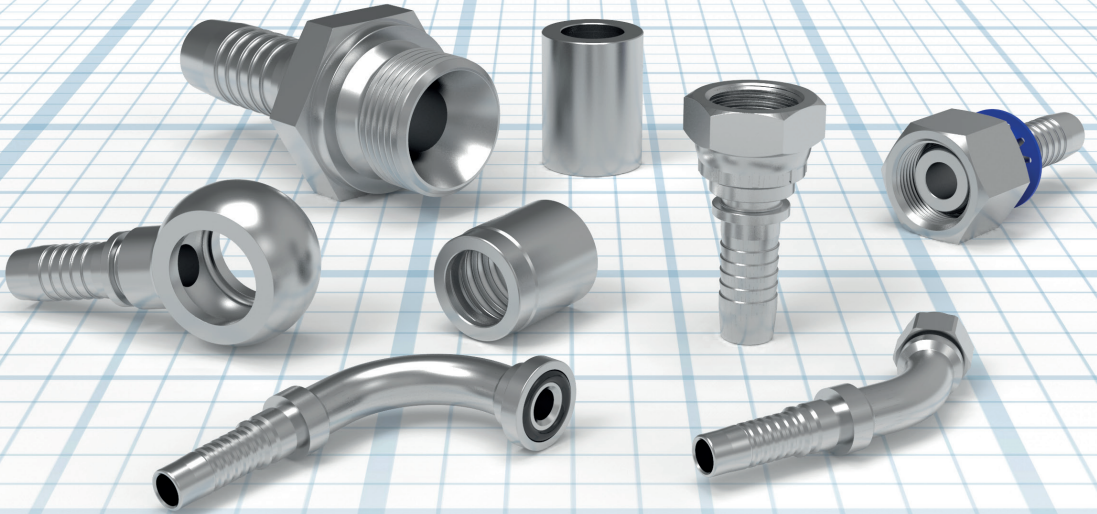


# Hose fittings



## VOSS Fluid GmbH Sales Organization

### Germany

VOSS Fluid GmbH  
Post box 15 40  
51679 Wipperfürth  
Lüdenscheider Straße  
52-54  
51688 Wipperfürth  
Tel. +49 2267 63-0  
Fax +49 2267 63-5621  
fluid@voss.net  
www.voss-fluid.net

### Italy

VOSS Fluid S.r.l.  
Via Stoppani, 13  
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Fax: +39 39 952 0010  
info@it.voss.net

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Tel.: +48 76 72 41 222  
fluid.pl@voss.net

### Spain

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Apartado Correos, 1014  
08203 Sabadell  
Tel.: +34 93 7106262  
Fax: +34 93 7116357  
sabadell@voss.net

### China

VOSS Fluid China (Wuxi)  
Block B, Taishan Road No. 8  
214028 Wuxi  
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Fax: +86 510 66902371  
fluidchina@voss.net

### France

VOSS Fluid Sàrl  
Route de Crécy 57  
28500 Vernouillet  
Tel.: +33 237 380190  
Fax: +33 237 468914  
info@fr.voss.net

### Worldwide dealers

Please request the current list of the dealer directory from our Sales Department in Wipperfürth.

Compliance with the respective operating and assembly instructions as well as the current standards and regulations of general mechanical engineering is a basic requirement for the reliable performance of VOSS products. Please always use the latest version.

Subject to technical modifications; misprints and errors excepted. This catalog edition replaces all previously published technical documents, catalogs, assembly instructions etc.

Consequently, all previous documents lose their validity with immediate effect!

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Accessories and test equipment

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Assembly instructions

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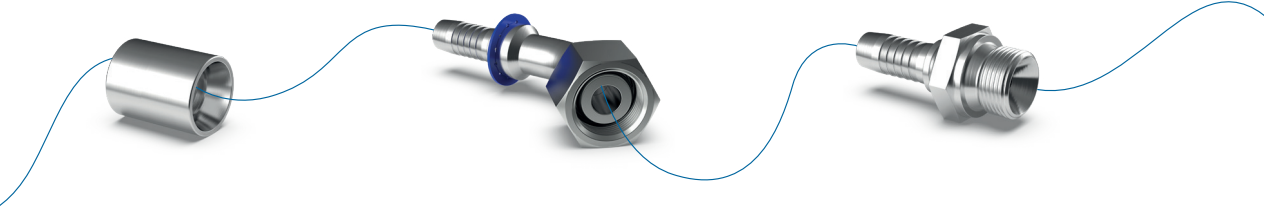
Designation directory

9

Order-No. directory

10





Passionately  
Connected

## The Company

**VOSS is a proven partner in the automotive and mechanical engineering industries for tube and coupling technology in fluid systems.**

Since its foundation in 1931, the company has developed into a globally active group of companies driven by customer proximity, innovations and top quality. VOSS Automotive GmbH, VOSS Fluid GmbH and 16 foreign companies are united under the umbrella of VOSS Holding.

With its production facilities in Germany and abroad as well as sales companies in Europe and overseas, VOSS is one of the world's leading suppliers of components for fluid systems: In the area of VOSS Automotive for vehicle construction and in the area of VOSS Fluid for mechanical engineering.

The product range includes coupling elements, ready-to-install lines, valves and other components for pneumatic, hydraulic, fuel and air conditioning systems.

**The headquarter:  
Plant and administration Wipperfürth**



With the complete integration of hose fittings, the product portfolio is systematically expanded for a wide range of applications.



As a development partner and system provider with a full range of products, VOSS takes on the responsibility of actively supporting the opinion-forming process in the fluid technology industry in a wide variety of ways.

## Machine components for coupling technology

**A complete range plus quality: VOSS produces one of the most comprehensive product ranges of tube connection systems and hose fittings on the basis of this principle. The entire product range is available as a catalog program.**

The product range includes hose fittings, cutting ring, soft seal and flared couplings, tube forming systems, flange couplings and supplementary accessories. Particular emphasis is placed on the development of customer-specific system solutions. VOSS Fluid handles the entire package, from project planning, engineering, production and assembly to special logistics services.

In addition, VOSS Fluid offers convincing economic additional services and optimization concepts that fully take into account procurement costs, assembly costs, the sustainability of the tightness of the screw connection and long-term corrosion protection.

The company's consistent quality policy and the defined quality objectives - all of which are reflected in the necessary certifications and approvals of the relevant associations and specialist bodies - have ensured VOSS a leading position in all established markets for many years.

Through worldwide depots with a wide range of systems and a global network of authorized dealers, VOSS Fluid stands for the very highest availability of products and offers particularly economical delivery systems. These range from a KANBAN Full Service to the complete optimization of the customer's supply chain.

