

Технические данные  
на рукава высокого  
давления, фитинги и  
арматуру

Fluid Technology







## 1.1 Hose assemblies as elements in hydraulic systems

### Hose assemblies

Hose assemblies have to perform crucial functions. Apart from transmitting power by means of liquid (hydraulic oil) they are frequently subjected to unwanted movements.

When selecting a hose assembly the starting point is the highest pressure it will have to withstand.

Although hydraulic systems are very likely to experience pressure surges – caused for example merely by a gear change – the pressure is often assumed to be no greater than that permitted after regulating the built-in pressure limiting value. In assuming this, it is often neglected that the response time of such components is relatively long compared with peak pressures that occur momentarily and often with greater frequency and whose multiplicity of causes, it may be assumed, are known. In cases of doubt, an oscillographical measurement is to be recommended that shows the frequency and amplitude of the actual pressure changes. Users/planners should in any case systematically investigate the specific application in advance and then select, install and maintain the hose type that will unconditionally meet the in-service requirements.

The following 15 pages provide technical information such as determining the nominal diameter for a given throughput, dimensions of the hose and of the hose attachments, carrying capacity, chemical and thermal resistance, guidelines on the proper installation of hose assemblies and on determining the nominal length. All these items are crucial when selecting and installing a hose assembly.

The following notes are guidelines, and no claim is made to completeness. We recommend the drawing up of performance specifications when the demands made on hose assemblies go beyond those described in pertinent recommendations. Hose assemblies, as referred to in safety regulations, are hoses that are connected with hose fittings, thereby forming a functioning unit.

Hose assemblies must be put together in compliance with the ContiTech Techno-Chemie hose assembly manual. In particular, the following minimum requirements must be met:

1. Hose and couplings must be compatible and must function properly.
2. The max. shelf life for hoses and hose assemblies may not be exceeded.  
Regarding storage time, useful life and reuse of hose assemblies, please refer to DIN 7716 and 20066 Part 5.
3. In-service hose assemblies may not have any defects.

NOTE: Incorrect selection, installation, use and maintenance may lead to a shorter useful life, bodily injury and/or property damage.

When the right hose material is to be selected, ContiTech Techno-Chemie is pleased to assist and in complicated cases to work out an optimum solution, so that the above points can be avoided.

### Marking of hydraulic hose assemblies

In accordance with DIN safety regulations, hydraulic hose assemblies must be marked clearly and permanently with the following data:

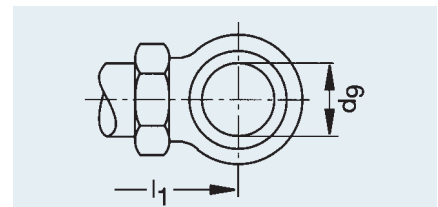
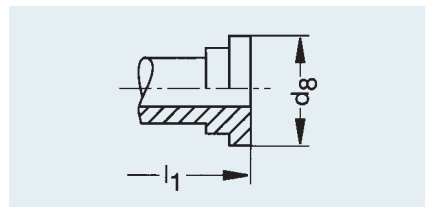
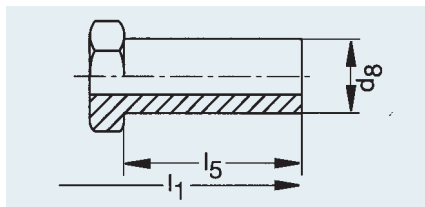
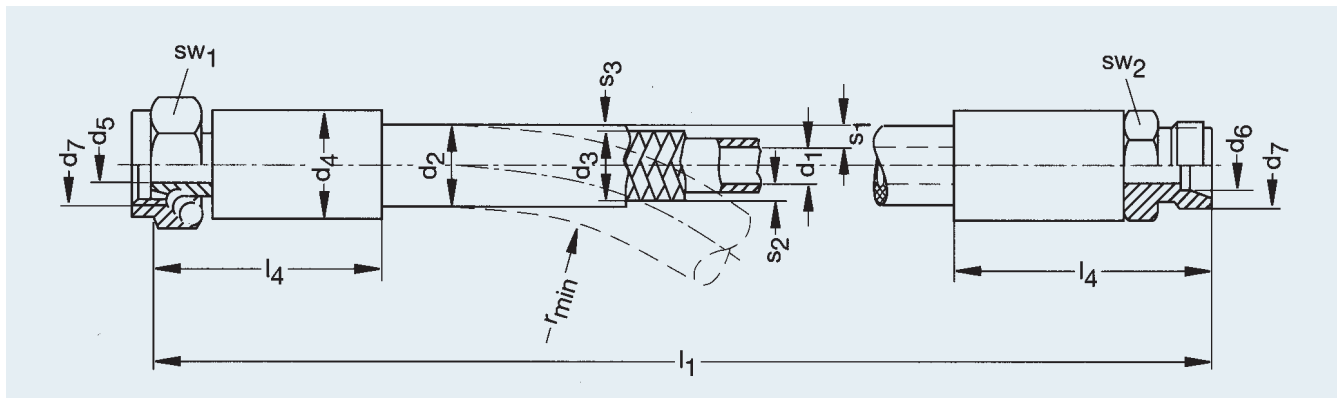
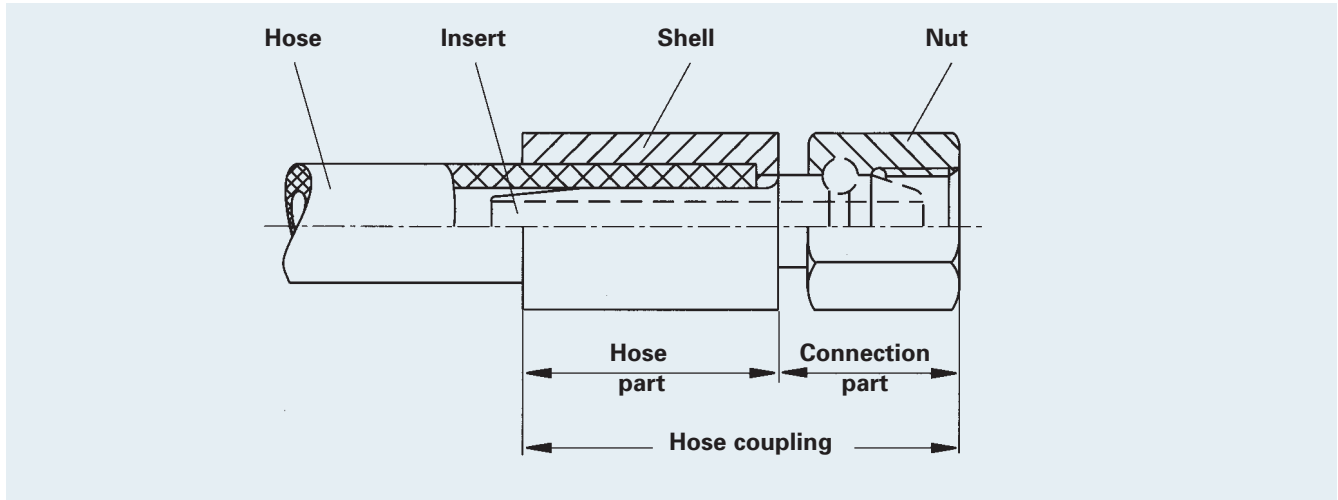
1. The manufacturer of the hose assembly
2. The date (i.e. month and year) of manufacture
3. The max. permissible dynamic working pressure (or another detail, such as the test pressure, as agreed with the customer).

Example: TCH 05/91 PN 250 (test pressure 600 bar)



## 1.2 Elements of a hose assembly and definitions

### Letters used for measurements



- $d_1$  = Inner diameter of hose
- $d_2$  = Outer diameter of hose
- $d_3$  = Diameter of outer ply
- $d_4$  = Largest outer diameter of shell
- $d_5$  = Smallest inner diameter of insert
- $d_6$  = Inner diameter of coupling for tube connection
- $d_7$  = Diameter of connecting thread
- $d_8$  = Outer diameter of flanged head
- $d_9$  = Inner diameter of cross bore of the banjo
- $l_1$  = Hose assembly length from sealing surface to sealing surface
- $l_4$  = Fitting length to sealing surface
- $l_5$  = Exposed pipe length
- $r_{min}$  = smallest permissible bending radius on the inside

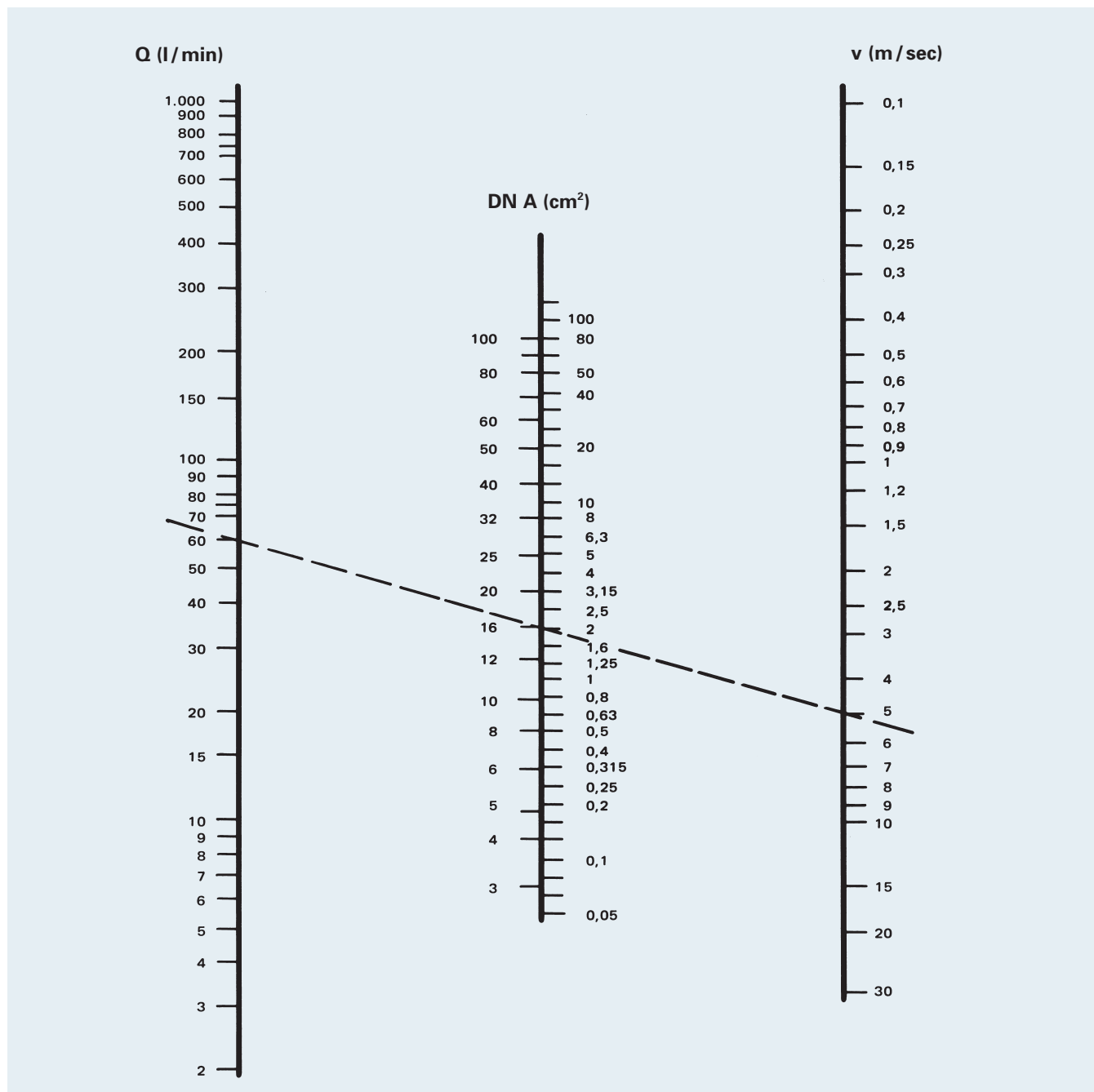
- $s_1$  = Hose wall thickness between inner and outer diameter
- $s_2$  = Hose wall thickness between inner diameter and diameter of outer ply
- $s_3$  = Hose wall thickness of the hose outer cover
- $sw_1$  = Width across flats of nut
- $sw_2$  = Width across flats of hexagonal bolt for securing

## Nominal diameter DN

The nominal diameter is a parameter used in hose assembly systems as a way of identifying matching parts, e.g. hoses and fittings.

The nominal diameters are approximately equal to the inner diameters  $d_1$  of the hoses, whereas the couplings for design reasons have smaller inner diameters. The nominal diameter has no unit and may not be used as a measurement, as defined in DIN 406. The following nomogram assists in determining the nominal diameter.

### Nomogram to determine the nominal diameter DN as a function of the volume flow and the flow rate



Application: The joining line between the two values Q (l/min) and v (m/sec) on the outer scales gives the nominal diameter at the point where it intersects the middle line.

The resistance to flow has been neglected.

Example:

Given volume flow  
Selected flow speed  
Nominal diameter  
as determined

Q = 60 l/min  
v = 5 m/sec  
= 16

## Cross-reference of thread to nominal diameters DN

| DN | Pipe diameter |          | Size | Pipe-diameter | Metric ISO thread |          |          | Thread acc. to. ISO 228-1 |            |            |
|----|---------------|----------|------|---------------|-------------------|----------|----------|---------------------------|------------|------------|
|    | LL+L series   | S series |      |               | LL ** series      | L series | S series | LL series                 | L series   | S series   |
| mm | mm            | mm       |      | inch          |                   |          |          |                           |            |            |
| 2  | 4             |          |      |               | M8x1              |          |          | G 1/8 A*                  |            |            |
| 4  | 5             | 6        | -2   |               | M10x1             |          | M14x1,5  | G 1/8 A*                  |            | G 1/4 A*   |
| 5  | 6             | 8        | -3   | 3/16"         | M12x1,5 (M10x1)   | M12x1,5  | M16x1,5  | G 1/8 A*                  | G 1/8 A*   | G 1/4 A*   |
| 6  | 8             | 10       | -4   | 1/4"          | M14x1,5 (M12x1)   | M14x1,5  | M18x1,5  | G 1/8 A*                  | G 1/4 A*   | G 3/8 A*   |
| 8  | 10            | 12       | -5   | 5/16"         | M16x1,5           | M16x1,5  | M20x1,5  | G 1/4 A*                  | G 1/4 A*   | G 3/8 A*   |
| 10 | 12            | 14       | -6   | 3/8"          | M18x1,5           | M18x1,5  | M22x1,5  | G 1/4 A*                  | G 3/8 A*   | G 1/2 A*   |
| 12 | 15            | 16       | -8   | 1/2"          | M22x1,5           | M22x1,5  | M24x1,5  |                           | G 1/2 A*   | G 1/2 A*   |
| 16 | 18            | 20       | -10  | 5/8"          | M26x1,5           | M26x1,5  | M30x2    |                           | G 1/2 A*   | G 3/4 A*   |
| 20 | 22            | 25       | -12  | 3/4"          | M30x1,5           | M30x2    | M36x2    |                           | G 3/4 A*   | G 1 A*     |
| 25 | 28            | 30       | -16  | 1"            | M38x1,5           | M36x2    | M42x2    |                           | G 1 A*     | G 1 1/4 A* |
| 32 | 35            | 38       | -20  | 1 1/4"        | M45x1,5           | M45x2    | M52x2    |                           | G 1 1/4 A* | G 1 1/2 A* |
| 40 | 42            |          | -24  | 1 1/2"        | M52x1,5           | M52x2    |          |                           | G 1 1/2 A* |            |
| 50 |               |          | -32  | 2"            |                   |          |          |                           |            |            |

\* for internal thread "A" does not apply

\*\* The threads written in brackets apply to threaded pins acc. to DIN 3853

| DN | Pipe diameter |          | Size | Pipe-diameter | BSP (BSPT / BSPP) | NPTF/NPSM 30°   | SAE J512 90° taper | JIC 74°/ SAE O-R | ORFS acc. to SAE J 1453 |
|----|---------------|----------|------|---------------|-------------------|-----------------|--------------------|------------------|-------------------------|
|    | LL+L series   | S series |      |               |                   |                 |                    |                  |                         |
|    | mm            | mm       |      | inch          |                   |                 |                    |                  |                         |
| 2  | 4             |          |      |               |                   |                 |                    |                  |                         |
| 4  | 5             | 6        | -2   | 1/8"          | 1/8" - 28         | 1/8" - 27       | 5/16" - 24         | 5/16" - 24       |                         |
| 5  | 6             | 8        | -3   | 3/16"         | 1/8" - 28         |                 | 3/8" - 24          | 3/8" - 24        |                         |
| 6  | 8             | 10       | -4   | 1/4"          | 1/4" - 19         | 1/4" - 18       | 7/16" - 20         | 7/16" - 20       | 9/16" - 18              |
| 8  | 10            | 12       | -5   | 5/16"         |                   |                 | 1/2" - 20          | 1/2" - 20        |                         |
| 10 | 12            | 14       | -6   | 3/8"          | 3/8" - 19         | 3/8" - 18       | 9/16" - 18         | 9/16" - 18       | 11/16" - 16             |
| 12 | 15            | 16       | -8   | 1/2"          | 1/2" - 14         | 1/2" - 14       | 3/4" - 16          | 3/4" - 16        | 13/16" - 16             |
| 16 | 18            | 20       | -10  | 5/8"          | 5/8" - 14         |                 | 7/8" - 14          | 7/8" - 14        | 1" - 14                 |
| 20 | 22            | 25       | -12  | 3/4"          | 3/4" - 14         | 3/4" - 14       | 1 1/16" - 12       | 1 1/16" - 12     | 1" - 3/16" - 12         |
| 25 | 28            | 30       | -16  | 1"            | 1" - 11           | 1" - 11 1/2     | 1 5/16" - 12       | 1 5/16" - 12     | 1 7/16" - 12            |
| 32 | 35            | 38       | -20  | 1 1/4"        | 1 1/4" - 11       | 1 1/4" - 11 1/2 | 1 5/8" - 12        | 1 5/8" - 12      | 1 11/16" - 12           |
| 40 | 42            |          | -24  | 1 1/2"        | 1 1/2" - 11       | 1 1/2" - 11 1/2 | 1 7/8" - 12        | 1 7/8" - 12      | 2" - 12                 |
| 50 |               |          | -32  | 2"            | 2" - 11           | 2" - 11 1/2     | 2 1/2" - 12        | 2 1/2" - 12      |                         |

## Recommended tightening torques for nuts of hose assemblies

| Series | Pipe-outer-diam. | DN | Thread  | Torque Ma in mkp for TCH fitting |           |           |           |
|--------|------------------|----|---------|----------------------------------|-----------|-----------|-----------|
|        |                  |    |         | DKL 2)                           | DKS 2)    | DKOL 3)   | DKOS 3)   |
| L      | 6                | 5  | M12x1,5 | 1,0 - 1,2                        | —         | 0,8 - 1,0 | —         |
|        | 8                | 6  | M14x1,5 | 1,2 - 1,5                        | —         | 1,0 - 1,3 | —         |
|        | 10               | 8  | M16x1,5 | 2,0 - 2,5                        | —         | 1,8 - 2,3 | —         |
|        | 12               | 10 | M18x1,5 | 3,0 - 3,5                        | —         | 2,7 - 3,2 | —         |
|        | 15               | 13 | M22x1,5 | 5,0 - 5,5                        | —         | 4,5 - 5,0 | —         |
|        | 18               | 16 | M26x1,5 | 7,5 - 8,5                        | —         | 7,0 - 8,0 | —         |
|        | 22               | 20 | M30x2   | 11 - 12                          | —         | 10 - 11   | —         |
|        | 28               | 25 | M36x2   | 16 - 18                          | —         | 15 - 16   | —         |
|        | 35               | 32 | M45x2   | 24 - 26                          | —         | 20 - 22   | —         |
| S      | 42               | 40 | M52x2   | 32 - 35                          | —         | 30 - 32   | —         |
|        | 8                | 5  | M16x1,5 | —                                | 2,0 - 2,5 | —         | 1,8 - 2,3 |
|        | 10               | 6  | M18x1,5 | —                                | 3,0 - 3,5 | —         | 2,7 - 3,2 |
|        | 12               | 8  | M20x1,5 | —                                | 4,5 - 5,0 | —         | 4 - 5     |
|        | 14               | 10 | M22x1,5 | —                                | 6 - 7     | —         | 5 - 6     |
|        | 16               | 13 | M24x1,5 | —                                | 8 - 10    | —         | 7 - 9     |
|        | 20               | 16 | M30x2   | —                                | 13 - 15   | —         | 12 - 14   |
|        | 25               | 20 | M36x2   | —                                | 24 - 27   | —         | 20 - 24   |
|        | 30               | 25 | M42x2   | —                                | 36 - 40   | —         | 32 - 36   |
|        | 38               | 32 | M52x2   | —                                | 60 - 64   | —         | 52 - 56   |

The adjacent values are reference values only and must be considered separately for each case; if necessary, the values must be checked.

- 2) DKL + DKS acc. to TCH 105 05  
3) DKOL + DKOS acc. to TCH 105 06

Nuts acc. to DIN 3870 shape A

Counter-fitting:  
Threaded pins acc. to DIN 3853  
Bore type W DIN 3861 L+S series

### 1.3 General guidelines for the installation of hose assemblies

Certain regulations have to be complied with when installing hose assemblies to ensure and to maintain their functioning. Crucial elements are: ease of installation and removal, optimum installation routing and regular checking, so that any ensuing problems are minimised.

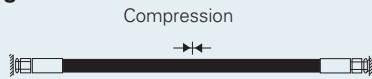
The following instructions are based on DIN 20066 Part 4.

#### Incorrect

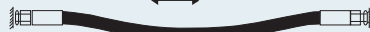
#### Correct

#### Notes

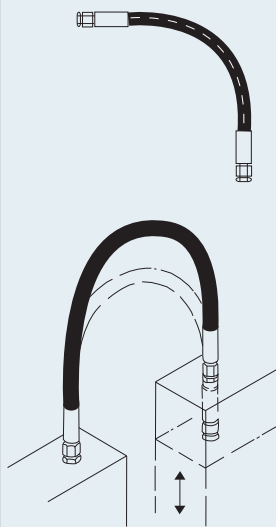
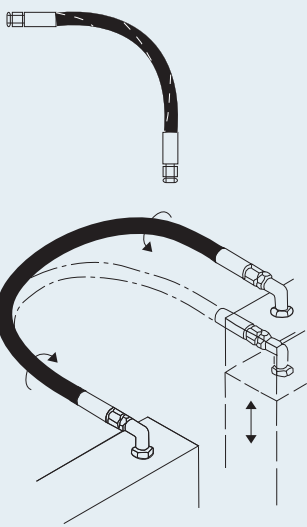
**Fig. 1**



Tensile stress



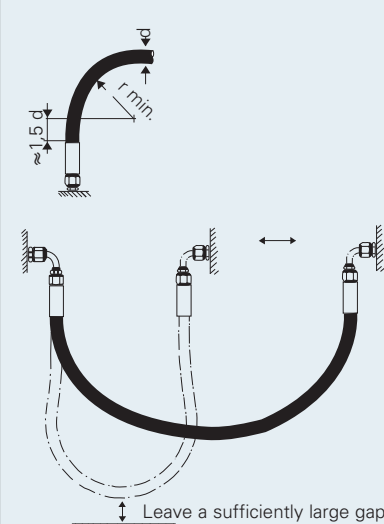
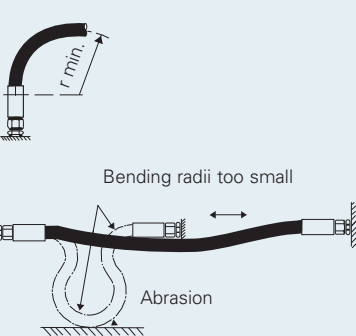
**Fig. 2**



Hose assemblies are to be installed in a way that excludes both tensile stressing (except by own weight) and compression. So they should be mounted with a sag that can take up any shortening of the hose. (See also the section "Length changes and volume increases in hose assemblies").

Care must be taken not to twist the hose. Torsional stressing reduces the cross-section, thereby restricting the throughput and even damaging the plies (pressure bearers). The hose may not be twisted when the fittings are attached, either.

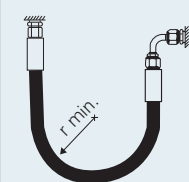
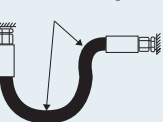
**Fig. 3**



Hose assemblies may not be bent through an angle exceeding the permitted bending radius and certainly not buckled or kinked. This would cause a pressure build-up. Non-straight configurations are to be achieved by means of elbows and/or shaped hoses. The min. bending radii given in the manual refer to the rigid installation of hose assemblies. If the hose is required to move repeatedly in a tight bending radius (continuous operation), then the radius should be designed as large as possible. Any bending of a hose should not commence at a point less than  $1.5 d$  from an end.

**Fig. 4**

Bending radii too small

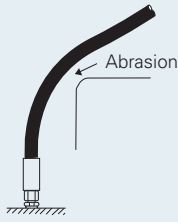
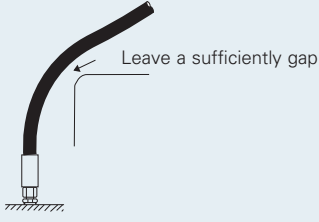
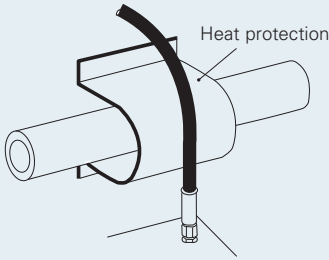


Any deviation from the bending radii stipulated in the standard may well shorten the service life, depending on the stressing involved.

**Incorrect**

**Correct**

**Notes**

|  |   |   |
|--|---|---|
| <p><b>Fig. 5</b></p>  <p>Abrasion</p> |  <p>Leave a sufficiently gap</p> | <p>Although hoses enjoy a certain amount of resistance to abrasion, they are to be protected from external damage that could lead to excessive wear or the coupling being torn off the hose and hence to the premature failure of the hose material. Hose assemblies are to be protected from extreme temperatures that go beyond the limits for which the hose was designed.</p> <p>Special care is to be taken when hoses are installed close to hot power lines. In some applications it may be necessary to protect or to re-route the hose assembly. Information about protective hoses is available from ContiTech Techno-Chemie.</p> |
|  |  <p>Heat protection</p>          |   |

It is obviously not possible to illustrate all forms of correct and incorrect installation.

If very difficult installation condition prevail, a consultation with ContiTech Techno-Chemie is recommended.

In the case of very unusual applications, it may be necessary to conduct trials before the hoses are selected.

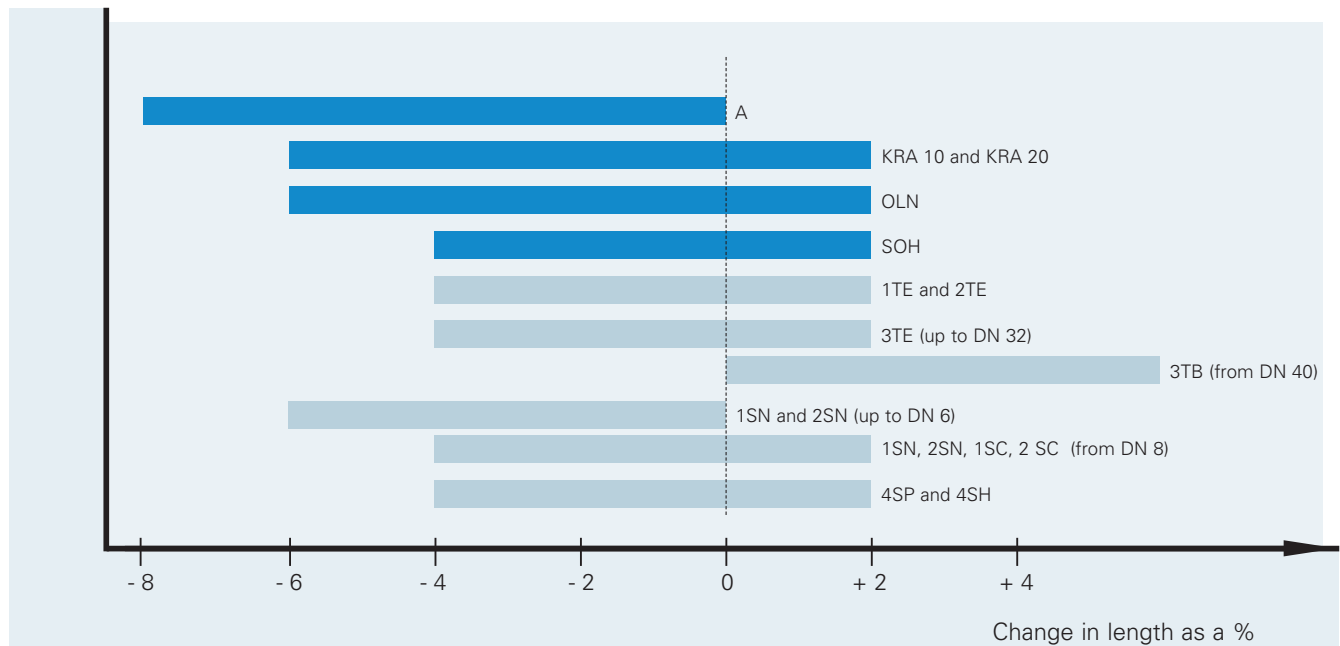
## 1.4 Length changes and volume increases in hose assemblies

The elasticity of hose material allows a hose to expand under pressure within certain limits.

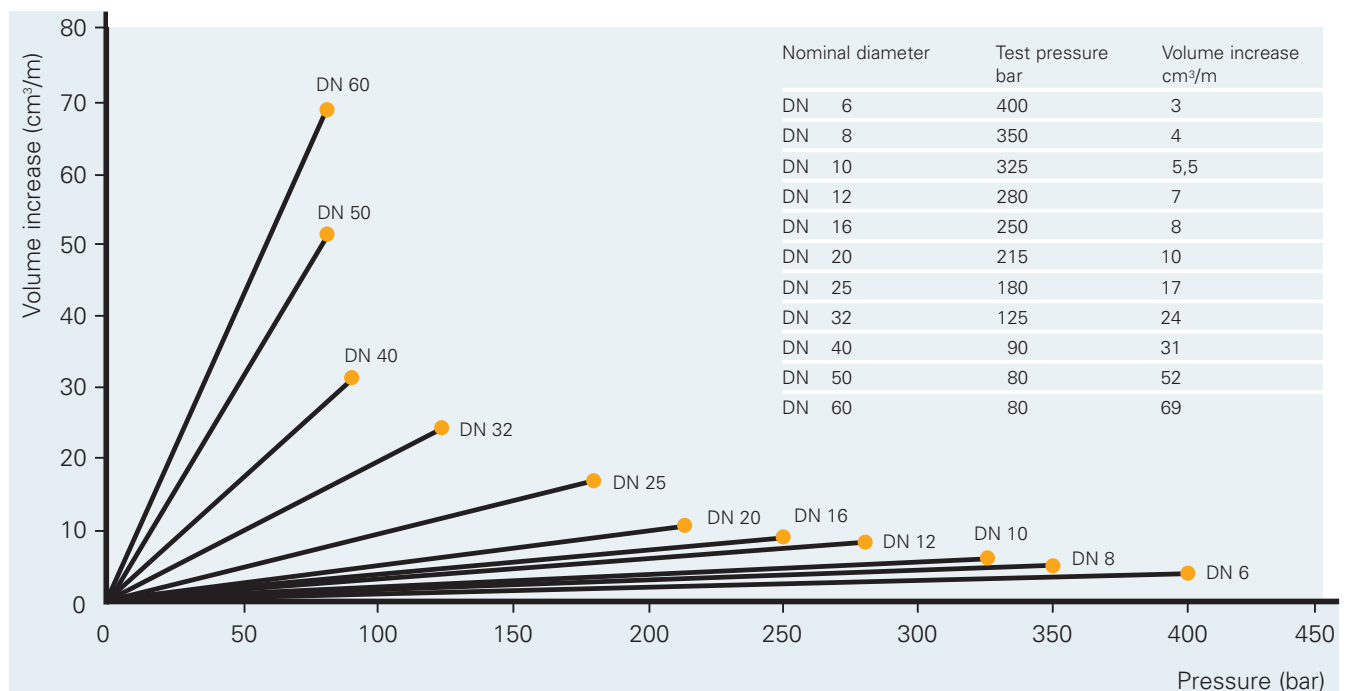
Under pressure, the yarn or steel-wire braid reinforcement – depending on the type and angle of twist – can withstand both longitudinal and radial expansion. The hose may experience a positive or negative change in length. The configuration in the installed state must allow for all possible changes in length so as to prevent the hose being ripped out of its coupling. The increase in volume that occurs helps to damp pressure peaks within certain limits.

Information on the various hose types is available on request.

### Length changes under pressure for selected hose types in the most common nominal diameters



### Volume increases of hose assemblies (example: hose type 2 SN)



## 1.5 Important standards

Account should be taken of relevant statutory industrial and manufacturing standards when hoses are selected.

### Hoses

| Standard                  | Subject  | Corresponds to*  | Hose                         |
|---------------------------|--|--|------------------------------|
| DIN EN 853 (issued 02.97) | Hydraulic hoses with wire braid reinforcement          | SAE 100 R1 AT<br>SAE 100 R1 A<br>SAE 100 R2 AT<br>SAE 100 R2 A | 1 SN<br>1 ST<br>2 SN<br>2 ST |
| DIN EN 854 (issued 02.97) | Hydraulic hoses with textile ply                       | SAE 100 R6<br>–<br>SAE 100 R3                                  | 1 TE<br>2 TE<br>3 TE / 3TB   |
| DIN EN 855 (issued 02.97) | Plastic hydraulic hoses with textile ply               | SAE 100 R7<br>SAE 100 R 8                                      | PL 7 / ZL 7<br>PL 8 / ZL 8   |
| DIN EN 856 (issued 02.97) | Hydraulic hoses with wire spiral reinforcement         | –<br>–<br>SAE 100 R12<br>SAE 100 R13                           | 4 SP<br>4 SH<br>–<br>–       |
| DIN EN 857 (issued 02.97) | Compact hydraulic hoses with wire spiral reinforcement | –<br>–   | 1 SC<br>2 SC                 |

\* SAE standards only contain some of the requirements stipulated in DIN

### Terms

| Standard                    | Subject  |
|-----------------------------|--|
| DIN 24 312 (issued 09.85)   | Pressure: Values and terms                     |
| DIN 24 950-1 (issued 07.78) | Hose assemblies: terms                         |
| DIN 24 950-2 (issued 07.78) | Hose assemblies: Letters used for measurements |
| DIN 53 501 (issued 11.80)   | Rubber and elastomers: terms                   |

### Hose assemblies

| Standard                     | Subject                                     |
|------------------------------|---|
| DIN 20 066-1 (issued 02.82)  | Hose assemblies: measurements, requirements |
| DIN 20 066-4 (issued 05.84)  | Hose assemblies: installation               |
| DIN 20 066-5 (issued 06.93E) | Hose assemblies: rating of reliability      |

### Hose fittings

| Standard                    | Subject   |
|-----------------------------|---|
| DIN 20 078-1 (issued 02.82) | Hose fittings: requirements, installation instructions, testing |

### Testing

| Standard  | Subject   |
|---|---|
| DIN EN ISO 6803 (issued 07.97)<br>(Replacement for DIN 20024) | Rubber and plastic hoses and hose assemblies:<br>hydraulic pressure impulse testing without bending |

## 1.6 Selection of the right type of hose using the nominal diameter and pressure ratings

| Type         | Spec. No. | DN                |     |     |     |     |     |     |                  |                   |     |     |    |                  |    |                  |     |
|--------------|-----------|-------------------|-----|-----|-----|-----|-----|-----|------------------|-------------------|-----|-----|----|------------------|----|------------------|-----|
|              |           | 2                 | 4   | 5   | 6   | 8   | 10  | 12  | 16               | 20                | 25  | 32  | 40 | 50               | 60 | 80               | 100 |
| A            | 2234      | 20                | 20  |     | 15  | 15  | 15  | 15  | 15               | 15                | 12  |     |    |                  |    |                  |     |
| AH           | 2246      |                   | 10  |     | 10  | 10  |     |     |                  |                   |     |     |    |                  |    |                  |     |
| GCN          | 2230      | 20                | 20  |     | 15  | 15  | 15  | 12  | 10               |                   |     |     |    |                  |    |                  |     |
| GCNA         | 2277      | 30                | 30  |     | 30  | 25  | 25  | 25  |                  |                   |     |     |    |                  |    |                  |     |
| GCW          | 2225      |                   |     |     |     |     |     | 25  | 15               | 15                | 15  | 15  | 10 | 10               | 10 |                  |     |
| GCWA         | 2226      |                   |     |     |     |     |     | 35  | 30               | 25                | 24  | 22  | 20 | 18               | 15 |                  |     |
| GCDR/GCDRW   | 2286/2291 |                   |     |     |     |     |     | 25  | 25               | 25                | 23  | 23  | 23 | 23               |    |                  |     |
| GCADR/GCADRW | 2287/2292 |                   |     |     |     |     |     | 25  | 25               | 25                | 23  | 23  | 23 | 23               |    |                  |     |
| OLN          | 2255      | 25                | 25  | 25  | 25  | 25  | 20  | 20  | 15               | 12                |     |     |    |                  |    |                  |     |
| OLNW         | 2731      |                   |     |     |     |     |     | 20  | 15               | 12                | 10  | 8   | 6  | 5                | 5  | 5                | 5   |
| OLNS 1       | 2370      |                   |     |     | 40  | 35  | 30  | 25  | 25               | 25                | 25  | 32  |    |                  |    |                  |     |
| OLNH(W)      | 2265/2279 | 30                | 30  |     | 30  | 27  | 27  | 25  | 20               | 20                | 20  | 20  |    |                  |    |                  |     |
| KRAV 10      | 2102      |                   | 10  |     |     |     |     |     |                  |                   |     |     |    |                  |    |                  |     |
| KRA 20       | 2264      | 25                | 25  |     | 10  | 10  | 15  | 15  | 10 <sup>5)</sup> |                   |     |     |    |                  |    |                  |     |
| SOH          | 2367      |                   |     |     |     |     |     |     | 25               | 25                | 25  | 20  | 20 | 20 <sup>1)</sup> | 20 | 15 <sup>4)</sup> |     |
| DBSLK        | 2503/2508 |                   |     | 10  | 10  | 10  | 10  | 10  |                  |                   |     |     |    |                  |    |                  |     |
| 1 TE         | 2315      |                   |     | 25  | 25  | 20  | 20  | 16  | 16               | 12                | 12  |     |    |                  |    |                  |     |
| 2 TE         | 2335      |                   |     | 80  | 75  | 68  | 63  | 58  | 50               | 45                | 40  |     |    |                  |    |                  |     |
| 3 TE/3 TB    | 2336/2326 |                   |     | 160 | 145 | 130 | 110 | 93  | 80               | 70                | 55  | 45  | 40 | 33               | 25 | 18               | 10  |
| 1 SN         | 2432      |                   |     |     | 225 | 215 | 180 | 160 | 130              | 105               | 88  | 63  | 50 | 40               |    |                  |     |
| 1 SC         | 2460      |                   |     |     | 225 | 215 | 180 | 160 | 130              |                   |     |     |    |                  |    |                  |     |
| 2 SN         | 2433      |                   |     |     | 400 | 350 | 330 | 275 | 250              | 215               | 165 | 125 | 90 | 80               |    |                  |     |
| 2 SC         | 2437      |                   |     |     | 400 | 350 | 330 | 275 | 250              | 215               | 165 |     |    |                  |    |                  |     |
| 1 SC-HP      | 2923      |                   |     |     |     | 250 | 225 | 190 |                  |                   |     |     |    |                  |    |                  |     |
| 2 SN-HP      | 2410      |                   |     |     |     |     |     |     | 290              | 275               |     |     |    |                  |    |                  |     |
| 4 SP         | 2450      |                   |     |     | 525 |     | 445 | 415 | 400              | 395               |     |     |    |                  |    |                  |     |
| 4 SH (4 SPS) | 2457      |                   |     |     |     |     |     |     |                  | 420 <sup>3)</sup> | 420 | 420 |    |                  |    |                  |     |
| HPO b-mini   | 2322      | 320 <sup>2)</sup> |     |     |     |     |     |     |                  |                   |     |     |    |                  |    |                  |     |
| HPC          | 2364      |                   | 420 |     | 360 |     |     |     |                  |                   |     |     |    |                  |    |                  |     |
| 2 SK         | 2491      |                   |     |     | 400 | 350 | 330 | 275 | 250              |                   |     |     |    |                  |    |                  |     |
| SR 1         | 2480      |                   |     |     | 260 | 250 | 225 | 170 | 140              | 90                | 85  |     |    |                  |    |                  |     |
| PL7/ZL7*     | 2465/2915 |                   |     |     | 200 | 180 | 160 | 135 |                  |                   |     |     |    |                  |    |                  |     |
| PL8/ZL8*     | 2466/2916 |                   |     |     | 345 | 300 | 280 |     |                  |                   |     |     |    |                  |    |                  |     |
| TFS          | 2429      |                   |     | 190 | 170 | 150 | 140 | 105 | 95               |                   |     |     |    |                  |    |                  |     |
| TWS          | 2428      |                   |     |     |     | 15  | 15  | 15  | 15               | 15                |     |     |    |                  |    |                  |     |
| PTFEW        | 2425      |                   |     |     |     |     |     |     |                  |                   | 25  | 25  | 20 |                  |    |                  |     |