With regular training courses and application-related information, VOSS Fluid offers a wide range of special services.



The internal and inter-company logistics of the entire VOSS Group provide considerable cost advantages, which make it possible for customers to plan their production precisely in time and in line with capacity without having to build up their own inventories.

## Energy and environmental policy of the VOSS Group

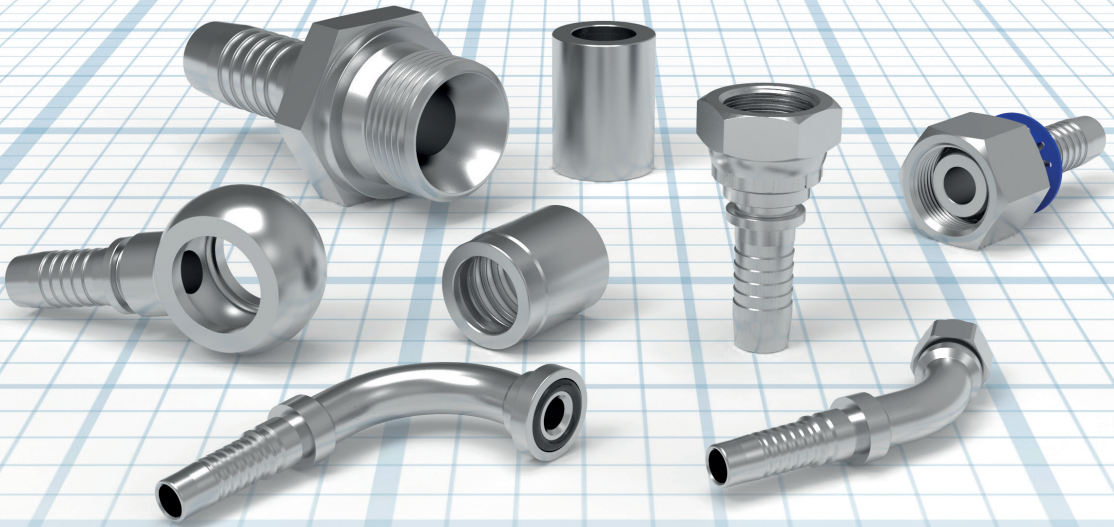
- 01** As a group of companies we make a continuous contribution to effective environmental protection. We strive for a sustainable balance between ecology, economy and social responsibility, thus ensuring the long-term success and continued existence of the company.
- 02** With our integrated management system, we implement the standards and clearly assign responsibility to the corporate levels. Within this framework, compliance with applicable legal requirements is consistently checked and the environmental awareness of our employees is continuously promoted.
- 03** All environmental effects of our activities are monitored and evaluated with the aim of constantly reducing the effects. We develop new processes and update existing ones in order to continuously improve our energy and environmental performance with the participation of the entire workforce.
- 04** The management undertakes to actively support the energy and environmental management system by providing the necessary resources, setting strategic and operational objectives and an appropriate information policy.
- 05** When manufacturing our products, we attach great importance to the efficient use of input resources and encourage our business partners to apply the same standards as we do ourselves.





## Overview of hose fittings

The right connections for all applications



Content Type/Page

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Hose connection systems P.10

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The complete range of VOSS hose fittings P.12

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Application table for hose nipples and ferrules P.18

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Product information VOSS hose fittings P.20

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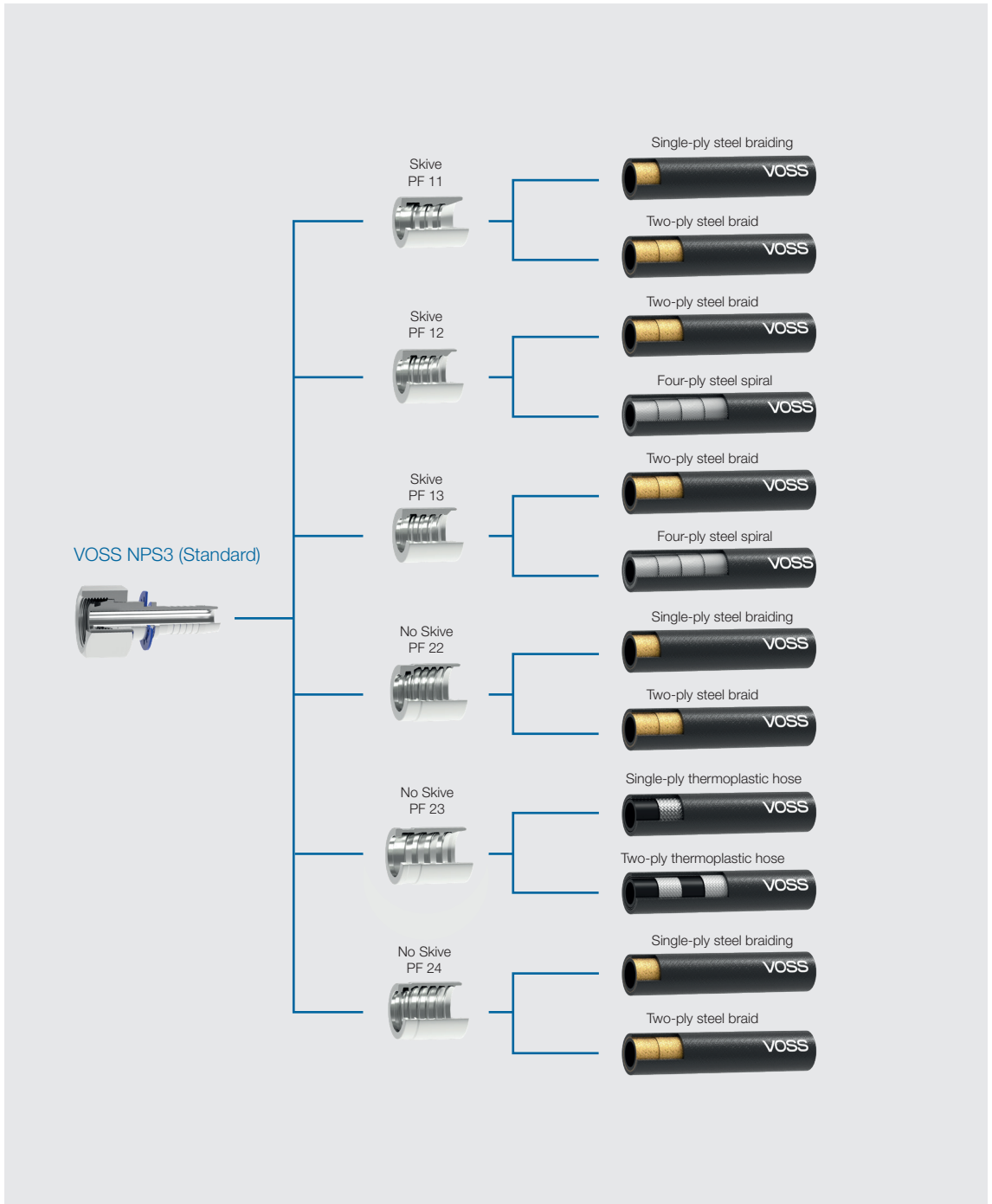
How to obtain a permanently leak-free coupling system P.24

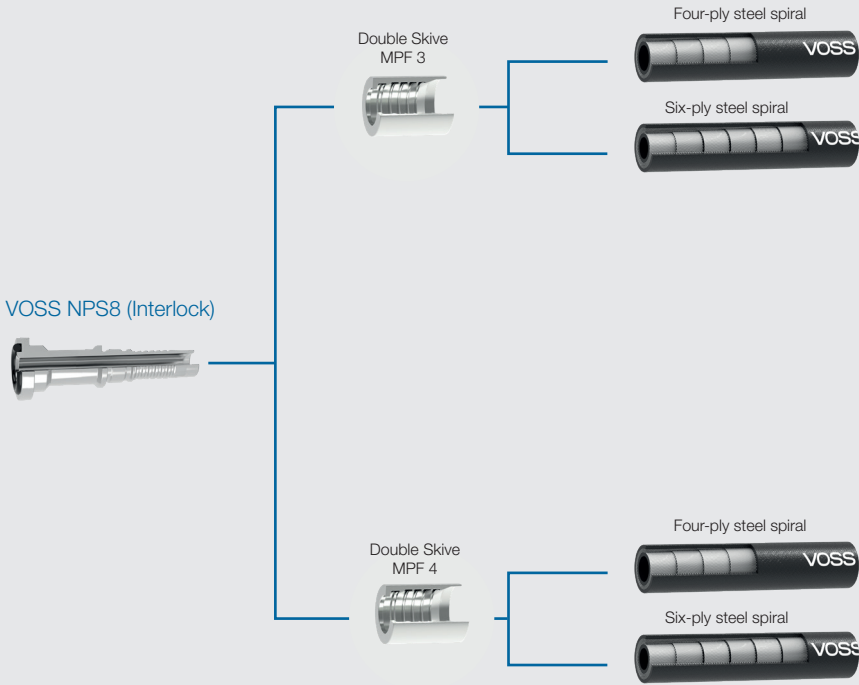
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# Hose connection systems – The right connections for all applications





# The complete range of VOSS hose fittings

## VOSS NPS3 (Standard)

Skive		
PF 11  P. 31	PF 12  P. 32	PF 13  P. 33

## Swaged ferrules

No Skive		
PF 22  P. 36	PF 23  P. 37	PF 24  P. 38

24° seal cone	
CEL  P. 40	CES  P. 41

## Hose fittings

24° seal cone / Series L			24° seal cone / Series S		
DKOL  P. 44	DKOL 45  P. 46	DKOL 90  P. 49	DKOS  P. 50	DKOS 45  P. 51	DKOS 90  P. 52

Universal seal cone		
DKM/L  P. 54	DKM/L 45  P. 55	DKM/L 90  P. 56

## Hose fittings

BSP thread		
<p>AGR</p>  <p>P. 58</p>	<p>AGR K</p>  <p>P. 59</p>	<p>AGR F</p>  <p>P. 60</p>

UN/UNF thread
<p>AGJ</p>  <p>P. 62</p>

NPTF thread
<p>AGN</p>  <p>P. 66</p>

BSP thread / 60° seal cone		
<p>DKR</p>  <p>P. 68</p>	<p>DKR 45</p>  <p>P. 69</p>	<p>DKR 90</p>  <p>P. 70</p>

BSP thread / 60° seal cone / O-ring		
<p>DKOR</p>  <p>P. 72</p>	<p>DKOR 45</p>  <p>P. 73</p>	<p>DKOR 90</p>  <p>P. 74</p>

UN/UNF thread / 37° seal cone			
<p>DKJ</p>  <p>P. 76</p>	<p>DKJ 45</p>  <p>P. 77</p>	<p>DKJ 90</p>  <p>P. 78</p>	<p>DKJ-WS</p>  <p>P. 79</p>

## Hose fittings

### UN/UNF thread ORFS

ORFS	ORFS 45	ORFS 90	AORFS
			
P. 82	P. 83	P. 84	P. 85

### SAE flange 3000/6000 PSI

FL3 / FL6 3000 / 6000 PSI	FL3 45 / FL6 45 3000 / 6000 PSI	FL3 90 / FL6 90 3000 / 6000 PSI
		
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### Flange 9000 PSI

FLCAT	FLCAT 45	FLCAT 90
		
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### Banjo inserts

RNR	RNM
	
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### Tube socket Series L/S

BEL	BEL 90	BES	BES 90
			
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# The complete range of VOSS hose fittings

## VOSS NPS8 (Interlock)

### Double Skive

MPF 3



P. 116

MPF 4



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## Swaged ferrules

### 24° seal cone

MCES



P. 120

## Hose fittings

### Seal cone O-ring

MDKOS



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MDKOS 45



P. 123

MDKOS 90



P. 124

### BSP thread

MAGR



P. 126

### UN/UNF thread

MAGJ



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### NPTF thread

MAGN



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### BSP thread / 60° seal cone / O-ring

MDKOR



P. 132

MDKOR 45



P. 133

MDKOR 90



P. 134




## Hose fittings

2




**UN/UNF thread / 37° seal cone / O-ring**

<p>MDKOJ</p>  <p>P. 136</p>	<p>MDKOJ 45</p>  <p>P. 137</p>	<p>MDKOJ 90</p>  <p>P. 138</p>
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**UN/UNF thread ORFS**

<p>MORFS</p>  <p>P. 140</p>	<p>MORFS 45</p>  <p>P. 141</p>	<p>MORFS 90</p>  <p>P. 142</p>
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






**SAE flange 3000/6000 PSI**

<p>MFL3 / MFL6 3000 / 6000 PSI</p>  <p>P. 144 / 148</p>	<p>MFL3 45 / MFL6 45 3000 / 6000 PSI</p>  <p>P. 145 / 149</p>	<p>MFL3 90 / MFL6 90 3000 / 6000 PSI</p>  <p>P. 146 / 150</p>
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**Flange 9000 PSI**

<p>MFLCAT</p>  <p>P. 152</p>	<p>MFLCAT 45</p>  <p>P. 153</p>	<p>MFLCAT 90</p>  <p>P. 154</p>
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## Application table for hose nipples and ferrules