\* on request also available as twin hose

1) = DN 46 / DN 50

2) = inside = 2.5 mm

3) = with special approval for 430 bar

4) = DN 85

5) = DN 15

Approval from German Lloyd with additional flame protection

Approval from German Lloyd without additional flame protection



### 1.7.1 Selection of hose assemblies via the type of connection

|     | Ferrule/shell<br>Part No.                      | 1 TE **<br>2315 | 2 TE **<br>2335 | 3 TE/3 TB<br>2336/2326 | 1 SN<br>2432 | 1 SC<br>2460 | 2 SN<br>2433 | 2 SC<br>2437 | 1 SC-HP<br>2923 | 2 SN-HP<br>2410 | 4 SP<br>2450 | 4 SH<br>2457 |
|-----|--|-----------------|-----------------|------------------------|--------------|--------------|--------------|--------------|-----------------|-----------------|--------------|--------------|
| 5   | are only supplied<br>as one-piece<br>couplings | ML              | ML/TL           | TL                     |              |              |              |              |                 |                 |              |              |
| 6   |  | ML              | ML/TL           | TL                     | TL           | TL           | TL           | TL           |                 |                 | TP           |              |
| 8   |  | ML              | ML/TL           | TL                     | TL           | TL           | TL           | TL           | TL              |                 |              |              |
| 10  |  | ML              | ML/TL           | TL                     | TL           | TL           | TL           | TL           | TL              |                 | TP           |              |
| 12  |  | ML              | ML/TL           | TL                     | TL           | TL           | TL           | TL           | TL              |                 | TP           |              |
| 16  |  | ML              | ML/TL           | TL                     | TL           | TL           | TL           | TL           |                 | TL              | TLP          |              |
| 20  |  | ML              | ML/TL           | TL                     | TL           |              | TL           | TL           |                 | TL              | WL           | WL           |
| 25  |  | ML              | ML/TL           | TL                     | TL           |              | TL           | TL           |                 |                 |              | WL           |
| 32  |  |                 |                 | TL                     | TL           |              | TL           |              |                 |                 |              | WL           |
| 40  |  |                 |                 | TL                     | TL           |              | TL           |              |                 |                 |              |              |
| 50  |  |                 |                 | TL                     | ES*          |              | ES*          |              |                 |                 |              |              |
| 60  |  |                 |                 | UPR                    |              |              |              |              |                 |                 |              |              |
| 70  |  |                 |                 | UPR                    |              |              |              |              |                 |                 |              |              |
| 80  |  |                 |                 | NS*                    |              |              |              |              |                 |                 |              |              |
| 100 |  |                 |                 | NS*                    |              |              |              |              |                 |                 |              |              |

|     | Ferrule/shell<br>Part No.                      | HPO b-mini<br>2322 | HPC<br>2364 | 2 SK<br>2491 | PL7/ZL7***<br>2465/2915 | PL8/ZL8***<br>2466/2916 | SR 1<br>2480 | TFS*<br>2429 | TWS*<br>2428 | PTFEW*<br>2425 |
|-----|--|--------------------|-------------|--------------|-------------------------|-------------------------|--------------|--------------|--------------|----------------|
| 5   | are only supplied<br>as one-piece<br>couplings | * (DN 2,5)         | * (DN 4)    |              |                         |                         |              | *            |              |                |
| 6   |  |                    | *           | TL           | TL                      | TL                      | TL           |              |              |                |
| 8   |  |                    |             | TL           | TL                      | TL                      | TL           |              |              |                |
| 10  |  |                    |             | TL           | TL                      | TL                      | TL           |              |              |                |
| 12  |  |                    |             | TL           |                         | TL                      | TL           |              |              |                |
| 16  |  |                    |             | TL           |                         |                         | TL           |              |              |                |
| 20  |  |                    |             |              |                         |                         | TL           |              |              |                |
| 25  |  |                    |             |              |                         |                         | TL           |              |              |                |
| 32  |  |                    |             |              |                         |                         |              |              |              |                |
| 40  |  |                    |             |              |                         |                         |              |              |              |                |
| 50  |  |                    |             |              |                         |                         |              |              |              |                |
| 60  |  |                    |             |              |                         |                         |              |              |              |                |
| 80  |  |                    |             |              |                         |                         |              |              |              |                |
| 100 |  |                    |             |              |                         |                         |              |              |              |                |

\* fittings on request

\*\* NLD insert ML crimped

\*\*\* on request also as twin hose available

## 1.7.2 Selection of hose assemblies via the type of connection

|     | Type<br>Inner diam. | Ferrule/shell<br>Part No. | A<br>2234 | AH<br>2246 | GCN<br>2230 | GCNA<br>2277 | GCW<br>2225 | GCWA<br>2226 | GCDR/GCDRW<br>2286/2291 |
|-----|---------------------|---------------------------|-----------|------------|-------------|--------------|-------------|--------------|-------------------------|
| 2   | 10,5                | 32 4105 326 022           | NK        |            | NK          |              |             |              |                         |
| 2   | 11,5                | 32 4105 326 024           |           |            |             | NK           |             |              |                         |
| 2   | 11,5                | 32 4112 326 022           |           |            |             |              |             |              |                         |
| 2   | 12                  | 32 4112 326 024           |           |            |             |              |             |              |                         |
| 4   | 11,5                | 32 4105 326 042           | NK        | NK         | NK          |              |             |              |                         |
| 4   | 13                  | 32 4105 326 045           |           |            |             | NK           |             |              |                         |
| 4   | 13                  | 32 4112 326 041           |           |            |             |              |             |              |                         |
| 4   | 14                  | 32 4112 326 043           |           |            |             |              |             |              |                         |
| 5   | 11,5                | 32 4105 326 024           |           |            |             |              |             |              |                         |
| 5   | 12                  | 32 4112 326 024           |           |            |             |              |             |              |                         |
| 5   | 13,5                | 32 4112 326 023           |           |            |             |              |             |              |                         |
| 6   | 13                  | 32 4112 326 041           |           |            |             |              |             |              |                         |
| 6   | 14                  | 32 4112 326 043           |           |            |             |              |             |              |                         |
| 6   | 14                  | 32 4105 326 064           | NK        | NK         | NK          |              |             |              |                         |
| 6   | 14,5                | 32 4105 326 065           |           |            |             | NK           |             |              |                         |
| 6   | 14,5                | 32 4112 326 061           |           |            |             |              |             |              |                         |
| 6   | 16                  | 32 4112 326 062           |           |            |             |              |             |              |                         |
| 8   | 16                  | 32 4112 326 062           |           |            |             |              |             |              |                         |
| 8   | 16                  | 32 4105 326 082           | NK        | NK         |             |              |             |              |                         |
| 8   | 17                  | 32 4105 326 084           |           |            | NK          |              |             |              |                         |
| 8   | 17                  | 32 4112 326 081           |           |            |             |              |             |              |                         |
| 8   | 17,5                | 32 4105 326 085           |           |            |             | NK           |             |              |                         |
| 8   | 18                  | 32 4112 326 083           |           |            |             |              |             |              |                         |
| 10  | 17                  | 32 4112 326 081           |           |            |             |              |             |              |                         |
| 10  | 18                  | 32 4112 326 083           |           |            |             |              |             |              |                         |
| 10  | 19                  | 32 4105 326 101           | NK        |            | NK          |              |             |              |                         |
| 10  | 20                  | 32 4105 326 102           |           |            |             | NK           |             |              |                         |
| 10  | 20                  | 32 4112 326 101           |           |            |             |              |             |              |                         |
| 10  | 21                  | 32 4112 326 103           |           |            |             |              |             |              |                         |
| 12  | 19                  | 32 4112 326 101           |           |            |             |              |             |              |                         |
| 12  | 21                  | 32 4112 326 103           |           |            |             |              |             |              |                         |
| 12  | 21                  | 32 4105 326 131           | NK        |            |             |              |             |              |                         |
| 12  | 23                  | 32 4112 326 141           |           |            |             |              | NLD         |              | NLD                     |
| 12  | 24                  | 32 4112 326 134           |           |            | NLD         |              |             |              |                         |
| 12  | 25                  | 32 4112 326 145           |           |            |             |              |             | NLD          |                         |
| 12  | 26                  | 32 4112 326 137           |           |            |             | NLD          |             |              |                         |
| 16  | 25                  | 32 4112 326 163           |           |            |             |              |             |              |                         |
| 16  | 27                  | 32 4112 326 160           |           |            | NLD         |              | NLD         |              | NLD                     |
| 16  | 28                  | 32 4112 326 162           | NLD       |            |             |              |             |              |                         |
| 16  | 28                  | 32 4112 326 165           |           |            |             |              |             | NLD          |                         |
| 20  | 28                  | 32 4112 326 162           |           |            |             |              |             |              |                         |
| 20  | 33                  | 32 4112 326 201           | NLD       |            |             |              |             |              |                         |
| 20  | 33                  | 32 4112 326 203           |           |            |             |              | NLD         | NLD          | NLD                     |
| 25  | 36                  | 32 4112 326 251           |           |            |             |              |             |              |                         |
| 25  | 38                  | 32 4112 326 250           | NLD       |            |             |              | NLD         | NLD          | NLD                     |
| 25  | 40                  | 32 4112 326 252           |           |            |             |              |             |              |                         |
| 25  |                     | are only supplied         |           |            |             |              |             |              |                         |
| 32  |                     | as one-piece              |           |            |             |              |             |              |                         |
| 40  |                     | couplings                 |           |            |             |              | TL          | TL           | TL                      |
| 50  |                     |                           |           |            |             |              | TL          | TL           | TL                      |
| 60  |                     | 33 4061 473 601           |           |            |             |              | UPR         | UPR          |                         |
| 80  |                     | 32 4001 780 800           |           |            |             |              |             |              |                         |
| 85  |                     | 33 4061 473 851           |           |            |             |              |             |              |                         |
| 100 |                     | 32 4001 780 910           |           |            |             |              |             |              |                         |

\* fittings on request    \*\* NLD insert ML crimped    \*\*\* (DN 40/46)

|  | GCADR/GCADRW<br>2287/2292 | OLN<br>2255 | OLNW<br>2731                        | OLNS1<br>2370 | OLNH(W)<br>2265/2279 | KRAV 10<br>2102 | KRA 20<br>2264   | SOH<br>2367                       | DBSLK<br>2503/2508 | 1 TE **<br>2315 | 2 TE **<br>2335 | 3 TE/3 TB**<br>2336/2326 |
|--|---------------------------|-------------|-------------------------------------|---------------|----------------------|-----------------|------------------|-----------------------------------|--------------------|-----------------|-----------------|--------------------------|
|  |                           | NK          |                                     |               | NLD                  | *               | NK               |                                   |                    |                 |                 |                          |
|  |                           |             |                                     |               | NLD                  |                 |                  |                                   |                    |                 |                 |                          |
|  |                           | NK          |                                     |               | NLD                  |                 | NK               |                                   |                    |                 |                 |                          |
|  |                           |             |                                     |               | NLD                  |                 |                  |                                   |                    |                 |                 |                          |
|  |                           | NK          |                                     |               |                      |                 |                  |                                   |                    | NLD             |                 |                          |
|  |                           |             |                                     | NLD           |                      |                 |                  |                                   | NLD                |                 | NLD             |                          |
|  |                           |             |                                     |               |                      |                 |                  |                                   | NLD                |                 | NLD             |                          |
|  |                           | NK          |                                     |               | NLD                  |                 | NK               |                                   |                    |                 |                 |                          |
|  |                           |             |                                     | NLD           |                      |                 |                  |                                   |                    | NLD             | NLD             |                          |
|  |                           | NK          |                                     |               | NLD                  |                 | NK               |                                   |                    |                 |                 |                          |
|  |                           |             |                                     | NLD           |                      |                 |                  |                                   |                    | NLD             | NLD             |                          |
|  |                           | NK          |                                     |               | NLD                  |                 | NK               |                                   |                    |                 |                 |                          |
|  |                           |             |                                     | NLD           |                      |                 |                  |                                   |                    | NLD             |                 |                          |
|  |                           | NK          |                                     |               | NLD                  |                 |                  |                                   | NLD                |                 |                 |                          |
|  |                           |             |                                     | NLD           |                      |                 |                  |                                   |                    |                 | NLD             |                          |
|  |                           | NLD         | NLD                                 |               | NLD                  |                 | NLD(DN14)<br>NLD |                                   | NLD                |                 |                 |                          |
|  | NLD                       |             |                                     |               |                      |                 |                  |                                   |                    |                 |                 |                          |
|  |                           | NLD         | NLD                                 | NLD           | NLD                  |                 |                  |                                   |                    | NLD             | NLD             |                          |
|  | NLD                       |             |                                     |               |                      |                 |                  | NLD                               |                    |                 |                 |                          |
|  |                           |             |                                     |               |                      |                 |                  | NLD                               |                    | NLD             | NLD             |                          |
|  | NLD                       | NLD         | NLD                                 | NLD           | NLD                  |                 |                  |                                   |                    | NLD             | NLD             |                          |
|  | NLD                       |             | NLD                                 | NLD           |                      |                 |                  | NLD                               |                    |                 |                 |                          |
|  |                           |             |                                     |               | TL                   |                 |                  |                                   |                    |                 |                 |                          |
|  | TL<br>TL<br>TL            |             | TL<br>TL<br>TL<br>UPR<br>NS*<br>NS* | TL            | TL                   |                 |                  | TL<br>TL ***<br>ES*<br>UPR<br>UPR |                    |                 |                 |                          |

## 1.8 Notes on ordering

To ensure the prompt and trouble-free handling of your order, would you please observe the following procedure:

### A) Ordering individual parts

For individual parts such as hoses, shells, inserts, nuts and accessories, just give the part nos. from the corresponding tables.

#### Example 1:

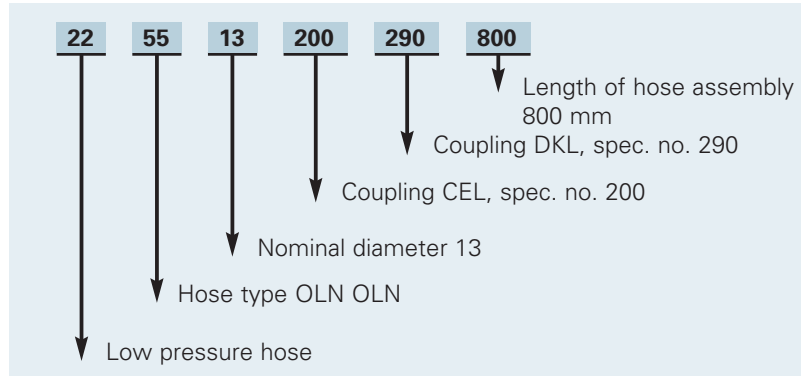
|          |  |           |                        |
|----------|--|-----------|------------------------|
| Hose:    | OLN; type no. 2255; DN 12                    | Part no.: | <b>22 5513 000 000</b> |
| Shell :  | DN 12 for OLN<br>(ID 23 mm)                  | Part no.: | <b>32 4112 326 141</b> |
| Insert:  | Coupling DKL;<br>DN 12; NLD<br>Spec. no. 290 | Part no.: | <b>32 2247 483 130</b> |
| Nut:     | M 22x1,5                                     | Part no.: | <b>38 0531 491 130</b> |
| Adapter: | M 22x1,5                                     | Part no.: | <b>39 5040 483 150</b> |

#### Example 2:

|                     |  |           |                        |
|---------------------|--|-----------|------------------------|
| Hose:               | OLN; type no. 2255; DN 32                  | Part no.: | <b>22 5532 000 000</b> |
| One-piece Coupling: | Coupling DKLL;<br>Spec. no. 300; DN; 32 TL | Part no.: | <b>04 0300 500 320</b> |

### B) Ordering hose assemblies

The part numbers of complete ContiTech Techno-Chemie hose assemblies consist of 5 blocks of digits. The meaning of the constituent blocks is illustrated by the adjacent example. It refers to an OLN hose of nominal diameter of 12, a CEL coupling at one end and a DKL coupling at the other. The hose assembly is 800 mm long.



**Points to remember when ordering:**

1. For hose assemblies with TL, ML and WL couplings, the first digit of the hose type no. changes from 2 to B;  
e.g. from 225512... to B2 5512 ...

2. The nominal diameter of the hose should always be given as two digits in the part no.

|               |             |               |
|---------------|-------------|---------------|
| Please write: | 02 for DN 2 | 08 for DN 8   |
|               | 04 for DN 4 | 13 for DN 12  |
|               | 06 for DN 6 | 91 for DN 100 |

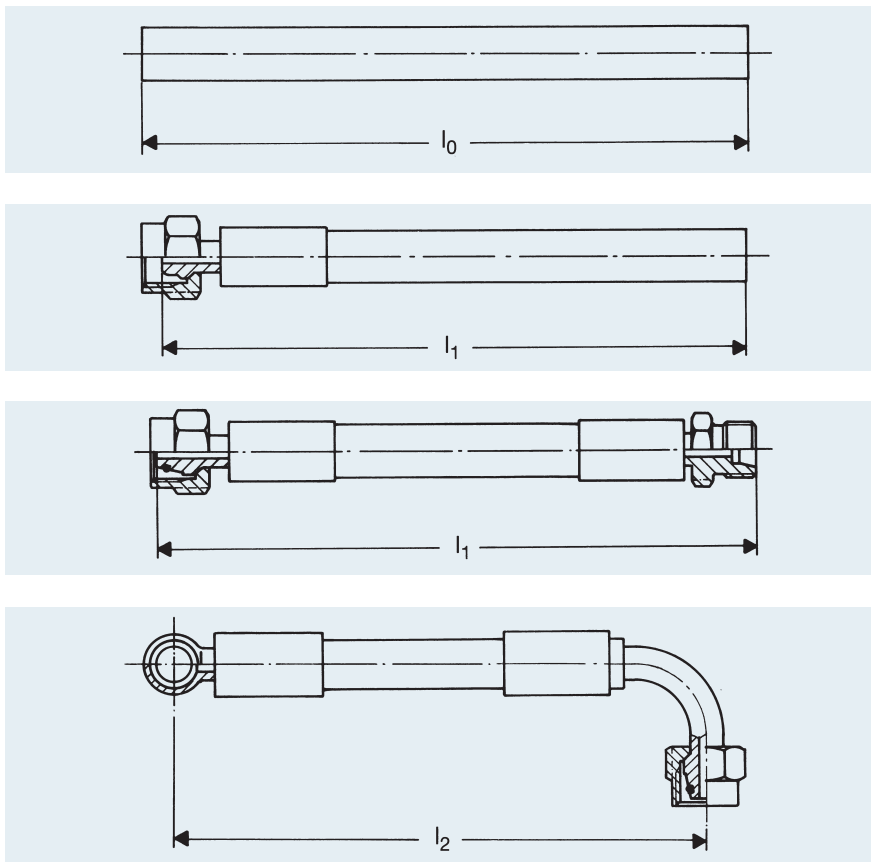
3. The types of coupling are defined by abbreviations and specification numbers.

|  |         |           |
|--|---------|-----------|
| Examples:  | Abbrev. | Spec. no. |
|  | BEL     | 100       |
|  | CEL     | 200       |
|  | DKL     | 290       |
| Further abbreviations and spec. nos. are given in the coupling tables. |         |           |

4. A hose assembly with only one coupling is given the specification number 000 for the end without a coupling.

5. Determining the nominal length of hose assemblies.

Some examples for showing the lengths of hoses and hose assemblies are given here.



6. Recommended standard lengths  $l_1$  and  $l_2$  of hose assemblies.

|     |     |      |      |      |       |
|-----|-----|------|------|------|-------|
| 160 | 400 | 1000 | 1800 | 4000 | 10000 |
| 200 | 500 | 1250 | 2000 | 5000 | 12500 |
| 250 | 630 | 1400 | 2500 | 6300 | 14000 |
| 315 | 800 | 1600 | 3150 | 8000 | 16000 |

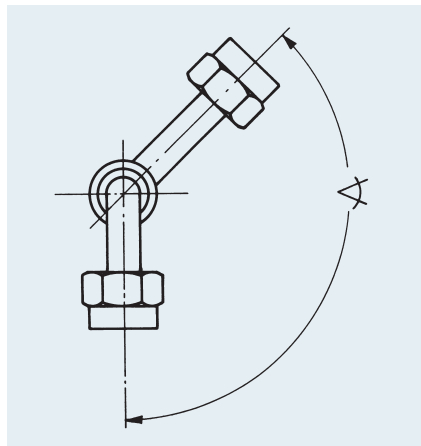
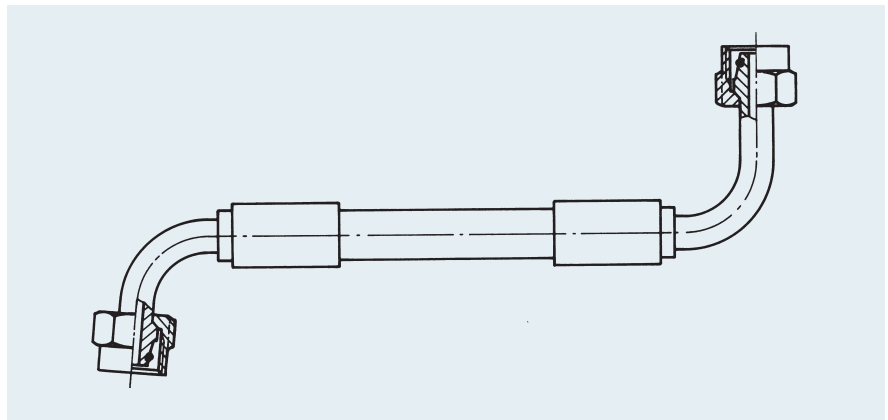
**Points to remember when ordering:**

7. Permissible deviations from measurements  $l_1$  and  $l_2$  for installed hose assemblies. The manufacturing tolerances comply with DIN 20066.

| Length $l_1$ and $l_2$ | Tolerance<br>up to DN 25 | from DN 32<br>up to DN 50 | from DN 60<br>up to DN 100 |
|------------------------|--------------------------|---------------------------|----------------------------|
| up to 630              | + 7<br>- 3               | + 12<br>- 4               |                            |
| from 630 to 1250       | + 12<br>- 4              | + 20<br>- 6               | + 25<br>- 6                |
| from 1250 to 2500      | + 20<br>- 6              | + 25<br>- 6               |                            |
| from 2500 to 8000      | + 1,5 %<br>- 0,5 %       |                           |                            |
| over 8000              | + 3 %<br>- 1 %           |                           |                            |

8. Positioning of elbows on hose assemblies

- If no details are given to the contrary, the elbows are fitted in such a way that they both point in the same direction.
- If the elbows are to be turned round, the angle concerned must be stated. It is always given in a counter-clockwise direction.
- The elbow with the smaller bending angle always points down.



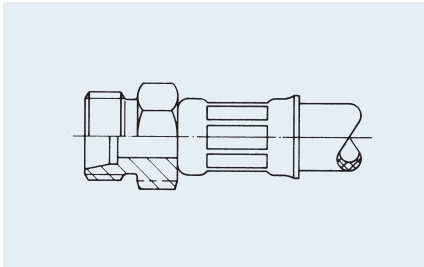
Couplings illustrated turned in plane of projection

## Illustrations

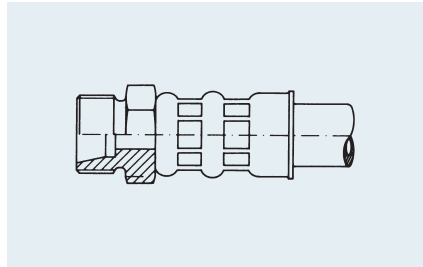
The various ContiTech Techno-Chemie hose couplings are referred to throughout the brochure (in both text and illustrations) by their abbreviation and in some cases illustrated uncrimped (for self-mounting presses).

The crimped version of the following types is illustrated for ease of understanding:

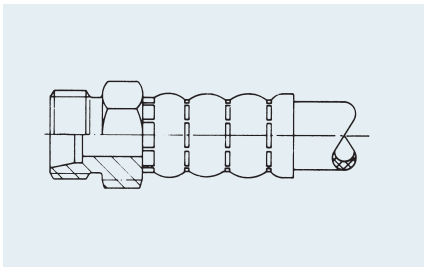
### NK-ML



### NLD

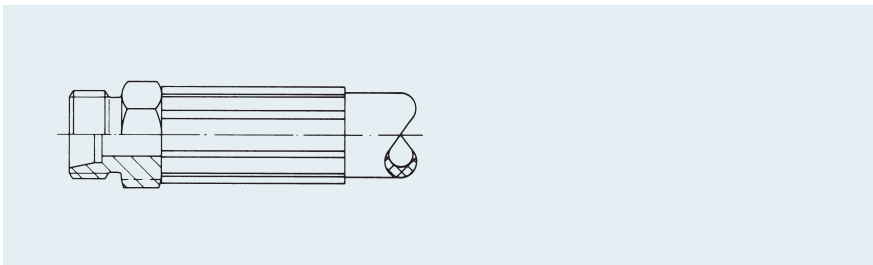


### TL



### TP/TLP (DN 6-16)

### WL (DN 20-32)



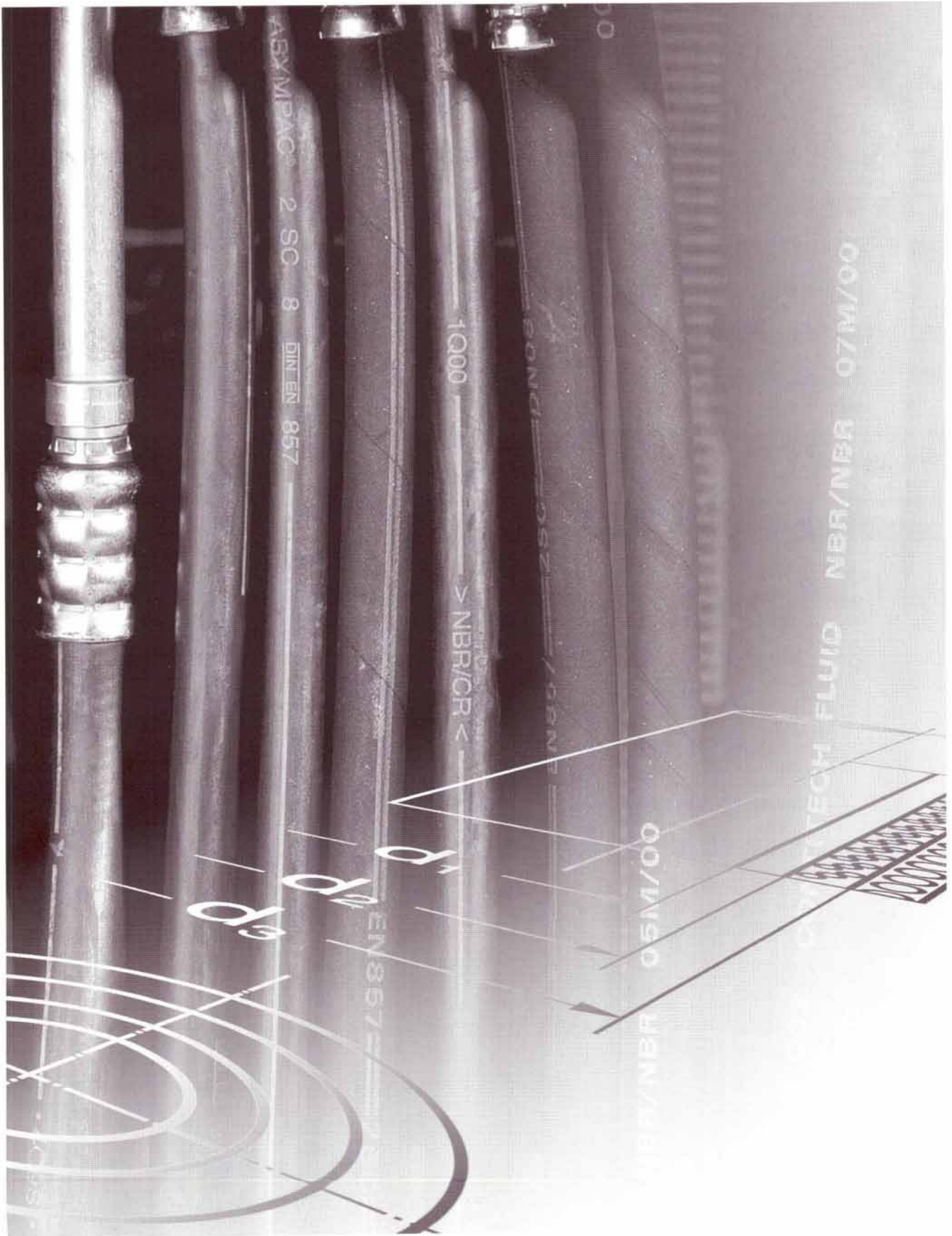
After selection of hoses and connections, and with the help of our crimping data sheets on positioning the fittings, it is easy to complete hose assemblies using suitable crimpers.





## Hoses

|   |               |
|---|---------------|
| <b>Low pressure</b>   | Pages 24 - 32 |
| <b>Medium pressure</b>  | Pages 33 - 34 |
| <b>High and EHP</b> (with steel-wire braid reinforcement )    | Pages 35 - 37 |
| <b>High and EHP</b> (with steel-wire spiral reinforcement)    | Pages 38 - 38 |
| <b>Plastic hoses</b> (with textile braid reinforcement)       | Pages 39 - 41 |
| <b>Teflon</b> (with stainless steel-wire braid reinforcement) | Pages 42 - 42 |



## Typ: A 2234



**Construction:** hose of synthetic rubber  
single steel wire braid  
TCH-Silverflex® genuine only with the blue marking ribbon

**Temperature range:** -35°C to 80°C

**Application:** see resistance table

**Coupling series:** NK/NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 2  | 4,5             | 9,5             | 25                  | 60                       | 30                      | 20                             |               | 130             | 22 3402 000 000 |
| 4  | 5,5             | 10,5            | 25                  | 60                       | 30                      | 20                             |               | 150             | 22 3404 000 000 |
| 6  | 7,5             | 12,5            | 30                  | 50                       | 25                      | 15                             |               | 170             | 22 3406 000 000 |
| 8  | 9               | 14              | 40                  | 50                       | 25                      | 15                             |               | 210             | 22 3408 000 000 |
| 10 | 11              | 17              | 50                  | 50                       | 25                      | 15                             |               | 330             | 22 3410 000 000 |
| 12 | 14              | 21              | 70                  | 50                       | 25                      | 15                             |               | 420             | 22 3413 000 000 |
| 16 | 17              | 25              | 100                 | 50                       | 25                      | 15                             |               | 550             | 22 3416 000 000 |
| 20 | 21,8            | 31              | 120                 | 50                       | 25                      | 15                             |               | 760             | 22 3420 000 000 |
| 25 | 25              | 35,8            | 150                 | 40                       | 20                      | 12                             |               | 900             | 22 3425 000 000 |

## Typ: AH 2246



**Norm:** This hose type corresponds to DIN 4798-A + DIN EN ISO 6806

**Construction:** hose of synthetic rubber  
single steel wire braid  
TCH-Silverflex® genuine only with the blue marking ribbon

**Temperature range:** -30°C to 100°C

**Application:** fuel oil EL – see resistance table

**Coupling series:** NK

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 5  | 5,5             | 10,5            | 50                  | 40                       | 20                      | 10                             |               | 150             | 22 4604 000 000 |
| 6  | 7,5             | 12,5            | 60                  | 40                       | 20                      | 10                             |               | 170             | 22 4606 000 000 |
| 8  | 9,5             | 14,5            | 75                  | 40                       | 20                      | 10                             |               | 210             | 22 4608 000 000 |

**Typ: GCN 2230**

**Construction:** hose of synthetic rubber  
single textile braid

**Temperature range:** -35°C to 80°C

**Application:** see resistance table

**Coupling series:** NK/NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 2  | 4,5             | 9,5             | 35                  | 60                       | 30                      | 20                             |               | 80              | 22 3002 000 000 |
| 4  | 5,5             | 10,5            | 40                  | 60                       | 30                      | 20                             |               | 100             | 22 3004 000 000 |
| 6  | 7,5             | 12,5            | 50                  | 50                       | 25                      | 15                             |               | 120             | 22 3006 000 000 |
| 8  | 9,5             | 15,5            | 60                  | 50                       | 25                      | 15                             |               | 160             | 22 3008 000 000 |
| 10 | 11              | 17,5            | 70                  | 50                       | 25                      | 15                             |               | 190             | 22 3010 000 000 |
| 12 | 15              | 23              | 80                  | 40                       | 20                      | 12                             |               | 340             | 22 3013 000 000 |
| 16 | 16              | 25              | 100                 | 40                       | 15                      | 10                             |               | 380             | 22 3016 000 000 |

**Typ: GCNA 2277**

**Construction:** hose of synthetic rubber  
single textile braid reinforcement  
single steel wire braid  
TCH-Silverflex® genuine only with the blue marking ribbon

**Temperature range:** -35°C to 80°C

**Application:** see resistance table

**Coupling series:** NK/NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 2  | 4,5             | 10,5            | 40                  | 90                       | 45                      | 30                             |               | 140             | 22 7702 000 000 |
| 4  | 5,5             | 11,5            | 40                  | 90                       | 45                      | 30                             |               | 160             | 22 7704 000 000 |
| 6  | 7,5             | 13,5            | 50                  | 90                       | 45                      | 30                             |               | 190             | 22 7706 000 000 |
| 8  | 9,5             | 16,5            | 60                  | 75                       | 38                      | 25                             |               | 290             | 22 7708 000 000 |
| 10 | 11              | 18,5            | 70                  | 75                       | 38                      | 25                             |               | 330             | 22 7710 000 000 |
| 12 | 15              | 24              | 85                  | 75                       | 38                      | 25                             |               | 480             | 22 7713 000 000 |

## Typ: GC/W 2225



**Construction:** hose of synthetic rubber  
single textile braid  
steel wire reinforcement  
single textile braid

**Temperature range:** -30°C to 80°C

**Application:** see resistance table

**Coupling series:** NLD/TL/UPR

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 12 | 13              | 22              | 60                  | 80                       | 40                      | 25                             | -0,8          | 300             | 22 2513 000 000 |
| 16 | 16              | 25              | 90                  | 50                       | 25                      | 15                             | -0,7          | 350             | 22 2516 000 000 |
| 20 | 20              | 30              | 105                 | 50                       | 25                      | 15                             | -0,65         | 450             | 22 2520 000 000 |
| 25 | 25              | 35,5            | 120                 | 50                       | 25                      | 15                             | -0,6          | 580             | 22 2525 000 000 |
| 32 | 32              | 42,5            | 175                 | 50                       | 25                      | 15                             | -0,9          | 820             | 22 2532 000 000 |
| 40 | 40              | 51,5            | 270                 | 30                       | 15                      | 10                             | -0,8          | 900             | 22 2540 000 000 |
| 50 | 50              | 61,5            | 320                 | 30                       | 15                      | 10                             | -0,7          | 1200            | 22 2550 000 000 |
| 60 | 60              | 72,5            | 360                 | 30                       | 15                      | 10                             | -0,6          | 1630            | 22 2560 000 000 |

## Typ: GC/WA 2226



**Construction:** hose of synthetic rubber  
single textile braid steel wire reinforcement  
single textile braid  
steel wire braid

**Temperature range:** -30°C to 80°C

**Application:** see resistance table

**Coupling series:** NLD/TL/UPR

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 12 | 13              | 23              | 70                  | 100                      | 55                      | 35                             | -0,8          | 470             | 22 2613 000 000 |
| 16 | 16              | 26              | 90                  | 90                       | 45                      | 30                             | -0,7          | 520             | 22 2616 000 000 |
| 20 | 20              | 31,5            | 105                 | 75                       | 38                      | 25                             | -0,65         | 630             | 22 2620 000 000 |
| 25 | 25              | 37              | 120                 | 75                       | 38                      | 24                             | -0,6          | 730             | 22 2625 000 000 |
| 32 | 32              | 44              | 175                 | 70                       | 35                      | 22                             | -0,9          | 990             | 22 2632 000 000 |
| 40 | 40              | 53              | 280                 | 60                       | 30                      | 20                             | -0,8          | 1120            | 22 2640 000 000 |
| 50 | 50              | 63              | 335                 | 60                       | 30                      | 18                             | -0,7          | 1400            | 22 2650 000 000 |
| 60 | 60              | 73,5            | 400                 | 50                       | 25                      | 15                             | -0,6          | 1730            | 22 2660 000 000 |



## Typ: GCDR 2286



**Construction:** hose of synthetic rubber  
single steel wire reinforcement  
single textile braid

**Temperature range:** -40°C to 95°C

**Application:** see resistance table

**Coupling series:** NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 16 | 16              | 25              | 90                  | 100                      | 50                      | 25                             | -0,9          | 460             | 22 8616 000 000 |
| 20 | 20              | 30              | 105                 | 100                      | 50                      | 25                             | -0,9          | 620             | 22 8620 000 000 |
| 25 | 25              | 35,5            | 120                 | 100                      | 45                      | 23                             | -0,9          | 720             | 22 8625 000 000 |

## Typ: GCDRW 2291



**Construction:** hose of synthetic rubber  
single steel braid steel wire reinforcement  
single textile braid

**Temperature range:** -40°C to 95°C

**Application:** see resistance table

**Coupling series:** NLD/TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 12 | 13              | 22              | 60                  | 75                       | 38                      | 25                             | -0,9          | 330             | 22 9113 000 000 |
| 32 | 32              | 42,5            | 175                 | 90                       | 45                      | 23                             | -0,9          | 1070            | 22 9132 000 000 |
| 40 | 38              | 49,5            | 270                 | 90                       | 45                      | 23                             | -0,9          | 1220            | 22 9140 000 000 |
| 50 | 50              | 61,5            | 320                 | 90                       | 45                      | 23                             | -0,9          | 1650            | 22 9150 000 000 |

## Typ: GCADR 2287



**Construction:** hose of synthetic rubber  
single steel wire reinforcement  
single textile braid  
single steel braid

**Temperature range:** -40°C to 95°C

**Application:** see resistance table

**Coupling series:** NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 16 | 16              | 26              | 90                  | 100                      | 50                      | 25                             | -0,9          | 590             | 22 8716 000 000 |
| 20 | 20              | 31              | 105                 | 100                      | 50                      | 25                             | -0,9          | 720             | 22 8720 000 000 |
| 25 | 25              | 37              | 120                 | 100                      | 45                      | 23                             | -0,9          | 920             | 22 8725 000 000 |

## Typ: GCADRW 2292



**Construction:** hose of synthetic rubber  
single steel braid steel wire reinforcement  
single textile braid single  
steel wire braid

**Temperature range:** -40°C to 95°C

**Application:** see resistance table

**Coupling series:** NLD/TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 13 | 13              | 23              | 60                  | 75                       | 38                      | 25                             | -0,9          | 480             | 22 9213 000 000 |
| 32 | 32              | 44              | 175                 | 90                       | 45                      | 23                             | -0,9          | 1420            | 22 9232 000 000 |
| 40 | 38              | 51              | 270                 | 90                       | 45                      | 23                             | -0,9          | 1810            | 22 9240 000 000 |
| 50 | 50              | 63              | 320                 | 90                       | 45                      | 23                             | -0,9          | 2250            | 22 9250 000 000 |

## Typ: OLN 2255



**Construction:** hose of synthetic rubber  
single or two textile braids  
hose of synthetic rubber, abrasion  
ozon and light resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C

**Application:** see resistance table

**Coupling series:** NK/NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|----------------|-----------------|
| 2  | 4               | 10              | 30                  | 80                       | 40                      | 25                             | -0,91         | 100            | 22 5502 000 000 |
| 4  | 6               | 12              | 40                  | 80                       | 40                      | 25                             | -0,91         | 110            | 22 5504 000 000 |
| 5  | 4,8             | 10,8            | 30                  | 80                       | 40                      | 25                             | -0,91         | 83             | 22 5505 000 000 |
| 6  | 8               | 14              | 50                  | 80                       | 40                      | 25                             | -0,91         | 130            | 22 5506 000 000 |
| 8  | 9               | 15              | 50                  | 80                       | 40                      | 25                             | -0,87         | 140            | 22 5508 000 000 |
| 10 | 11              | 18              | 70                  | 60                       | 30                      | 20                             | -0,81         | 200            | 22 5510 000 000 |
| 12 | 13              | 22              | 90                  | 60                       | 30                      | 20                             | -0,81         | 300            | 22 5513 000 000 |
| 16 | 16              | 25              | 110                 | 50                       | 25                      | 15                             | -0,71         | 360            | 22 5516 000 000 |
| 20 | 20              | 30              | 130                 | 40                       | 20                      | 12                             | -0,67         | 490            | 22 5520 000 000 |

## Typ: OLNW 2731



**Construction:** hose of synthetic rubber  
two textile braids steel wire reinforcement  
hose of synthetic rubber, abrasion  
ozon and light resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C

Approved by GERMANISCHER LLOYD to be used  
with additional flame protection

**Application:** see resistance table

**Coupling series:** NLD/TL/UPR/NS

| DN  | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈g/m | Part-No.        |
|-----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|----------------|-----------------|
| 12  | 13              | 22              | 90                  | 55                       | 27                      | 20                             | -0,9          | 340            | 27 3113 000 000 |
| 16  | 16              | 25              | 110                 | 45                       | 21                      | 15                             | -0,9          | 400            | 27 3116 000 000 |
| 20  | 20              | 30              | 130                 | 36                       | 18                      | 12                             | -0,9          | 530            | 27 3120 000 000 |
| 25  | 25              | 35,5            | 150                 | 30                       | 15                      | 10                             | -0,9          | 660            | 27 3125 000 000 |
| 32  | 32              | 42,5            | 180                 | 25                       | 12                      | 8                              | -0,9          | 840            | 27 3132 000 000 |
| 40  | 40              | 51,5            | 240                 | 20                       | 10                      | 6                              | -0,9          | 1100           | 27 3140 000 000 |
| 50  | 50              | 61,5            | 300                 | 15                       | 7                       | 5                              | -0,7          | 1400           | 27 3150 000 000 |
| 60  | 60              | 72              | 350                 | 15                       | 7                       | 5                              | -0,6          | 1740           | 27 3160 000 000 |
| 80  | 80              | 94              | 480                 | 15                       | 7                       | 5                              | -0,6          | 2550           | 27 3180 000 000 |
| 100 | 100             | 116             | 600                 | 15                       | 7                       | 5                              | -0,6          | 4200           | 27 3191 000 000 |

## Typ: OLNH 2265



**Construction:** hose of synthetic rubber  
single or two textile braids  
beginning DN 25 steel wire reinforcement (Typ: OLNHW 2279)  
hose of synthetic rubber, abrasion, ozon and light resistant

**Temperature range:** -40°C to 120°C

**Remark:** temporary up to 130°C

This hose can be supplied as well with an additional steel wire cover (Typ: OLNHA 2266)

**Application:** see resistance table

**Coupling series:** NLD/TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 2  | 5               | 11              | 40                  | 200                      | 75                      | 30                             | -0,9          | 100             | 22 6530 000 000 |
| 4  | 6               | 14              | 40                  | 200                      | 100                     | 30                             | -0,9          | 110             | 22 6504 000 000 |
| 6  | 8               | 14              | 50                  | 150                      | 75                      | 30                             | -0,9          | 140             | 22 6506 000 000 |
| 8  | 9,5             | 15,5            | 55                  | 140                      | 70                      | 27                             | -0,85         | 150             | 22 6508 000 000 |
| 10 | 12              | 19              | 70                  | 160                      | 70                      | 27                             | -0,8          | 210             | 22 6512 000 000 |
| 12 | 13              | 22              | 80                  | 120                      | 60                      | 25                             | -0,75         | 320             | 22 6513 000 000 |
| 16 | 16              | 25              | 110                 | 110                      | 55                      | 20                             | -0,7          | 380             | 22 6516 000 000 |
| 20 | 20              | 30              | 130                 | 100                      | 50                      | 20                             | -0,6          | 520             | 22 6520 000 000 |
| 25 | 25,4            | 35,9            | 125                 | 100                      | 50                      | 20                             | -0,65         | 690             | 22 7925 000 000 |
| 32 | 32              | 42,5            | 160                 | 100                      | 50                      | 20                             | -0,6          | 820             | 22 7932 000 000 |

## Typ: OLNS1 2370



**Construction:** hose of synthetic rubber  
single or two PA braids  
beginning DN 25 steel wire reinforcement  
hose of synthetic rubber, abrasion, ozon and light resistant

**Temperature range:** -35°C to 150°C

**Remark:** By a temperatur from 100°C it is possible to raise the pressure about 5 bar

**Application:** see resistance table

**Coupling series:** NLD/TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6               | 12              | 50                  | 250                      | 60                      | 30                             |               | 120             | 23 7006 000 000 |
| 8  | 8               | 14              | 60                  | 200                      | 60                      | 25                             |               | 140             | 23 7008 000 000 |
| 10 | 10              | 16              | 60                  | 200                      | 60                      | 25                             |               | 150             | 23 7010 000 000 |
| 12 | 12              | 19              | 70                  | 150                      | 40                      | 20                             |               | 210             | 23 7013 000 000 |
| 16 | 16              | 24              | 100                 | 150                      | 40                      | 20                             |               | 350             | 23 7016 000 000 |
| 20 | 20              | 30              | 130                 | 150                      | 40                      | 20                             |               | 520             | 23 7020 000 000 |
| 25 | 25              | 35,5            | 130                 | 150                      | 40                      | 20                             |               | 670             | 23 7025 000 000 |
| 32 | 32              | 43,5            | 260                 | 120                      | 30                      | 12                             |               | 850             | 23 7032 000 000 |



## Typ: SOH 2367



**Construction:** hose of synthetic rubber  
single steel wire reinforcement  
single textile braid

**Temperature range:** -35°C to 150°C

**Application:** see resistance table

**Coupling series:** NLD/TL/UPR

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 16 | 16              | 26              | 150                 | 200                      | 100                     | 25                             | -0,7          | 500             | 23 6716 000 000 |
| 20 | 22              | 31,5            | 180                 | 200                      | 100                     | 25                             | -0,65         | 640             | 23 6720 000 000 |
| 25 | 25,4            | 35,9            | 200                 | 200                      | 100                     | 25                             | -0,6          | 700             | 23 6725 000 000 |
| 32 | 35              | 46,5            | 260                 | 140                      | 70                      | 20                             | -0,6          | 1160            | 23 6732 000 000 |
| 40 | 40              | 52              | 340                 | 100                      | 50                      | 20                             | -0,5          | 1290            | 23 6741 000 000 |
| 46 | 46              | 57              | 340                 | 100                      | 50                      | 20                             | -0,45         | 1400            | 23 6740 000 000 |
| 50 | 50              | 61              | 400                 | 80                       | 40                      | 20                             | -0,45         | 1490            | 23 6750 000 000 |
| 60 | 60              | 72              | 400                 | 80                       | 40                      | 20                             | -0,4          | 1920            | 23 6760 000 000 |
| 85 | 85              | 99              | 500                 | 80                       | 40                      | 15                             | -0,3          | 2800            | 23 6785 000 000 |

## Typ: DBSLK 2503



**Norm:** This hose type corresponds to DIN 74 310, TL 4720-004

**Construction:** hose of synthetic rubber  
single textile braid (beginning DN 12 Typ: 2308)  
hose of synthetic rubber, abrasion  
ozon and light resistant

**Temperature range:** -45°C to 70°C

**Remark:** temporary up to 100°C

**Application:** compresses air brake systems – see resistance table

**Coupling series:** NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 5  | 5               | 12              | 50                  | 50                       | 20                      | 10                             |               | 130             | 25 0305 000 000 |
| 6  | 7               | 14              | 55                  | 50                       | 20                      | 10                             |               | 160             | 25 0306 000 000 |
| 8  | 9               | 16              | 65                  | 50                       | 20                      | 10                             |               | 190             | 25 0308 000 000 |
| 10 | 11              | 18              | 70                  | 50                       | 20                      | 10                             |               | 220             | 25 0310 000 000 |
| 12 | 13              | 25              | 100                 | 50                       | 20                      | 10                             |               | 500             | 25 0813 000 000 |

## Typ: KRAV10 2102



**Norm:** This hose type corresponds to DIN 73 379-B

**Construction:** hose of synthetic rubber  
single textile braid

**Temperature range:** -30°C to 80°C

**Remark:** temporary up to 90°C  
Other DN dimensions on inquiry

**Application:** see resistance table

**Coupling series:** couplings on inquiry

| DN  | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|-----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 3,2 | 3,2             | 7               | 25                  | 50                       | 25                      | 10                             |               | 31,9            | 21 0214 000 000 |

## Typ: KRA20 2264



**Norm:** This hose type corresponds to DIN 73 379-A

**Construction:** hose of synthetic rubber  
single textile braid  
hose of synthetic rubber, abrasion  
ozon and light resistant

**Temperature range:** -30°C to 90°C

**Application:** see resistance table

**Coupling series:** NK/NLD

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 2  | 4               | 10              | 30                  | 80                       | 40                      | 25                             | -0,9          | 90              | 22 6402 000 000 |
| 4  | 6               | 12              | 40                  | 80                       | 40                      | 25                             | -0,9          | 120             | 22 6404 000 000 |
| 6  | 7,5             | 13,5            | 50                  | 40                       | 20                      | 10                             | -0,9          | 150             | 22 6424 000 000 |
| 8  | 9               | 15              | 50                  | 40                       | 20                      | 10                             | -0,85         | 160             | 22 6408 000 000 |
| 10 | 11              | 18              | 70                  | 50                       | 25                      | 15                             | -0,8          | 200             | 22 6410 000 000 |
| 12 | 12              | 19              | 80                  | 70                       | 25                      | 15                             | -0,8          | 220             | 22 6412 000 000 |
| 14 | 14              | 22              | 100                 | 40                       | 20                      | 10                             | -0,7          | 310             | 22 6414 000 000 |

Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.

**Typ: 1TE 2315**

**Norm:** This hose type corresponds to DIN EN 854

**Construction:** hose of synthetic rubber  
single textile braid  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Application:** see resistance table

**Coupling series:** ML

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g / m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-------------------|-----------------|
| 5  | 4,8             | 10,8            | 35                  | 100                      | 50                      | 25                             |               | 100               | 23 1505 000 000 |
| 6  | 6,4             | 12,4            | 45                  | 100                      | 50                      | 25                             |               | 110               | 23 1506 000 000 |
| 8  | 7,9             | 13,9            | 65                  | 80                       | 40                      | 20                             |               | 130               | 23 1508 000 000 |
| 10 | 9,5             | 15,5            | 75                  | 80                       | 40                      | 20                             |               | 150               | 23 1510 000 000 |
| 12 | 12,7            | 18,7            | 90                  | 64                       | 32                      | 16                             |               | 190               | 23 1513 000 000 |
| 16 | 15,9            | 22,9            | 115                 | 64                       | 32                      | 16                             |               | 280               | 23 1516 000 000 |
| 20 | 19              | 26              | 135                 | 40                       | 20                      | 12                             |               | 320               | 23 1520 000 000 |
| 25 | 25,4            | 33,4            | 165                 | 40                       | 20                      | 12                             |               | 490               | 23 1525 000 000 |

**Typ: 2TE 2335**

**Norm:** This hose type corresponds to DIN EN 854

**Construction:** hose of synthetic rubber  
single textile braid  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** This hose can be supplied as well with an additional steel wire cover  
(Typ: 2TEM 2817)

**Application:** see resistance table

**Coupling series:** ML/TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g / m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-------------------|-----------------|
| 5  | 4,8             | 11,8            | 35                  | 320                      | 160                     | 80                             | -0,6          | 130               | 23 3505 000 000 |
| 6  | 6,4             | 13,4            | 40                  | 300                      | 150                     | 75                             | -0,6          | 160               | 23 3506 000 000 |
| 8  | 7,9             | 14,9            | 50                  | 270                      | 136                     | 68                             | -0,6          | 170               | 23 3508 000 000 |
| 10 | 9,5             | 16,5            | 60                  | 250                      | 126                     | 63                             | -0,6          | 200               | 23 3510 000 000 |
| 12 | 12,7            | 19,7            | 70                  | 232                      | 116                     | 58                             | -0,6          | 250               | 23 3513 000 000 |
| 16 | 15,9            | 23,9            | 90                  | 200                      | 100                     | 50                             |               | 340               | 23 3516 000 000 |
| 20 | 19              | 27              | 110                 | 180                      | 90                      | 45                             |               | 390               | 23 3520 000 000 |
| 25 | 25,4            | 34,5            | 150                 | 160                      | 80                      | 40                             |               | 570               | 23 3525 000 000 |

## Typ: 3TE 2336



**Norm:** This hose type corresponds to DIN EN 854

**Construction:** hose of synthetic rubber  
single textile braid  
beginning DN 50 steel wire reinforcement (Typ: 3TB 2326)  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C

**Application:** see resistance table

**Coupling series:** TL/UPR/NS

| DN  | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|-----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 5   | 4,8             | 12,8            | 40                  | 640                      | 320                     | 160                            | -0,8          | 130             | 23 3605 000 000 |
| 6   | 6,4             | 14,4            | 45                  | 580                      | 290                     | 145                            | -0,8          | 160             | 23 3606 000 000 |
| 8   | 7,9             | 16,9            | 55                  | 520                      | 260                     | 130                            | -0,8          | 220             | 23 3608 000 000 |
| 10  | 9,5             | 18,5            | 70                  | 440                      | 220                     | 110                            | -0,8          | 250             | 23 3610 000 000 |
| 12  | 12,7            | 21,7            | 85                  | 372                      | 186                     | 93                             | -0,8          | 320             | 23 3613 000 000 |
| 16  | 15,9            | 25,9            | 105                 | 320                      | 160                     | 80                             | -0,8          | 410             | 23 3616 000 000 |
| 20  | 19              | 29              | 130                 | 280                      | 140                     | 70                             | -0,6          | 490             | 23 3620 000 000 |
| 25  | 25,4            | 35,9            | 150                 | 220                      | 110                     | 55                             | -0,6          | 640             | 23 3625 000 000 |
| 32  | 31,8            | 42,3            | 190                 | 180                      | 110                     | 45                             |               | 790             | 23 3632 000 000 |
| 40  | 38,1            | 49,6            | 240                 | 160                      | 96                      | 40                             |               | 1060            | 23 3640 000 000 |
| 40  | 38,1            | 49,6            | 240                 | 160                      | 80                      | 40                             |               | 1060            | 23 3640 000 000 |
| 50  | 50,8            | 62,3            | 300                 | 132                      | 66                      | 33                             |               | 1390            | 23 3650 000 000 |
| 50  | 50,8            | 62,3            | 300                 | 130                      | 78                      | 33                             |               | 1390            | 23 2650 000 000 |
| 60  | 60              | 72              | 400                 | 100                      | 60                      | 25                             |               | 1710            | 23 2660 000 000 |
| 60  | 60              | 72              | 400                 | 100                      | 50                      | 25                             |               | 1710            | 23 3660 000 000 |
| 80  | 80              | 94              | 500                 | 70                       | 42                      | 18                             |               | 2650            | 23 2680 000 000 |
| 80  | 80              | 94              | 500                 | 72                       | 36                      | 18                             |               | 2650            | 23 3680 000 000 |
| 100 | 100             | 116             | 600                 | 40                       | 20                      | 10                             |               | 4240            | 23 3691 000 000 |
| 100 | 100             | 116             | 600                 | 40                       | 24                      | 10                             |               | 4240            | 23 2691 000 000 |

Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.



**Typ: 1SN 2432**

**Norm:** This hose type corresponds to DIN EN 853

**Construction:** hose of synthetic rubber  
two steel wire braids  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
In special technical range of applications it is possible to reduce the bend radius after conference with the technic  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** TL/ES

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 13,4            | 100                 | 900                      | 450                     | 225                            | -0,8          | 220             | 24 3206 000 000 |
| 8  | 7,9             | 15              | 115                 | 850                      | 430                     | 215                            | -0,8          | 270             | 24 3208 000 000 |
| 10 | 9,5             | 17,4            | 130                 | 720                      | 435                     | 180                            | -0,8          | 340             | 24 3210 000 000 |
| 13 | 12,7            | 20,6            | 180                 | 640                      | 385                     | 160                            | -0,8          | 430             | 24 3213 000 000 |
| 16 | 15,9            | 23,7            | 200                 | 520                      | 315                     | 130                            | -0,8          | 510             | 24 3216 000 000 |
| 20 | 19              | 27,7            | 240                 | 420                      | 255                     | 105                            | -0,8          | 600             | 24 3220 000 000 |
| 25 | 25,4            | 35,6            | 300                 | 350                      | 210                     | 88                             | -0,8          | 760             | 24 3225 000 000 |
| 32 | 31,8            | 43,5            | 420                 | 250                      | 150                     | 63                             | -0,6          | 1160            | 24 3232 000 000 |
| 40 | 38,1            | 50,6            | 500                 | 200                      | 120                     | 50                             | -0,6          | 1430            | 24 3240 000 000 |
| 50 | 50,8            | 64              | 630                 | 160                      | 96                      | 40                             | -0,6          | 1930            | 24 3250 000 000 |

**Typ: 1SC 2911**

**Norm:** This hose type corresponds to DIN EN 857

**Construction:** hose of synthetic rubber  
single steel wire braids  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 12,1            | 75                  | 900                      | 450                     | 225                            | -0,8          | 190             | 29 1106 000 000 |
| 8  | 7,9             | 13,8            | 85                  | 860                      | 430                     | 215                            | -0,8          | 210             | 29 1108 000 000 |
| 10 | 9,5             | 15,9            | 90                  | 720                      | 360                     | 180                            | -0,8          | 290             | 29 1110 000 000 |
| 13 | 12,7            | 19,5            | 130                 | 640                      | 320                     | 160                            | -0,8          | 380             | 29 1113 000 000 |
| 16 | 15,9            | 22,5            | 150                 | 520                      | 260                     | 130                            | -0,8          | 400             | 29 1116 000 000 |

## Typ: 2SN 2433



**Norm:** This hose type corresponds to DIN EN 853

**Construction:** hose of synthetic rubber  
two steel wire braids  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
In special technical range of applications it is possible to reduce the bend radius after conference with the technic  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** TL/ES

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 15              | 100                 | 1600                     | 800                     | 400                            | -0,95         | 420             | 24 3306 000 000 |
| 8  | 7,9             | 16,6            | 115                 | 1400                     | 700                     | 350                            | -0,95         | 490             | 24 3308 000 000 |
| 10 | 9,5             | 19              | 130                 | 1320                     | 660                     | 330                            | -0,95         | 580             | 24 3310 000 000 |
| 12 | 12,7            | 22,2            | 180                 | 1100                     | 550                     | 275                            | -0,95         | 670             | 24 3313 000 000 |
| 16 | 15,9            | 25,4            | 200                 | 1000                     | 500                     | 250                            | -0,95         | 800             | 24 3316 000 000 |
| 20 | 19              | 29,3            | 240                 | 850                      | 430                     | 215                            | -0,8          | 920             | 24 3320 000 000 |
| 25 | 25,4            | 38,1            | 300                 | 650                      | 325                     | 165                            | -0,8          | 1290            | 24 3325 000 000 |
| 32 | 31,8            | 48,3            | 420                 | 500                      | 250                     | 125                            | -0,8          | 1920            | 24 3332 000 000 |
| 40 | 38,1            | 54,6            | 500                 | 360                      | 180                     | 90                             | -0,8          | 2230            | 24 3340 000 000 |
| 50 | 50,8            | 67,3            | 630                 | 320                      | 160                     | 80                             | -0,8          | 3200            | 24 3350 000 000 |

## Typ: 2SC 2437



**Norm:** This hose type corresponds to DIN EN 857

**Construction:** hose of synthetic rubber  
two steel wire braids  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
In special technical range of applications it is possible to reduce the bend radius after conference with the technic  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 13,4            | 75                  | 1600                     | 960                     | 400                            | -0,95         | 280             | 24 3706 000 000 |
| 8  | 7,9             | 15              | 85                  | 1400                     | 840                     | 350                            | -0,95         | 330             | 24 3708 000 000 |
| 10 | 9,5             | 17,4            | 90                  | 1320                     | 795                     | 330                            | -0,95         | 420             | 24 3710 000 000 |
| 12 | 12,7            | 20,6            | 130                 | 1100                     | 660                     | 275                            | -0,95         | 520             | 24 3713 000 000 |
| 16 | 15,9            | 23,7            | 170                 | 1000                     | 600                     | 250                            | -0,95         | 600             | 24 3716 000 000 |
| 20 | 19              | 27,7            | 200                 | 850                      | 510                     | 215                            |               | 760             | 24 3720 000 000 |
| 25 | 25,4            | 35,6            | 230                 | 650                      | 390                     | 165                            |               | 1160            | 24 3725 000 000 |

**Typ: 1SC-HP 2912**

**Construction:** hose of synthetic rubber  
single steel wire braid  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.               |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|------------------------|
| 8  | 7,9             | 13,8            | 85                  | 1000                     | 500                     | 250                            | -0,8          |                 | <b>29 1208 000 000</b> |
| 10 | 9,5             | 15,9            | 90                  | 900                      | 450                     | 225                            | -0,8          |                 | <b>29 1210 000 000</b> |
| 13 | 12,7            | 19,5            | 130                 | 760                      | 380                     | 190                            | -0,8          |                 | <b>29 1213 000 000</b> |

**Typ: 2SN-HP 2412**

**Construction:** hose of synthetic rubber  
single steel wire braid  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.               |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|------------------------|
| 16 | 15,9            | 25              | 170                 | 1200                     | 600                     | 300                            |               | 770             | <b>24 1216 000 000</b> |
| 20 | 19              | 29,3            | 230                 | 1120                     | 560                     | 280                            |               | 1080            | <b>24 1220 000 000</b> |

Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.

## Typ: 4SP 2450



**Norm:** This hose type corresponds to DIN EN 856

**Construction:** hose of synthetic rubber  
4 spiral layers  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
In special technical range of applications it is possible to reduce the bend radius after conference with the technic  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** TL/TLP/WL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 17,9            | 150                 | 2100                     | 900                     | 525                            |               | 600             | 24 5006 000 000 |
| 10 | 9,5             | 21,4            | 180                 | 1780                     | 890                     | 445                            |               | 800             | 24 5010 000 000 |
| 13 | 12,7            | 24,6            | 230                 | 1660                     | 830                     | 415                            |               | 950             | 24 5013 000 000 |
| 16 | 15,9            | 28,2            | 250                 | 1600                     | 700                     | 400                            |               | 1200            | 24 5016 000 000 |
| 20 | 19              | 32,2            | 300                 | 1585                     | 700                     | 395                            |               | 1600            | 24 5020 000 000 |

## Typ: 4SH (4SPS) 2457



**Norm:** This hose type corresponds to DIN EN 856

**Construction:** hose of synthetic rubber  
4 spiral layers  
hose of synthetic rubber, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 125°C  
Approved by GERMANISCHER LLOYD

**Application:** see resistance table

**Coupling series:** WL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 20 | 19              | 32,2            | 280                 | 1720                     | 840                     | 420                            |               | 1520            | 24 5720 000 000 |
| 25 | 25,4            | 39,7            | 340                 | 1680                     | 760                     | 420                            |               | 2060            | 24 5725 000 000 |
| 32 | 31,8            | 45,5            | 460                 | 1350                     | 650                     | 420                            |               | 2530            | 24 5732 000 000 |

Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.



**Typ: HPOB min. 2322**

**Construction:** hose of plastic  
two textile braids  
hose of plastic, abrasion resistant

**Temperature range:** -40°C to 100°C

**Remark:** temporary up to 120°C

The maximum permissible operating pressure is based on a safety factor 1:3  
an applies to liquids. For higher safety requirements, the permissible  
operating pressure is low

**Application:** see resistance table

**Coupling series:** Couplings on inquiry

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.               |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|------------------------|
| 3  | 2,5             | 7               | 25                  | 1200                     | 720                     | 320                            |               | 30              | <b>23 2203 000 000</b> |

**Typ: HPC 2364**

**Construction:** hose of plastic  
single textile braid  
hose of plastic, abrasion resistant

**Temperature range:** -54°C to 100°C

**Remark:** temporary up to 120°C

Higher flexibility than other comparable plastic hoses, low weight, high  
pulse resistance, easy to reinforce

The maximum permissible operating pressure is based on a safety factor 1:3  
an applies

**Application:** see resistance table

**Coupling series:** Couplings on inquiry

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.               |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|------------------------|
| 4  | 4,3             | 8,25            | 40                  | 1350                     | 850                     | 420                            |               | 40              | <b>23 6404 000 000</b> |
| 6  | 6               | 10,5            | 60                  | 1050                     | 700                     | 360                            |               | 70              | <b>23 6406 000 000</b> |

## Typ: 2SK 2491



**Norm:** This hose type corresponds compressive strengt to DIN EN 857

**Construction:** hose of plastic  
two steel wire braids  
hose of snthetic rubber, abrasion resistant

**Temperature range:** -50°C to 125°C

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,4             | 12,9            | 75                  | 1700                     | 1020                    | 400                            | -0,95         | 257             | 24 9106 000 000 |
| 8  | 7,9             | 14,4            | 85                  | 1450                     | 870                     | 350                            | -0,95         | 288             | 24 9108 000 000 |
| 10 | 9,5             | 16              | 90                  | 1400                     | 840                     | 330                            | -0,95         | 352             | 24 9110 000 000 |
| 12 | 12,7            | 19,4            | 130                 | 1180                     | 710                     | 275                            | -0,95         | 456             | 24 9113 000 000 |
| 16 | 15,9            | 22,8            | 180                 | 1050                     | 630                     | 250                            | -0,95         | 558             | 24 9116 000 000 |

## Typ: SR1 2480



**Construction:** hose of plastic  
single steel wire braid  
hose of plastic, abrasion resistant

**Temperature range:** -50°C to 100°C

**Remark:** temporary up to 120°C

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,6             | 11,7            | 70                  | 1100                     | 550                     | 260                            |               | 170             | 24 8006 000 000 |
| 8  | 8,2             | 13,2            | 80                  | 1000                     | 500                     | 250                            |               | 200             | 24 8008 000 000 |
| 10 | 9,7             | 15,6            | 90                  | 900                      | 450                     | 225                            |               | 250             | 24 8010 000 000 |
| 12 | 13,1            | 18,3            | 120                 | 700                      | 340                     | 170                            |               | 330             | 24 8013 000 000 |
| 16 | 16,1            | 21,7            | 150                 | 560                      | 280                     | 140                            |               | 360             | 24 8016 000 000 |
| 20 | 19,3            | 26              | 180                 | 360                      | 180                     | 90                             |               | 470             | 24 8020 000 000 |
| 25 | 25,6            | 33              | 230                 | 340                      | 170                     | 85                             |               | 650             | 24 8025 000 000 |

## Typ: PL7 2465



**Norm:** This hose type corresponds to SAE 100R7/DIN EN 855

**Construction:** hose of plastic  
single textile braid  
hose of plastic, abrasion resistant

**Temperature range:** -54°C to 100°C

**Remark:** Higher flexibility than other comparable plastic hoses, low weight, high pulse resistance, easy to reinforce  
This hose type can be supplied as well as a twin-hose (Typ: ZL7 2915)

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,6             | 13              | 75                  | 800                      | 400                     | 200                            |               | 110             | 24 6506 000 000 |
| 8  | 8,2             | 14,9            | 90                  | 700                      | 350                     | 180                            |               | 130             | 24 6508 000 000 |
| 10 | 9,8             | 16,5            | 115                 | 640                      | 320                     | 160                            |               | 150             | 24 6510 000 000 |
| 13 | 13              | 20,3            | 160                 | 550                      | 250                     | 135                            |               | 230             | 24 6513 000 000 |

## Typ: PL8 2466



**Norm:** This hose type corresponds to SAE 100R8/DIN EN 855

**Construction:** hose of plastic  
single or two textile braids  
hose of plastic, abrasion resistant

**Temperature range:** -54°C to 100°C

**Remark:** Higher flexibility than other comparable plastic hoses, low weight, high pulse resistance, easy to reinforce  
This hose type can be supplied as well as a twin-hose (Typ: ZL8 2916)

**Application:** see resistance table

**Coupling series:** TL

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 6  | 6,6             | 12,9            | 75                  | 1380                     | 690                     | 345                            |               | 100             | 24 6606 000 000 |
| 8  | 8,2             | 14,8            | 90                  | 1170                     | 585                     | 295                            |               | 130             | 24 6608 000 000 |
| 10 | 9,8             | 16,5            | 115                 | 1100                     | 550                     | 275                            |               | 150             | 24 6610 000 000 |

Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.

## Typ: TWS 2428



**Construction:** hose of corrugated PTFE  
single textile braid  
beginning DN 25 Typ:PTFEW 2425  
stainless steel wire braid

**Temperature range:** -54°C to 180°C

**Remark:** temporary up to 205°C  
High flexibility, resistance to temperature and chemical stability

**Application:** see resistance table

**Coupling series:** Couplings on inquiry

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 8  | 7,6             | 12,7            | 50                  | 200                      | 40                      | 15                             |               | 160             | 24 2808 000 000 |
| 10 | 9,8             | 15,3            | 50                  | 200                      | 40                      | 15                             |               | 190             | 24 2810 000 000 |
| 12 | 12,3            | 18,3            | 60                  | 200                      | 40                      | 15                             |               | 240             | 24 2813 000 000 |
| 16 | 15,6            | 21,6            | 70                  | 150                      | 40                      | 15                             |               | 330             | 24 2816 000 000 |
| 18 | 18,6            | 25              | 80                  | 150                      | 40                      | 15                             |               | 420             | 24 2818 000 000 |
| 20 | 19,9            | 26,9            | 80                  | 150                      | 40                      | 15                             |               | 420             | 24 2820 000 000 |
| 25 | 26,2            | 33,5            | 120                 | 120                      | 75                      | 25                             |               |                 | 24 2525 000 000 |
| 32 | 32,6            | 40,2            | 150                 | 120                      | 75                      | 25                             |               |                 | 24 2532 000 000 |
| 40 | 38,9            | 46,5            | 180                 | 100                      | 60                      | 20                             |               |                 | 24 2540 000 000 |

## Typ: TFS 2429



**Construction:** hose of smooth PTFE  
stainless steel wire braid

**Temperature range:** -60°C to 230°C

**Remark:** High flexibility, resistance to temperature and chemical stability

**Application:** see resistance table

**Coupling series:** Couplings on inquiry

| DN | I.D.<br>Ø<br>mm | O.D.<br>Ø<br>mm | Bend Radius<br>min. | Burst<br>Pressure<br>bar | Test<br>Pressure<br>bar | Recom. Working Pressure<br>bar | Vacuum<br>bar | Weight<br>≈ g/m | Part-No.        |
|----|-----------------|-----------------|---------------------|--------------------------|-------------------------|--------------------------------|---------------|-----------------|-----------------|
| 5  | 4,5             | 7,6             | 40                  | 760                      | 380                     | 190                            |               | 80              | 24 2905 000 000 |
| 6  | 6,4             | 9               | 40                  | 680                      | 340                     | 170                            |               | 100             | 24 2906 000 000 |
| 8  | 7,9             | 10,7            | 50                  | 600                      | 300                     | 150                            |               | 120             | 24 2908 000 000 |
| 10 | 9,1             | 11,7            | 60                  | 550                      | 275                     | 140                            |               | 150             | 24 2910 000 000 |
| 12 | 12,5            | 15,5            | 80                  | 420                      | 210                     | 105                            |               | 210             | 24 2913 000 000 |
| 16 | 15,3            | 18,5            | 120                 | 380                      | 190                     | 95                             |               | 270             | 24 2916 000 000 |

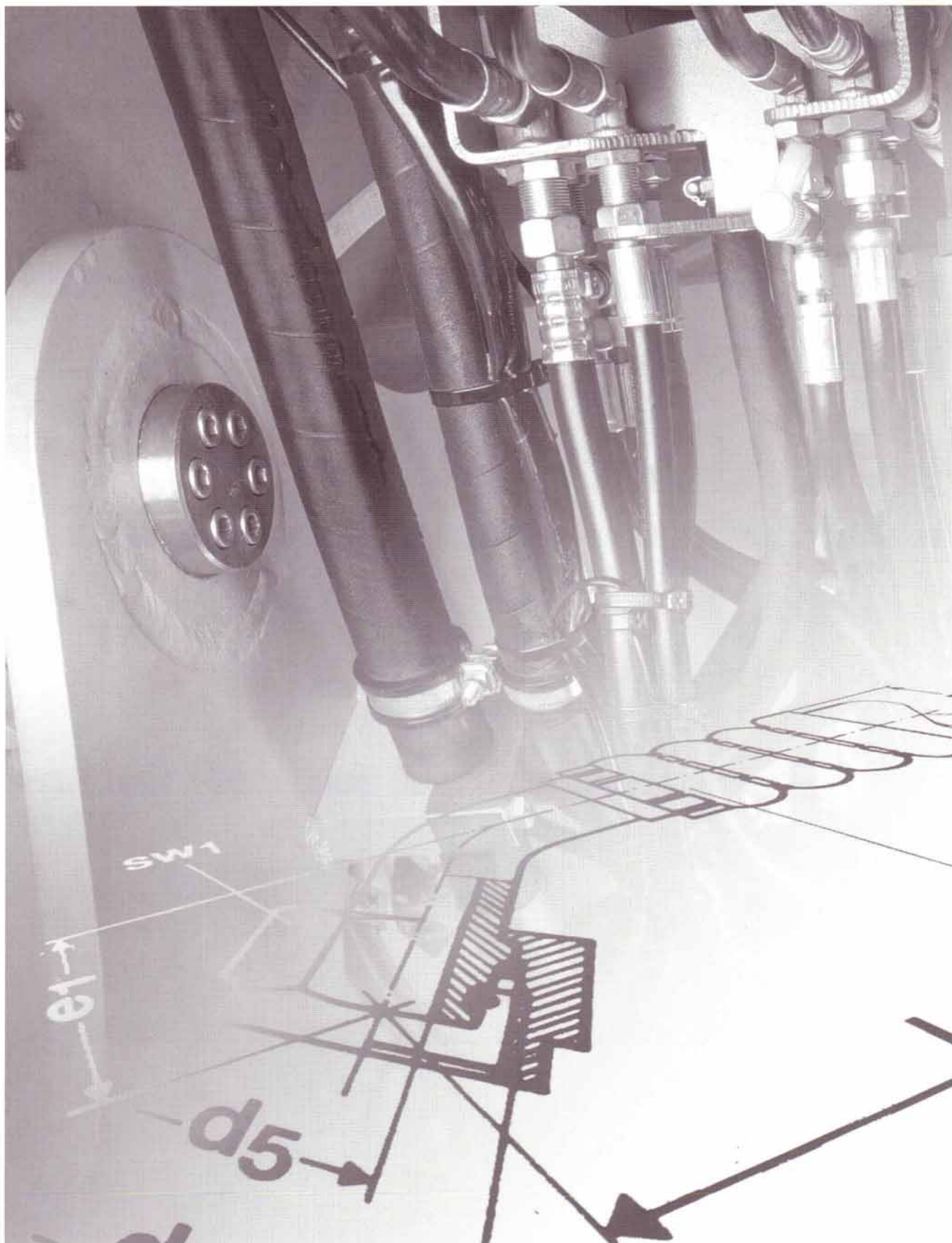
Beyond that we have other hose assemblies in the series fabrication for individual constructions and we manufacture and develop hose assemblies especially for your individual wishes.



## Types of connection

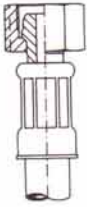
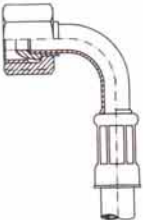
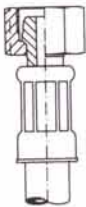
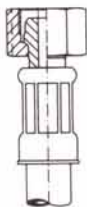
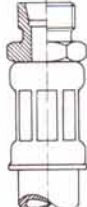
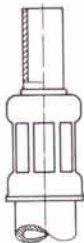
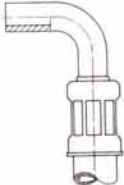
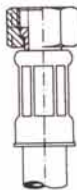
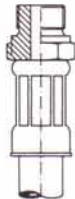

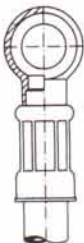
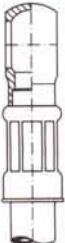
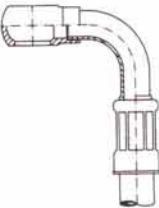
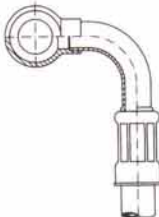

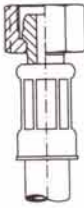
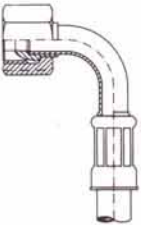
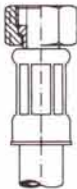
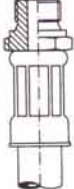
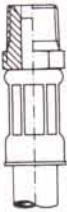

|                  |               |
|------------------|---------------|
| <b>NK/NLD/ML</b> | Pages 44 - 65 |
| <b>TL</b>        | Pages 66 - 90 |
| <b>TP/TLP</b>    | Pages 91 - 94 |
| <b>WL</b>        | Pages 95 - 98 |

## Hose couplings



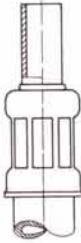
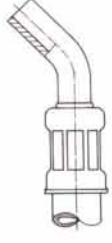
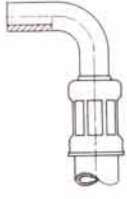
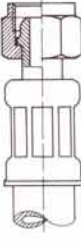
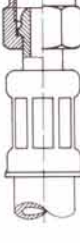
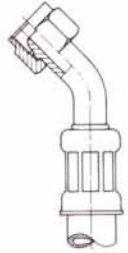
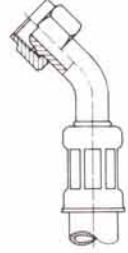
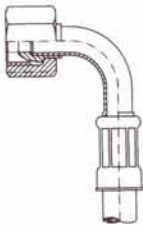
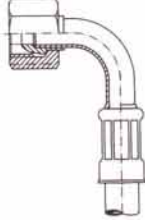

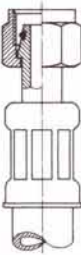

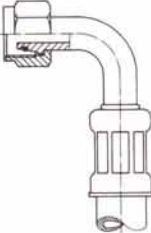
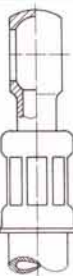
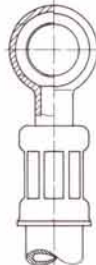
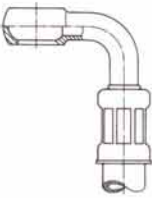
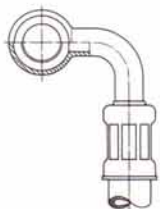
## Types of connection NK/NLD

for low pressure hoses

|  |  |   |   |   |
|--|--|---|---|---|
| DKL 290<br>   | RKDKL 899<br>   | DKL 302<br>    | DKLL 300<br>   | CEL 200<br>    |
| BEL 100<br>  | RKBEL 890<br>   | BNM 500<br>    | ENM 400<br>    | RN 450<br>    |
| RN 451<br>  | RN 453<br>    | RKRN 894<br> | RKRN 895<br> | DKZ 301<br>  |
| DKZ 303<br> | RKDKZ 893<br> | BNZ 501<br>  | ENZ 401<br>  | ENZK 403<br> |
| ENP 402<br> |  |   |   |   |

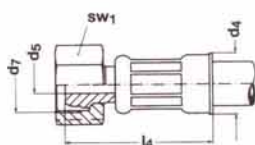
## Type of connection ML

for hoses with textile braid reinforcement 1 TE und 2 TE

|   |   |   |   |   |
|---|---|---|---|---|
| <b>BEL</b> 100  | <b>RKBEL</b> 845  | <b>RKBEL</b> 890  | <b>DKL</b> 290  | <b>DKLL</b> 300   |
|    |    |    |    |    |
| <b>RKDKL</b> 907  | <b>RKDKLL</b> 908   | <b>RKDKL</b> 899  | <b>RKDKLL</b> 892   | <b>CEL</b> 200  |
|   |   |   |    |   |
| <b>DKOL</b> 347   | <b>RKDKOL</b> 912   | <b>RKDKOL</b> 913   | <b>RN</b> 450   | <b>RN</b> 451   |
|  |  |  |  |  |
| <b>RKRN</b> 894   | <b>RKRN</b> 895   |   |   |   |
|  |  |   |   |   |
|   |   |   |   |   |
|   |   |   |   |   |

## 3.1

### DKL 290 Form A DIN 20078



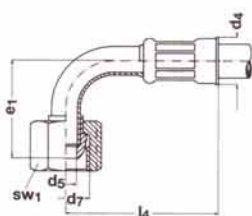
Metric female swivel  
for male inverted flare 24° and 60°  
light type.