Nipple profile	Ferrules	Applica- tion	Hose size	Hose type				
				EN 853 1SN SAE 100 R2AT	EN 853 2SN SAE 100 R2AT	EN 857 1SC	EN 857 2SC	SAE 100 R17
VOSS NPS3	 PF11	Skive	DN Inch Dash	5 – 51 3/16" – 2" -03 – -32		6 – 25 1/4" – 1" -04 – -16	6 – 25 1/4" – 1" -04 – -16	6 – 25 1/4" – 1" -04 – -16
	 PF12/13	Skive	DN Inch Dash		5 – 51 3/16" – 2" -03 – -32			
	 PF22	No Skive	DN Inch Dash	5 – 51 3/16" – 2" -03 – -32	5 – 51 3/16" – 2" -03 – -32			
	 PF23	No Skive	DN Inch Dash					
	 PF24	No Skive	DN Inch Dash	5 – 31 3/16" – 1 1/4" -03 – -20		6 – 25 1/4" – 1" -04 – -16	6 – 25 1/4" – 1" -04 – -16	6 – 25 1/4" – 1" -04 – -16
VOSS NPS8	 MPF3	Double Skive	DN Inch Dash					
	 MPF4	Double Skive	DN Inch Dash					

EN 855 R7	EN 855 R8	EN 856 4SP	SAE 100 R12	EN 856 4SH	EN 856 R13 SAE 100 R13	EN 856 R15 SAE 100 R15	EN 854 2TE	EN 854 3TE
		6 – 51 1/4" – 2" -04 – -32	10 – 51 3/8" – 2" -06 – -32					
4 – 25 3/16" – 1" -03 – -16	4 – 12 3/16" – 1/2" -03 – -08							
				19 – 51 3/4" – 2" -12 – -32	19 – 25 3/4" – 1" -12 – -16	19 – 25 3/4" – 1" -12 – -16		
					31 – 51 1 1/4" – 2" -20 – -32	31 – 38 1 1/4" – 1 1/2" -20 – -24		

## Safety & Flexibility with VOSS hose fittings

**Hydraulic systems are only as efficient as each individual component. So VOSS Fluid places the same high demands on the quality of its hose fittings as on the rest of the range. This is true for their leakage and assembly reliability as well as their versatility and durability. The synergy between VOSS Fluid hose fittings and other VOSS coupling systems guarantees the right fit for any application.**

All components and systems from VOSS are perfectly matched. Uniform values and parameters make assembly easier, more reliable and increase protection against leakage while improving the load capacity. In addition, as the standard VOSS Fluid solutions provide exemplary corrosion protection that has set the benchmark in the market and significantly increases the product service lives.



### Main advantages of the hose fittings

**There are many reasons for using hose fittings from VOSS Fluid. Here are some of the main reasons:**

- Precision-engineered solutions developed from decades of competence and expertise.
- Transfer of experience values from tube couplings to hose fittings.
- Perfect alignment between fittings and couplings.
- Highest leak-proofing thanks to standardization of system components.
- Efficient assembly reliability thanks to consistent assembly criteria.
- Standard, long service life through maximum corrosion protection with a VOSS coat coating.
- Versatility with multi-variant product solutions.
- Permanent product availability through a global network of authorized dealers.
- Logistics and procurement benefits because everything comes from one, single source, including services for all product groups.
- Consulting and application competence with consideration of the entire system for the perfect solution.

## Hose fittings in the DKO version

The highest targets are maximum impermeability and prevention

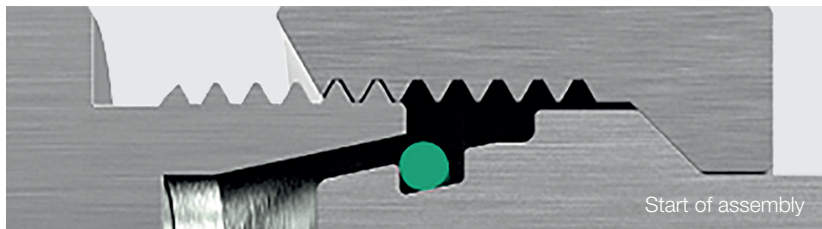
**Hose connections that are produced based on VOSS taper couplings with O-rings provide huge reliability bonuses even under dynamic loads and vibrations. Their structural details in depth:**

- Permanent stability thanks to metallic taper coupling on the fitting body and additional soft seal.
- Reduced work effort thanks to reduced tightening distances and tightening forces.
- Maximum tightness thanks to embedded FKM O-ring (standard).
- For applications with high operating pressures, vibrations, pulses or temperature fluctuations.

### Ideal for high loads

**Hose fittings in the DKO variant can be simply and reliably mounted. Their connection dimensions comply with ISO 8434-1. With their dimensional equivalence they can easily be built-into existing connection systems. Here are some other reasons that they are enjoying ever-increasing use:**

- Improved leak-proofing and precision seal.
- Higher pressure resistance and functional reliability even under extreme operating conditions such as pressure shocks, alternating bending loads and vibrations.
- Easy, fast and reliable assembly.
- Repeat assemblies can be carried out frequently and without problems.

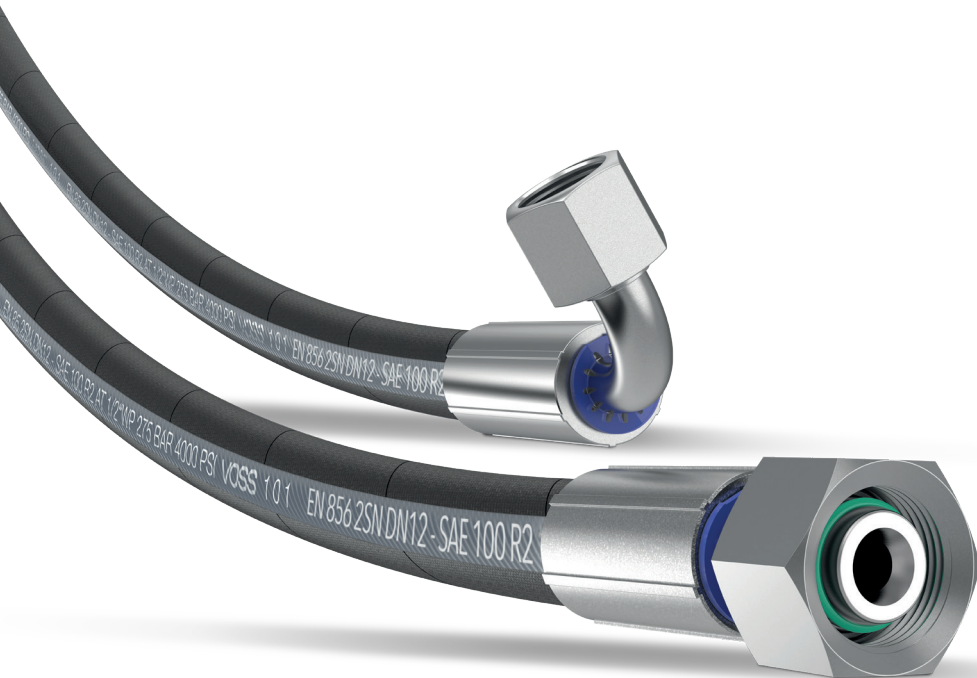


## Over-tightening protection prevents faults

**If the tightening torques are exceeded during assembly, leaks are possible in the sealing area of connected hydraulic components in contrast, VOSS Fluid has built-in over-tightening protection in its hose fittings as well as in its tube couplings.**

The principle: If a fitter tightens past the optimum end of assembly, the front face of the over-tightening protection and the connecting piece collide. A noticeable increase in force indicates the end of the assembly to the worker.