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NLD              | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 35             | 17              | 32 2247 483 050    | 38 0531 491 040 |
| NK               | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 28             | 17              | 32 2245 483 050    | 38 0531 491 040 |
| NLD              | 6  | 5,5            | M 14 × 1,5     | 17                     | 38             | 17              | 32 2247 483 060    | 38 0531 491 060 |
| NK               | 6  | 5,5            | M 14 × 1,5     | 17                     | 30             | 17              | 32 2245 483 060    | 38 0531 491 060 |
| NLD              | 8  | 7,5            | M 16 × 1,5     | 20                     | 44             | 19              | 32 2247 483 080    | 38 0531 491 080 |
| NK               | 8  | 7,5            | M 16 × 1,5     | 20,5                   | 30             | 19              | 32 2245 483 080    | 38 0531 491 080 |
| NLD              | 10 | 9,5            | M 18 × 1,5     | 23                     | 44             | 22              | 32 2247 483 100    | 38 0531 491 100 |
| NK               | 10 | 9,5            | M 18 × 1,5     | 23                     | 33             | 22              | 32 2245 483 100    | 38 0531 491 100 |
| NLD              | 12 | 12,5*          | M 22 × 1,5     | 29,5                   | 44             | 27              | 32 2247 483 131    | 38 0531 491 130 |
| NLD              | 12 | 11             | M 22 × 1,5     | 29,5                   | 44             | 27              | 32 2247 483 130    | 38 0531 491 130 |
| NLD              | 16 | 15**           | M 26 × 1,5     | 31,5                   | 49             | 32              | 32 2247 483 161    | 38 0531 491 160 |
| NLD              | 16 | 13             | M 26 × 1,5     | 31,5                   | 49             | 32              | 32 2247 483 160    | 38 0531 491 160 |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

### RKDKL 899



Elbow 90°  
metric female swivel  
for male inverted flare 24° and 60°  
light type

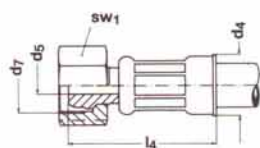
| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>elbow | Part-No.<br>nut |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-------------------|-----------------|
| NLD              | 4  | 3              | M 12 × 1,5     | 15,5                   | 27             | 41             | 17              | 02 9253 090 121   |                 |
| NK               | 4  | 3              | M 12 × 1,5     | 15,5                   | 27             | 34             | 17              | 02 9221 090 120   |                 |
| NLD              | 6  | 5              | M 14 × 1,5     | 17                     | 35             | 52             | 17              | 02 9253 090 241   |                 |
| NK               | 6  | 5              | M 14 × 1,5     | 17                     | 35             | 44             | 17              | 02 9221 090 240   |                 |
| NK               | 8  | 7              | M 16 × 1,5     | 20,5                   | 47             | 51             | 19              | 02 9221 090 370   |                 |
| NLD              | 8  | 7              | M 16 × 1,5     | 20                     | 47             | 65             | 19              | 02 9253 090 371   |                 |
| NLD              | 10 | 9              | M 18 × 1,5     | 23                     | 48             | 69             | 22              | 02 9253 090 521   |                 |
| NK               | 10 | 9              | M 18 × 1,5     | 23                     | 48             | 58             | 22              | 02 9221 090 520   |                 |
| NLD              | 12 | 11*            | M 22 × 1,5     | 29,5                   | 49             | 74             | 27              | 02 9253 090 601   | 38 0531 491 130 |
| NLD              | 12 | 11             | M 22 × 1,5     | 29,5                   | 49             | 69             | 27              | 02 9253 090 602   | 38 0531 491 130 |
| NLD              | 16 | 14**           | M 26 × 1,5     | 31,5                   | 54             | 90             | 32              | 02 9253 090 721   | 38 0531 491 160 |
| NLD              | 16 | 14             | M 26 × 1,5     | 31,5                   | 54             | 90             | 32              | 02 9253 090 720   | 38 0531 491 160 |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A



## DKL 302

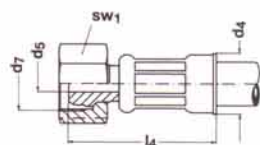


Metric female swivel  
for male inverted flare 24° and 60° jump size  
light type

| Type of assembly | DN    | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|-------|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2:4   | 3              | M 12 × 1,5     | 14                     | 28             | 17              | 32 2246 483 030    | 38 0531 491 040 |
| NLD              | 4:6   | 3,6            | M 14 × 1,5     | 15,5                   | 35             | 17              | 32 2248 483 050    | 38 0531 491 060 |
| NK               | 4:6   | 3,6            | M 14 × 1,5     | 15,5                   | 28             | 17              | 32 2246 483 050    | 38 0531 491 060 |
| NLD              | 6:8   | 5,5            | M 16 × 1,5     | 17                     | 38             | 19              | 32 2248 483 060    | 38 0531 491 080 |
| NK               | 6:8   | 5,5            | M 16 × 1,5     | 17                     | 30             | 19              | 32 2246 483 060    | 38 0531 491 080 |
| NLD              | 8:10  | 7,5            | M 18 × 1,5     | 20                     | 44             | 22              | 32 2248 483 080    | 38 0531 491 100 |
| NK               | 8:10  | 7,5            | M 18 × 1,5     | 20,5                   | 30             | 22              | 32 2246 483 100    | 38 0531 491 130 |
| NLD              | 10:12 | 9,5            | M 22 × 1,5     | 23                     | 44             | 27              | 32 2248 483 100    | 38 0531 491 130 |
| NK               | 10:12 | 9,5            | M 22 × 1,5     | 23                     | 33             | 27              | 32 2246 483 100    | 38 0531 491 130 |
| NLD              | 12:16 | 12,5*          | M 26 × 1,5     | 29,5                   | 45             | 32              | 32 2248 483 140    | 38 0531 491 160 |
| NLD              | 12:16 | 11             | M 26 × 1,5     | 29,5                   | 45             | 32              | 32 2246 483 130    | 38 0531 491 160 |

\* only for hose GCN-GCNA-A-KRA 20

## DKLL 300 Form C DIN 20078



Metric female swivel  
for male inverted flare 60°  
very light type

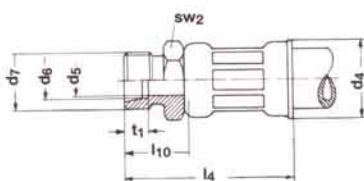
| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|-----|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2   | 3              | M 10 × 1       | 14                     | 26             | 14              | 32 2205 483 020    | 38 0531 491 030 |
| NLD              | 20  | 19*            | M 30 × 1,5     | 36,5                   | 48             | 36              | 32 2239 483 217    | 39 0501 483 200 |
| NLD              | 20  | 17             | M 30 × 1,5     | 36,5                   | 48             | 36              | 32 2239 483 207    | 39 0501 483 200 |
| NLD              | 25  | 22             | M 38 × 1,5     | 41,5                   | 48             | 46              | 32 2239 483 257    | 39 0501 483 250 |
| TL               | 32  | 26             | M 45 × 1,5     | 54                     | 92             | 50              | 04 0300 500 320    | 04 0300 500 320 |
| TL               | 40  | 33,5           | M 52 × 1,5     | 60                     | 92             | 60              | 04 0300 500 400    | 04 0300 500 400 |
| UPR              | 50  | 44             | M 65 × 2       | 72                     | 96             | 76              | 03 2260 002 500    | 03 2260 002 500 |
| UPR              | 60  | 54             | M 78 × 2       | 84                     | 103            | 90              | 03 2260 002 600    | 03 2260 002 600 |
| NS               | 80  | 77             | M 100 × 2      | 106                    | 112            | 120             | 32 2269 388 800    | 38 0520 388 800 |
| NS               | 100 | 97             | M 120 × 2      | 128                    | 125            | 140             | 32 2269 388 910    | 38 0520 388 910 |

\* only for hose A

coupling with  
shell

# 3.1

## CEL 200 Form D DIN 20078

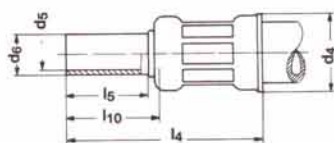


211 for DN 2  
Male inverted flare 24°  
light type  
the pressure resistance of this coupling is limited by the corresponding counter coupling

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No.<br>nipple |                     |
|------------------|----|----------------|----------------|----------------|------------------------|----------------|-----------------|----------------|--------------------|---------------------|
| NK               | 2  | 3              | 4              | M 81 × 1       | 14                     | 28             | 9               | 4              | 32 2103 483 020    |                     |
| NK               | 4  | 3,6            | 6              | M 12.x1,5      | 15,5                   | 30             | 12              | 7              | 32 2104 483 040    |                     |
| NLD              | 4  | 3,6            | 6              | M 12.x1,5      | 15,5                   | 38             | 13              | 7              | 32 2143 483 050    |                     |
| NLD              | 6  | 5,5            | 8              | M 14 × 1,5     | 17                     | 41             | 14              | 7              | 32 2143 483 064    |                     |
| NK               | 6  | 5,5            | 8              | M 14 × 1,5     | 17                     | 32             | 14              | 7              | 32 2104 483 060    |                     |
| NK               | 8  | 7,5            | 10             | M 16 × 1,5     | 20,5                   | 33             | 17              | 7              | 32 2104 483 080    |                     |
| NLD              | 8  | 7,5            | 10             | M 16 × 1,5     | 20                     | 48             | 17              | 7              | 32 2143 483 080    |                     |
| NLD              | 10 | 9,5            | 12             | M 18 × 1,5     | 23                     | 48             | 19              | 7              | 32 2143 483 104    |                     |
| NK               | 10 | 9              | 12             | M 18 × 1,5     | 23                     | 37             | 19              | 7              | 32 2104 483 100    |                     |
| NLD              | 12 | 12,5*          | 15             | M 22 × 1,5     | 29,5                   | 51             | 22              | 7              | 32 2143 483 130    |                     |
| NLD              | 12 | 11             | 15             | M 22 × 1,5     | 29,5                   | 51             | 22              | 7              | 32 2143 483 133    |                     |
| NLD              | 16 | 13             | 18             | M 26 × 1,5     | 31,5                   | 57             | 27              | 7,5            | 32 2143 483 161    |                     |
| NLD              | 16 | 15**           | 18             | M 26 × 1,5     | 31,5                   | 57             | 27              | 7,5            | 32 2143 483 160    |                     |
| NLD              | 20 | 19***          | 22             | M 30 × 2       | 36,5                   | 59             | 30              | 7,5            | 32 2143 483 200    |                     |
| NLD              | 20 | 17             | 22             | M 30 × 2       | 36,5                   | 59             | 30              | 7,5            | 32 2143 483 204    |                     |
| NLD              | 25 | 22             | 28             | M 36 × 2       | 41,5                   | 63             | 36              | 7,5            | 32 2143 483 250    |                     |
| TL               | 32 | 26             | 35,3           | M 45 × 2       | 54                     | 103            | 45              | 10,5           | 04 0200 500 320    | coupling with shell |

- \* only for hose GCN-GCNA-A-KRA 20
- \*\* only for hose A
- \*\*\* only for hose A

## BEL 100



Standpipe  
light type

the pressure resistance of this coupling is limited by the corresponding countercoupling

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>5</sub> | Part-No.<br>nipple |                     |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|--------------------|---------------------|
| NK               | 2  | 2              | 4              | 14                     | 40             | 23             | 32 3602 023 004    |                     |
| NK               | 4  | 4              | 6              | 15,5                   | 40             | 23             | 32 3602 043 004    |                     |
| NLD              | 4  | 4              | 6              | 15,5                   | 47             | 23             | 32 3631 043 004    |                     |
| NK               | 6  | 6              | 8              | 17                     | 42             | 23             | 32 3602 063 004    |                     |
| NLD              | 6  | 6              | 8              | 17                     | 50             | 23             | 32 3631 063 004    |                     |
| NK               | 8  | 8              | 10             | 20,5                   | 42             | 23             | 32 3602 083 004    |                     |
| NLD              | 8  | 8              | 10             | 20                     | 56             | 23             | 32 3631 083 004    |                     |
| NLD              | 10 | 10             | 12             | 23                     | 56             | 23             | 32 3631 101 004    |                     |
| NK               | 10 | 10             | 12             | 23                     | 45             | 23             | 32 3602 101 004    |                     |
| NLD              | 12 | 12*            | 15             | 29,5                   | 61             | 27             | 32 3631 133 005    |                     |
| NLD              | 12 | 10,5           | 15             | 29,5                   | 61             | 27             | 32 3631 500 005    |                     |
| NLD              | 16 | 13             | 18             | 31,5                   | 65             | 27             | 32 3631 501 005    |                     |
| NLD              | 16 | 15**           | 18             | 31,5                   | 65             | 27             | 32 3631 163 005    |                     |
| NLD              | 20 | 17             | 22             | 36,5                   | 65             | 27             | 32 3631 502 005    |                     |
| NLD              | 20 | 19***          | 22             | 36,5                   | 65             | 27             | 32 3631 203 005    |                     |
| NLD              | 25 | 22             | 28             | 41,5                   | 65             | 25             | 32 2065 483 250    |                     |
| TL               | 32 | 26             | 35             | 54                     | 108            | 36             | 04 0100 500 320    | coupling with shell |

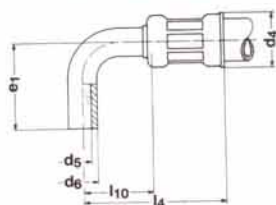
\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

## 3.1

### RKBEL 890



Elbow 90°  
Standpipe  
light type  
the pressure resistance of this coupling is limited by the corresponding countercoupling

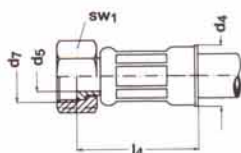
| Type of assembly | DN | d <sub>5</sub><br>nipple bore | d <sub>6</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | Part-No.<br>elbow |                     |
|------------------|----|-------------------------------|----------------|------------------------|----------------|----------------|-------------------|---------------------|
| NK               | 2  | 2                             | 4              | 14                     | 30             | 29             | 32 9040 391 020   |                     |
| NK               | 4  | 4                             | 6              | 15,5                   | 30             | 34             | 32 9040 391 040   |                     |
| NLD              | 4  | 4                             | 6              | 15,5                   | 30             | 41             | 32 9229 090 121   |                     |
| NK               | 6  | 6                             | 8              | 17                     | 42             | 44             | 32 9040 391 060   |                     |
| NLD              | 6  | 6                             | 8              | 17                     | 42             | 52             | 32 9229 090 241   |                     |
| NK               | 8  | 8                             | 10             | 20,5                   | 54             | 51             | 32 9040 391 080   |                     |
| NLD              | 8  | 8                             | 10             | 20                     | 54             | 65             | 32 9229 090 371   |                     |
| NLD              | 10 | 10                            | 12             | 23                     | 55             | 69             | 32 9229 090 521   |                     |
| NK               | 10 | 10                            | 12             | 23                     | 55             | 58             | 32 9040 391 100   |                     |
| NLD              | 12 | 12*                           | 15             | 29,5                   | 55             | 69             | 32 9229 090 601   |                     |
| NLD              | 12 | 10,5                          | 15             | 29,5                   | 55             | 74             | 32 9229 090 602   |                     |
| NLD              | 16 | 13                            | 18             | 31,5                   | 51             | 90             | 32 9229 090 723   |                     |
| NLD              | 16 | 15**                          | 18             | 31,5                   | 60             | 90             | 32 9229 090 721   |                     |
| NLD              | 20 | 17                            | 22             | 36,5                   | 65             | 92             | 32 9229 090 792   |                     |
| NLD              | 20 | 19***                         | 22             | 36,5                   | 65             | 92             | 32 9229 090 791   |                     |
| NLD              | 25 | 23                            | 28             | 41,5                   | 60             | 84             | 02 9229 090 841   |                     |
| TL               | 32 | 29                            | 35             | 54                     | 76             | 133            | 04 0890 500 320   | coupling with shell |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

### BNM 500

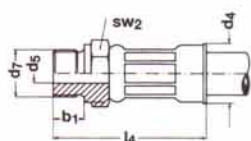


Metric female swivel and flat nipple

| Type of assembly | DN | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2  | 3              | M 10 × 1       | 14                     | 22,5           | 14              | 32 3201 483 020    | 38 0531 491 030 |
| NLD              | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 31             | 17              | 32 3283 483 051    | 38 0531 491 040 |
| NK               | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 24             | 17              | 32 3201 483 040    | 38 0531 491 040 |
| NLD              | 6  | 5,5            | M 14 × 1,5     | 17                     | 34             | 17              | 32 3283 483 060    | 38 0531 491 060 |
| NK               | 6  | 5,5            | M 14 × 1,5     | 17                     | 26             | 17              | 32 3201 483 060    | 38 0531 491 060 |
| NLD              | 8  | 7,5            | M 16 × 1,5     | 20                     | 40             | 19              | 32 3283 483 080    | 38 0531 491 080 |
| NK               | 8  | 7,5            | M 16 × 1,5     | 20,5                   | 26             | 19              | 32 3201 483 080    | 38 0531 491 080 |
| NLD              | 10 | 9,5            | M 18 × 1,5     | 23                     | 41             | 22              | 32 3283 483 101    | 38 0531 491 100 |
| NK               | 10 | 9              | M 18 × 1,5     | 23                     | 29             | 22              | 32 3201 483 100    | 38 0531 491 100 |
| NLD              | 12 | 12,5           | M 22 × 1,5     | 29,5                   | 41             | 27              | 32 3283 483 134    | 38 0531 491 130 |
| NK               | 12 | 11             | M 22 × 1,5     | 29,5                   | 41             | 27              | 32 3283 483 130    | 38 0531 491 130 |



## ENM 400



Metric male flat

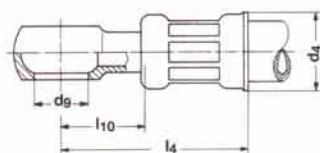
| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | b <sub>1</sub> | l <sub>4</sub> | sw <sub>2</sub> | Part-No.<br>nipple |                     |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|--------------------|---------------------|
| NK               | 2  | 3              | M 10 × 1       | 14                     | 8              | 29             | 14              | 32 2601 483 020    |                     |
| NK               | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 12             | 34             | 17              | 32 2601 483 040    |                     |
| NLD              | 4  | 3,6            | M 12 × 1,5     | 15,5                   | 12             | 42             | 17              | 32 2619 483 050    |                     |
| NK               | 6  | 5,5            | M 14 × 1,5     | 17                     | 12             | 37             | 19              | 32 2601 483 060    |                     |
| NLD              | 6  | 5,5            | M 14 × 1,5     | 17                     | 12             | 45             | 19              | 32 2619 483 060    |                     |
| NK               | 8  | 7,5            | M 16 × 1,5     | 20,5                   | 12             | 37             | 22              | 32 2601 483 080    |                     |
| NLD              | 8  | 7,5            | M 16 × 1,5     | 20                     | 12             | 51             | 22              | 32 2619 483 081    |                     |
| NLD              | 10 | 9,5            | M 18 × 1,5     | 23                     | 12             | 51,5           | 24              | 32 2619 483 101    |                     |
| NK               | 10 | 9              | M 18 × 1,5     | 23                     | 12             | 40             | 24              | 32 2601 483 100    |                     |
| NLD              | 12 | 12,5*          | M 22 × 1,5     | 29,5                   | 14             | 56             | 27              | 32 2619 483 131    |                     |
| NLD              | 12 | 11             | M 22 × 1,5     | 29,5                   | 14             | 56             | 27              | 32 2619 483 130    |                     |
| NLD              | 16 | 13             | M 26 × 1,5     | 31,5                   | 16             | 62             | 32              | 32 2619 483 160    |                     |
| NLD              | 16 | 15**           | M 26 × 1,5     | 31,5                   | 16             | 62             | 32              | 32 2619 483 165    |                     |
| NLD              | 20 | 17             | M 30 × 1,5     | 36,5                   | 16             | 62             | 36              | 32 2619 483 200    |                     |
| NLD              | 20 | 19***          | M 30 × 1,5     | 36,5                   | 16             | 62             | 36              | 32 2619 483 201    |                     |
| NLD              | 25 | 22             | M 38 × 1,5     | 41,5                   | 16             | 64             | 46              | 32 2619 483 250    |                     |
| TL               | 32 | 26             | M 45 × 1,5     | 54                     | 16             | 101            | 55              | 04 0400 500 320    | coupling with shell |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

## RN 450

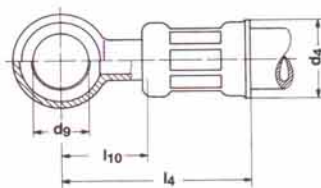


Banjo parallel DIN 7642

| Type of assembly | DN | d <sub>5</sub><br>nipple bore | d <sub>4</sub><br>max. | d <sub>9</sub> | l <sub>4</sub> | Part-No.<br>nipple |  |
|------------------|----|-------------------------------|------------------------|----------------|----------------|--------------------|--|
| NK               | 2  | 3                             | 14                     | 8              | 27             | 32 2506 483 020    |  |
| NLD              | 4  | 3,6                           | 15,5                   | 10             | 38             | 32 2543 483 050    |  |
| NK               | 4  | 3,6                           | 15,5                   | 10             | 28             | 32 2506 483 040    |  |
| NLD              | 6  | 5,5                           | 17                     | 12             | 43             | 32 2543 483 060    |  |
| NK               | 6  | 5,5                           | 17                     | 12             | 31             | 32 2506 483 060    |  |
| NLD              | 8  | 7,5                           | 20                     | 14             | 51             | 32 2543 483 080    |  |
| NK               | 8  | 8                             | 20,5                   | 14             | 33             | 32 2506 524 080    |  |
| NLD              | 10 | 9,5                           | 23                     | 16             | 38             | 32 2543 483 100    |  |
| NK               | 10 | 9                             | 23                     | 16             | 38             | 32 2506 483 100    |  |
| NLD              | 12 | 12,5                          | 29,5                   | 18             | 57             | 02 2543 002 136    |  |
| NLD              | 12 | 11                            | 29,5                   | 18             | 57             | 02 2543 002 135    |  |

## 3.1

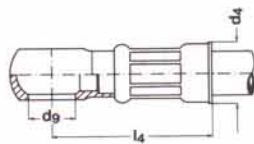
### RN 451



Banjo 90° staggered DIN 7642

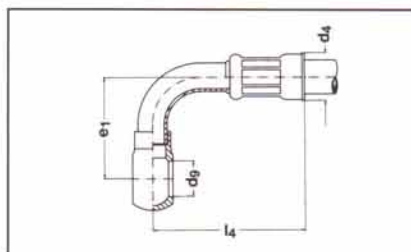
| Type of assembly | DN | d <sub>5</sub><br>nipple bore | d <sub>4</sub><br>max. | d <sub>9</sub> | l <sub>4</sub> | Part-No.<br>nipple |
|------------------|----|-------------------------------|------------------------|----------------|----------------|--------------------|
| NK               | 2  | 3                             | 14                     | 8              | 27             | 32 2506 483 020    |
| NLD              | 4  | 3,6                           | 15,5                   | 10             | 38             | 32 2543 483 050    |
| NK               | 4  | 3,6                           | 15,5                   | 10             | 28             | 32 2506 483 040    |
| NLD              | 6  | 5,5                           | 17                     | 12             | 43             | 32 2543 483 060    |
| NK               | 6  | 5,5                           | 17                     | 12             | 31             | 32 2506 483 060    |
| NLD              | 8  | 7,5                           | 20                     | 14             | 51             | 32 2543 483 080    |
| NK               | 8  | 8                             | 20,5                   | 14             | 33             | 32 2506 524 080    |
| NLD              | 10 | 9,5                           | 23                     | 16             | 38             | 32 2543 483 100    |
| NK               | 10 | 9                             | 23                     | 16             | 38             | 32 2506 483 100    |
| NLD              | 12 | 12,5                          | 29,5                   | 18             | 57             | 02 2543 002 136    |
| NLD              | 12 | 11                            | 29,5                   | 18             | 57             | 02 2543 002 135    |

### RN 453



Banjo parallel Din 7642  
jump size

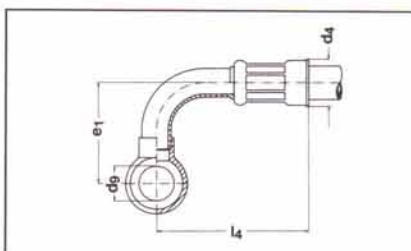
| Type of assembly | DN   | d <sub>5</sub><br>nipple bore | d <sub>4</sub><br>max. | d <sub>9</sub> | l <sub>4</sub> | Part-No.<br>nipple |
|------------------|------|-------------------------------|------------------------|----------------|----------------|--------------------|
| NK               | 2:4  | 3                             | 14                     | 10             | 28             | 32 2510 483 020    |
| NLD              | 4:6  | 3,6                           | 15,5                   | 12             | 36             | 02 2544 002 064    |
| NK               | 4:6  | 3,6                           | 15,5                   | 12             | 29             | 32 2510 483 040    |
| NLD              | 6:8  | 5,5                           | 17                     | 14             | 41             | 02 2544 002 084    |
| NK               | 6:8  | 5                             | 17                     | 14             | 33             | 32 2510 524 062    |
| NLD              | 8:10 | 7,5                           | 20                     | 16             | 49             | 02 2544 002 104    |
| NK               | 8:10 | 7,5                           | 20,5                   | 16             | 35             | 32 2510 483 080    |

**RKRN 894**

Elbow 90°  
banjo parallel DIN 7642

| Type of assembly | DN | d <sub>5</sub><br>nipple<br>bore | d <sub>4</sub><br>max. | d <sub>9</sub> | e <sub>1</sub> | l <sub>4</sub> | Part-No.<br>elbow |
|------------------|----|----------------------------------|------------------------|----------------|----------------|----------------|-------------------|
| NK               | 2  | 3                                | 14                     | 8              | 28             | 34             | 02 9070 002 020   |
| NLD              | 4  | 4                                | 15,5                   | 10             | 35             | 41             | 02 9230 090 131   |
| NK               | 4  | 4                                | 15,5                   | 10             | 35             | 34             | 02 9070 002 040   |
| NLD              | 6  | 6                                | 17                     | 12             | 44             | 52             | 02 9230 090 251   |
| NK               | 6  | 6                                | 17                     | 12             | 44             | 44             | 02 9070 002 060   |
| NLD              | 8  | 8                                | 20                     | 14             | 58             | 65             | 02 9230 090 381   |
| NK               | 8  | 8                                | 20,5                   | 14             | 58             | 51             | 02 9070 002 080   |
| NLD              | 10 | 10                               | 23                     | 16             | 70             | 69             | 02 9230 090 520   |
| NK               | 10 | 10                               | 23                     | 16             | 61             | 58             | 02 9070 002 100   |
| NLD              | 12 | 12*                              | 29,5                   | 18             | 63             | 69             | 02 9230 090 611   |
| NLD              | 12 | 10,5                             | 29,5                   | 18             | 63             | 74             | 02 9230 090 613   |

\* only for hose GCN-GCNA-A-KRA 20

**RKRN 895**

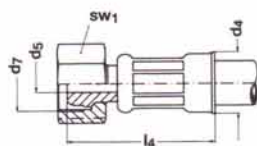
Elbow 90°  
banjo staggered 90° DIN 7642

| Type of assembly | DN | d <sub>5</sub><br>nipple<br>bore | d <sub>4</sub><br>max. | d <sub>9</sub> | e <sub>1</sub> | l <sub>4</sub> | Part-No.<br>elbow |
|------------------|----|----------------------------------|------------------------|----------------|----------------|----------------|-------------------|
| NK               | 2  | 3                                | 14                     | 8              | 28             | 34             | 02 9060 002 020   |
| NLD              | 4  | 4                                | 15,5                   | 10             | 35             | 41             | 02 9230 090 130   |
| NK               | 4  | 4                                | 15,5                   | 10             | 35             | 34             | 02 9060 002 040   |
| NLD              | 6  | 6                                | 17                     | 12             | 44             | 52             | 02 9230 090 250   |
| NK               | 6  | 6                                | 17                     | 12             | 44             | 44             | 02 9060 002 060   |
| NLD              | 8  | 8                                | 20                     | 14             | 58             | 65             | 02 9230 090 380   |
| NK               | 8  | 8                                | 20,5                   | 14             | 58             | 51             | 02 9060 002 080   |
| NLD              | 10 | 10                               | 23                     | 16             | 61             | 69             | 02 9230 090 530   |
| NK               | 10 | 10                               | 23                     | 16             | 61             | 58             | 02 9060 002 100   |
| NLD              | 12 | 12*                              | 29,5                   | 18             | 63             | 69             | 02 9230 090 610   |
| NK               | 12 | 10,5                             | 29,5                   | 18             | 63             | 74             | 02 9230 090 612   |

\* only for hose GCN-GCNA-A-KRA 20

# 3.1

## DKZ 301



Metric female swivel

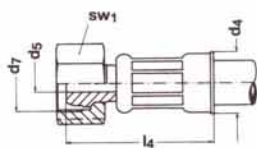
| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2  | 3              | R 1/8"         | 14                     | 26             | 14              | 32 2205 483 020    | 38 0601 483 020 |
| NLD              | 4  | 3,6            | R 1/4"         | 15,5                   | 34             | 17              | 32 2239 483 040    | 38 0601 483 040 |
| NK               | 4  | 3,6            | R 1/4"         | 15,5                   | 27             | 17              | 32 2205 483 040    | 38 0601 483 040 |
| NLD              | 6  | 5,5            | R 1/4"         | 17                     | 37             | 17              | 32 2239 483 060    | 38 0601 483 060 |
| NK               | 6  | 5,5            | R 1/4"         | 17                     | 29             | 17              | 32 2205 483 060    | 38 0601 483 060 |
| NLD              | 8  | 7,5            | R 3/8"         | 20                     | 43             | 19              | 32 2239 483 080    | 38 0601 491 080 |
| NK               | 8  | 7,5            | R 3/8"         | 20,5                   | 29             | 19              | 32 2205 483 080    | 38 0601 491 080 |
| NLD              | 10 | 9,5            | R 1/2"         | 23                     | 43             | 24              | 32 2239 583 102    | 38 0601 483 100 |
| NK               | 10 | 9,5            | R 1/2"         | 23                     | 32             | 24              | 32 2205 483 100    | 38 0601 483 100 |
| NLD              | 12 | 12,5*          | R 5/8"         | 29,5                   | 44             | 27              | 32 2239 483 132    | 38 0601 483 130 |
| NLD              | 12 | 11             | R 5/8"         | 29,5                   | 43             | 27              | 32 2239 583 134    | 38 0601 483 130 |
| NLD              | 16 | 15**           | R 3/4"         | 31,5                   | 48             | 32              | 32 2239 483 161    | 38 0601 483 160 |
| NLD              | 16 | 13             | R 3/4"         | 31,5                   | 48             | 32              | 32 2239 483 160    | 38 0601 483 160 |
| NLD              | 20 | 19***          | R 1"           | 36,5                   | 48             | 41              | 32 2239 483 201    | 38 0601 483 200 |
| NLD              | 20 | 17             | R 1"           | 36,5                   | 48             | 41              | 32 2239 483 200    | 38 0601 483 200 |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

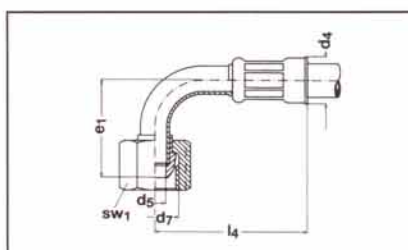
## DKZ 303



BSP parallel female  
for male inverted flare jump size

| Type of assembly | DN    | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|-------|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2:4   | 3              | R 1/4"         | 14                     | 27             | 17              | 32 2209 483 020    | 38 0601 483 040 |
| NLD              | 6:8   | 5,5            | R 3/8"         | 17                     | 37             | 19              | 32 2235 483 060    | 38 0625 491 080 |
| NK               | 6:8   | 5,5            | R 3/8"         | 17                     | 29             | 19              | 32 2209 483 060    | 38 0625 491 080 |
| NLD              | 8:10  | 7,5            | R 1/2"         | 20                     | 43             | 24              | 32 2235 483 080    | 38 0601 483 100 |
| NK               | 8:10  | 7,5            | R 1/2"         | 20,5                   | 29             | 24              | 32 2209 483 080    | 38 0601 483 100 |
| NLD              | 10:12 | 9,5            | R 5/8"         | 23                     | 43             | 27              | 32 2235 483 101    | 38 0601 483 130 |
| NK               | 10:12 | 9,5            | R 5/8"         | 23                     | 32             | 27              | 32 2209 483 101    | 38 0601 483 130 |

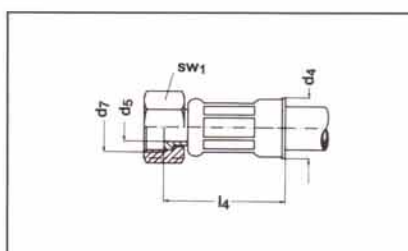


**RKDKZ 893**

Elbow 90°  
BSP female

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>elbow |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-------------------|
| NK               | 2  | 2,5            | R 1/8"         | 14                     | 26             | 34             | 14              | 02 9218 090 021   |
| NLD              | 4  | 3              | R 1/4"         | 15,5                   | 28             | 41             | 17              | 02 9232 090 121   |
| NK               | 4  | 3              | R 1/4"         | 15,5                   | 28             | 34             | 17              | 02 9218 090 141   |
| NLD              | 6  | 5              | R 1/4"         | 17                     | 35             | 52             | 17              | 02 9232 090 251   |
| NK               | 6  | 5              | R 1/4"         | 17                     | 35             | 44             | 17              | 02 9218 090 251   |
| NLD              | 8  | 7              | R 3/8"         | 20                     | 47             | 65             | 19              | 02 9232 090 381   |
| NK               | 8  | 7              | R 3/8"         | 20,5                   | 47             | 51             | 19              | 02 9218 090 391   |
| NLD              | 10 | 9              | R 1/2"         | 23                     | 48             | 69             | 24              | 02 9232 090 531   |
| NK               | 10 | 9              | R 1/2"         | 23                     | 48             | 58             | 24              | 02 9218 090 531   |
| NLD              | 12 | 11*            | R 5/8"         | 29,5                   | 49             | 69             | 27              | 02 9232 090 611   |
| NLD              | 12 | 11             | R 5/8"         | 29,5                   | 49             | 69             | 27              | 02 9232 090 613   |

\* only for hose GCN-GCNA-A-KRA 20

**BNZ 501**

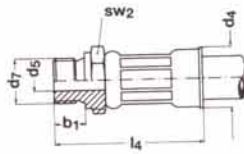
BSP female flat

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|--------------------|-----------------|
| NK               | 2  | 3              | R 1/8"         | 14                     | 22,5           | 14              | 32 3201 483 020    | 38 0601 483 020 |
| NLD              | 4  | 3,6            | R 1/4"         | 15,5                   | 31             | 17              | 32 3283 483 051    | 38 0601 483 040 |
| NK               | 4  | 3,6            | R 1/4"         | 15,5                   | 24             | 17              | 32 3201 483 040    | 38 0601 483 040 |
| NLD              | 6  | 5,5            | R 1/4"         | 17                     | 34             | 17              | 32 3283 483 060    | 38 0601 483 060 |
| NK               | 6  | 5,5            | R 1/4"         | 17                     | 26             | 17              | 32 3201 483 060    | 38 0601 483 060 |
| NLD              | 8  | 7,5            | R 3/8"         | 20                     | 40             | 19              | 32 3283 483 080    | 38 0601 491 080 |
| NK               | 8  | 7,5            | R 3/8"         | 20,5                   | 26             | 19              | 32 3201 483 080    | 38060141080     |
| NLD              | 10 | 9,5            | R 1/2"         | 23                     | 41             | 24              | 32 3283 483 100    | 38 0601 483 100 |
| NK               | 10 | 9              | R 1/2"         | 23                     | 29             | 24              | 32 3203 483 100    | 38 0601 483 100 |
| NLD              | 12 | 12,5*          | R 5/8"         | 29,5                   | 41             | 27              | 32 3283 483 134    | 38 0601 483 130 |
| NK               | 12 | 11             | R 5/8"         | 29,5                   | 41             | 27              | 32 3283 483 130    | 38 0601 483 130 |

\* only for hose GCN-GCNA-A-KRA 20

## 3.1

### ENZ 401



BSP taper male

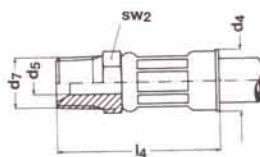
| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | b <sub>1</sub> | l <sub>4</sub> | SW <sub>2</sub> | Part-No.<br>nipple |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|--------------------|
| NK               | 2  | 3              | R1/8"          | 14                     | 8              | 29             | 14              | 32 2702 483 020    |
| NK               | 4  | 3,6            | R1/8"          | 15,5                   | 8              | 29             | 14              | 32 2702 483 040    |
| NLD              | 4  | 3,6            | R1/8"          | 15,5                   | 8              | 37,5           | 14              | 32 2796 483 050    |
| NK               | 6  | 5,5            | R1/4"          | 17                     | 12             | 37             | 19              | 32 2702 483 060    |
| NLD              | 6  | 5,5            | R1/4"          | 17                     | 12             | 45             | 19              | 32 2796 483 060    |
| NLD              | 8  | 7,5            | R3/8"          | 20                     | 12             | 51             | 22              | 32 2796 483 080    |
| NK               | 8  | 7,5            | R3/8"          | 20,5                   | 12             | 37             | 22              | 32 2702 483 080    |
| NLD              | 10 | 9,5            | R3/8"          | 23                     | 12             | 51             | 22              | 32 2796 483 100    |
| NK               | 10 | 9              | R3/8"          | 23                     | 12             | 40             | 22              | 32 2702 483 100    |
| NLD              | 12 | 11             | R1/2"          | 29,5                   | 14             | 56             | 27              | 32 2796 483 130    |
| NLD              | 12 | 12,5*          | R1/2"          | 29,5                   | 14             | 56             | 27              | 32 2796 483 131    |
| NLD              | 16 | 13             | R3/4"          | 31,5                   | 14             | 60             | 30              | 32 2796 483 160    |
| NLD              | 16 | 15**           | R3/4"          | 31,5                   | 14             | 60             | 30              | 32 2796 483 165    |
| NLD              | 20 | 17             | R3/4"          | 36,5                   | 16             | 62             | 32              | 32 2796 483 205    |
| NLD              | 20 | 19***          | R3/4"          | 36,5                   | 16             | 62             | 32              | 32 2796 483 200    |
| NLD              | 25 |                | R1"            | 41,5                   |                |                |                 | 32 2796 483 252    |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

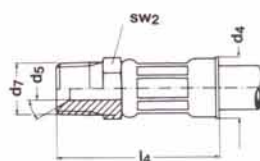
### ENZK 403



BSP male cone

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | SW <sub>2</sub> | Part-No.<br>nipple |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|--------------------|
| NLD              | 4  | 3,6            | R 1/8" keg.    | 15,5                   | 37,5           | 11              | 32 2840 483 050    |
| NK               | 4  | 3,6            | R 1/8" keg.    | 15,5                   | 29             | 11              | 32 2809 483 040    |
| NLD              | 6  | 5,5            | R 1/4" keg.    | 17                     | 45,5           | 14              | 32 2840 483 060    |
| NK               | 6  | 5,5            | R 1/4" keg.    | 17                     | 36             | 14              | 32 2809 483 060    |
| NLD              | 8  | 7,5            | R 3/8" keg.    | 20                     | 52             | 19              | 32 2840 483 080    |
| NK               | 8  | 7,5            | R 3/8" keg.    | 20,5                   | 37             | 17              | 32 2809 483 080    |
| NLD              | 10 | 9,5            | R 3/8" keg.    | 23                     | 52             | 19              | 32 2840 483 105    |
| NK               | 10 | 9              | R 3/8" keg.    | 23                     | 41             | 19              | 32 2809 483 100    |
| NLD              | 12 | 12,5*          | R 1/2" keg.    | 29,5                   | 56             | 24              | 32 2840 483 131    |
| NLD              | 12 | 11             | R 1/2" keg.    | 29,5                   | 56             | 24              | 32 2840 483 130    |

\* only for hose GCN-GCNA-A-KRA 20

**ENP 402**

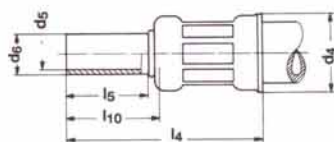
NPTF male coupling

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub>  | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>nipple |
|------------------|----|----------------|-----------------|------------------------|----------------|-----------------|-----------------|--------------------|
| NK               | 2  | 3              | 1/8"-27 NPTF    | 14                     | 29             | 15              | 12              | 32 2805 483 020    |
| NK               | 4  | 3,6            | 1/8"-27 NPTF    | 15,5                   | 29             | 15              | 11              | 32 2804 822 040    |
| NLD              | 4  | 3,6            | 1/8"-27 NPTF    | 15,5                   | 36,5           | 16              | 11              | 32 2839 483 050    |
| NK               | 6  | 5,5            | 1/4"-18 NPTF    | 18                     | 36             | 20              | 14              | 32 2804 483 060    |
| NLD              | 6  | 5,5            | 1/4"-18 NPTF    | 18                     | 44             | 20              | 14              | 32 2839 483 060    |
| NLD              | 8  | 7,5            | 3/8"-18 NPTF    | 21                     | 51             | 21              | 19              | 32 2839 483 080    |
| NK               | 8  | 7,5            | 3/8"-18 NPTF    | 21                     | 37             | 21              | 19              | 32 2805 483 080    |
| NLD              | 10 | 9,5            | 3/8"-18 NPTF    | 23                     | 51             | 21              | 19              | 32 2839 483 100    |
| NK               | 10 | 9,5            | 3/8"-18 NPTF    | 23                     | 40             | 21              | 19              | 32 2803 483 100    |
| NLD              | 12 | 11             | 1/2"-14 NPTF    | 29,5                   | 56             | 26              | 22              | 32 2839 483 131    |
| NLD              | 12 | 12,5*          | 1/2"-14 NPTF    | 29,5                   | 56             | 26              | 22              | 32 2839 483 130    |
| NLD              | 16 | 13             | 3/4"-14 NPTF    | 31,5                   | 62             | 28              | 30              | 32 2839 483 161    |
| NLD              | 16 | 15**           | 3/4"-14 NPTF    | 31,5                   | 62             | 28              | 30              | 32 2839 483 160    |
| NLD              | 20 | 17             | 3/4"-14 NPTF    | 36,5                   | 62             | 28              | 30              | 32 2839 483 201    |
| NLD              | 20 | 19***          | 3/4"-14 NPTF    | 36,5                   | 62             | 28              | 30              | 32 2839 483 200    |
| NLD              | 25 | 22             | 1"-11 1/2" NPTF | 41,5                   | 62             | 33              | 36              | 32 2839 483 250    |

\* only for hose GCN-GCNA-A-KRA 20

\*\* only for hose A

\*\*\* only for hose A

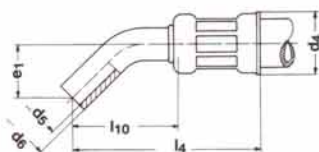
**BEL 100**

Standpipe  
light type  
with regard to security we recommend DKL or DKOL  
the pressure resistance of this coupling is limited by the corresponding counter coupling

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>5</sub> | l <sub>10</sub> | Part-No.<br>standpipe | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------------|--------------|
| NLD              | 5  | 4              | 6              | 16                     | 47             | 23             | 26              | 32 3631 053 004       | applied hose |
| NLD              | 6  | 6              | 8              | 16,5                   | 47             | 23             | 26              | 32 3631 052 004       |              |
| NLD              | 8  | 8              | 10             | 18,5                   | 50             | 23             | 26              | 32 3631 072 004       |              |
| NLD              | 10 | 10             | 12             | 21                     | 56             | 23             | 26              | 32 3631 091 004       |              |
| NLD              | 12 | 12             | 15             | 23                     | 66             | 32             | 36              | 32 3631 501 006       |              |
| NLD              | 16 | 15             | 18             | 30,5                   | 65             | 27             | 31              | 32 3631 501 005       |              |
| NLD              | 20 | 19             | 22             | 31,5                   | 75             | 37             | 41              | 32 3631 193 007       |              |
| NLD              | 25 | 22             | 28             | 39,5                   | 65             | 25             | 31              | 32 2065 483 250       |              |

## 3.1

### RKBEL 845



Elbow 45° Standpipe

light type

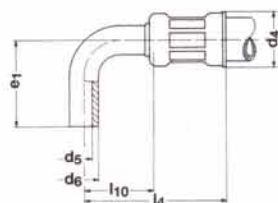
with regard to security we recommend RKDKL or RKDKOL

the pressure resistance of this coupling is limited by the corresponding counter coupling

Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>nipple | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|--------------------|--------------|
| NLD              | 5  | 4              | 6              | 16                     | 21             | 64             | 43              | 32 9229 045 121    | applied hose |
| NLD              | 6  | 6              | 8              | 16,5                   | 21             | 64             | 43              | 32 9229 045 241    |              |
| NLD              | 8  | 8              | 10             | 18,5                   | 23             | 71             | 47              | 32 9229 045 371    |              |
| NLD              | 10 | 10             | 12             | 21                     | 23             | 77             | 47              | 32 9229 045 521    |              |
| NLD              | 12 | 12             | 15             | 23                     | 29             | 85             | 55              | 32 9229 045 602    |              |
| NLD              | 16 | 15             | 18             | 30,5                   | 29             | 89             | 55              | 32 9229 045 722    |              |
| NLD              | 20 | 19             | 22             | 31,5                   | 30             | 95             | 61              | 32 9229 045 791    |              |
| NLD              | 25 | 23             | 28             | 39,5                   | 30             | 96             | 62              | 02 9229 045 840    |              |

### RKBEL 890



Elbow 90° Standpipe

light type

with regard to security we recommend RKDKL or RKDKOL

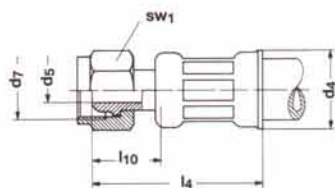
the pressure resistance of this coupling is limited by the corresponding counter coupling.

Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>nipple | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|--------------------|--------------|
| NLD              | 5  | 4              | 6              | 16                     | 41             | 52             | 31              | 32 9229 090 123    | applied hose |
| NLD              | 6  | 6              | 8              | 16,5                   | 41             | 52             | 31              | 32 9229 090 243    |              |
| NLD              | 8  | 8              | 10             | 18,5                   | 44             | 60             | 36              | 32 9229 090 375    |              |
| NLD              | 10 | 10             | 12             | 21                     | 44             | 66             | 36              | 32 9229 090 525    |              |
| NLD              | 12 | 12             | 15             | 23                     | 51             | 71             | 41              | 32 9229 090 607    |              |
| NLD              | 16 | 15             | 18             | 30,5                   | 51             | 75             | 41              | 32 9229 090 723    |              |
| NLD              | 20 | 19             | 22             | 31,5                   | 65             | 85             | 51              | 32 9229 090 795    |              |
| NLD              | 25 | 23             | 28             | 39,5                   | 60             | 84             | 50              | 02 9229 090 841    |              |



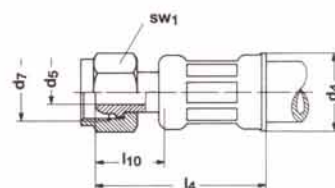
## DKL 290 DN 5-6 Form A DIN 20078



Metric female swivel 24° and 60° up to DN 16  
beginning DN 20 only 24°  
light type

| Type of assembly | DN | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|--------------------|-----------------|--------------|
| NLD              | 5  | 3              | M 12 × 1,5     | 16                     | 35             | 14              | 14              | 32 2248 483 030    | 39 0507 491 106 | applied hose |
| NLD              | 6  | 3,6            | M 14 × 1,5     | 16,5                   | 35             | 14              | 17              | 32 2248 483 050    | 39 0531 491 060 |              |
| NLD              | 8  | 5,5            | M 16 × 1,5     | 18,5                   | 38             | 14              | 19              | 32 2248 483 060    | 39 0531 491 080 |              |
| NLD              | 10 | 7,5            | M 18 × 1,5     | 21                     | 44             | 14              | 22              | 32 2248 483 080    | 39 0531 491 100 |              |
| NLD              | 12 | 9,5            | M 22 × 1,5     | 23                     | 44             | 14              | 27              | 32 2248 483 100    | 39 0531 491 130 |              |
| NLD              | 16 | 13             | M 26 × 1,5     | 30,5                   | 49             | 15              | 32              | 32 2247 483 160    | 39 0531 491 160 |              |
| NLD              | 20 | 15             | M 30 × 2       | 31,5                   | 51             | 17              | 36              | 32 2235 483 166    | 39 0507 491 122 |              |
| NLD              | 25 | 22             | M 36 × 2       | 39,5                   | 51             | 17              | 41              | 32 2239 483 257    | 39 0507 491 128 |              |

## DKLL 300 Form C DIN 20078 DN 5-16 DKL 290

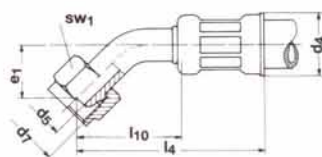


Metric female swivel  
cone seat 60°  
very light type

| Type of assembly | DN | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|--------------------|-----------------|--------------|
| NLD              | 20 | 15,5           | M 30 × 1,5     | 31,5                   | 51             | 17              | 36              | 32 2235 483 166    | 39 0501 483 200 | applied hose |
| NLD              | 25 | 22             | M 38 × 1,5     | 39,5                   | 51             | 17              | 46              | 32 2238 483 257    | 39 0501 483 250 |              |

## 3.1

### RKDKL 907

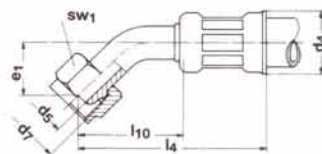


Elbow 45°  
metric female swivel 24° and 60° up to DN 16  
beginning DN 20 only 24°  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 5  | 3     | M 12 × 1,5 | 16            | 15    | 58    | 37       | 14     | 02 9253 045 090    | 39 0507 491 106 | applied hose |
| NLD              | 6  | 4     | M 14 × 1,5 | 16,5          | 15    | 58    | 37       | 17     | 02 9253 045 120    | 38 0531 491 060 |              |
| NLD              | 8  | 6     | M 16 × 1,5 | 18,5          | 17    | 65    | 41       | 19     | 02 9253 045 240    | 38 0531 491 080 |              |
| NLD              | 10 | 7     | M 18 × 1,5 | 21            | 17    | 71    | 41       | 22     | 02 9253 045 370    | 38 0531 491 100 |              |
| NLD              | 12 | 11    | M 22 × 1,5 | 23            | 20    | 76    | 46       | 27     | 02 9253 045 520    | 38 0531 491 130 |              |
| NLD              | 16 | 13,5  | M 26 × 1,5 | 30,5          | 24    | 84    | 50       | 32     | 02 9253 045 720    | 38 0531 491 160 |              |
| NLD              | 20 | 16    | M 30 × 2   | 31,5          | 24    | 89    | 55       | 36     | 02 9232 045 736    | 39 0507 491 122 |              |
| NLD              | 25 | 21    | M 36 × 2   | 39,5          | 25    | 94    | 60       | 41     | 02 9232 045 846    | 39 0507 491 128 |              |

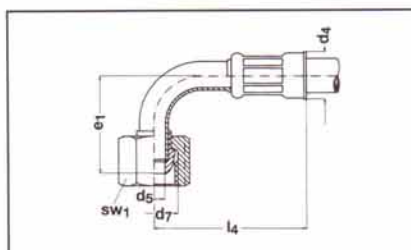
### RKDKLL 908 DN 5–16 RKDKL 907



Elbow 45°  
metric female swivel  
cone 60°  
very light type

Elbows can also be supplied with an altered  $e_1$ -size

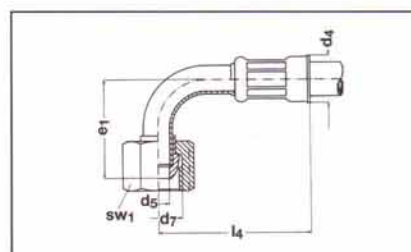
| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 20 | 16    | M 30 × 1,5 | 31,5          | 24    | 89    | 55       | 36     | 02 9232 045 736    | 39 0501 483 200 | applied hose |
| NLD              | 25 | 21    | M 38 × 1,5 | 39,5          | 25    | 94    | 60       | 46     | 02 9232 045 846    | 39 0501 483 250 |              |

**RKDKL 899**

Elbow 90°  
metric female swivel 24° and 60° up to DN 16  
beginning DN 20 only 24°  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 5  | 3     | M 12 × 1,5 | 16            | 33    | 52    | 31       | 14     | 02 9253 090 090    | 39 0507 491 106 | applied hose |
| NLD              | 6  | 4     | M 14 × 1,5 | 16,5          | 33    | 52    | 31       | 17     | 02 9253 090 120    | 38 0531 491 060 |              |
| NLD              | 8  | 6     | M 16 × 1,5 | 18,5          | 35    | 60    | 36       | 19     | 02 9253 090 240    | 38 0531 491 080 |              |
| NLD              | 10 | 7     | M 18 × 1,5 | 21            | 35    | 66    | 36       | 22     | 02 9253 090 370    | 38 0531 491 100 |              |
| NLD              | 12 | 11    | M 22 × 1,5 | 23            | 43    | 71    | 41       | 27     | 02 9253 090 520    | 38 0531 491 130 |              |
| NLD              | 16 | 13,5  | M 26 × 1,5 | 30,5          | 54    | 75    | 49       | 32     | 02 9253 090 720    | 38 0531 491 160 |              |
| NLD              | 20 | 16    | M 30 × 2   | 31,5          | 57    | 85    | 51       | 36     | 02 9227 090 736    | 39 0507 491 122 |              |
| NLD              | 25 | 21    | M 36 × 2   | 39,5          | 57    | 89    | 55       | 41     | 02 9223 090 846    | 39 0507 491 128 |              |

**RKDKLL 892 DN 5-16 RKDKL 899**

Elbow 90°  
metric female swivel  
cone seat 60°  
very light type

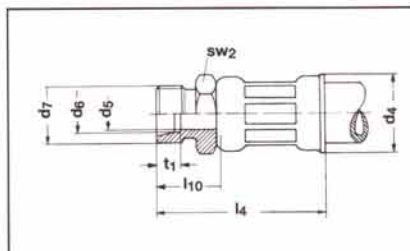
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 20 | 16    | M 30 × 1,5 | 31,5          | 57    | 85    | 51       | 36     | 02 9232 090 736    | 39 0501 483 200 | applied hose |
| NLD              | 25 | 21    | M 38 × 1,5 | 39,5          | 57    | 89    | 55       | 46     | 02 9232 090 846    | 39 0501 483 250 |              |



## 3.1

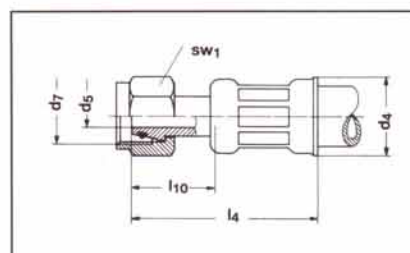
### CEL 200 Form D DIN 20078



Metric male swivel  
24° cone seat  
light type  
the pressure resistance of this coupling is limited by the corresponding counter coupling

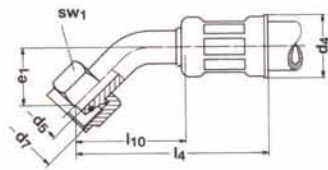
| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No. nipple | PN           |
|------------------|----|----------------|----------------|----------------|------------------------|----------------|-----------------|-----------------|----------------|-----------------|--------------|
| NLD              | 5  | 3              | 6              | M 12 × 1,5     | 16                     | 41             | 17              | 13              |                | 32 2143 483 031 | applied hose |
| NLD              | 6  | 3,6            | 8              | M 14 × 1,5     | 16,5                   | 41             | 17              | 14              |                | 32 2143 483 051 |              |
| NLD              | 8  | 5,5            | 10             | M 16 × 1,5     | 18,5                   | 42             | 18              | 17              | 7              | 32 2143 483 065 |              |
| NLD              | 10 | 7,5            | 12             | M 18 × 1,5     | 21                     | 50             | 20              | 19              |                | 32 2143 483 081 |              |
| NLD              | 12 | 9,5            | 15             | M 22 × 1,5     | 23                     | 51             | 21              | 22              |                | 32 2143 483 101 |              |
| NLD              | 16 | 13             | 18             | M 26 × 1,5     | 30,5                   | 57             | 23              | 27              |                | 32 2143 483 161 |              |
| NLD              | 20 | 15             | 22             | M 30 × 2       | 31,5                   | 59             | 25              | 30              | 7,5            | 32 2143 483 162 |              |
| NLD              | 25 | 22             | 28             | M 36 × 2       | 39,5                   | 63             | 29              | 36              |                | 32 2143 483 250 |              |

### DKOL 347 Form N DIN 20078



Metric female swivel with O-Ring  
24° cone seat  
light type

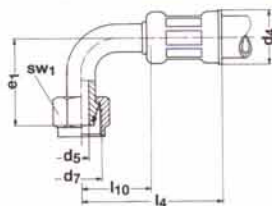
| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No. nipple | Part-No. nut    | PN           |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| NLD              | 5  | 3              | M 12 × 1,5     | 16                     | 40             | 19              | 14              | 32 2243 483 050 | 38 0531 491 040 | applied hose |
| NLD              | 6  | 3,6            | M 14 × 1,5     | 16,5                   | 40             | 19              | 17              | 32 2243 483 060 | 38 0507 491 106 |              |
| NLD              | 8  | 5,5            | M 16 × 1,5     | 18,5                   | 44             | 20              | 19              | 32 2243 483 080 | 38 0531 491 080 |              |
| NLD              | 10 | 7,5            | M 18 × 1,5     | 21                     | 50             | 20              | 22              | 32 2243 483 100 | 38 0531 491 100 |              |
| NLD              | 12 | 9,5            | M 22 × 1,5     | 23                     | 52             | 22              | 27              | 32 2243 483 130 | 38 0531 491 130 |              |
| NLD              | 16 | 13             | M 26 × 1,5     | 30,5                   | 57             | 23              | 32              | 32 2243 483 160 | 38 0531 491 160 |              |
| NLD              | 20 | 15             | M 30 × 2       | 31,5                   | 59             | 25              | 36              | 32 2243 483 200 | 39 0507 491 122 |              |
| NLD              | 25 | 22             | M 36 × 2       | 39,5                   | 60             | 26              | 41              | 32 2243 483 250 | 39 0507 491 128 |              |

**RKDKOL 912**

Elbow 45°  
metric female swivel with O-Ring  
24° cone seat  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 5  | 3     | M 12 × 1,5 | 16            | 17    | 60    | 39       | 14     | 02 9271 045 150    | 39 0507 491 106 | applied hose |
| NLD              | 6  | 4     | M 14 × 1,5 | 16,5          | 17    | 60    | 39       | 17     | 02 9271 045 240    | 38 0531 491 060 |              |
| NLD              | 8  | 6     | M 16 × 1,5 | 18,5          | 19    | 67    | 43       | 19     | 02 9271 045 370    | 38 0531 491 080 |              |
| NLD              | 10 | 8     | M 18 × 1,5 | 21            | 19    | 73    | 43       | 22     | 02 9271 045 520    | 38 0531 491 100 |              |
| NLD              | 12 | 10    | M 22 × 1,5 | 23            | 22    | 78    | 48       | 27     | 02 9271 045 600    | 38 0531 491 130 |              |
| NLD              | 16 | 12,5  | M 26 × 1,5 | 30,5          | 26    | 86    | 52       | 32     | 02 9271 045 720    | 38 0531 491 160 |              |
| NLD              | 20 | 16    | M 30 × 2   | 31,5          | 27    | 91    | 57       | 36     | 02 9271 045 790    | 38 0507 491 122 |              |
| NLD              | 25 | 20    | M 36 × 2   | 39,5          | 27    | 96    | 62       | 41     | 02 9271 045 840    | 39 0507 491 128 |              |

**RKDKOL 913**

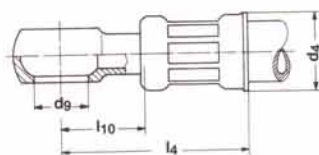
Elbow 90°  
metric female swivel with O-Ring  
24° cone seat  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>nipple | Part-No.<br>nut | PN           |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|--------------------|-----------------|--------------|
| NLD              | 5  | 3     | M 12 × 1,5 | 16            | 35    | 52    | 31       | 14     | 02 9271 090 150    | 39 0507 491 106 | applied hose |
| NLD              | 6  | 4     | M 14 × 1,5 | 16,5          | 35    | 52    | 31       | 17     | 02 9271 090 240    | 39 0531 491 060 |              |
| NLD              | 8  | 6     | M 16 × 1,5 | 18,5          | 37    | 60    | 36       | 19     | 02 9271 090 370    | 38 0531 491 080 |              |
| NLD              | 10 | 8     | M 18 × 1,5 | 21            | 37    | 66    | 36       | 22     | 02 9271 090 520    | 38 0531 491 100 |              |
| NLD              | 12 | 10    | M 22 × 1,5 | 23            | 45    | 71    | 41       | 27     | 02 9271 090 600    | 38 0531 491 130 |              |
| NLD              | 16 | 12,5  | M 26 × 1,5 | 30,5          | 47    | 75    | 41       | 32     | 02 9271 090 720    | 38 0531 491 160 |              |
| NLD              | 20 | 16    | M 30 × 2   | 31,5          | 60    | 85    | 51       | 36     | 02 9271 090 790    | 39 0507 491 122 |              |
| NLD              | 25 | 20    | M 36 × 2   | 39,5          | 60    | 89    | 55       | 41     | 02 9271 090 840    | 39 0507 491 128 |              |

## 3.1

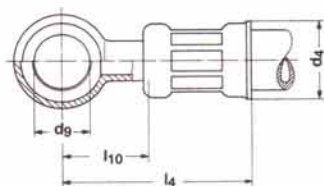
### RN 450



Banjo parallel DIN 7642

| Type of assembly | DN | d <sub>9</sub><br>nipple<br>bore | d <sub>4</sub><br>max. | d <sub>9</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>nipple | PN           |
|------------------|----|----------------------------------|------------------------|----------------|----------------|-----------------|--------------------|--------------|
| NLD              | 5  | 3                                | 16                     | 10             | 40             | 19              | 02 2544 002 054    | applied hose |
| NLD              | 6  | 4                                | 16,5                   | 12             | 42             | 21              | 02 2544 002 064    |              |
| NLD              | 8  | 6                                | 18,5                   | 14             | 47             | 23              | 02 2544 002 084    |              |
| NLD              | 10 | 8                                | 21                     | 16             | 55             | 25              | 02 2544 002 104    |              |
| NLD              | 12 | 10                               | 23                     | 18             | 55             | 25              | 02 2544 002 134    |              |
| NLD              | 16 | 13                               | 30,5                   | 22             | 64             | 30              | 02 2543 002 160    |              |
| NLD              | 20 | 16                               | 31,5                   | 26             | 67             | 33              | 02 2544 002 204    |              |
| NLD              | 25 | 22                               | 39,5                   | 30             | 73             | 39              | 02 2543 002 251    |              |

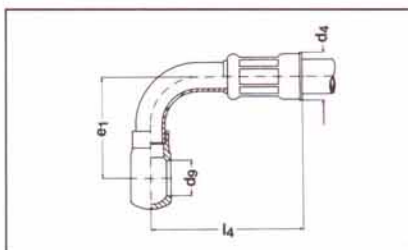
### RN 451



Banjo 90° staggered DIN 7642

| Type of assembly | DN | d <sub>9</sub><br>nipple<br>bore | d <sub>4</sub><br>max. | d <sub>9</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>nipple | PN           |
|------------------|----|----------------------------------|------------------------|----------------|----------------|-----------------|--------------------|--------------|
| NLD              | 5  | 3                                | 16                     | 10             | 40             | 19              | 02 2544 002 054    | applied hose |
| NLD              | 6  | 4                                | 16,5                   | 12             | 42             | 21              | 02 2544 002 064    |              |
| NLD              | 8  | 6                                | 18,5                   | 14             | 47             | 23              | 02 2544 002 084    |              |
| NLD              | 10 | 8                                | 21                     | 16             | 55             | 25              | 02 2544 002 104    |              |
| NLD              | 12 | 10                               | 23                     | 18             | 55             | 25              | 02 2544 002 134    |              |
| NLD              | 16 | 13                               | 30,5                   | 22             | 64             | 30              | 02 2543 002 160    |              |
| NLD              | 20 | 16                               | 31,5                   | 26             | 67             | 33              | 02 2544 002 204    |              |
| NLD              | 25 | 22                               | 39,5                   | 30             | 73             | 39              | 02 2543 002 251    |              |

## RKRN 894

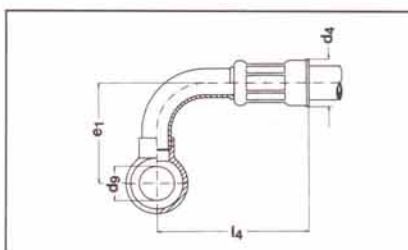


Elbow 90°  
banjo parallel DIN 7642

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$<br>nipple<br>bore | $d_4$<br>max. | $d_9$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>nipple | PN           |
|------------------|----|-------------------------|---------------|-------|-------|-------|----------|--------------------|--------------|
| NLD              | 5  | 2,8                     | 16            | 10    | 36    | 52    | 31       | 02 9230 090 090    | applied hose |
| NLD              | 6  | 3,8                     | 16,5          | 12    | 38    | 55    | 31       | 02 9230 090 132    |              |
| NLD              | 8  | 5,8                     | 18,5          | 14    | 42    | 66    | 36       | 02 9230 090 252    |              |
| NLD              | 10 | 7,8                     | 21            | 16    | 44    | 66    | 36       | 02 9230 090 382    |              |
| NLD              | 12 | 8,5                     | 23            | 18    | 45,5  | 71    | 41       | 02 9230 090 533    |              |
| NLD              | 16 | 12,5                    | 30,5          | 22    | 48,5  | 75    | 41       | 02 9230 090 616    |              |
| NLD              | 20 | 14,5                    | 31,5          | 26    | 66    | 85    | 51       | 02 9230 090 726    |              |
| NLD              | 25 | 22                      | 39,5          | 30    | 63    | 84    | 50       | 02 9230 090 800    |              |

## RKRN 895



Elbow 90°  
banjo staggered 90° DIN 7642

Elbows can also be supplied with an altered  $e_1$ -size

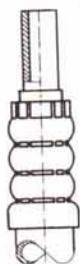
| Type of assembly | DN | $d_5$<br>nipple<br>bore | $d_4$<br>max. | $d_9$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>nipple | PN           |
|------------------|----|-------------------------|---------------|-------|-------|-------|----------|--------------------|--------------|
| NLD              | 5  | 2,8                     | 16            | 10    | 36    | 52    | 31       | 02 9230 090 091    | applied hose |
| NLD              | 6  | 3,8                     | 16,5          | 12    | 38    | 55    | 31       | 02 9230 090 133    |              |
| NLD              | 8  | 5,8                     | 18,5          | 14    | 42    | 66    | 36       | 02 9230 090 253    |              |
| NLD              | 10 | 7,8                     | 21            | 16    | 44    | 66    | 36       | 02 9230 090 383    |              |
| NLD              | 12 | 8,5                     | 23            | 18    | 45,5  | 71    | 41       | 02 9230 090 534    |              |
| NLD              | 16 | 12,5                    | 30,5          | 22    | 48,5  | 75    | 41       | 02 9230 090 617    |              |
| NLD              | 20 | 14,5                    | 31,5          | 26    | 66    | 85    | 51       | 02 9230 090 727    |              |
| NLD              | 25 | 22                      | 39,5          | 30    | 63    | 84    | 50       | 02 9230 090 801    |              |



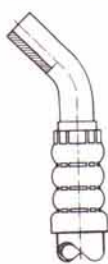
## Type of connection TL

for hoses 3 TE; 2 SK; 2 SN; 1SN; 1 SC; 2 SC; PL 7; PL 8

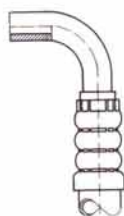
**BEL** 100/130



**RKBEL** 845/997



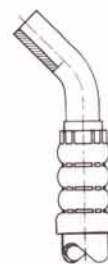
**RKBEL** 890/896



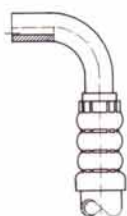
**BES** 103



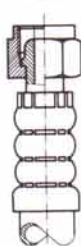
**RKBES** 846



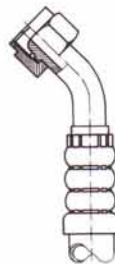
**RKBES** 891



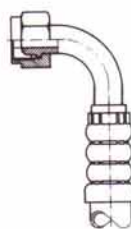
**DKL** 290/292



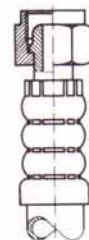
**RKDKL** 907/947



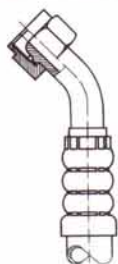
**RKDKL** 899/903



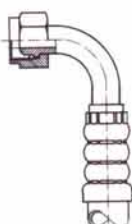
**DKS** 345/295



**RKDKS** 909/948



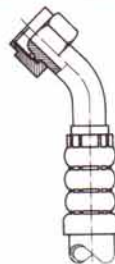
**RKDKS** 898/989



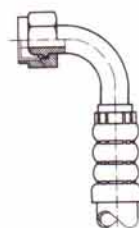
**DKLL** 300



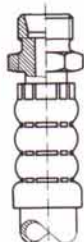
**RKDKLL** 908



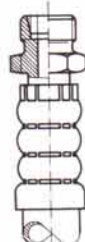
**RKDKLL** 892



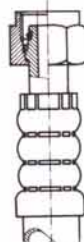
**CEL** 200/230



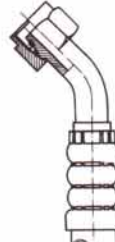
**CES** 202/231



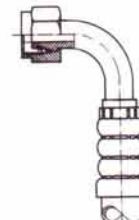
**DKOL** 347/351



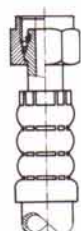
**RKDKOL** 912/806



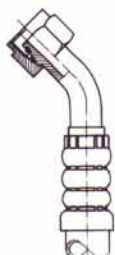
**RKDKOL** 913/807



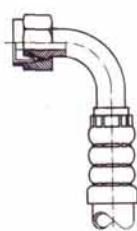
**DKOS** 348/353



**RKDKOS** 878/959



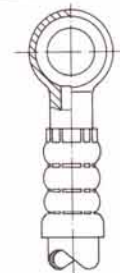
**RKDKOS** 879/881



**RN** 450/490

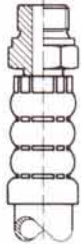
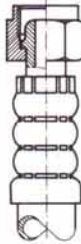
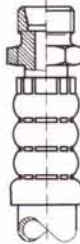

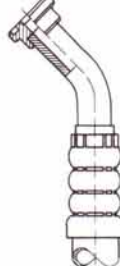
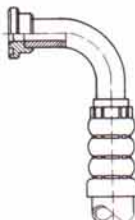

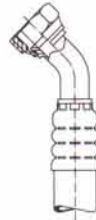
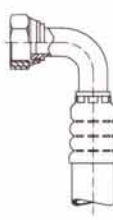

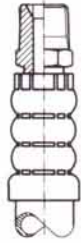
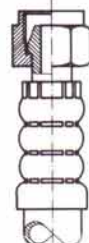
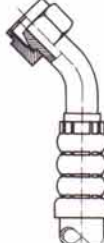
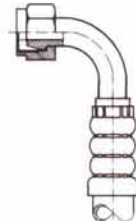
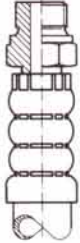
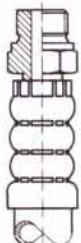
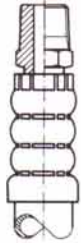


**RN** 451/491



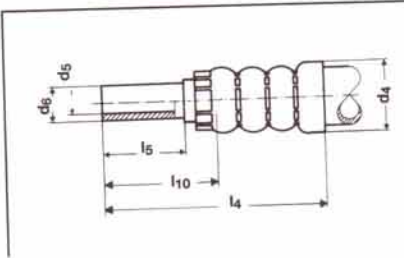
## Type of connection TL

for hoses 3 TE; 2 SK; 2 SN; 1 SN; 1 SC; 2 SC; PL 7; PL 8

|  |   |  |  |  |
|--|---|--|--|--|
| ENM 400/472<br>   | DKGF 336<br>       | CEGF 204<br>        | FNS 527/533<br>     | RKFS 855/826<br>  |
| RKFS 900/902<br>  | BNI 504<br>        | RKI 857<br>         | RKI 858<br>         | ENI 404<br>      |
| ENP 402/423<br> | DKZ 319/364<br>  | RKDKZ 833/808<br> | RKDKZ 914/809<br> | ENZ 431/419<br> |
| ENZ 401/419<br> | ENZK 403/447<br> |  |  |  |
|  |   |  |  |  |
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## 3.2

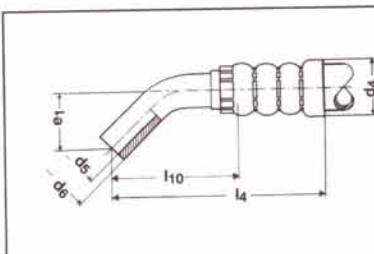
### BEL 100/130



Standpipe  
light type  
with regards to security we recommend DKL or DKOL  
the pressure resistance of this coupling is limited by the corresponding countercoupling

| Type of assembly | DN  | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>5</sub> | l <sub>10</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|------------------------|----------------|----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4              | 8              | 20                     | 64             | 23             | 32              | 04 0100 501 060  | 04 0100 500 060  | 250 |
| TL               | 6:5 | 4              | 6              | 20                     | 61             | 22             | 31              | 04 0130 501 060  | 04 0130 500 060  | 250 |
| TL               | 8   | 5,5            | 10             | 22,5                   | 64             | 23             | 32              | 04 0100 501 080  | 04 0100 500 080  | 250 |
| TL               | 10  | 7              | 12             | 24                     | 67             | 24             | 33              | 04 0100 501 100  | 04 0100 500 100  | 250 |
| TL               | 12  | 9,4            | 15             | 28                     | 69             | 25             | 34              | 04 0100 501 130  | 04 0100 500 130  | 250 |
| TL               | 16  | 12,2           | 18             | 31                     | 72             | 27             | 36              | 04 0100 500 160  | 04 0100 500 160  | 160 |
| TL               | 20  | 15,3           | 22             | 35                     | 74             | 27             | 37              | 04 0100 500 200  | 04 0100 500 200  | 160 |
| TL               | 25  | 20,4           | 28             | 43                     | 80             | 30             | 39              | 04 0100 500 250  | 04 0100 500 250  | 100 |
| TL               | 32  | 26             | 35             | 55                     | 105            | 36             | 49              | 04 0100 500 320  | 04 0100 500 320  | 100 |
| TL               | 40  | 33,5           | 42             | 62                     | 102            | 36             | 46              | 04 0100 500 400  | 04 0100 500 400  | 100 |

### RKBEL 845/997



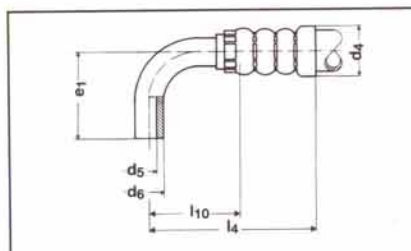
Elbow 45°  
standpipe light type  
with regards to security we recommend RKDKL or RKDKOL  
the pressure resistance of this coupling is limited by the corresponding countercoupling

Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN  | d <sub>5</sub> | d <sub>6</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|------------------------|----------------|----------------|-----------------|------------------|--|-----|
| TL               | 6   | 5              | 8              | 20                     | 18             | 77             | 39              | 04 0845 501 060  | 04 0845 500 060  | 250 |
| TL               | 6:5 | 3,2            | 6              | 20                     | 18             | 75             | 39              | 04 0997 501 060  | 04 0997 500 060  | 250 |
| TL               | 8   | 5,5            | 10             | 22,5                   | 22             | 82             | 45              | 04 0845 501 080  | 04 0845 500 080  | 250 |
| TL               | 10  | 7,0            | 12             | 24                     | 22             | 82             | 45              | 04 0845 501 100  | 04 0845 500 100  | 250 |
| TL               | 12  | 9,4            | 15             | 28                     | 23             | 89             | 47              | 04 0845 501 130  | 04 0845 500 130  | 250 |
| TL               | 16  | 12,2           | 18             | 31                     | 25             | 95             | 50              | 04 0845 500 160  | 04 0845 500 160  | 160 |
| TL               | 20  | 17             | 22             | 35                     | 30             | 105            | 69              | 04 0845 500 200  | 04 0845 500 200  | 160 |
| TL               | 25  | 23             | 28             | 43                     | 30             | 113            | 71              | 04 0845 500 250  | 04 0845 500 250  | 100 |
| TL               | 32  | 29             | 35             | 55                     | 37             | 142            | 86              | 04 0845 500 320  | 04 0845 500 320  | 100 |
| TL               | 40  | 33,5           | 42             | 62                     | 40             | 149            | 92              | 04 0845 500 400  | 04 0845 500 400  | 100 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

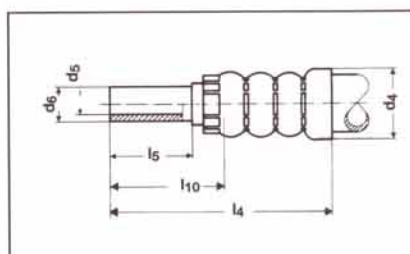


**RKBEL 890/896**

Elbow 90°  
standpipe light type  
with regards to security we recommend RKDKL or RKDKOL  
the pressure resistance of this coupling is limited by the corresponding counter coupling

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_6$ | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|-------|---------------|-------|-------|----------|------------------|--|-----|
| TL               | 6   | 5     | 8     | 20            | 35    | 65    | 29       | 04 0890 501 060  | 04 0890 500 060  | 250 |
| TL               | 6,5 | 3,2   | 6     | 20            | 35    | 63    | 29       | 04 0896 501 060  | 04 0896 500 060  | 250 |
| TL               | 8   | 5,5   | 10    | 22,5          | 43    | 71    | 35       | 04 0890 501 080  | 04 0890 500 080  | 250 |
| TL               | 10  | 7,0   | 12    | 24            | 43    | 71    | 35       | 04 0890 501 100  | 04 0890 500 100  | 250 |
| TL               | 12  | 9,4   | 15    | 28            | 45    | 77    | 35       | 04 0890 500 130  | 04 0890 500 130  | 250 |
| TL               | 16  | 12,2  | 18    | 31            | 50    | 84    | 40       | 04 0890 500 160  | 04 0890 500 160  | 160 |
| TL               | 20  | 17    | 22    | 35            | 63    | 95    | 59       | 04 0890 500 200  | 04 0890 500 200  | 160 |
| TL               | 25  | 23    | 28    | 43            | 60    | 101   | 58       | 04 0890 500 250  | 04 0890 500 250  | 100 |
| TL               | 32  | 29    | 35    | 55            | 76    | 128   | 72       | 04 0890 500 320  | 04 0890 500 320  | 100 |
| TL               | 40  | 35    | 42    | 62            | 86    | 137   | 85       | 04 0890 500 400  | 04 0890 500 400  | 100 |

**BES 103**

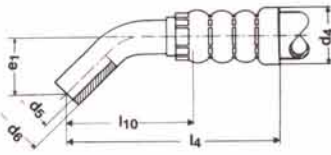
Standpipe  
heavy type  
with regards to security we recommend DKS or DKOS  
the pressure resistance of this coupling is limited by the corresponding counter coupling

| Type of assembly | DN | $d_5$ | $d_6$ | $d_4$<br>max. | $l_4$ | $l_5$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|-------|---------------|-------|-------|----------|------------------|--|-----|
| TL               | 6  | 4     | 10    | 20            | 64    | 23    | 33       | 04 0103 501 060  | 04 0103 500 060  | 250 |
| TL               | 8  | 5,5   | 12    | 22,5          | 64    | 23    | 33       | 04 0103 501 080  | 04 0103 500 080  | 250 |
| TL               | 10 | 7     | 14    | 24            | 67    | 26    | 36       | 04 0103 501 100  | 04 0103 500 100  | 250 |
| TL               | 12 | 9,4   | 16    | 28            | 69    | 26    | 37       | 04 0103 501 130  | 04 0103 500 130  | 250 |
| TL               | 16 | 12,2  | 20    | 31            | 80    | 36    | 43       | 04 0103 500 160  | 04 0103 500 160  | 160 |
| TL               | 20 | 15,3  | 25    | 35            | 84    | 40    | 47       | 04 0103 500 200  | 04 0103 500 200  | 160 |
| TL               | 25 | 20,4  | 30    | 43            | 92    | 44    | 51       | 04 0103 500 250  | 04 0103 500 250  | 100 |
| TL               | 32 | 26    | 38    | 55            | 116   | 50    | 60       | 04 0103 500 320  | 04 0103 500 320  | 100 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