The contacting front faces prevent a further increase in force in the 24° seal cone, which prevents spreading of the connection taper while also preventing damage to the sealing surfaces. The over-tightening protection does not impede retightening the connection. Even repeat assemblies are perfectly possible, in particular because the components are protected against deformation.





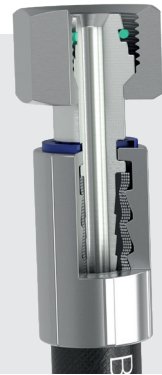
## Solutions for all variants

**Against the background of diverse stresses on hoses, normally three different embedding methods are used for perfectly fitting the hose fixtures.**

They differ in the casing of the elastomer in the deformation area and each exhibits different, application-specific thicknesses. The best thing first: VOSS Fluid offers the entire range of commercially available hydraulic hoses including fittings of up to 2 inches as well as all pressure ranges. That means we can always provide you with the best solution during the consulting process.

### Skive

The top-most outer layer of the hose material is worn out accurately. This enables the ferrule to form a direct connection with the wire mesh. The advantage during this is the strong frictional connection between the hose and the fitting and the associated high pressure resistance and impermeability. This system provides a special benefit in safety in the application process.



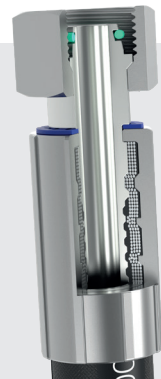
### No Skive

Here the elastomer of the hose remains unskived. Instead, the ferrule is pushed over the unskived hose and compressed. The advantages are easy, fast and the assembly is clean. This system offers a special plus in cleanliness and speed in the assembly process.



### Double Skive (Interlock)

In addition to the outer layer, a defined, short part of the inner layer of the hose material is also skived off. This way an exceptionally strong form fit is achieved in the fitting area. The advantage of this technology is the continuously improved pull-off protection which is why it is commonly used in demanding applications and high-pressure areas.



## How to obtain a permanently leak-free coupling system

**Permanently leak-free joints increase the efficiency of your products and enhance your product image. The variety of VOSS coupling systems and the high type diversity provide the right alternative for almost every application.**

**Taking the respective application into account, we recommend the following for the design and selection of the correct coupling system:**

### Pay attention to the basics!

Before selecting the coupling system, important parameters such as pressure, volume flow, ambient temperature, external influences, standardization and/or legislation and the type of load should be known. One important additional decision criterion should be the cost-effectiveness of the coupling. In addition to the incurred purchase price, the procurement costs, the installation effort, the sustainability of the sealing function and the long-term corrosion protection must also be included in the total cost consideration.

### If possible, use a continuous soft sealing system!

Soft-sealing systems prevent even the smallest leakage paths, which can be caused by setting of the connection, temperature fluctuations and vibrations. The VOSS Fluid product range enables the consistent use of elastomers on the tube connection and threaded side of the connection. Please note the different material properties of the sealing materials.

### You can consistently rely on VOSS Fluid products!

In general, it is possible to use different coupling components from different manufacturers, however, we recommend using only VOSS components. The VOSS Fluid products are perfectly matched to each other, guaranteeing the best function and quality.

### Profit from our broad application competence!

VOSS Fluid and our authorized specialist dealers have a wide range of knowledge for almost every application. Take advantage of our experience and get customized advice before selecting a system.

### Assemble exclusively according to the VOSS assembly instructions!

Leaky connections are mainly caused by assembly errors. That is why it is necessary to follow the assembly and operating instructions carefully. VOSS Fluid offers comprehensive training material as well as practical seminars on all aspects of hydraulic couplings. On request, we will also be happy to conduct these at your company and provide valuable tips, specially designed for your production processes. When assembling hose assemblies, always comply with all necessary standards, directives and regulations.

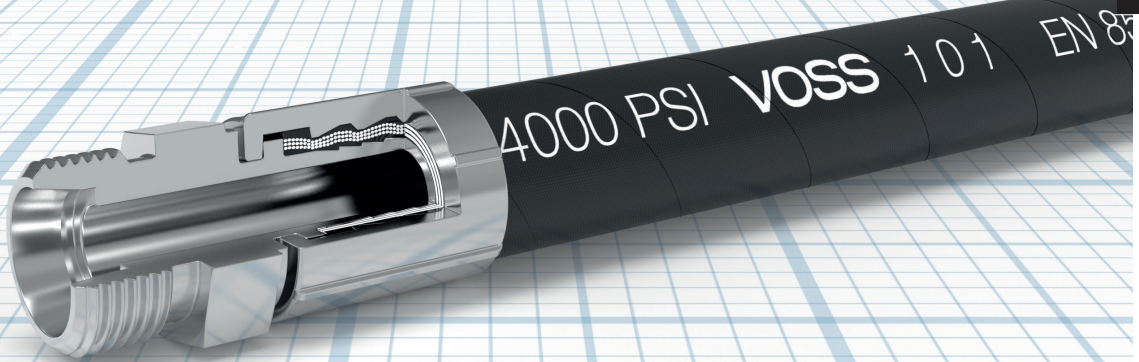
### Have yourself regularly audited by VOSS Fluid!

Check at regular intervals whether changes have resulted in your internal production processes, for example due to new assembly personnel or worn machines and tools. We offer auditing as a service, during which we check your assembly on site.

### Check your tube and hose installation!

Make sure that your tube and hose assemblies are professionally laid and supported at regular intervals. Excessively rigid constructions cannot absorb vibrations, while carelessly supported tube systems tend to vibrate.