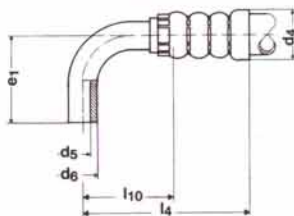
### RKBES 846



Elbow 45°  
standpipe heavy type  
with regards to security we recommend RKDKS or RKDKOS  
the pressure resistance of this coupling is limited by the corresponding counter coupling  
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_6$ | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|-------|---------------|-------|-------|----------|------------------|--|-----|
| TL               | 6  | 6     | 10    | 20            | 22    | 83    | 45       | 04 0846 501 060  | 04 0846 500 060  | 250 |
| TL               | 8  | 7     | 12    | 22,5          | 23    | 84    | 47       | 04 0846 501 080  | 04 0846 500 080  | 250 |
| TL               | 10 | 9     | 14    | 24            | 26    | 90    | 51       | 04 0846 501 100  | 04 0846 500 100  | 250 |
| TL               | 12 | 9,4   | 16    | 28            | 28    | 97    | 53       | 04 0846 501 130  | 04 0846 500 130  | 250 |
| TL               | 16 | 12,2  | 20    | 31            | 32    | 106   | 59       | 04 0846 500 160  | 04 0846 500 160  | 160 |
| TL               | 20 | 20    | 25    | 35            | 38    | 107   | 75       | 04 0846 500 200  | 04 0846 500 200  | 160 |
| TL               | 25 | 21    | 30    | 43            | 41    | 127   | 84,5     | 04 0846 500 250  | 04 0846 500 250  | 100 |
| TL               | 32 | 26    | 38    | 55            | 48    | 156   | 100      | 04 0846 500 320  | 04 0846 500 320  | 100 |

### RKBES 891

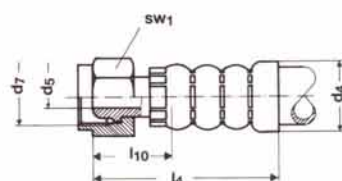


Elbow 90°  
standpipe heavy type  
with regards to security we recommend RKDKS or RKDKOS  
the pressure resistance of this coupling is limited by corresponding counter coupling  
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_6$ | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|-------|---------------|-------|-------|----------|------------------|--|-----|
| TL               | 6  | 6     | 10    | 2             | 43    | 70    | 35       | 04 0891 501 060  | 04 0891 500 060  | 250 |
| TL               | 8  | 7     | 12    | 22,5          | 45    | 71    | 35       | 04 0891 501 080  | 04 0891 500 080  | 250 |
| TL               | 10 | 9     | 14    | 24            | 52    | 77    | 40       | 04 0891 501 100  | 04 0891 500 100  | 250 |
| TL               | 12 | 9,4   | 16    | 28            | 55    | 82    | 40       | 04 0891 501 130  | 04 0891 500 130  | 250 |
| TL               | 16 | 12,2  | 20    | 31            | 62    | 82    | 45       | 04 0891 500 160  | 04 0891 500 160  | 160 |
| TL               | 20 | 20    | 25    | 35            | 75    | 105   | 60       | 04 0891 500 200  | 04 0891 500 200  | 160 |
| TL               | 25 | 21    | 30    | 43            | 79    | 106   | 63       | 04 0891 500 250  | 04 0891 500 250  | 100 |
| TL               | 32 | 26    | 38    | 55            | 92    | 133   | 77       | 04 0891 500 320  | 04 0891 500 320  | 100 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

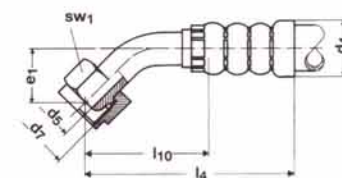
## DKL 290/292, DN 5-16 Form A DIN 20078



Metric female swivel 24° and 60° up to DN 16,  
beginning DN 20 only 24°  
light type

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4              | M 14 × 1,5     | 20                     | 54             | 22,5            | 17              | 04 0290 501 060  | 04 0290 500 060  | 315 |
| TL               | 6,5 | 3,2            | M 12 × 1,5     | 20                     | 54             | 23              | 14              | 04 0292 501 060  | 04 0292 500 060  | 315 |
| TL               | 8   | 5,5            | M 16 × 1,5     | 22,5                   | 54             | 22,5            | 19              | 04 0290 501 080  | 04 0290 500 080  | 315 |
| TL               | 10  | 7              | M 18 × 1,5     | 24                     | 54             | 22,5            | 22              | 04 0290 501 100  | 04 0290 500 100  | 315 |
| TL               | 12  | 9,4            | M 22 × 1,5     | 28                     | 60             | 22,5            | 27              | 04 0290 501 130  | 04 0290 500 130  | 315 |
| TL               | 16  | 12,2           | M 26 × 1,5     | 31                     | 60             | 23              | 32              | 04 0290 500 160  | 04 0290 500 160  | 315 |
| TL               | 20  | 15,3           | M 30 × 3       | 35                     | 60             | 24              | 36              | 04 0290 500 200  | 04 0290 500 200  | 160 |
| TL               | 25  | 20,4           | M 36 × 2       | 43                     | 65             | 24              | 41              | 04 0290 500 250  | 04 0290 500 250  | 160 |
| TL               | 32  | 26             | M 45 × 2       | 55                     | 89             | 33              | 50              | 04 0290 500 320  | 04 0290 500 320  | 160 |
| TL               | 40  | 33,5           | M 52 × 2       | 62                     | 89             | 33              | 60              | 04 0290 500 400  | 04 0290 500 400  | 160 |

## RKDKL 907/947



Metric female swivel 24° and 60° up to DN 16,  
beginning DN 20 only 24°  
light type

Elbows can also be supplied with an altered e<sub>1</sub>-size

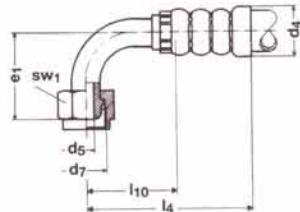
| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4              | M 14 × 1,5     | 20                     | 14             | 75             | 34,5            | 17              | 04 0907 501 060  | 04 0947 500 060  | 315 |
| TL               | 6,5 | 3,2            | M 12 × 1,5     | 20                     | 14             | 66             | 35              | 14              | 04 0947 501 060  | 04 0947 500 060  | 315 |
| TL               | 8   | 5,5            | M 16 × 1,5     | 22,5                   | 16             | 79             | 46              | 19              | 04 0907 501 080  | 04 0947 500 080  | 315 |
| TL               | 10  | 7,0            | M 18 × 1,5     | 24                     | 17             | 79             | 51              | 22              | 04 0907 501 100  | 04 0907 500 100  | 315 |
| TL               | 12  | 9,4            | M 22 × 1,5     | 28                     | 19             | 88             | 53              | 27              | 04 0907 501 130  | 04 0907 500 130  | 315 |
| TL               | 16  | 12,2           | M 26 × 1,5     | 31                     | 26             | 100            | 63              | 32              | 04 0907 500 160  | 04 0907 500 160  | 315 |
| TL               | 20  | 16             | M 30 × 2       | 35                     | 25             | 99             | 64              | 36              | 04 0907 500 200  | 04 0907 500 200  | 160 |
| TL               | 25  | 20,2           | M 36 × 2       | 43                     | 35             | 118            | 75              | 41              | 04 0907 500 250  | 04 0907 500 250  | 160 |
| TL               | 32  | 26             | M 45 × 2       | 55                     | 36             | 141            | 85              | 55              | 04 0907 500 320  | 04 0907 500 320  | 160 |
| TL               | 40  | 33,5           | M 52 × 2       | 62                     | 39             | 148            | 91              | 60              | 04 0907 500 400  | 04 0907 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## 3.2

### RKDKL 899/903

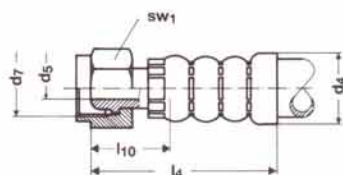


Elbow 90° metric female swivel 24° and 60° up to DN 16  
beginning DN 20 only 24°  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6   | 4     | M 14 × 1,5 | 20            | 29    | 63    | 29       | 17     | 04 0899 501 060  | 04 0899 500 060  | 315 |
| TL               | 6:5 | 4     | M 12 × 1,5 | 20            | 29    | 63    | 29       | 14     | 04 0903 501 060  | 04 0903 500 060  | 315 |
| TL               | 8   | 5,5   | M 16 × 1,5 | 22,5          | 34    | 68    | 44,5     | 19     | 04 0899 501 080  | 04 0899 500 080  | 315 |
| TL               | 10  | 7,0   | M 18 × 1,5 | 24            | 39    | 68    | 48       | 22     | 04 0899 501 100  | 04 0899 500 100  | 315 |
| TL               | 12  | 9,4   | M 22 × 1,5 | 28            | 44    | 77    | 52       | 27     | 04 0899 501 130  | 04 0899 500 130  | 315 |
| TL               | 16  | 12,2  | M 26 × 1,5 | 31            | 55    | 92    | 55       | 32     | 04 0899 500 160  | 04 0899 500 160  | 315 |
| TL               | 20  | 16    | M 30 × 2   | 35            | 55    | 99    | 59,5     | 36     | 04 0899 500 200  | 04 0899 500 200  | 160 |
| TL               | 25  | 22    | M 36 × 2   | 43            | 67    | 101   | 58       | 41     | 04 0899 500 250  | 04 0899 500 250  | 160 |
| TL               | 32  | 30    | M 45 × 2   | 55            | 75    | 128   | 72       | 55     | 04 0899 500 320  | 04 0899 500 320  | 160 |
| TL               | 40  | 37    | M 52 × 2   | 62            | 85    | 138   | 81       | 60     | 04 0899 500 400  | 04 0899 500 400  | 160 |

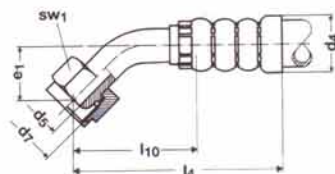
### DKS 345/295



Metric female swivel  
24° cone seat  
heavy type

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|-------|------------|---------------|-------|----------|--------|------------------|--|--------------|
| TL               | 6   | 4     | M 18 × 1,5 | 20            | 55    | 23       | 22     | 04 0345 501 060  | 04 0345 500 060  | applied hose |
| TL               | 6:5 | 4     | M 16 × 1,5 | 20            | 55    | 23,5     | 19     | 04 0295 501 060  | 04 0295 500 060  |              |
| TL               | 8   | 5,5   | M 20 × 1,5 | 22,5          | 55    | 23       | 24     | 04 0345 501 080  | 04 0345 500 080  |              |
| TL               | 10  | 7     | M 22 × 1,5 | 24            | 56    | 23       | 27     | 04 0345 501 100  | 04 0345 500 100  |              |
| TL               | 12  | 9,4   | M 24 × 1,5 | 28            | 57    | 23       | 30     | 04 0345 501 130  | 04 0345 500 130  |              |
| TL               | 16  | 12,2  | M 30 × 2   | 31            | 63    | 26       | 36     | 03 0345 500 160  | 04 0345 500 160  |              |
| TL               | 20  | 15,3  | M 36 × 2   | 35            | 63    | 26       | 46     | 04 0345 500 200  | 04 0345 500 200  |              |
| TL               | 25  | 20,4  | M 42 × 2   | 43            | 69    | 28       | 50     | 04 0345 500 250  | 04 0345 500 250  |              |
| TL               | 32  | 26    | M 52 × 2   | 55            | 92    | 36       | 60     | 04 0345 500 320  | 04 0345 500 320  |              |

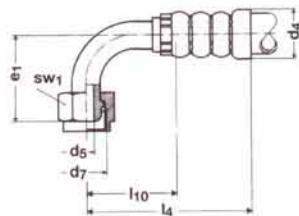
When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**RKDKS 909/948**

45° metric female swivel  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|--------------|
| TL               | 6   | 4     | M 18 × 1,5 | 20            | 18    | 76    | 38       | 22     | 04 0909 501 060  | 04 0909 500 060  | applied hose |
| TL               | 6,5 | 4     | M 16 × 1,5 | 20            | 18    | 76    | 38       | 19     | 04 0948 501 060  | 04 0948 500 060  |              |
| TL               | 8   | 5,5   | M 20 × 1,5 | 22,5          | 19    | 80    | 52       | 24     | 04 0909 501 080  | 04 0909 500 080  |              |
| TL               | 10  | 7,0   | M 22 × 1,5 | 24            | 19    | 80    | 52       | 27     | 04 0909 501 100  | 04 0909 500 100  |              |
| TL               | 12  | 9,4   | M 24 × 1,5 | 28            | 19    | 89    | 53       | 30     | 04 0909 501 130  | 04 0909 500 130  |              |
| TL               | 16  | 12,2  | M 30 × 2   | 31            | 26    | 100   | 63       | 36     | 04 0909 500 160  | 04 0909 500 160  |              |
| TL               | 20  | 16    | M 36 × 2   | 35            | 27    | 101   | 63       | 46     | 04 0909 500 200  | 04 0909 500 200  |              |
| TL               | 25  | 22    | M 42 × 2   | 43            | 34    | 117   | 74       | 50     | 04 0909 500 250  | 04 0909 500 250  |              |
| TL               | 32  | 30    | M 52 × 2   | 55            | 32    | 136   | 80       | 60     | 04 0909 500 320  | 04 0909 500 320  |              |

**RKDKS 898/989**

90° metric female swivel  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

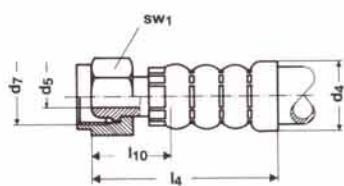
| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|--------------|
| TL               | 6   | 4     | M 18 × 1,5 | 20            | 34    | 63    | 29       | 22     | 04 0898 501 060  | 04 0898 500 060  | applied hose |
| TL               | 6,5 | 4     | M 16 × 1,5 | 20            | 34    | 63    | 29       | 19     | 04 0989 501 060  | 40 0989 500 060  |              |
| TL               | 8   | 5,5   | M 20 × 1,5 | 22,5          | 37    | 68    | 42       | 24     | 04 0898 501 080  | 04 0898 500 080  |              |
| TL               | 10  | 7,0   | M 22 × 1,5 | 24            | 41    | 68    | 48       | 27     | 04 0898 501 100  | 04 0898 500 100  |              |
| TL               | 12  | 9,4   | M 24 × 1,5 | 28            | 45    | 77    | 52       | 30     | 04 0898 501 130  | 04 0898 500 130  |              |
| TL               | 16  | 12,2  | M 30 × 2   | 31            | 55    | 92    | 55       | 36     | 04 0898 500 160  | 04 0898 500 160  |              |
| TL               | 20  | 16    | M 36 × 2   | 35            | 57    | 99    | 62       | 46     | 04 0898 500 200  | 04 0898 500 200  |              |
| TL               | 25  | 22    | M 42 × 2   | 43            | 65    | 101   | 58       | 50     | 04 0898 500 250  | 04 0898 500 250  |              |
| TL               | 32  | 30    | M 52 × 2   | 55            | 68    | 128   | 72       | 60     | 04 0898 500 320  | 04 0898 500 320  |              |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## 3.2

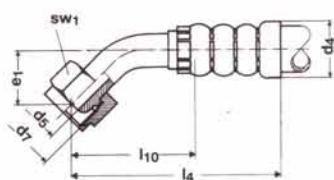
### DKLL 300 Form C DIN 20078 DN 5–16 DKL 290



Metric female swivel  
60° cone seat  
very light type

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 20 | 15,3           | M 30 × 1,5     | 35                     | 60             | 24              | 36              | 04 0300 500 200  | 04 0300 500 200  | 160 |
| TL               | 25 | 20,4           | M 38 × 1,5     | 43                     | 65             | 24              | 46              | 04 0300 500 250  | 04 0300 500 250  | 160 |
| TL               | 32 | 26             | M 45 × 1,5     | 55                     | 89             | 33              | 50              | 04 0300 500 320  | 04 0300 500 320  | 160 |
| TL               | 40 | 33,5           | M 52 × 1,5     | 62                     | 89             | 33              | 60              | 04 0300 500 400  | 04 0300 500 400  | 160 |

### RKDKLL 908 DN 5–16 RKDKL 907

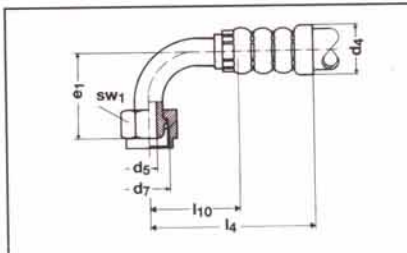


Elbow 45° metric female swivel  
60° cone seat  
very light type

Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 20 | 16             | M 30 × 1,5     | 35                     | 25             | 99             | 64              | 36              | 04 0908 500 200  | 04 0908 500 200  | 160 |
| TL               | 25 | 22             | M 38 × 1,5     | 43                     | 35             | 118            | 75              | 46              | 04 0908 500 250  | 04 0908 500 250  | 160 |
| TL               | 32 | 30             | M 45 × 1,5     | 55                     | 36             | 141            | 85              | 55              | 04 0908 500 320  | 04 0908 500 320  | 160 |
| TL               | 40 | 37             | M 52 × 1,5     | 62                     | 39             | 148            | 91              | 60              | 04 0908 500 400  | 04 0908 500 400  | 160 |

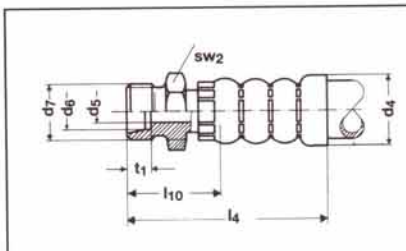
When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**RKDKLL 892 DN 5-16 RKDKL 899**

Elbow 90° metric female swivel  
60° cone seat  
very light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 20 | 16    | M 30 × 1,5 | 35            | 55    | 99    | 59,5     | 36     | 04 0892 500 200  | 04 0892 500 200  | 160 |
| TL               | 25 | 22    | M 38 × 1,5 | 43            | 67    | 101   | 58       | 46     | 04 0892 500 250  | 04 0892 500 250  | 160 |
| TL               | 32 | 30    | M 45 × 1,5 | 55            | 75    | 128   | 72       | 55     | 04 0892 500 320  | 04 0892 500 320  | 160 |
| TL               | 40 | 37    | M 52 × 1,5 | 62            | 85    | 138   | 81       | 60     | 04 0892 500 400  | 04 0892 500 400  | 160 |

**CEL 200/230 Form D DIN 20078**

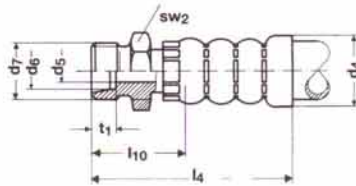
Metric male coupling  
24° cone seat  
light type  
the pressure resistance of this coupling is limited by the corresponding counter coupling

| Type of assembly | DN  | $d_5$ | $d_6$ | $d_7$      | $d_4$<br>max. | $l_4$ | $l_{10}$ | $sw_2$ | $t_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|-------|------------|---------------|-------|----------|--------|-------|------------------|--|-----|
| TL               | 6   | 4     | 8     | M 14 × 1,5 | 20            | 57    | 26       | 14     |       | 04 0200 501 060  | 04 0200 500 060  | 315 |
| TL               | 6,5 | 4     | 6     | M 12 × 1,5 | 20            | 57    | 25,5     | 13     |       | 04 0230 501 060  | 04 0230 500 060  | 315 |
| TL               | 8   | 5,5   | 10    | M 16 × 1,5 | 22,5          | 58    | 27       | 17     | 7     | 04 0200 501 080  | 04 0200 500 080  | 315 |
| TL               | 10  | 7     | 12    | M 18 × 1,5 | 24            | 60    | 29       | 19     |       | 04 0200 501 100  | 04 0200 500 100  | 315 |
| TL               | 12  | 9,4   | 15    | M 22 × 1,5 | 28            | 67    | 30       | 22     |       | 04 0200 501 130  | 04 0200 500 130  | 315 |
| TL               | 16  | 12,2  | 18    | M 26 × 1,5 | 31            | 69    | 32       | 27     |       | 04 0200 500 160  | 04 0200 500 160  | 315 |
| TL               | 20  | 15,3  | 22    | M 30 × 2   | 35            | 71    | 34       | 30     | 7,5   | 04 0200 500 200  | 04 0200 500 200  | 160 |
| TL               | 25  | 20,4  | 28    | M 36 × 2   | 43            | 79    | 40       | 36     |       | 04 0200 500 250  | 04 0200 500 250  | 160 |
| TL               | 32  | 26    | 35,3  | M 45 × 2   | 55            | 100   | 44       | 46     | 10,5  | 04 0200 500 320  | 04 0200 500 320  | 160 |
| TL               | 40  | 33,5  | 42,3  | M 52 × 2   | 62            | 100   | 44       | 55     | 11    | 04 0200 500 400  | 04 0200 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

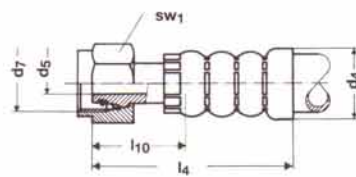
### CES 202/231 Form E DIN 20078



Metric male coupling  
24° cone seat  
heavy type  
the pressure resistance of this coupling is limited by the corresponding counter coupling.

| Type of assembly | DN  | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|----------------|------------------------|----------------|-----------------|-----------------|----------------|------------------|--|-----|
| TL               | 6   | 4              | 10             | M 18 × 1,5     | 20                     | 61             | 30              | 19              | 7,5            | 04 0202 501 060  | 04 0202 500 060  | 630 |
| TL               | 6,5 | 4              | 8              | M 16 × 1,5     | 20                     | 59             | 27              | 17              | 7              | 04 0231 501 060  | 04 0231 500 060  | 630 |
| TL               | 8   | 5,5            | 12             | M 20 × 1,5     | 22,5                   | 61             | 30              | 22              | 7,5            | 04 0202 501 080  | 04 0202 500 080  | 630 |
| TL               | 10  | 7              | 14             | M 22,5 × 1,5   | 24                     | 63             | 32              | 22              | 8              | 04 0202 501 100  | 04 0202 500 100  | 630 |
| TL               | 12  | 9,4            | 16             | M 24 × 1,5     | 28                     | 71             | 34              | 24              | 8,5            | 04 0202 501 130  | 04 0202 500 130  | 400 |
| TL               | 16  | 12,2           | 20             | M 30 × 2       | 31                     | 73             | 36              | 30              | 10,5           | 04 0202 500 160  | 04 0202 500 160  | 400 |
| TL               | 20  | 15,3           | 25             | M 36 × 2       | 35                     | 79             | 42              | 36              | 12             | 04 0202 500 200  | 04 0202 500 200  | 400 |
| TL               | 25  | 20,4           | 30             | M 42 × 2       | 43                     | 87             | 46              | 46              | 13,5           | 04 0202 500 250  | 04 0202 500 250  | 400 |
| TL               | 32  | 26             | 38,3           | M 52 × 2       | 55                     | 106            | 50              | 55              | 16             | 04 0202 500 320  | 04 0202 500 320  | 315 |

### DKOL 347/351 Form N DIN 20078

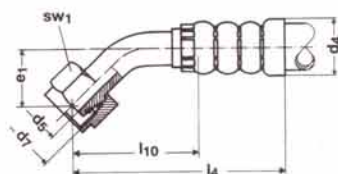


Metric female swivel with O-Ring  
24° cone seat  
light type

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4              | M 14 × 1,5     | 20                     | 57             | 25,5            | 17              | 04 0347 501 060  | 04 0347 500 060  | 315 |
| TL               | 6,5 | 4              | M 12 × 1,5     | 20                     | 57             | 26              | 14              | 04 0351 501 060  | 04 0351 500 060  | 315 |
| TL               | 8   | 5,5            | M 16 × 1,5     | 22,5                   | 58             | 25,5            | 19              | 04 0347 501 080  | 04 0347 500 080  | 315 |
| TL               | 10  | 7              | M 18 × 1,5     | 24                     | 58             | 26,5            | 22              | 04 0347 501 100  | 04 0347 500 100  | 315 |
| TL               | 12  | 9,4            | M 22 × 1,5     | 28                     | 60             | 28              | 27              | 04 0347 501 130  | 04 0347 500 130  | 315 |
| TL               | 16  | 12,2           | M 26 × 1,5     | 31                     | 65             | 28              | 32              | 04 0347 500 160  | 04 0347 500 160  | 315 |
| TL               | 20  | 15,3           | M 30 × 2       | 35                     | 67             | 30              | 36              | 04 0347 500 200  | 04 0347 500 200  | 160 |
| TL               | 25  | 20,4           | M 36 × 2       | 43                     | 72             | 31              | 41              | 04 0347 500 250  | 04 0347 500 250  | 160 |
| TL               | 32  | 26             | M 45 × 2       | 55                     | 95             | 39              | 50              | 04 0347 500 320  | 04 0347 500 320  | 160 |
| TL               | 40  | 33,5           | M 52 × 2       | 62                     | 95             | 39              | 60              | 04 0347 500 400  | 04 0347 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

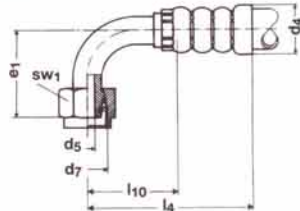


**RKDKOL 912/806**

Elbow 45° metric female swivel with O-Ring  
24° cone seat  
light type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6   | 4     | M 14 × 1,5 | 20            | 14    | 66    | 34,5     | 17     | 04 0912 501 060  | 04 0912 500 060  | 315 |
| TL               | 6,5 | 4     | M 12 × 1,5 | 20            | 14    | 66    | 34,5     | 14     | 04 0806 501 060  | 04 0806 500 060  | 315 |
| TL               | 8   | 5,5   | M 16 × 1,5 | 22,5          | 16    | 77    | 46       | 19     | 04 0912 501 080  | 04 0912 500 080  | 315 |
| TL               | 10  | 7,0   | M 18 × 1,5 | 24            | 17    | 82    | 51       | 22     | 04 0912 501 100  | 04 0912 500 100  | 315 |
| TL               | 12  | 9,4   | M 22 × 1,5 | 28            | 19    | 84    | 53       | 27     | 04 0912 501 130  | 04 0912 500 130  | 315 |
| TL               | 16  | 12,2  | M 26 × 1,5 | 31            | 26    | 100   | 63       | 32     | 04 0912 500 160  | 04 0921 500 160  | 315 |
| TL               | 20  | 16    | M 30 × 2   | 35            | 27    | 102   | 66       | 36     | 04 0912 500 200  | 04 0912 500 200  | 160 |
| TL               | 25  | 22    | M 36 × 2   | 43            | 36    | 119   | 76       | 41     | 04 0912 500 250  | 04 0912 500 250  | 160 |
| TL               | 32  | 29    | M 45 × 2   | 55            | 39    | 144   | 88       | 55     | 04 0912 500 320  | 04 0912 500 320  | 160 |
| TL               | 40  | 33,5  | M 52 × 2   | 62            | 43    | 152   | 95       | 60     | 04 0912 500 400  | 04 0912 500 400  | 160 |

**RKDKOL 913/807**

Elbow 90° metric female swivel with O-Ring  
24° cone seat  
light type

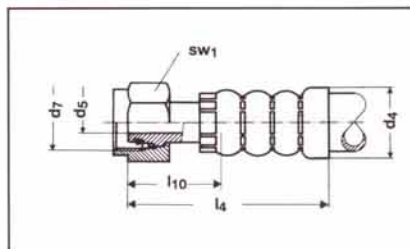
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_2$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6   | 4     | M 14 × 1,5 | 20            | 29    | 60    | 29       | 17     | 04 0913 501 060  | 04 0913 500 060  | 315 |
| TL               | 6,5 | 4     | M 12 × 1,5 | 20            | 29    | 60    | 29       | 14     | 04 0807 501 060  | 04 0807 500 060  | 315 |
| TL               | 8   | 5,5   | M 16 × 1,5 | 22,5          | 34    | 73    | 42       | 19     | 04 0913 501 080  | 04 0913 500 080  | 315 |
| TL               | 10  | 7,0   | M 18 × 1,5 | 24            | 39    | 79    | 48       | 22     | 04 0913 501 100  | 04 0913 500 100  | 315 |
| TL               | 12  | 9,4   | M 22 × 1,5 | 28            | 44    | 87    | 52       | 27     | 04 0913 501 130  | 04 0913 500 130  | 315 |
| TL               | 16  | 12,2  | M 26 × 1,5 | 31            | 55    | 92    | 55       | 32     | 04 0913 500 160  | 04 0913 500 160  | 315 |
| TL               | 20  | 16    | M 30 × 2   | 35            | 58    | 99    | 62       | 36     | 04 0913 500 200  | 04 0913 500 200  | 160 |
| TL               | 25  | 22    | M 36 × 2   | 43            | 68    | 101   | 58       | 41     | 04 0913 500 250  | 04 0913 500 250  | 160 |
| TL               | 32  | 29    | M 45 × 2   | 55            | 79    | 128   | 72       | 55     | 04 0913 500 320  | 04 0913 500 320  | 160 |
| TL               | 40  | 33,5  | M 52 × 2   | 62            | 90    | 138   | 81       | 60     | 04 0913 500 400  | 04 0913 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

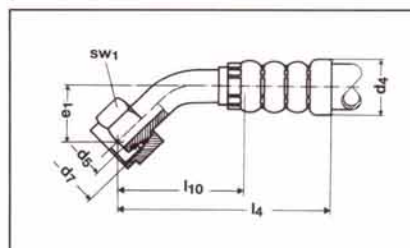
### DKOS 348/353 Form P DIN 20078



Metric female swivel with O-Ring  
24° cone seat  
heavy type

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 ZE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | M 18 × 1,5     | 20                     | 60             | 28,5            | 22              | 04 0348 501 060  | 04 0348 500 060  | applied hose |
| TL               | 6:5 | 4              | M 16 × 1,5     | 20                     | 60             | 28,5            | 19              | 04 0353 501 060  | 04 0353 500 060  |              |
| TL               | 8   | 5,5            | M 20 × 1,5     | 22,5                   | 60             | 28,5            | 24              | 04 0348 501 080  | 04 0348 500 080  |              |
| TL               | 10  | 7              | M 22 × 1,5     | 24                     | 63             | 32              | 27              | 04 0348 501 100  | 04 0348 500 100  |              |
| TL               | 12  | 9,4            | M 24 × 1,5     | 28                     | 64             | 32              | 30              | 04 0348 501 130  | 04 0348 500 130  |              |
| TL               | 16  | 12,2           | M 30 × 2       | 31                     | 72             | 35              | 36              | 04 0348 500 160  | 04 0348 500 160  |              |
| TL               | 20  | 15,3           | M 36 × 2       | 35                     | 75             | 38              | 46              | 04 0348 500 200  | 04 0348 500 200  |              |
| TL               | 25  | 20,4           | M 42 × 2       | 43                     | 81             | 40              | 50              | 04 0348 500 250  | 04 0348 500 250  |              |
| TL               | 32  | 26             | M 52 × 2       | 55                     | 103            | 47              | 60              | 04 0348 500 320  | 04 0348 500 320  |              |

### RKDKOS 878/959



Elbow 45° metric female swivel with O-Ring  
24° cone seat  
heavy type

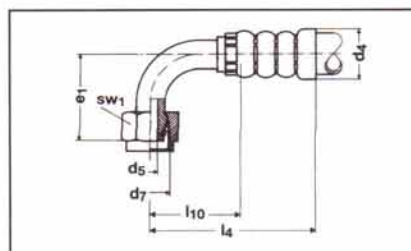
Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | M 18 × 1,5     | 20                     | 18             | 69             | 38              | 22              | 04 0878 501 060  | 04 0878 500 060  | applied hose |
| TL               | 6:5 | 4              | M 16 × 1,5     | 20                     | 18             | 69             | 38              | 19              | 04 0959 501 060  | 04 0959 500 060  |              |
| TL               | 8   | 5,5            | M 20 × 1,5     | 22,5                   | 19             | 83             | 52              | 24              | 04 0878 501 080  | 04 0878 500 080  |              |
| TL               | 10  | 7,0            | M 22 × 1,5     | 24                     | 19             | 83             | 52              | 27              | 04 0878 501 100  | 04 0878 500 100  |              |
| TL               | 12  | 9,4            | M 24 × 1,5     | 28                     | 19             | 89             | 54              | 30              | 04 0878 501 130  | 04 0878 500 130  |              |
| TL               | 16  | 12,2           | M 30 × 2       | 31                     | 26             | 100            | 63              | 36              | 04 0878 500 160  | 04 0878 500 160  |              |
| TL               | 20  | 16             | M 36 × 2       | 35                     | 31             | 105            | 70              | 46              | 04 0878 500 200  | 04 0878 500 200  |              |
| TL               | 25  | 22             | M 42 × 2       | 43                     | 38             | 121            | 78              | 50              | 04 0878 500 250  | 04 0878 500 250  |              |
| TL               | 32  | 29             | M 52 × 2       | 55                     | 55             | 143            | 87              | 60              | 04 0878 500 320  | 04 0878 500 320  |              |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## RKDKOS 879/881

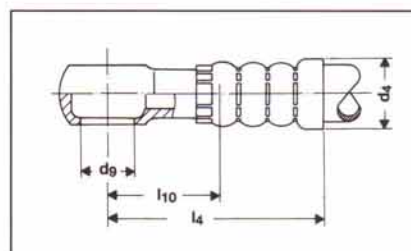


Elbow 90° metric female swivel with O-Ring  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_2$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|--------------|
| TL               | 6   | 4     | M 18 × 1,5 | 20            | 34    | 65    | 29       | 22     | 04 0879 501 060  | 04 0879 500 060  | applied hose |
| TL               | 6,5 | 4     | M 16 × 1,5 | 20            | 34    | 60    | 29       | 19     | 04 0881 501 060  | 04 0881 500 060  |              |
| TL               | 8   | 5,5   | M 20 × 1,5 | 22,5          | 36    | 73    | 42       | 24     | 04 0879 501 080  | 04 0879 500 080  |              |
| TL               | 10  | 7,0   | M 22 × 1,5 | 24            | 41    | 79    | 48       | 27     | 04 0879 501 100  | 04 0879 500 100  |              |
| TL               | 12  | 9,4   | M 24 × 1,5 | 28            | 45    | 87    | 52       | 30     | 04 0879 501 130  | 04 0879 500 130  |              |
| TL               | 16  | 12,2  | M 30 × 2   | 31            | 55    | 92    | 55       | 36     | 04 0879 500 160  | 04 0879 500 160  |              |
| TL               | 20  | 16    | M 36 × 2   | 35            | 63    | 99    | 62       | 46     | 04 0879 500 200  | 04 0879 500 200  |              |
| TL               | 25  | 22    | M 42 × 2   | 43            | 71    | 101   | 58       | 50     | 04 0879 500 250  | 04 0879 500 250  |              |
| TL               | 32  | 29    | M 52 × 2   | 55            | 78    | 128   | 72       | 60     | 04 0879 500 320  | 04 0879 500 320  |              |

## RN 450/490



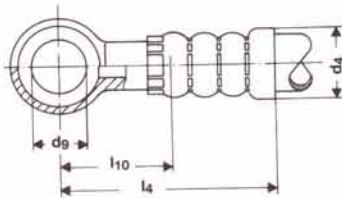
Banjo parallel Din 7642

| Type of assembly | DN  | $d_5$<br>nipple<br>bore | $d_4$<br>max. | $d_9$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------------------------|---------------|-------|-------|----------|------------------|--|-----|
| TL               | 6   | 4                       | 20            | 12    | 62    | 29       | 04 0450 501 060  | 04 0450 500 060  | 200 |
| TL               | 6,5 | 4                       | 20            | 10    | 62    | 26       | 04 0490 501 060  | 04 0490 500 060  | 200 |
| TL               | 8   | 5,5                     | 22,5          | 14    | 63    | 30       | 04 0450 501 080  | 04 0450 500 080  | 200 |
| TL               | 10  | 7                       | 24            | 16    | 65    | 32       | 04 0450 501 100  | 04 0450 500 100  | 200 |
| TL               | 12  | 9,4                     | 28            | 18    | 71    | 34       | 04 0450 501 130  | 04 0450 500 130  | 200 |
| TL               | 16  | 12,2                    | 31            | 22    | 79    | 37       | 04 0450 500 160  | 04 0450 500 160  | 200 |
| TL               | 20  | 16                      | 35            | 26    | 84    | 42       | 04 0450 500 200  | 04 0450 500 200  | 160 |
| TL               | 25  | 20,4                    | 43            | 34    | 86    | 47       | 04 0450 500 250  | 04 0450 500 250  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

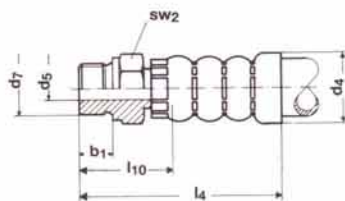
### RN 451/491



Banjo 90° staggered DIN 7642

| Type of assembly | DN  | d <sub>5</sub><br>nipple bore | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------------------------------|----------------|------------------------|----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4                             | 12             | 20                     | 62             | 29              | 04 0451 501 060  | 04 0451 500 060  | 200 |
| TL               | 6.5 | 4                             | 10             | 19                     | 53             | 25              | 04 0491 501 060  | 04 0491 500 060  | 200 |
| TL               | 8   | 6                             | 14             | 22,5                   | 63             | 30              | 04 0451 501 080  | 04 0451 500 080  | 200 |
| TL               | 10  | 7,5                           | 16             | 24                     | 65             | 32              | 04 0451 501 100  | 04 0451 500 100  | 200 |
| TL               | 12  | 10                            | 18             | 28                     | 71             | 34              | 04 0451 501 130  | 04 0451 500 130  | 200 |
| TL               | 16  | 13                            | 22             | 31                     | 79             | 37              | 04 0451 500 160  | 04 0451 500 160  | 200 |
| TL               | 20  | 16                            | 26             | 35                     | 84             | 42              | 04 0451 500 200  | 04 0451 500 200  | 160 |
| TL               | 25  | 21                            | 30             | 42                     | 86             | 44              | 04 0451 500 250  | 04 0451 500 250  | 160 |

### ENM 400/472

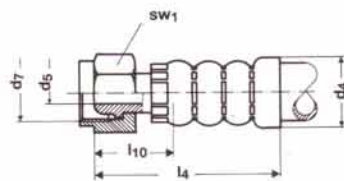


Metric male coupling flat

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | b <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | M 14 × 1,5     | 20                     | 12             | 63             | 32              | 19              | 04 0400 501 060  | 04 0400 500 060  | applied hose |
| TL               | 6.5 | 4              | M 12 × 1,5     | 20                     | 12             | 5              | 32              | 17              | 04 0472 501 060  | 04 0472 501 060  |              |
| TL               | 8   | 5,5            | M 16 × 1,5     | 22,5                   | 12             | 63             | 32              | 22              | 04 0400 501 080  | 04 0400 500 080  |              |
| TL               | 10  | 7              | M 18 × 1,5     | 24                     | 12             | 63             | 34,5            | 24              | 04 0400 501 100  | 04 0400 500 100  |              |
| TL               | 12  | 9,4            | M 22 × 1,5     | 28                     | 14             | 72             | 37              | 27              | 04 0400 501 130  | 04 0400 500 130  |              |
| TL               | 16  | 12,2           | M 26 × 1,5     | 31                     | 16             | 78             | 41              | 32              | 04 0400 500 160  | 04 0400 500 160  |              |
| TL               | 20  | 15,3           | M 30 × 1,5     | 35                     | 16             | 80             | 43              | 36              | 04 0400 500 200  | 04 0400 500 200  |              |
| TL               | 25  | 20,4           | M 38 × 1,5     | 43                     | 16             | 88             | 47              | 46              | 04 0400 500 250  | 04 0400 500 250  |              |
| TL               | 32  | 26             | M 45 × 1,5     | 55                     | 16             | 98             | 42              | 55              | 04 0400 500 320  | 04 0400 500 320  |              |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

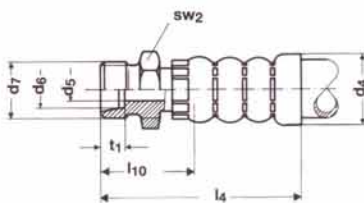
## DKGF 336



24° female french gas

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 8  | 5,5            | M 20 × 1,5     | 22,5                   | 56             | 25              | 24              | 04 0336 501 080  | 04 0336 500 080  | 350 |
| TL               | 12 | 9,4            | M 24 × 1,5     | 28                     | 61             | 25              | 30              | 04 0336 501 130  | 04 0336 500 130  | 350 |
| TL               | 16 | 12,2           | M 30 × 1,5     | 31                     | 61             | 26              | 36              | 04 0336 501 160  | 04 0336 500 160  | 250 |
| TL               | 20 | 15,5           | M 36 × 1,5     | 35                     | 61             | 23              | 41              | 04 0336 500 200  | 04 0336 500 200  | 250 |
| TL               | 25 | 20,4           | M 45 × 1,5     | 43                     | 67             | 28,5            | 50              | 04 0336 500 250  | 04 0336 500 250  | 250 |
| TL               | 32 | 26             | M 52 × 1,5     | 55                     | 88             | 32              | 60              | 04 0336 500 320  | 04 0336 500 320  | 125 |
| TL               | 40 | 33,5           | M 58 × 2       | 62                     | 92             | 35              | 65              | 04 0336 500 400  | 04 0336 500 400  | 125 |

## CEGF 204



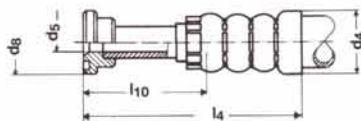
24° male french gas

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|----------------|------------------------|----------------|-----------------|-----------------|----------------|------------------|--|-----|
| TL               | 8  | 5,5            | 13,4           | M 20 × 1,5     | 22,5                   | 59             | 30              | 22              |                | 04 0204 501 080  | 04 0204 500 080  | 350 |
| TL               | 12 | 9,4            | 16,9           | M 24 × 1,5     | 28                     | 65             | 34              | 27              |                | 04 0204 501 130  | 04 0204 500 130  | 350 |
| TL               | 16 | 12,2           | 21,4           | M 30 × 1,5     | 31                     | 71             | 35              | 32              | 9              | 04 0204 500 160  | 04 0204 500 160  | 250 |
| TL               | 20 | 15,5           | 27,2           | M 36 × 1,5     | 35                     | 71             | 34              | 41              | 9              | 04 0204 500 200  | 04 0204 500 200  | 250 |
| TL               | 25 | 20,4           | 33,8           | M 45 × 1,5     | 43                     | 81             | 40              | 46              |                | 04 0204 500 250  | 04 0204 500 250  | 125 |
| TL               | 32 | 26             | 42,25          | M 52 × 1,5     | 55                     | 97             | 41              | 55              |                | 04 0204 500 320  | 04 0204 500 320  | 125 |
| TL               | 40 | 33,5           | 48,25          | M 58 × 2       | 62                     | 99             | 42              | 60              | 11             | 04 0204 500 400  | 04 0204 500 400  | 125 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

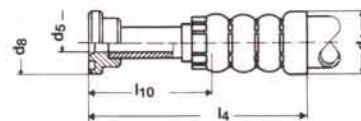
### FNS 527 Form R DIN 20078



SAE straight flange 3000 PSI

| Type of assembly | DN | Inch   | Nominal size | d <sub>5</sub> | d <sub>4</sub><br>max. | d <sub>8</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|--------|--------------|----------------|------------------------|----------------|----------------|-----------------|------------------|--|-----|
| TL               | 12 | 1/2"   | 8            | 9,4            | 28                     | 30,2           | 90             | 53              | 04 0527 501 130  | 04 0527 500 130  | 350 |
| TL               | 20 | 3/4"   | 12           | 16             | 35                     | 38,1           | 89             | 51,5            | 04 0527 500 200  | 04 0527 500 200  | 350 |
| TL               | 25 | 1"     | 16           | 20,4           | 43                     | 44,6           | 102            | 44              | 04 0527 500 250  | 04 0527 500 250  | 350 |
| TL               | 32 | 1 1/4" | 20           | 26             | 55                     | 50,8           | 105            | 63              | 04 0527 500 320  | 04 0527 500 320  | 280 |
| TL               | 40 | 1 1/2" | 24           | 33,5           | 62                     | 60,3           | 105            | 63              | 04 0527 500 400  | 04 0527 500 400  | 210 |
| TL               | 50 | 2"     | 32           |                |                        | 71,4           |                |                 |                  |  | 210 |

### FNS 533 Form R DIN 20078

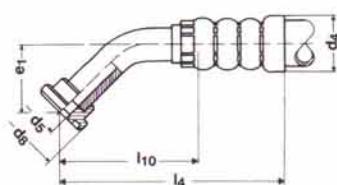


SAE straight flange 3000 PSI  
jump size

| Type of assembly | DN    | Nominal size | d <sub>5</sub> | d <sub>4</sub><br>max. | d <sub>8</sub> | l <sub>4</sub> | l <sub>10</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-------|--------------|----------------|------------------------|----------------|----------------|-----------------|------------------|--|-----|
| TL               | 20:25 | 16           | 16             | 35                     | 44,5           | 89             | 50              | 04 0533 500 200  | 04 0533 500 200  | 350 |
| TL               | 25:32 | 20           | 20,7           | 43                     | 50,8           | 100            | 58              | 04 0533 500 250  | 04 0533 500 250  | 280 |
| TL               | 32:40 | 24           | 26             | 55                     | 60,3           | 85             | 29              | 04 0533 503 320  | 04 0533 500 320  | 210 |
| TL               | 40:50 | 32           | 33,5           | 62                     | 71,4           | 88             | 31              | 04 0533 503 400  | 04 0533 500 400  | 210 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

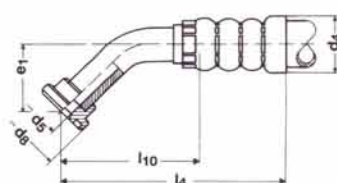


**RKFS 855**

Elbow 45° SAE flange 3000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Inch   | Nominal size | $d_5$ | $d_4$<br>max. | $d_6$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE       | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|--------|--------------|-------|---------------|-------|-------|-------|----------|------------------------|--|-----|
| TL               | 12 | 1/2"   | 8            | 10    | 28            | 30,2  | 19    | 104   | 54       | <b>04 0855 501 130</b> | <b>04 0855 500 130</b>                                     | 350 |
| TL               | 20 | 3/4"   | 12           | 16    | 35            | 38,1  | 31,5  | 115   | 72       | <b>04 0855 500 200</b> | <b>04 0855 500 200</b>                                     | 350 |
| TL               | 25 | 1"     | 16           | 23    | 43            | 44,5  | 35    | 124   | 82       | <b>04 0855 500 250</b> | <b>04 0855 500 250</b>                                     | 350 |
| TL               | 32 | 1 1/4" | 20           | 29    | 55            | 50,8  | 28    | 135   | 78,5     | <b>04 0855 500 320</b> | <b>04 0855 500 320</b>                                     | 280 |
| TL               | 40 | 1 1/2" | 24           | 36    | 62            | 60,3  | 33    | 144   | 91       | <b>04 0855 500 400</b> | <b>04 0855 500 400</b>                                     | 210 |
| TL               | 50 | 2"     | 32           |       |               | 71,4  |       |       |          |                        |  | 210 |

**RKFS 826**Elbow 45° SAE flange 3000 PSI  
jump sizeElbows can also be supplied with an altered  $e_1$ -size

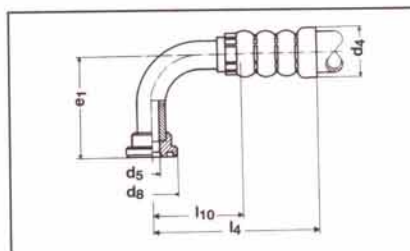
| Type of assembly | DN    | Nominal size | $d_5$ | $d_4$<br>max. | $d_6$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE       | Part-No.<br>1 SN; 2 SN; 2 SC;<br>2 SK; PL 7; PL 8 /<br>PS 8 | PN  |
|------------------|-------|--------------|-------|---------------|-------|-------|-------|----------|------------------------|---|-----|
| TL               | 20:25 | 16           | 19    | 35            | 44,5  | 31    | 115   | 77,5     | <b>04 0826 500 200</b> | <b>04 0826 500 200</b>                                      | 350 |
| TL               | 25:32 | 20           | 23    | 43            | 50,8  | 33    | 122   | 80       | <b>04 0826 500 250</b> | <b>04 0826 500 250</b>                                      | 280 |
| TL               | 32:40 | 24           | 29    | 55            | 60,3  | 30    | 139   | 81       | <b>04 0826 500 320</b> | <b>04 0826 500 320</b>                                      | 210 |
| TL               | 40:50 | 32           | 40    | 62            | 71,4  | 33    | 144   | 87       | <b>04 0826 500 400</b> | <b>04 0826 500 400</b>                                      | 210 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## 3.2

### RKFS 900

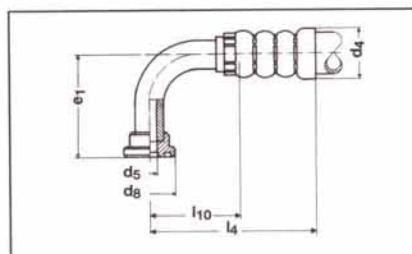


Elbow 90° SAE flange 3000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Inch   | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|--------|--------------|-------|---------------|-------|-------|-------|----------|------------------|--|-----|
| TL               | 12 | 1/2"   | 8            | 9,4   | 28            | 30,2  | 45    | 90    | 52       | 04 0900 501 130  | 04 0900 500 130  | 350 |
| TL               | 20 | 3/4"   | 12           | 16    | 35            | 38,1  | 62,5  | 105   | 65       | 04 0900 500 200  | 04 0900 500 200  | 350 |
| TL               | 25 | 1"     | 16           | 23    | 43            | 44,5  | 67    | 108   | 66       | 04 0900 500 250  | 04 0900 500 250  | 350 |
| TL               | 32 | 1 1/4" | 20           | 29    | 55            | 50,8  | 67    | 134   | 78       | 04 0900 500 320  | 04 0900 500 320  | 280 |
| TL               | 40 | 1 1/2" | 24           | 32    | 62            | 60,3  | 77    | 141   | 84       | 04 0900 500 400  | 04 0900 500 400  | 210 |
| TL               | 50 | 2"     | 32           | 45    | 72            | 71,4  | 113   | 165   | 119,5    | 04 0900 002 500  | 04 0900 002 500  | 210 |

### RKFS 902

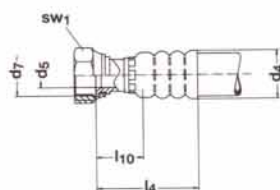


Elbow 90° SAE flange 3000 PSI  
jump size

Elbows can also be supplied with an altered  $e_1$ -size

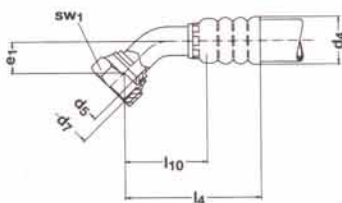
| Type of assembly | DN    | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-------|--------------|-------|---------------|-------|-------|-------|----------|------------------|--|-----|
| TL               | 20:25 | 16           | 19    | 35            | 44,5  | 64    | 105   | 65       | 04 0902 500 200  | 04 0902 500 200  | 350 |
| TL               | 25:32 | 20           | 23    | 43            | 50,8  | 65    | 108   | 66       | 04 0902 500 250  | 04 0902 500 250  | 280 |
| TL               | 32:40 | 24           | 30    | 55            | 60,3  | 70    | 134   | 78       | 04 0902 500 320  | 04 0902 500 320  | 210 |
| TL               | 40:50 | 32           | 40    | 62            | 71,4  | 77    | 140   | 86       | 04 0902 500 400  | 04 0902 500 400  | 210 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**BNI 504**

JIC female 74° cone seat

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6  | 4              | 7/16" -20      | 20                     | 52             | 19              | 14              | 04 0504 501 060  | 04 0504 500 060  | 640 |
| TL               | 8  | 5,5            | 1/2" -20       | 22,5                   | 52             | 19              | 17              | 04 0504 501 080  | 04 0504 500 080  | 560 |
| TL               | 10 | 7              | 9/16" -18      | 25                     | 52             | 18              | 19              | 04 0504 501 100  | 04 5004 500 100  | 530 |
| TL               | 12 | 9,4            | 3/4" -16       | 28                     | 56             | 21              | 22              | 04 0504 501 130  | 04 0504 500 130  | 440 |
| TL               | 16 | 12,2           | 7/8" -14       | 31                     | 57             | 20              | 27              | 04 0504 500 160  | 04 0504 500 160  | 400 |
| TL               | 20 | 15,3           | 1 1/16" -12    | 35                     | 58             | 21              | 32              | 04 0504 500 200  | 04 0504 500 200  | 340 |
| TL               | 25 | 20,4           | 1 5/16" -12    | 43                     | 64             | 22              | 41              | 04 0504 500 250  | 04 0504 500 250  | 260 |
| TL               | 32 | 26             | 1 5/8" -12     | 55                     | 86             | 30              | 50              | 04 0504 500 320  | 04 0504 500 320  | 200 |
| TL               | 40 | 33,5           | 1 7/8" -12     | 62                     | 88             | 32              | 55              | 04 0504 500 400  | 04 0504 500 400  | 145 |

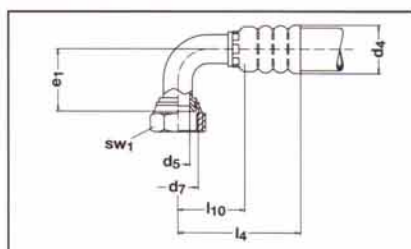
**RKI 857**Elbow 45°  
JIC female 74° cone seatElbows can also be supplied with an altered e<sub>1</sub>-size.

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6  | 4              | 7/16" -20      | 20                     | 18             | 70             | 38              | 14              | 04 0857 501 060  | 04 0857 500 060  | 640 |
| TL               | 8  | 5,5            | 1/2" -20       | 22,5                   | 19             | 85             | 52              | 17              | 04 0857 501 080  | 04 0857 500 080  | 560 |
| TL               | 10 | 7              | 9/16" -18      | 25                     | 19             | 85             | 52              | 19              | 04 0857 501 100  | 04 0855 500 100  | 530 |
| TL               | 12 | 9,4            | 3/4" -16       | 28                     | 19             | 89             | 53              | 22              | 04 0857 501 130  | 04 0857 500 130  | 440 |
| TL               | 16 | 12,2           | 7/8" -14       | 31                     | 26             | 94             | 63              | 27              | 04 0857 500 160  | 04 0857 500 160  | 400 |
| TL               | 20 | 16             | 1 1/16" -12    | 35                     | 25             | 100            | 59              | 32              | 04 0857 500 200  | 04 0857 500 200  | 340 |
| TL               | 25 | 21             | 1 5/16" -12    | 43                     | 28             | 113            | 67              | 41              | 04 0857 500 250  | 04 0857 500 250  | 260 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

### RKI 858

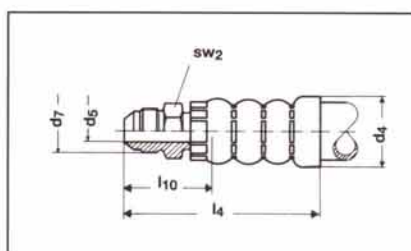


Elbow 90°  
JIC female 74° cone seat

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6  | 4     | 7/16"-20   | 20            | 34    | 62    | 29       | 14     | 04 0858 501 060  | 04 0858 500 060  | 640 |
| TL               | 8  | 5,5   | 1/2"-20    | 22,5          | 36    | 75    | 42       | 17     | 04 0858 501 080  | 04 0858 500 080  | 560 |
| TL               | 10 | 7     | 9/16"-18   | 24            | 41    | 81    | 48       | 19     | 04 0858 501 100  | 04 0858 500 100  | 530 |
| TL               | 12 | 9,4   | 3/4"-16    | 28            | 45    | 87    | 52       | 22     | 04 0858 501 130  | 04 0858 500 130  | 440 |
| TL               | 16 | 12,2  | 7/8"-14    | 31            | 55    | 92    | 55       | 27     | 04 0858 500 160  | 04 0858 500 160  | 400 |
| TL               | 20 | 15,5  | 1 1/16"-12 | 35            | 49    | 88    | 47       | 32     | 04 0858 500 200  | 04 0858 500 200  | 340 |
| TL               | 25 | 21    | 1 5/16"-12 | 43            | 56    | 100   | 55       | 41     | 04 0858 500 250  | 04 0858 500 250  | 260 |

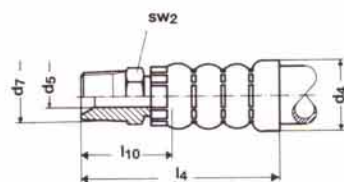
### ENI 404



JIC male 74° cone

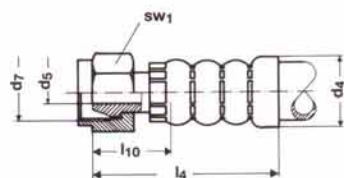
| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $l_4$ | $l_{10}$ | $sw_2$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|----|-------|------------|---------------|-------|----------|--------|------------------|--|-----|
| TL               | 6  | 4     | 7/16"-20   | 20            | 60    | 30,5     | 12     | 04 0404 501 060  | 04 0404 500 060  | 640 |
| TL               | 8  | 5,5   | 1/2"-20    | 22,5          | 60    | 31       | 14     | 04 0404 501 080  | 04 0404 500 080  | 560 |
| TL               | 10 | 8     | 9/16"-18   | 24            | 60    | 31       | 17     | 04 0404 501 100  | 04 0404 500 100  | 530 |
| TL               | 12 | 10,8  | 3/4"-16    | 28            | 67    | 34,5     | 22     | 04 0404 501 130  | 04 0404 500 130  | 440 |
| TL               | 16 | 13,7  | 7/8"-14    | 31            | 75    | 38       | 24     | 04 0404 500 160  | 04 0404 500 160  | 400 |
| TL               | 20 | 15,3  | 1 1/16"-12 | 35            | 79    | 42       | 27     | 04 0404 500 200  | 04 0404 500 200  | 340 |
| TL               | 25 | 20,4  | 1 5/16"-12 | 43            | 84    | 43       | 36     | 04 0404 500 250  | 04 0404 500 250  | 260 |
| TL               | 32 | 26    | 1 5/8"-12  | 55            | 104   | 48       | 46     | 04 0404 500 320  | 04 0404 500 320  | 125 |
| TL               | 40 | 33,5  | 1 7/8"-12  | 62            | 107   | 51       | 50     | 04 0404 500 400  | 04 0404 500 400  | 90  |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**ENP 402/423**

NPTF male

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | 1/4"-18        | 20                     | 58             | 29,5            | 17              | 04 0402 501 060  | 04 0402 500 060  | applied hose |
| TL               | 6:5 | 4              | 1/8"-27        | 20                     | 53             | 25,5            | 12              | 04 0423 501 060  | 04 0423 500 060  |              |
| TL               | 10  | 7              | 3/8"-18        | 24                     | 60             | 30,5            | 19              | 04 0402 501 100  | 04 0402 500 100  |              |
| TL               | 12  | 9,4            | 1/2"-14        | 28                     | 73             | 36,5            | 22              | 04 0402 501 130  | 04 0402 500 130  |              |
| TL               | 20  | 15,3           | 3/4"-14        | 35                     | 76             | 39              | 30              | 04 0402 500 200  | 04 0402 500 200  |              |
| TL               | 25  | 20,4           | 1"-11 1/2"     | 43                     | 82             | 44              | 36              | 04 0402 500 250  | 04 0402 500 250  |              |
| TL               | 32  | 26             | 1 1/4"-11 1/2" | 55                     | 106            | 50              | 50              | 04 0402 500 320  | 04 0402 500 320  |              |
| TL               | 40  | 33,5           | 1 1/2"-11 1/2" | 62                     | 107            | 51              | 55              | 04 0402 500 400  | 04 0402 500 400  |              |

**DKZ 319/364**

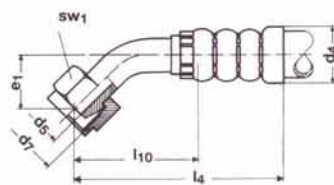
BSP female

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub><br>DIN 259 | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|----------------|---------------------------|------------------------|----------------|-----------------|-----------------|------------------|--|-----|
| TL               | 6   | 4              | R 1/4"                    | 20                     | 52             | 19              | 17              | 04 0319 501 060  | 04 0319 500 060  | 400 |
| TL               | 6:5 | 4              | R 1/8"                    | 20                     | 66             | 34              | 14              | 04 0364 501 060  | 04 0364 500 060  | 400 |
| TL               | 10  | 7              | R 3/8"                    | 24                     | 52             | 19,5            | 22              | 04 0319 501 100  | 04 0319 500 100  | 400 |
| TL               | 12  | 9,4            | R 1/2"                    | 28                     | 56             | 19,5            | 27              | 04 0319 501 130  | 04 0319 500 130  | 400 |
| TL               | 16  | 12,2           | R 5/8"                    | 31                     | 57             | 19,5            | 27              | 04 0319 500 160  | 04 0319 500 160  | 250 |
| TL               | 20  | 15,3           | R 3/4"                    | 35                     | 71             | 25              | 32              | 04 0319 500 200  | 04 0319 500 200  | 250 |
| TL               | 25  | 20,4           | R 1"                      | 43                     | 67             | 24              | 41              | 04 0319 500 250  | 04 0319 500 250  | 250 |
| TL               | 32  | 26             | R 1 1/4"                  | 55                     | 88             | 30              | 50              | 04 0319 500 320  | 04 0319 500 320  | 160 |
| TL               | 40  | 33,5           | R 1 1/2"                  | 62                     | 93             | 37              | 60              | 04 0319 500 400  | 04 0319 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## RKDKZ 833/808

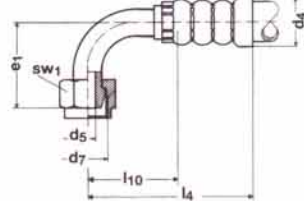


Elbow 45°  
BSP female

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$<br>DIN 259 | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|------------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6   | 4     | R 1/4"           | 20            | 18    | 69    | 38       | 19     |                  |  | 400 |
| TL               | 6:5 | 3     | R 1/8"           | 20            | 18    | 69    | 38       | 14     |                  |  | 400 |
| TL               | 10  | 6,5   | R 3/8"           | 24            | 19    | 83    | 52       | 22     |                  |  | 400 |
| TL               | 12  | 9,4   | R 1/2"           | 28            | 19    | 88    | 53       | 27     |                  |  | 250 |
| TL               | 16  | 12,2  | R 5/8"           | 31            | 26    | 100   | 63       | 27     |                  |  | 250 |
| TL               | 20  | 15,5  | R 3/4"           | 35            | 35    | 100   | 73,5     | 32     |                  |  | 250 |
| TL               | 25  | 21    | R 1"             | 43            | 36    | 117   | 76       | 41     |                  |  | 160 |
| TL               | 32  | 26    | R 1 1/4"         | 51            | 41    | 143   | 87       | 55     |                  |  | 160 |

## RKDKZ 914/809



Elbow 90°  
BSP female

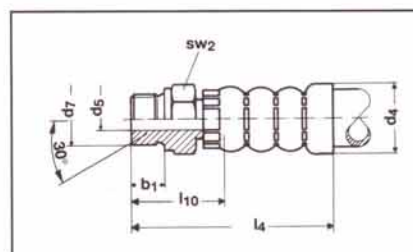
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN  | $d_5$ | $d_7$<br>DIN 259 | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN  |
|------------------|-----|-------|------------------|---------------|-------|-------|----------|--------|------------------|--|-----|
| TL               | 6   | 4     | R 1/4"           | 19            | 34    | 62    | 29       | 19     | 04 0914 501 060  | 04 0914 500 060  | 400 |
| TL               | 6:5 | 3     | R 1/8"           | 19            | 34    | 61    | 29       | 14     | 04 0809 501 060  | 04 0809 500 060  | 400 |
| TL               | 10  | 6,5   | R 3/8"           | 24            | 41    | 66    | 48       | 22     | 04 0914 501 100  | 04 0914 500 100  | 400 |
| TL               | 12  | 9,4   | R 1/2"           | 27            | 45    | 74    | 52       | 27     | 04 0914 501 130  | 04 0914 500 130  | 400 |
| TL               | 16  | 12,2  | R 5/8"           | 31            | 55    | 79    | 55       | 27     | 04 0914 500 160  | 04 0914 500 160  | 250 |
| TL               | 20  | 15,5  | R 3/4"           | 35            | 66    | 89    | 55       | 32     | 04 0914 500 200  | 04 0914 500 200  | 250 |
| TL               | 25  | 20    | R 1"             | 43            | 72    | 100   | 63,5     | 41     | 04 0914 500 250  | 04 0914 500 250  | 250 |
| TL               | 32  | 26    | R 1 1/4"         | 55            | 81    | 125   | 69       | 55     | 04 0914 500 320  | 04 0914 500 320  | 160 |
| TL               | 40  | 33,5  | R 1 1/2"         | 62            | 82    | 134   | 77       | 60     | 04 0914 500 400  | 04 0914 500 400  | 160 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



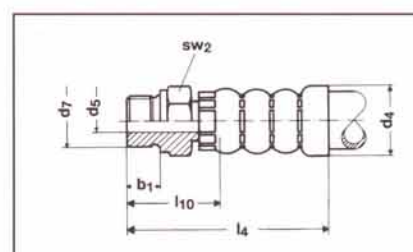
## ENZ 431/419



BSP male  
60° cone seat

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub><br>DIN 259 | d <sub>4</sub><br>max. | b <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|---------------------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | R 1/4"                    | 20                     | 10             | 60             | 29              | 17              | 04 0431 501 060  | 04 0431 500 060  | 250          |
| TL               | 6.5 | 4              | R 1/8"                    | 19                     | 8              | 55             | 26,5            | 13              | 04 0419 501 060  | 04 0419 500 060  | 250          |
| TL               | 10  | 7              | R 3/8"                    | 24                     | 12             | 65             | 30              | 19              | 04 0431 501 100  | 04 0431 500 100  | applied hose |
| TL               | 12  | 9,4            | R 1/2"                    | 28                     | 14             | 70             | 33              | 22              | 04 0431 501 130  | 04 0431 500 130  |              |
| TL               | 16  | 12,2           | R 5/8"                    | 31                     | 16             | 73             | 36              | 27              | 04 0431 500 160  | 04 0431 500 160  |              |
| TL               | 20  | 15,3           | R 3/4"                    | 35                     | 16             | 73             | 36              | 30              | 04 0431 500 200  | 04 0431 500 200  |              |
| TL               | 25  | 20,4           | R 1"                      | 43                     | 19             | 84             | 43              | 36              | 04 0431 500 250  | 04 0431 500 250  |              |
| TL               | 32  | 26             | R 1 1/4"                  | 55                     | 20             | 99             | 43              | 50              | 04 0431 500 320  | 04 0431 500 320  |              |
| TL               | 40  | 33,5           | R 1 1/2"                  | 62                     | 22             | 101            | 45              | 55              | 04 0431 500 400  | 04 0431 500 400  |              |

## ENZ 401/419



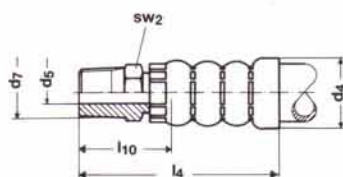
BSP male flat

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub><br>DIN 259 | d <sub>4</sub><br>max. | b <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|---------------------------|------------------------|----------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | R 1/4"                    | 20                     | 12             | 65             | 32              | 19              | 04 0401 501 060  | 04 0401 500 060  | 250          |
| TL               | 6.5 | 4              | R 1/8"                    | 20                     | 8              | 60             | 26,5            | 14              | 04 0419 501 060  | 04 0419 500 060  | 250          |
| TL               | 10  | 7              | R 3/8"                    | 24                     | 12             | 67             | 34              | 22              | 04 0401 501 100  | 04 0401 500 100  | applied hose |
| TL               | 12  | 9,4            | R 1/2"                    | 28                     | 14             | 75             | 37              | 27              | 04 0401 501 130  | 04 0401 500 130  |              |
| TL               | 20  | 15,3           | R 3/4"                    | 35                     | 16             | 77             | 40              | 32              | 04 0401 500 200  | 04 0401 500 200  |              |
| TL               | 25  | 20,4           | R 1"                      | 43                     | 16             | 85             | 44              | 41              | 04 0401 500 250  | 04 0401 500 250  |              |
| TL               | 32  | 26             | R 1 1/4"                  | 55                     | 16             | 98             | 42              | 50              | 04 0401 500 320  | 04 0401 500 320  |              |
| TL               | 40  | 33,5           | R 1 1/2"                  | 62                     | 16             | 98             | 42              | 55              | 04 0401 500 400  | 04 0401 500 400  |              |
| TL               | 50  | 44             | R 2"                      | 72                     | 20             | 113            | 44,5            | 70              | 04 0401 002 500  | 04 0401 002 500  |              |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## 3.2

### ENZK 403/447



BSP taper male

| Type of assembly | DN  | d <sub>5</sub> | d <sub>7</sub><br>DIN 2999 | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | SW <sub>2</sub> | Part-No.<br>3 TE | Part-No.<br>1 SN; 2 SN; 1 SC;<br>2 SC; 2 SK; PL 7;<br>PL 8 | PN           |
|------------------|-----|----------------|----------------------------|------------------------|----------------|-----------------|-----------------|------------------|--|--------------|
| TL               | 6   | 4              | R 1/4"                     | 20                     | 64             | 29,5            | 14              | 04 0403 501 060  | 04 0403 500 060  | applied hose |
| TL               | 6:5 | 4              | R 1/8"                     | 20                     | 64             | 30              | 11              | 04 0447 501 060  | 04 0447 500 060  |              |
| TL               | 10  | 7              | R 3/8"                     | 25                     | 64             | 29,5            | 19              | 04 0403 501 100  | 04 0403 500 100  |              |
| TL               | 12  | 9,4            | R 1/2"                     | 28                     | 74             | 36,5            | 22              | 04 0403 501 130  | 04 0403 500 130  |              |
| TL               | 16  | 12,2           | R 5/8"                     | 31                     | 71             | 37              | 27              | 04 0403 500 160  | 04 0403 500 160  |              |
| TL               | 20  | 15,3           | R 3/4"                     | 35                     | 75             | 41              | 30              | 04 0403 500 200  | 04 0403 500 200  |              |
| TL               | 25  | 20,4           | R 1"                       | 43                     | 78             | 44              | 36              | 04 0403 500 250  | 04 0403 500 250  |              |
| TL               | 32  | 26             | R 1 1/4"                   | 55                     | 105            | 49              | 46              | 04 0403 500 320  | 04 0403 500 320  |              |
| TL               | 40  | 33,5           | R 1 1/2"                   | 62                     | 105            | 49              | 50              | 04 0403 500 400  | 04 0403 500 400  |              |
| TL               | 50  |                | R 2"                       |                        |                |                 |                 |                  |  |              |



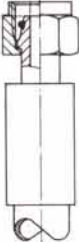
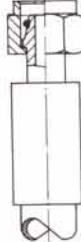
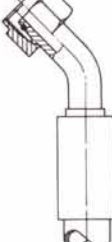
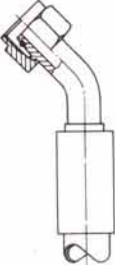
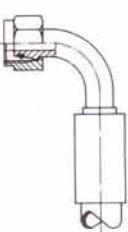
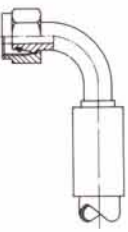

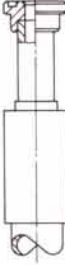
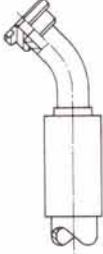
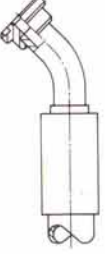
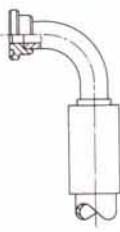
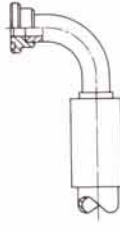

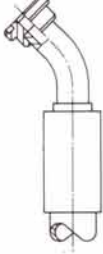
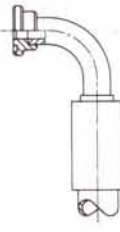
When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

Type of connection TP/TLP

for hose 4 SP

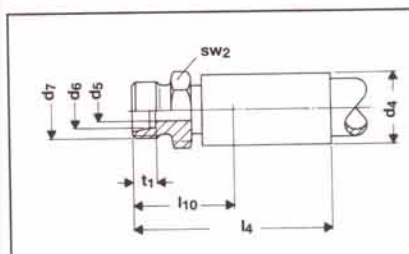
Type of connection WL

for hose 4 SH

|   |   |   |  |  |
|---|---|---|--|--|
| <div>CES229</div>      | <div>CES202</div>      | <div>DKOS344</div>     | <div>DKOS348</div>    | <div>RKDKOS981</div>  |
| <div>RKDKOS878</div>  | <div>RKDKOS978</div>  | <div>RKDKOS879</div>  | <div>FNS538</div>    | <div>FNS527</div>    |
| <div>RKFS934</div>   | <div>RKFS855</div>   | <div>RKFS935</div>   | <div>RKFS900</div>  | <div>FNS528</div>   |
| <div>RKFS856</div>   | <div>RKFS901</div>   |   |  |  |
|   |   |   |  |  |
|   |   |   |  |  |

### 3.3

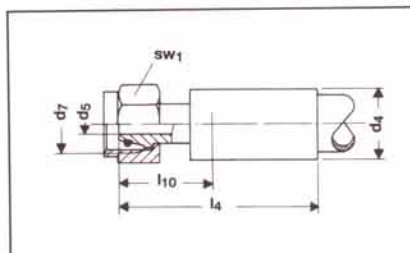
#### CES 229 TP/TLP Form E DIN 20078



Metric male coupling  
24° cone seat  
heavy type

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No.<br>4 SP | PN  |
|------------------|----|----------------|----------------|----------------|------------------------|----------------|-----------------|-----------------|----------------|------------------|-----|
| TP/TLP           | 6  | 4              | 10             | M 18 × 1,5     | 23                     | 61             | 27              | 19              | 7,5            | 04 0229 002 060  | 630 |
| TP/TLP           | 10 | 6,8            | 14             | M 22 × 1,5     | 27                     | 63             | 32              | 22              | 8              | 04 0229 002 100  | 630 |
| TP/TLP           | 12 | 10             | 16             | M 24 × 1,5     | 30                     | 66             | 34              | 24              | 8,5            | 04 0229 002 130  | 400 |
| TP/TLP           | 16 | 12,5           | 20             | M 30 × 2       | 35                     | 73             | 36              | 30              | 10,5           | 04 0229 002 160  | 400 |

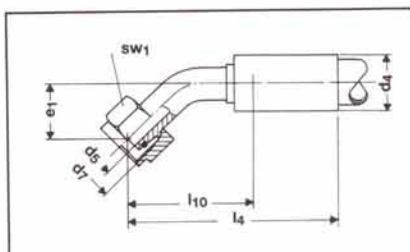
#### DKOS 344 TP/TLP Form P DIN 20078



Metric female swivel with O-Ring  
24° cone seat

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>4 SP | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------|-----|
| TP/TLP           | 6  | 4              | M 18,5 × 1,5   | 23                     | 61             | 30              | 22              | 04 0334 002 060  | 630 |
| TP/TLP           | 10 | 6,8            | M 22,5 × 1,5   | 27                     | 63             | 32              | 27              | 04 0334 002 100  | 630 |
| TP/TLP           | 12 | 9,4            | M 24 × 1,5     | 30                     | 66             | 32              | 30              | 04 0334 002 130  | 400 |
| TP/TLP           | 16 | 12,2           | M 30 × 2       | 35                     | 73             | 35              | 36              | 04 0334 002 160  | 400 |

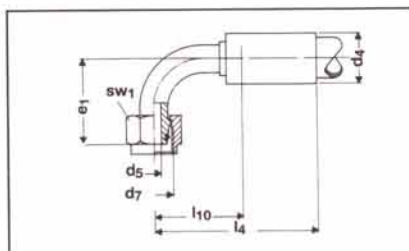
When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**RKDKOS 981 TP/TLP**

Elbow 45° metric female swivel with O-Ring  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

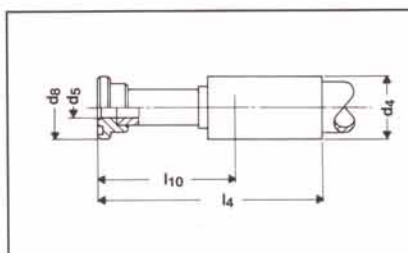
| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>4 SP       | PN  |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|------------------------|-----|
| TP/TLP           | 6  | 6     | M 18 × 1,5 | 23            | 23    | 82    | 38       | 22     | <b>04 0981 002 060</b> | 630 |
| TP/TLP           | 10 | 9     | M 22 × 1,5 | 27            | 22    | 83    | 38       | 27     | <b>04 0981 002 100</b> | 630 |
| TP/TLP           | 12 | 9,4   | M 24 × 1,5 | 30            | 19    | 92    | 54       | 30     | <b>04 0981 002 130</b> | 400 |
| TP/TLP           | 16 | 12,2  | M 30 × 2   | 33            | 26    | 100   | 63       | 36     | <b>04 0981 002 160</b> | 400 |

**RKDKOS 978 TP/TLP**

Elbow 90° metric female swivel with O-Ring  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$      | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>4 SP       | PN  |
|------------------|----|-------|------------|---------------|-------|-------|----------|--------|------------------------|-----|
| TP/TLP           | 6  | 6     | M 18 × 1,5 | 23            | 39    | 63    | 29       | 22     | <b>04 0978 002 060</b> | 630 |
| TP/TLP           | 10 | 9     | M 22 × 1,5 | 27            | 41    | 69    | 48       | 27     | <b>04 0978 002 100</b> | 630 |
| TP/TLP           | 12 | 9,4   | M 24 × 1,5 | 30            | 45    | 85    | 52       | 30     | <b>04 0978 002 130</b> | 400 |
| TP/TLP           | 16 | 12,2  | M 30 × 2   | 33            | 55    | 92    | 55       | 36     | <b>04 0978 002 160</b> | 400 |

**FNS 538 TLP Form R DIN 20078**

SAE Straight flange 3000 PSI

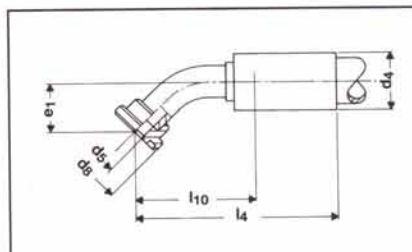
| Type of assembly | DN | Inch | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SP       | PN  |
|------------------|----|------|--------------|-------|---------------|-------|-------|----------|------------------------|-----|
| TLP              | 12 | 1/2" | 8            | 10    | 30            | 30,2  | 85    | 47       | <b>04 0538 002 130</b> | 350 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



### 3.3

#### RKFS 934 TLP

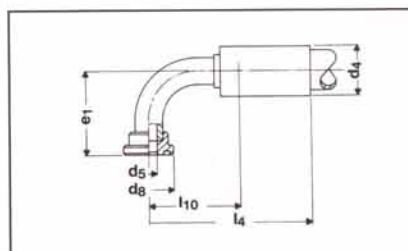


Elbow 45° SAE flange 3000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Inch | Nominal size | $d_5$ | $d_6$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SP       | PN  |
|------------------|----|------|--------------|-------|---------------|-------|-------|-------|----------|------------------------|-----|
| TLP              | 12 | 1/2" | 8            | 9,4   | 30            |       | 30,2  | 92    | 54       | <b>04 0934 002 130</b> | 350 |

#### RKFS 935 TLP

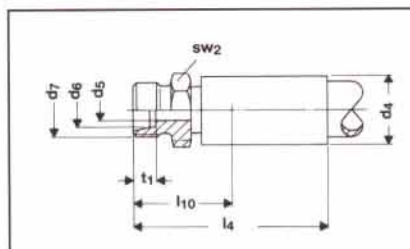


Elbow 90° SAE flange 3000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

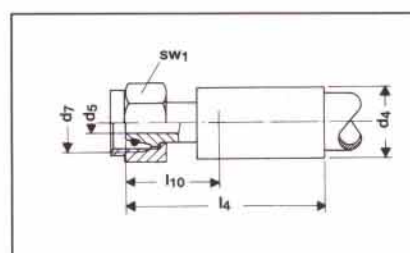
| Type of assembly | DN | Inch | Nominal size | $d_5$ | $d_6$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SP       | PN  |
|------------------|----|------|--------------|-------|---------------|-------|-------|-------|----------|------------------------|-----|
| TLP              | 12 | 1/2" | 8            | 9,4   | 30            | 30,2  | 45    | 90    | 52       | <b>04 0935 002 130</b> | 350 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**CES 202 WL Form E DIN 20078**