## Hose fittings VOSS NPS3 (Standard)



## Content

## Type/Page

Skive swaged ferrules

PF 11

PF 12

PF 13



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P.33

No Skive swaged ferrules

PF 22

PF 23

PF 24



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P.37



P.38

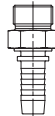
Hose fittings with 24° cone

CEL

CES



P.40



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Hose fittings with  
24° taper L series

DKOL

DKOL 45

DKOL 90



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Hose fittings with  
24° taper S series

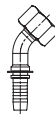
DKOS

DKOS 45

DKOS 90



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Hose fittings with universal taper

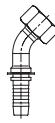
DKM/L

DKM/L 45

DKM/L 90



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## Content

## Type/Page

Hose fittings with BSP thread

AGR

AGR K

AGR F



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Hose fittings with UN/UNF thread

AGJ



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Hose fittings with NPTF thread

AGN



P.66

Hose fittings with BSP thread and 60° taper

DKR

DKR 45

DKR 90



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Hose fittings with BSP thread and 60° taper O-ring

DKOR

DKOR 45

DKOR 90



P.72

P.73

P.74

Hose fittings with UN/UNF thread and 37° cone

DKJ

DKJ 45

DKJ 90

DKJ-WS



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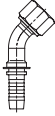

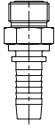

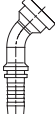


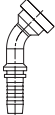


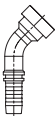

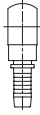
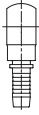


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P.78

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## Content

## Type/Page

Hose fittings ORFS with UN/UNF thread	ORFS  P.82	ORFS 45  P.83	ORFS 90  P.84	AORFS  P.85
Hose fittings with SAE flange standard series (3000 psi)	FL3  P.88	FL3 45  P.89	FL3 90  P.90	
Hose fittings with SAE flange high pressure series (6000 psi)	FL6  P.92	FL6 45  P.93	FL6 90  P.94	
Hose fittings with flange high pressure series (9000 psi)	FLCAT  P.96	FLCAT 45  P.97	FLCAT 90  P.98	
Ring eyelets	RNR  P.100	RBM  P.101		
Hose Fittings with tube socket L series	BEL  P.104	BEL 90  P.105		

## Content

## Type/Page

Hose Fittings with tube socket S series

BES

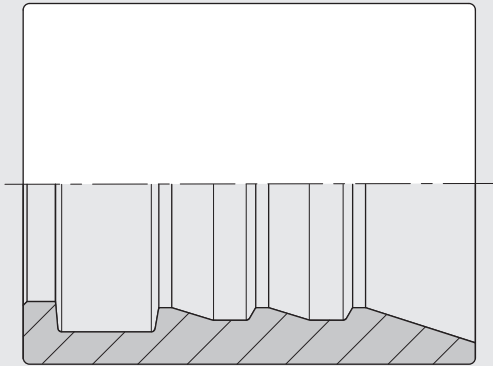
BES 90



P.108

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## Skive swaged ferrules

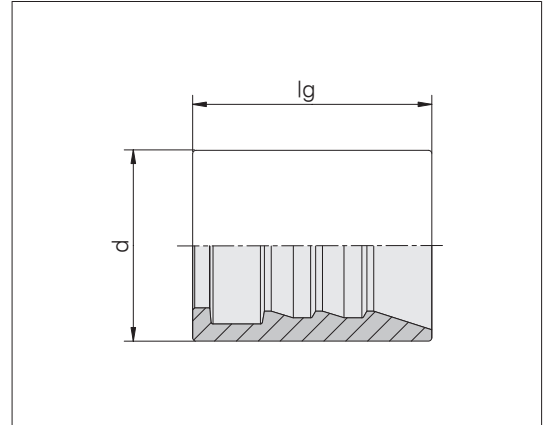




## PF 11

Skive swaged ferrules for wire braided hoses according to

SAE 100 R1A/R1AT  
EN 853 1ST/1SN  
EN 857 1SC/2SC hose



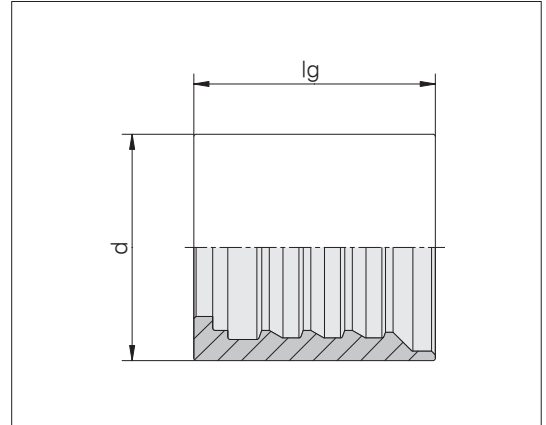
Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
5	3/16	-03	17	26	7000029800	HF-FER/PF11-DN05-OS
6	1/4	-04	20	31	7000029900	HF-FER/PF11-DN06-OS
8	5/16	-05	21	31	7000030000	HF-FER/PF11-DN08-OS
10	3/8	-06	24	31	7000030100	HF-FER/PF11-DN10-OS
12	1/2	-08	28	35	7000030200	HF-FER/PF11-DN12-OS
16	5/8	-10	31	36	7000030300	HF-FER/PF11-DN16-OS
19	3/4	-12	35	42.5	7000030400	HF-FER/PF11-DN19-OS
25	1	-16	42	50.5	7000030500	HF-FER/PF11-DN25-OS
31	1 1/4	-20	52	59	7000219200	HF-FER/PF11-DN31-OS
38	1 1/2	-24	58	63	7000219300	HF-FER/PF11-DN38-OS
51	2	-32	71	70	7000219400	HF-FER/PF11-DN51-OS

The maximum operating pressure is determined by the respective hose fitting and hose.

## PF 12

Skive swaged ferrules for braided and spiral hoses according to

SAE 100 R2A/R2AT  
EN 853 2ST/2SN  
EN 856 4SP/R12 hose



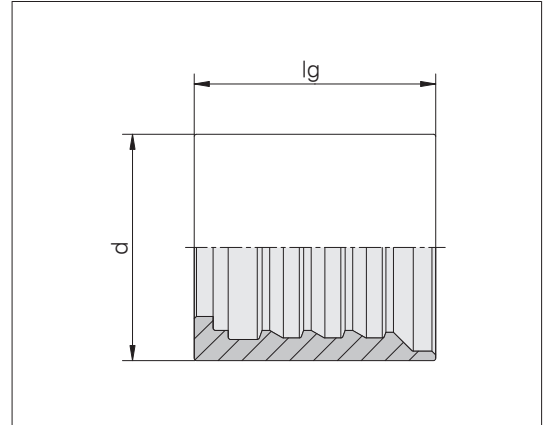
Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
5	3/16	-03	21	26	7000219500	HF-FER/PF12-DN05-OS
6	1/4	-04	22	30	7000219600	HF-FER/PF12-DN06-OS
8	5/16	-05	23	30	7000219700	HF-FER/PF12-DN08-OS
10	3/8	-06	26	31	7000219800	HF-FER/PF12-DN10-OS
12	1/2	-08	30	32	7000219900	HF-FER/PF12-DN12-OS
31	1 1/4	-20	57	58	7000032300	HF-FER/PF12-DN31-OS
38	1 1/2	-24	65	62	7000032400	HF-FER/PF12-DN38-OS
51	2	-32	79	73.5	7000032500	HF-FER/PF12-DN51-OS

The maximum operating pressure is determined by the respective hose fitting and hose.