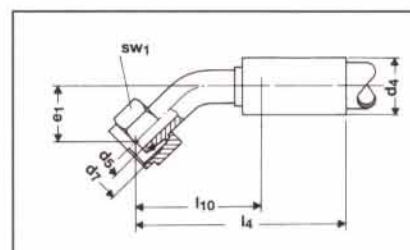
Metric male coupling  
24° cone seat  
heavy type

| Type of assembly | DN | d <sub>5</sub> | d <sub>6</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | t <sub>1</sub> | Part-No.<br>4 SH       | PN  |
|------------------|----|----------------|----------------|----------------|------------------------|----------------|-----------------|-----------------|----------------|------------------------|-----|
| WL               | 20 | 15             | 25             | M 36 × 2       | 38                     | 88             | 37              | 36              | 12             | <b>04 0202 520 200</b> | 400 |
| WL               | 25 | 20             | 30             | M 42 × 2       | 46                     | 103            | 43              | 46              | 13,5           | <b>04 0202 250 250</b> | 400 |
| WL               | 32 | 26,5           | 38             | M 52 × 2       | 57                     | 117            | 45              | 55              | 16             | <b>04 0202 520 320</b> | 315 |

**DKOS 348 WL Form P DIN 20078**

Metric female swivel with O-Ring  
24° cone seat  
heavy type

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | l <sub>4</sub> | l <sub>10</sub> | sw <sub>2</sub> | Part-No.<br>4 SH       | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|-----------------|-----------------|------------------------|-----|
| WL               | 20 | 15             | M 36 × 2       | 38                     | 90             | 39              | 46              | <b>04 0348 520 200</b> | 400 |
| WL               | 25 | 20             | M 42 × 2       | 46                     | 102            | 42              | 50              | <b>04 0348 520 250</b> | 400 |
| WL               | 32 | 26,5           | M 52 × 2       | 57                     | 114            | 44              | 60              | <b>04 0348 520 320</b> | 315 |

**RKDKOS 878 WL**

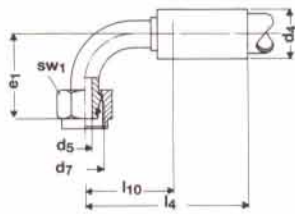
Elbow 45° metric female swivel with O-Ring  
24° cone seat  
heavy type

Elbows can also be supplied with an altered e<sub>1</sub>-size

| Type of assembly | DN | d <sub>5</sub> | d <sub>7</sub> | d <sub>4</sub><br>max. | e <sub>1</sub> | l <sub>4</sub> | l <sub>10</sub> | sw <sub>1</sub> | Part-No.<br>4 SH       | PN  |
|------------------|----|----------------|----------------|------------------------|----------------|----------------|-----------------|-----------------|------------------------|-----|
| WL               | 20 | 15             | M 36 × 2       | 38                     | 33             | 120            | 66              | 46              | <b>04 0878 520 200</b> | 400 |
| WL               | 25 | 20             | M 42 × 2       | 46                     | 36             | 135            | 75              | 50              | <b>04 0878 520 250</b> | 400 |
| WL               | 32 | 25             | M 52 × 2       | 57                     | 36             | 145            | 75              | 60              | <b>04 0878 520 320</b> | 315 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## RKDKOS 879 WL

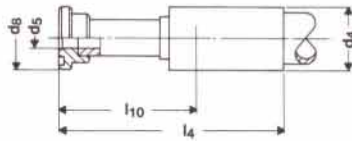


Elbow 90° metric female swivel with O-Ring  
24° cone seat  
heavy type

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | $d_5$ | $d_7$    | $d_4$<br>max. | $e_1$ | $l_4$ | $l_{10}$ | $sw_1$ | Part-No.<br>4 SH       | PN  |
|------------------|----|-------|----------|---------------|-------|-------|----------|--------|------------------------|-----|
| WL               | 20 | 15    | M 36 × 2 | 38            | 63    | 100   | 49       | 46     | <b>04 0879 520 200</b> | 400 |
| WL               | 25 | 20    | M 42 × 2 | 46            | 71    | 122   | 58       | 50     | <b>04 0879 520 250</b> | 400 |
| WL               | 32 | 25    | M 52 × 2 | 57            | 88    | 150   | 78       | 60     | <b>04 0879 523 200</b> | 315 |

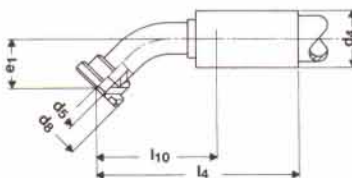
## FNS 527 WL Form R DIN 20078



SAE Straight flange 3000 PSI

| Type of assembly | DN | Nominal size | $d_5$ | $d_4$<br>max. | $d_6$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SH       | PN  |
|------------------|----|--------------|-------|---------------|-------|-------|----------|------------------------|-----|
| WL               | 20 | 12           | 15    | 38            | 38,2  | 98    | 47       | <b>04 0527 520 200</b> | 350 |
| WL               | 25 | 16           | 20    | 46            | 44,6  | 107   | 47       | <b>04 0527 520 250</b> | 350 |
| WL               | 32 | 20           | 25    | 57            | 50,8  | 127   | 55       | <b>04 0527 520 320</b> | 280 |

## RKFS 855 WL

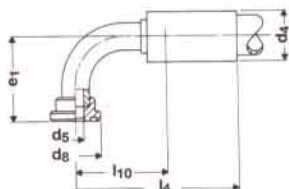


Elbow 45° SAE flange 3000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Nominal size | $d_5$ | $d_4$<br>max. | $d_6$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SH       | PN  |
|------------------|----|--------------|-------|---------------|-------|-------|-------|----------|------------------------|-----|
| WL               | 20 | 12           | 15    | 38            | 38,2  | 27    | 113   | 61       | <b>04 0855 520 200</b> | 350 |
| WL               | 25 | 16           | 20    | 46            | 44,6  | 28    | 134   | 74       | <b>04 0855 520 250</b> | 350 |
| WL               | 32 | 20           | 25    | 57            | 50,8  | 30    | 140   | 68       | <b>04 0855 520 320</b> | 280 |

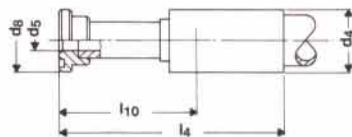
When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

**RKFS 900 WL**

Elbow 90° SAE flange 3000 PSI

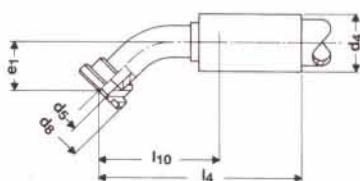
Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SH       | PN  |
|------------------|----|--------------|-------|---------------|-------|-------|-------|----------|------------------------|-----|
| WL               | 20 | 12           | 15    | 38            | 38,2  | 55    | 101   | 50       | <b>04 0900 520 200</b> | 350 |
| WL               | 25 | 16           | 20    | 46            | 44,6  | 61    | 125   | 65       | <b>04 0900 520 250</b> | 350 |
| WL               | 32 | 20           | 25    | 57            | 51    | 75    | 134   | 62       | <b>04 0900 520 320</b> | 280 |

**FNS 528 WL Form S DIN 20078**

SAE Straight flange 6000 PSI

| Type of assembly | DN | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SH       | PN  |
|------------------|----|--------------|-------|---------------|-------|-------|----------|------------------------|-----|
| WL               | 20 | 12           | 15    | 38            | 41,5  | 105   | 54       | <b>04 0528 520 200</b> | 415 |
| WL               | 25 | 16           | 20    | 46            | 47,6  | 126   | 61       | <b>04 0528 520 250</b> | 415 |
| WL               | 32 | 20           | 26,5  | 57            | 54,0  | 136   | 64       | <b>04 0528 520 320</b> | 415 |

**RKFS 856 WL**

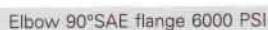
Elbow 45°SAE flange 6000 PSI

Elbows can also be supplied with an altered  $e_1$ -size

| Type of assembly | DN | Nominal size | $d_5$ | $d_4$<br>max. | $d_8$ | $e_1$ | $l_4$ | $l_{10}$ | Part-No.<br>4 SH       | PN  |
|------------------|----|--------------|-------|---------------|-------|-------|-------|----------|------------------------|-----|
| WL               | 20 | 12           | 15    | 38            | 41,5  | 30    | 116   | 64       | <b>04 0856 520 200</b> | 415 |
| WL               | 25 | 16           | 20    | 46            | 47,6  | 33    | 136   | 76       | <b>04 0856 520 250</b> | 415 |
| WL               | 32 | 20           | 25    | 57            | 54,0  | 36    | 152   | 75       | <b>04 0856 520 320</b> | 415 |

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.

## RKFS 90 WL

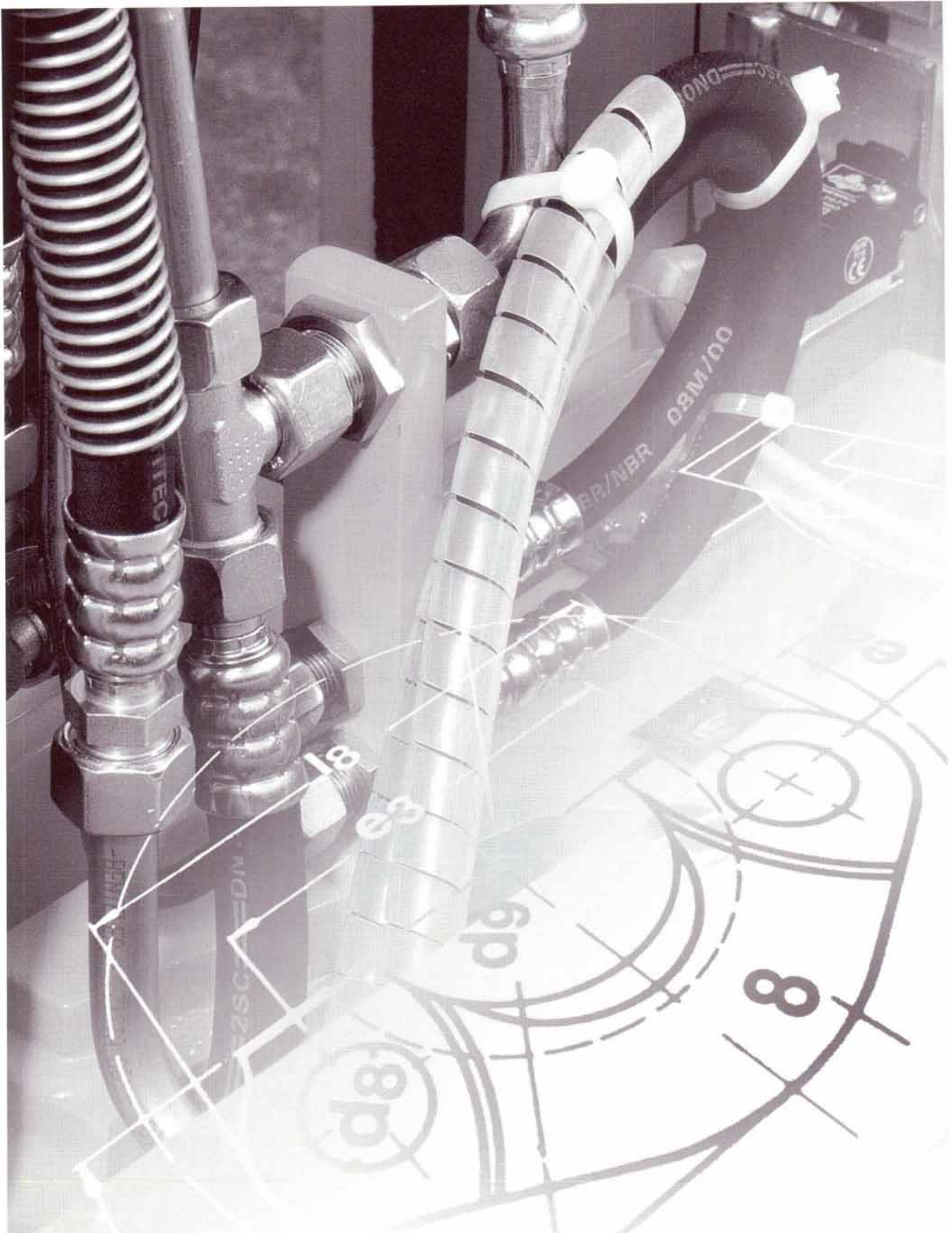


Elbows can also be supplied with an altered  $e_1$ -size

When hose and hose fittings have different rated pressures, the hosepipe as a whole should be subjected only to the lower of the two as maximum permissible operating pressure.



## Accessories for hose assemblies



## Anti-scuffing coil



The anti-scuffing coil made of polyamide protects from scuffing. It is unaffected by air, water, oil, hydraulic fluids, petrol and other media.

**Temperature range:**  
-30°C to +100°C

**Type no. 9727**

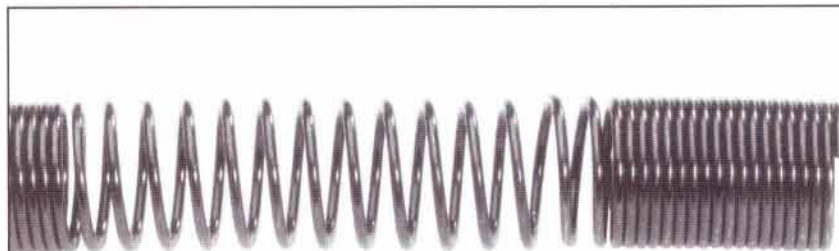
| b  | d <sub>1</sub> | For hose outer diameter |
|----|----------------|-------------------------|
| mm | mm             | max.                    |
| 10 | 7              | 9 to 25                 |
| 15 | 10             | over 25                 |

Part no.

**97 2732 160 070**

**97 2732 160 100**

## Anti-kinking coil



The anti-kinking coil, firmly seated on the hose shell, prevents the hose assembly from kinking in the area of fittings and also protects from unwanted mechanical stressing.

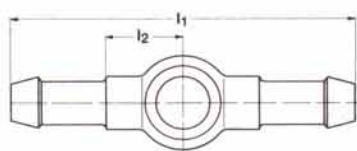
**Type no. 38 9737**

## Flame protection cover

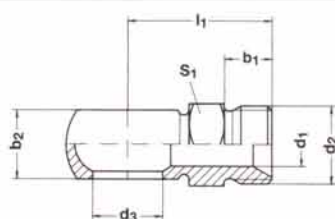


The flame protection cover protects the hose assembly from radiation and inhibits flames for a predefined time.

**Type no. 2140**

**Double banjo NK**

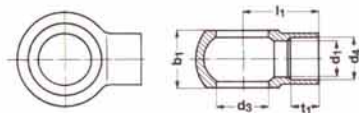
| DN | d <sub>1</sub> | d <sub>3</sub> | b <sub>1</sub> | l <sub>1</sub> | l <sub>2</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|-----------------|
| 2  | 3              | 8              | 8              | 56,6           | 12,5           | 32 2555 483 020 |
| 4  | 3,6            | 10             | 10             | 62             | 13             | 32 2555 483 041 |
| 6  | 5,5            | 12             | 12             | 64             | 14             | 32 2555 483 061 |

**Banjo adaptor**

Banjo adaptor

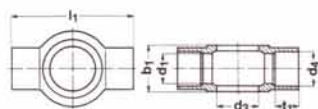
| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | b <sub>1</sub> | b <sub>2</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 3  | 3,5            | M 10 × 1       | 8              | 8              | 8              | 22             | 11             | 39 5712 483 050 |
| 5  | 4,5            | M 12 × 1,5     | 10             | 10             | 10             | 27             | 13             | 39 5712 483 060 |
| 6  | 6              | M 14 × 1,5     | 12             | 10             | 12             | 27             | 14             | 39 5712 483 080 |
| 8  | 8              | M 16 × 1,5     | 14             | 11             | 14             | 31             | 17             | 39 5712 483 100 |
| 10 | 10             | M 18 × 1,5     | 16             | 11             | 16             | 33             | 19             | 39 5712 483 120 |
| 12 | 12             | M 22 × 1,5     | 18             | 12             | 20             | 35             | 22             | 39 5712 483 150 |
| 16 | 14             | M 26 × 1,5     | 22             | 12             | 25             | 37             | 25             | 38 5703 483 160 |
| 20 | 17             | M 30 × 1,5     | 26             | 12             | 30             | 42             | 30             | 38 5703 482 200 |
| 25 | 22             | M 38 × 1,5     | 30             | 14             | 36             | 46             | 36             | 38 5703 483 250 |
| 31 | 30             | M 45 × 1,5     | 38             | 14             | 44             | 54             | 44             | 38 5703 483 320 |

## Soldering banjo DIN 7642



| DN | d <sub>1</sub> | d <sub>3</sub> | d <sub>4</sub> | b <sub>1</sub> | l <sub>1</sub> | t <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 3  | 3              | 8              | 5              | 8              | 14             | 6              | 39 6702 476 050 |
| 5  | 4              | 10             | 6              | 10             | 16             | 6              | 39 6702 476 060 |
| 6  | 6              | 12             | 8              | 12             | 18             | 6              | 39 6702 476 080 |
| 8  | 8              | 14             | 10             | 14             | 20             | 6              | 39 6702 476 100 |
| 10 | 10             | 16             | 12             | 16             | 22             | 6              | 39 6702 476 120 |
| 12 | 13             | 18             | 15             | 20             | 24             | 6              | 39 6702 476 150 |
| 16 | 16             | 22             | 18             | 25             | 27             | 6              | 39 6702 476 180 |
| 20 | 20             | 26             | 22             | 30             | 32             | 8              | 39 6702 476 220 |
| 25 | 26             | 30             | 28             | 36             | 38             | 10             | 39 6702 476 280 |

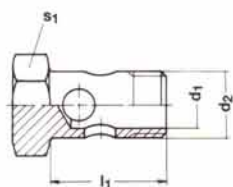
## Double soldering banjo



| DN | d <sub>1</sub> | d <sub>3</sub> | d <sub>4</sub> | b <sub>1</sub> | l <sub>1</sub> | t <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 2  | 3              | 8              | 5              | 8              | 26             | 6              | 38 6730 477 020 |
| 4  | 4              | 10             | 6              | 10             | 32             | 6              | 38 6730 477 040 |
| 8  | 8              | 14             | 10             | 14             | 40             | 8              | 38 6730 477 080 |

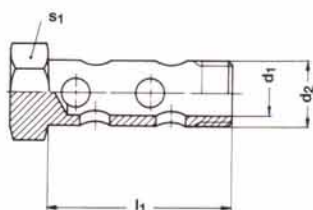


## Hollow bolt DIN 7643



| DN | d <sub>1</sub> | d <sub>2</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|-----------------|
| 3  | 4              | M 8 × 1        | 17             | 12             | 39 0205 483 040 |
| 5  | 5,5            | M 10 × 1       | 19             | 14             | 39 0205 483 060 |
| 6  | 7              | M 12 × 1,5     | 24             | 17             | 39 0205 483 080 |
| 8  | 9              | M 14 × 1,5     | 26             | 19             | 39 0205 483 100 |
| 10 | 11             | M 16 × 1,5     | 28             | 22             | 39 0205 483 120 |
| 12 | 13             | M 18 × 1,5     | 32             | 24             | 39 0205 483 150 |
| 16 | 16             | M 22 × 1,5     | 39             | 27             | 39 0205 483 180 |
| 20 | 20             | M 26 × 1,5     | 45             | 32             | 39 0205 483 220 |
| 25 | 24             | M 30 × 1,5     | 51             | 36             | 39 0205 483 280 |
| 32 | 32             | M 38 × 1,5     | 61             | 46             | 39 0205 483 350 |

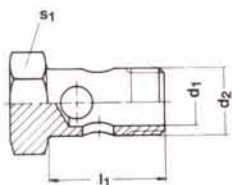
## Double hollow bolt



| DN | d <sub>1</sub> | d <sub>2</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|-----------------|
| 3  | 4              | M 8 × 1        | 26             | 12             | 39 0251 483 030 |
| 5  | 5,5            | M 10 × 1       | 30             | 14             | 39 0251 483 040 |
| 6  | 7              | M 12 × 1,5     | 38             | 17             | 39 0251 483 060 |
| 8  | 9              | M 14 × 1,5     | 42             | 19             | 39 0251 483 080 |
| 10 | 11             | M 16 × 1,5     | 46             | 22             | 39 0251 483 100 |
| 12 | 13             | M 18 × 1,5     | 54             | 24             | 39 0251 483 130 |

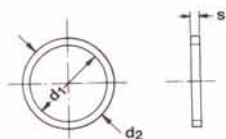


## BSP hollow bolt



| DN | d <sub>1</sub> | d <sub>2</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|-----------------|
| 5  | 5,5            | R 1/8"         | 19             | 14             | 38 0221 483 040 |
| 8  | 9              | R 1/4"         | 26             | 19             | 38 0221 483 080 |
| 10 | 11             | R 3/8"         | 28             | 22             | 38 0221 483 100 |
| 12 | 12             | R 3/8"         | 34             | 24             | 38 0221 483 130 |
| 16 | 16             | R 1/2"         | 39             | 27             | 38 0221 483 160 |

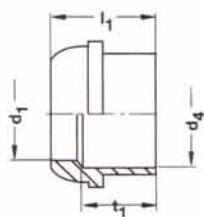
## Gasket DIN 7603 Type A



| Dimension<br>d <sub>1</sub> × d <sub>2</sub> × s | For hollow<br>bolt | For hollow<br>bolt | Part-No.*       |
|--|--------------------|--------------------|-----------------|
| 12 × 15,5 × 1,5                                  | M 12 × 1,5         |                    | 39 1310 972 115 |
| 30 × 36 × 2                                      | M 30 × 1,5         |                    | 39 1310 972 337 |
| 26 × 31 × 2                                      | M 26 × 1,5         |                    | 39 1310 972 298 |
| 22 × 27 × 1,5                                    | M 22 × 1,5         |                    | 39 1310 972 250 |
| 18 × 22 × 1,5                                    | M 18 × 1,5         |                    | 39 1310 972 195 |
| 17 × 21 × 1,5                                    |                    | R 3/8"             | 39 1310 972 182 |
| 10 × 13,5 × 1                                    | M 10 × 1           | R 1/8"             | 39 1310 972 090 |
| 14 × 18 × 1,5                                    | M 14 × 1,5         | R 1/4"             | 39 1310 972 143 |
| 38 × 44 × 2                                      | M 38 × 1,5         |                    | 39 1310 972 417 |
| 16 × 20 × 1,5                                    | M 16 × 1,5         |                    | 39 1310 972 172 |
| 8 × 11,5 × 1                                     | M 8 × 1            |                    | 39 1310 972 063 |

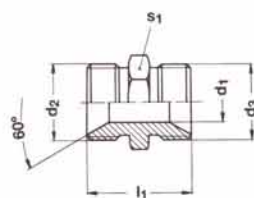
\* Material VF – Material Cu Part-No.: 39 1310 800 ...

## Soldering cone DIN 20078 Type C



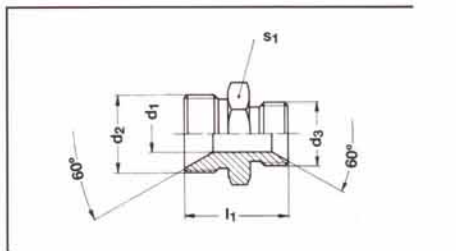
| DN | d <sub>1</sub> | d <sub>4</sub> | l <sub>1</sub> | t <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|-----------------|
| 5  | 4              | 6              | 12             | 8              | 38 1501 477 040 |
| 6  | 6              | 8              | 12             | 8              | 38 1501 477 060 |
| 8  | 8              | 10             | 12             | 8              | 38 1501 476 080 |
| 10 | 10             | 12             | 12             | 8              | 38 1501 476 100 |
| 12 | 13             | 15             | 14             | 10             | 38 1501 476 130 |
| 16 | 16             | 18             | 14             | 10             | 38 1501 477 160 |
| 20 | 20             | 22             | 16             | 12             | 38 1501 477 200 |
| 25 | 26             | 28             | 18             | 14             | 38 1501 477 250 |
| 32 | 33             | 35             | 18             | 14             | 38 1501 477 320 |

## Adaptor metric DIN 7631



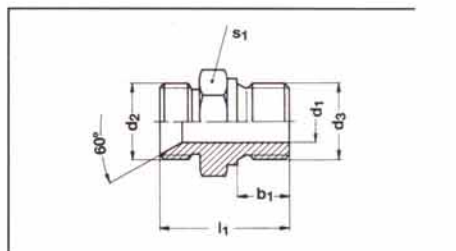
| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|-----------------|
| 3  | 3              | M 10 × 1       | M 10 × 1       | 21             | 11             | 39 5401 483 040 |
| 5  | 4              | M 12 × 1,5     | M 12 × 1,5     | 26             | 13             | 39 5401 483 060 |
| 6  | 6              | M 14 × 1,5     | M 14 × 1,5     | 26             | 14             | 39 5401 483 080 |
| 8  | 8              | M 16 × 1,5     | M 16 × 1,5     | 28             | 17             | 39 5401 483 100 |
| 10 | 10             | M 18 × 1,5     | M 18 × 1,5     | 30             | 19             | 39 5401 483 120 |
| 12 | 12             | M 22 × 1,5     | M 22 × 1,5     | 32             | 22             | 39 5401 483 150 |
| 16 | 15             | M 26 × 1,5     | M 26 × 1,5     | 34             | 27             | 39 5401 483 180 |
| 20 | 19             | M 30 × 1,5     | M 30 × 1,5     | 38             | 30             | 39 5401 483 220 |
| 25 | 25             | M 38 × 1,5     | M 38 × 1,5     | 45             | 41             | 39 5401 483 280 |
| 32 | 32             | M 45 × 1,5     | M 45 × 1,5     | 50             | 46             | 39 5401 483 350 |
| 40 | 39             | M 52 × 1,5     | M 52 × 1,5     | 50             | 55             | 39 5401 483 420 |

### Adaptor metric jump size DIN 7631



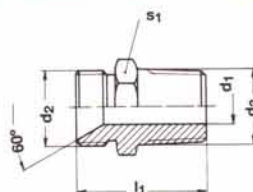
| DN    | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|-------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 5:3   | 4              | M 12 × 1,5     | M 10 × 1       | 23             | 12             | 39 5302 483 030 |
| 6:5   | 4              | M 14 × 1,5     | M 12 × 1,5     | 25             | 14             | 39 5302 483 040 |
| 8:6   | 6              | M 16 × 1,5     | M 14 × 1,5     | 25             | 17             | 39 5302 483 060 |
| 10:8  | 8              | M 18 × 1,5     | M 16 × 1,5     | 26             | 19             | 39 5302 483 080 |
| 12:10 | 10             | M 22 × 1,5     | M 18 × 1,5     | 28             | 22             | 39 5302 483 100 |
| 16:12 | 13             | M 26 × 1,5     | M 22 × 1,5     | 32             | 27             | 39 5302 483 130 |
| 20:16 | 16             | M 30 × 1,5     | M 26 × 1,5     | 32             | 30             | 39 5302 483 160 |
| 25:20 | 20             | M 38 × 1,5     | M 30 × 1,5     | 36             | 41             | 39 5302 483 200 |
| 32:25 | 25             | M 45 × 1,5     | M 38 × 1,5     | 38             | 46             | 39 5302 483 250 |
| 40:32 | 30             | M 52 × 1,5     | M 45 × 1,5     | 38             | 55             | 39 5302 483 320 |

### Adaptor metric DIN 7632



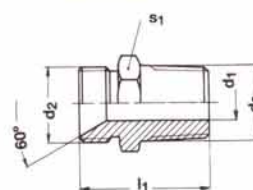
| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | b <sub>1</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 3  | 3              | M 10 × 1       | M 10 × 1       | 8              | 22             | 14             | 39 5040 483 040 |
| 5  | 4              | M 12 × 1,5     | M 12 × 1,5     | 10             | 29             | 17             | 39 5040 483 060 |
| 6  | 6              | M 14 × 1,5     | M 14 × 1,5     | 10             | 30             | 19             | 39 5040 483 080 |
| 8  | 8              | M 16 × 1,5     | M 16 × 1,5     | 10             | 30             | 22             | 39 5040 483 100 |
| 10 | 10             | M 18 × 1,5     | M 18 × 1,5     | 10             | 32             | 24             | 39 5040 483 120 |
| 12 | 12             | M 22 × 1,5     | M 22 × 1,5     | 12             | 36             | 27             | 39 5040 483 150 |
| 16 | 15             | M 26 × 1,5     | M 26 × 1,5     | 12             | 40             | 32             | 39 5040 483 180 |
| 20 | 19             | M 30 × 1,5     | M 30 × 1,5     | 12             | 44             | 36             | 39 5040 483 220 |
| 25 | 25             | M 38 × 1,5     | M 38 × 1,5     | 14             | 47             | 46             | 39 5040 483 280 |
| 32 | 32             | M 45 × 1,5     | M 45 × 1,5     | 14             | 50             | 55             | 39 5040 483 350 |

### Adaptor metric to BSP taper male



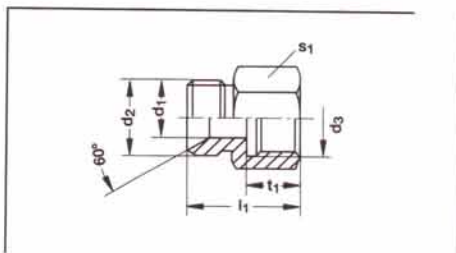
| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|-----------------|
| 5  | 3              | M 12 × 1,5     | R 1/8"keg.     | 24             | 12             | 39 5014 483 040 |
| 6  | 5              | M 14 × 1,5     | R 1/4"keg.     | 30             | 14             | 39 5014 483 060 |
| 8  | 7,5            | M 16 × 1,5     | R 3/8"keg.     | 31             | 19             | 39 5014 483 081 |
| 10 | 9              | M 18 × 1,5     | R 3/8"keg.     | 31             | 19             | 39 5014 483 100 |
| 12 | 12             | M 22 × 1,5     | R 1/2"keg.     | 37             | 24             | 39 5014 483 130 |
| 16 | 15             | M 26 × 1,5     | R 3/4"keg.     | 40             | 30             | 39 5014 483 161 |
| 20 | 17             | M 30 × 1,5     | R 3/4"keg.     | 40             | 30             | 39 5014 483 200 |
| 25 | 24             | M 38 × 1,5     | R 1"keg.       | 48             | 41             | 39 5014 483 250 |
| 32 | 30             | M 45 × 1,5     | R 1 1/4"keg.   | 50             | 46             | 39 5014 483 320 |
| 40 | 38             | M 52 × 1,5     | R 1 1/2"keg.   | 50             | 55             | 39 5014 483 400 |
| 50 | 48             | M 65 × 2       | R 2"keg.       | 59             | 65             | 39 5014 483 500 |

### Adaptor metric to NPTF



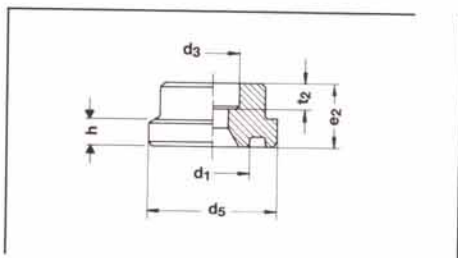
| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub>     | l <sub>1</sub> | s <sub>1</sub> | Part-No.        |
|----|----------------|----------------|--------------------|----------------|----------------|-----------------|
| 3  | 3              | M10 × 1        | 1/8"-27 NPTF       | 22             | 12             | 39 5030 483 030 |
| 5  | 4              | M 12 × 1,5     | 1/8"-27 NPTF       | 29             | 12             | 39 5030 483 040 |
| 6  | 6              | M 14 × 1,5     | 1/4"-18 NPTF       | 29             | 17             | 39 5030 483 060 |
| 8  | 7,5            | M 16 × 1,5     | 3/8"-18 NPTF       | 30             | 19             | 39 5030 483 080 |
| 10 | 9              | M 18 × 1,5     | 3/8"-18 NPTF       | 30             | 19             | 39 5030 483 100 |
| 12 | 11             | M 22 × 1,5     | 1/2"-14 NPTF       | 39             | 22             | 39 5030 483 130 |
| 16 | 15             | M 26 × 1,5     | 3/4"-14 NPTF       | 39             | 30             | 39 5030 483 160 |
| 20 | 17             | M 30 × 1,5     | 3/4"-14 NPTF       | 39             | 30             | 39 5030 483 200 |
| 25 | 23             | M 38 × 1,5     | 1-11 1/2 NPTF      | 48             | 41             | 39 5030 483 250 |
| 32 | 30             | M 45 × 1,5     | 1 1/4"-11 1/2 NPTF | 50             | 46             | 39 5030 483 320 |
| 40 | 38             | M52 × 1,5      | 1 1/2"-11 1/2 NPTF | 50             | 55             | 39 5030 483 400 |
| 50 | 48             | M 65 × 2       | 2"-11 1/2 NPTF     | 57             | 70             | 39 5030 483 500 |

## Adaptor metric male to BSP female



| DN | d <sub>1</sub> | d <sub>2</sub> | d <sub>3</sub> | l <sub>1</sub> | s <sub>1</sub> | t <sub>1</sub> | Part-No.        |
|----|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 5  | 3,6            | M 12 × 1,5     | R 1/8"         | 23,5           | 14             | 10             | 39 6112 483 046 |
| 6  | 5,5            | M 14 × 1,5     | R 1/4"         | 26             | 19             | 12             | 39 6112 483 060 |
| 8  | 7,5            | M 16 × 1,5     | R 1/8"         | 26             | 22             | 12             | 39 6112 483 081 |
| 10 | 9              | M 18 × 1,5     | R 3/8"         | 26             | 22             | 12             | 39 6112 483 100 |
| 12 | 12             | M 22 × 1,5     | R 1/2"         | 34             | 27             | 17             | 39 6112 483 130 |
| 16 | 15             | M 26 × 1,5     | R 3/4"         | 34             | 32             | 17             | 39 6112 483 161 |
| 20 | 19             | M 30 × 1,5     | R 3/4"         | 34             | 32             | 17             | 39 6112 483 200 |
| 25 | 24             | M 38 × 1,5     | R 1"           | 37             | 41             | 18             | 39 6112 483 250 |
| 32 | 30             | M 45 × 1,5     | R 1 1/4"       | 38             | 50             | 18             | 39 6112 483 320 |

## SAE flanged head standard pressure series (3000 PSI)

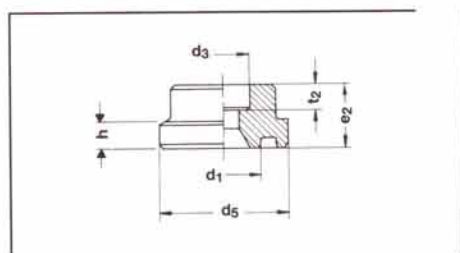


| DN | Nominal size | d <sub>1</sub> | d <sub>3</sub> * | d <sub>5</sub> | e <sub>2</sub> | h    | t <sub>2</sub> | Part-No.        | PN  |
|----|--------------|----------------|------------------|----------------|----------------|------|----------------|-----------------|-----|
| 12 | 8            | 17,4           | 15               | 30,2           | 15             | 6,73 | 6              | 39 9141 477 082 | 350 |
| 12 | 8            | 17,4           | 16               | 30,2           | 15             | 6,73 | 6              | 39 9141 477 080 | 350 |
| 20 | 12           | 23,7           | 22               | 38,1           | 15             | 6,73 | 8              | 39 9141 477 123 | 350 |
| 20 | 12           | 23,7           | 25               | 38,1           | 15             | 6,73 | 8              | 39 9141 477 124 | 350 |
| 25 | 16           | 31,6           | 30               | 44,5           | 17             | 8    | 10             | 39 9141 477 164 | 350 |
| 25 | 16           | 31,6           | 28               | 44,5           | 17             | 8    | 10             | 39 9141 477 172 | 350 |
| 32 | 20           | 36,4           | 35               | 50,8           | 17             | 8    | 10             | 39 9141 477 200 | 280 |
| 40 | 24           | 45,7           | 42               | 60,3           | 18             | 8    | 10             | 39 9141 477 244 | 280 |
| 50 | 32           | 55,2           | 50               | 71,4           | 18             | 9,53 | 10             | 39 9141 477 328 | 210 |

\* SAE flanges for other diameters on inquiry.

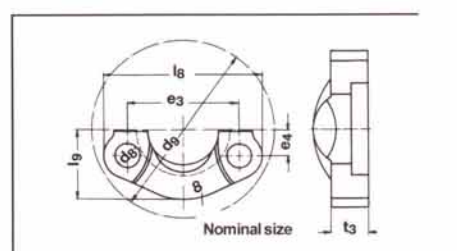


### SAE flanged head high pressure series (6000 PSI)



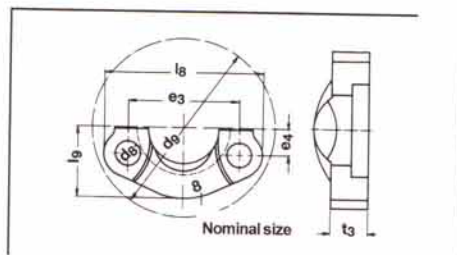
| DN | Nominal size | d <sub>1</sub> | d <sub>3</sub> SAE flanges for other diameters on inquiry. | d <sub>5</sub> | e <sub>2</sub> | h     | t <sub>2</sub> | Part-No.        | PN  |
|----|--------------|----------------|--|----------------|----------------|-------|----------------|-----------------|-----|
| 12 | 8            | 17,4           | 16   | 31,8           | 18             | 7,75  | 6              | 39 9143 477 082 | 415 |
| 12 | 8            | 17,4           | 15   | 31,8           | 18             | 7,75  | 6              | 39 9143 477 086 | 415 |
| 20 | 12           | 23,7           | 22   | 41,3           | 22             | 8,76  | 8              | 39 9143 477 125 | 415 |
| 20 | 12           | 23,7           | 25   | 41,3           | 22             | 8,76  | 8              | 39 9143 477 123 | 415 |
| 25 | 16           | 31,6           | 30   | 47,6           | 25             | 9,53  | 10             | 39 9143 477 163 | 415 |
| 25 | 16           | 31,6           | 28   | 47,6           | 25             | 9,53  | 10             | 39 9143 477 172 | 415 |
| 32 | 20           | 36,4           | 35   | 54,0           | 25             | 10,29 | 10             | 39 9143 477 160 | 415 |
| 40 | 24           | 45,7           | 42   | 63,5           | 30             | 12,57 | 10             | 39 9143 477 242 | 415 |
| 50 | 32           | 55,2           | 50   | 71,4           | 40             | 12,75 | 10             | 39 9143 477 324 | 415 |

### SAE split flange clamp half standard pressure series (3000 PSI)



| DN | Nominal size | d <sub>8</sub> | d <sub>9</sub> | e <sub>3</sub> | e <sub>4</sub> | l <sub>8</sub> | l <sub>9</sub> | t <sub>3</sub> | Part-No.        | PN  |
|----|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----|
| 12 | 8            | 9              | 62             | 38,1           | 8,7            | 54,9           | 21,8           | 13             | 39 9140 658 080 | 350 |
| 20 | 12           | 10,5           | 74             | 47,6           | 11,1           | 65,8           | 24,9           | 14             | 39 9140 658 120 | 350 |
| 25 | 16           | 10,5           | 82             | 52,4           | 13,1           | 70,6           | 28,2           | 16             | 39 9140 658 160 | 350 |
| 32 | 20           | 12             | 92             | 58,7           | 15,1           | 80,3           | 35,3           | 14             | 39 9140 658 200 | 280 |
| 40 | 24           | 13,5           | 108            | 69,9           | 17,9           | 94,5           | 40,1           | 16             | 39 9140 658 240 | 210 |
| 50 | 32           | 13,5           | 118            | 77,8           | 21,4           | 103,1          | 47,2           | 16             | 39 9140 658 320 | 210 |

# SAE split flange clamp half high pressure series(6000 PSI)



| DN | Nominal size | d <sub>8</sub> | d <sub>9</sub> | e <sub>3</sub> | e <sub>4</sub> | l <sub>8</sub> | l <sub>9</sub> | t <sub>3</sub> | Part-No.               | PN  |
|----|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|-----|
| 12 | 8            | 9              | 62             | 40,5           | 9,1            | 57,2           | 22,6           | 16             | <b>39 9138 658 080</b> | 415 |
| 20 | 12           | 11             | 78             | 50,8           | 11,9           | 72,1           | 29             | 19             | <b>39 9138 658 120</b> | 415 |
| 25 | 16           | 13             | 90             | 57,2           | 13,9           | 81,8           | 33,8           | 24             | <b>39 9138 658 160</b> | 415 |
| 32 | 20           | 15             | 104            | 66,7           | 15,9           | 96             | 37,6           | 27             | <b>39 9138 658 200</b> | 415 |
| 40 | 24           | 17             | 124            | 79,4           | 18,3           | 114,3          | 46,5           | 30             | <b>39 9138 658 240</b> | 415 |
| 50 | 32           | 21             | 146            | 96,8           | 22,2           | 134,9          | 55,9           | 37             | <b>39 9138 658 320</b> | 415 |