## PF 13

Skive swaged ferrules for braided and spiral hoses according to

SAE 100 R2A/R2AT  
 EN 853 2ST/2SN  
 EN 856 4SP/R12 hose



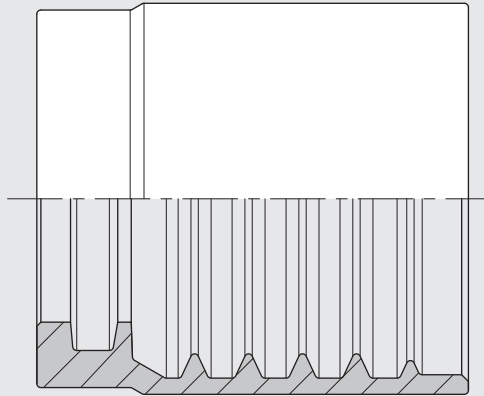
3

Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
16	5/8	-10	33	38	7000220000	HF-FER/PF13-DN16-OS
19	3/4	-12	38	42.5	7000220100	HF-FER/PF13-DN19-OS
25	1	-16	46	51	7000220200	HF-FER/PF13-DN25-OS

The maximum operating pressure is determined by the respective hose fitting and hose.



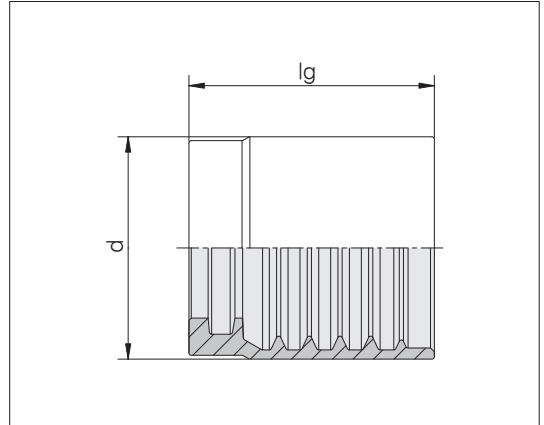
## No Skive swaged ferrules



## PF 22

No Skive swaged ferrules for wire braided hoses according to

SAE 100 R1AT/R2AT  
EN 853 1SN/2SN



Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
5	3/16	-03	21	23.5	7000028700	HF-FER/PF22-DN05
6	1/4	-04	23	30	7000028800	HF-FER/PF22-DN06
8	5/16	-05	24	30	7000028900	HF-FER/PF22-DN08
10	3/8	-06	26	31	7000029000	HF-FER/PF22-DN10
12	1/2	-08	29	32	7000029100	HF-FER/PF22-DN12
16	5/8	-10	33	36	7000029200	HF-FER/PF22-DN16
19	3/4	-12	37	42.5	7000029300	HF-FER/PF22-DN19
25	1	-16	46	51	7000029400	HF-FER/PF22-DN25
31	1 1/4	-20	59	57.5	7000029500	HF-FER/PF22-DN31
38	1 1/2	-24	67	60.5	7000029600	HF-FER/PF22-DN38
51	2	-32	80	74	7000029700	HF-FER/PF22-DN51

The maximum operating pressure is determined by the respective hose fitting and hose.

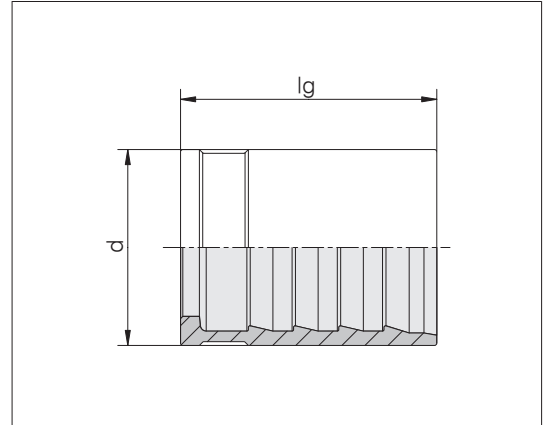
## PF 23

No Skive swaged ferrules for thermoplastic hoses according to

SAE 100 R7/R8

EN 855 R7/R8

R8 hoses are limited to 1/2"



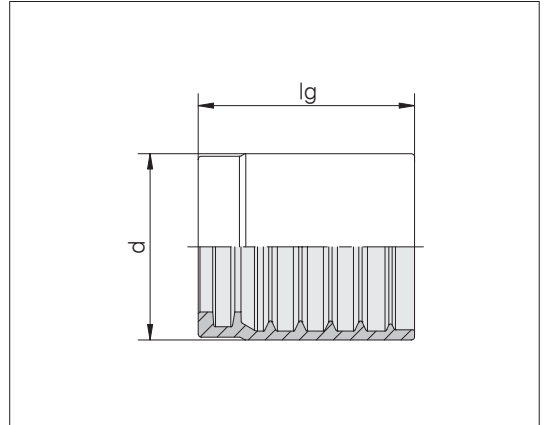
Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
5	3/16	-03	14	26.5	7000220300	HF-FER/PF23-DN05
6	1/4	-04	18	30.5	7000220400	HF-FER/PF23-DN06
8	5/16	-05	19	32	7000220500	HF-FER/PF23-DN08
10	3/8	-06	22	33	7000220600	HF-FER/PF23-DN10
12	1/2	-08	26	34	7000220700	HF-FER/PF23-DN12
16	5/8	-10	31	36	7002109400	HF-FER/PF23-DN16
19	3/4	-12	35	42.5	7002109700	HF-FER/PF23-DN19
25	1	-16	41	51	7002110000	HF-FER/PF23-DN25

The maximum operating pressure is determined by the respective hose fitting and hose.

# PF 24

No Skive swaged ferrules for braided hoses according to

EN 857 1SC/2SC  
 1K/2K (exceeds EN 857 1SC/2SC)  
 SAE 100 R1AT  
 EN 853 1SN



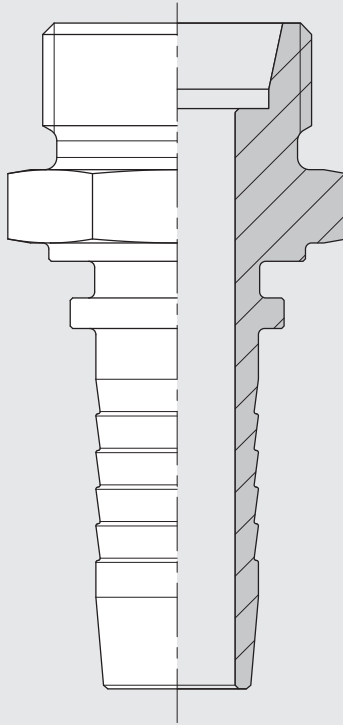
Hose size			d	lg	Order-No.	Designation
DN	Inch	Dash				
6	1/4	-04	20	30	7004061800	HF-FER/PF24-DN06
8	5/16	-05	22	30	7004062300	HF-FER/PF24-DN08
10	3/8	-06	24	31	7004062700	HF-FER/PF24-DN10
12	1/2	-08	28	32	7004063400	HF-FER/PF24-DN12
16	5/8	-10	31	36	7004063700	HF-FER/PF24-DN16
19	3/4	-12	35	42.5	7004063100	HF-FER/PF24-DN19
25	1	-16	43	51	7004062400	HF-FER/PF24-DN25
31	1 1/4	-20	55	57.5	7006650500	HF-FER/PF24-DN31

The maximum operating pressure is determined by the respective hose fitting and hose.





## Hose fittings with 24° cone

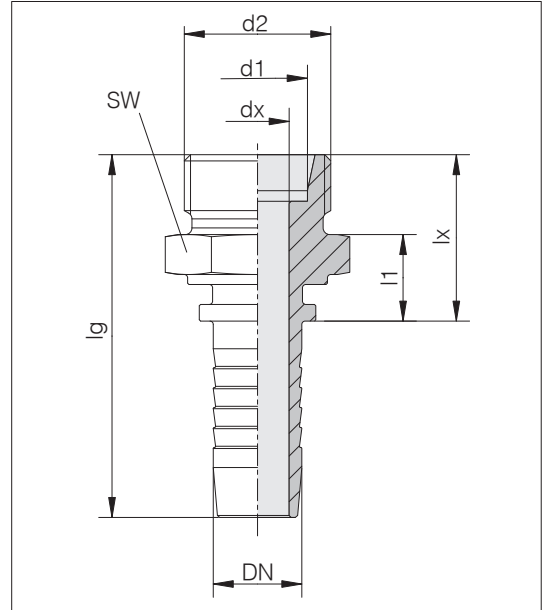


# CEL

Hose fittings with metric thread and 24° cone

ISO 12151-2 (ISO 8434-1)

L series



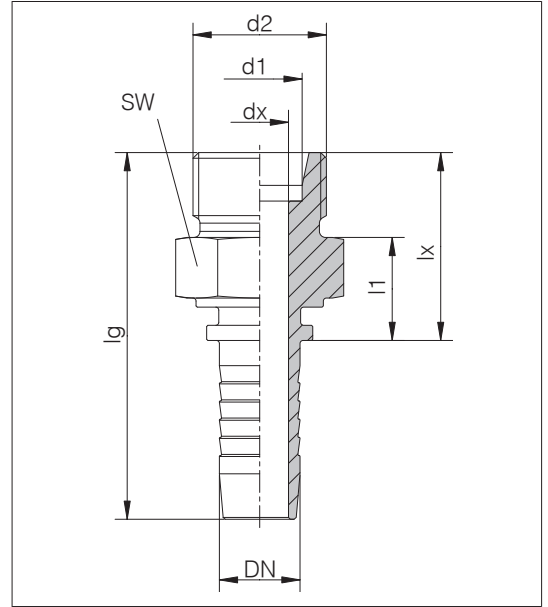
Series	Hose size			d2	dx	lg	lx	l1	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
d1											
L 6	5	3/16	-03	M 12 x 1.5	3	43	21	11	14	7000049000	HF/24-S-L6-DN05
L 6	6	1/4	-04	M 12 x 1.5	4	50	22	12	14	7000049200	HF/24-S-L6-DN06
L 8	6	1/4	-04	M 14 x 1.5	4	50	22	12	17	7000049300	HF/24-S-L8-DN06
L 10	6	1/4	-04	M 16 x 1.5	4	51	23	12	17	7000049400	HF/24-S-L10-DN06
L 10	8	5/16	-05	M 16 x 1.5	5.5	51	23	12	17	7000049600	HF/24-S-L10-DN08
L 10	10	3/8	-06	M 16 x 1.5	7	54	24.5	13.5	17	7000049800	HF/24-S-L10-DN10
L 12	6	1/4	-04	M 18 x 1.5	4	52	24	13	19	7000049500	HF/24-S-L12-DN06
L 12	8	5/16	-05	M 18 x 1.5	5.5	52	24	13	19	7000049700	HF/24-S-L12-DN08
L 12	10	3/8	-06	M 18 x 1.5	7	54	24.5	13.5	19	7000049900	HF/24-S-L12-DN10
L 12	12	1/2	-08	M 18 x 1.5	9.5	55.5	26	15	22	7002124900	HF/24-S-L12-DN12
L 15	10	3/8	-06	M 22 x 1.5	7	55	25.5	13.5	24	7000050000	HF/24-S-L15-DN10
L 15	12	1/2	-08	M 22 x 1.5	9.5	56.5	27	15	24	7000050100	HF/24-S-L15-DN12
L 15	16	5/8	-10	M 22 x 1.5	12.5	61	27	15	24	7002125300	HF/24-S-L15-DN16
L 18	10	3/8	-06	M 26 x 1.5	7	56	26.5	14.5	27	7002125500	HF/24-S-L18-DN10
L 18	12	1/2	-08	M 26 x 1.5	9.5	57.5	28	16	27	7000050200	HF/24-S-L18-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	62	28	16	27	7000050300	HF/24-S-L18-DN16
L 18	19	3/4	-12	M 26 x 1.5	15	69	30	18	27	7002125900	HF/24-S-L18-DN19
L 22	16	5/8	-10	M 30 x 2	12.5	64	30	16	32	7002126100	HF/24-S-L22-DN16
L 22	19	3/4	-12	M 30 x 2	15	71	32	18	32	7000050600	HF/24-S-L22-DN19
L 28	25	1	-16	M 36 x 2	19.5	80	33	19	41	7000050700	HF/24-S-L28-DN25
L 35	31	1 1/4	-20	M 45 x 2	26	93	38.5	22.5	46	7000050800	HF/24-S-L35-DN31
L 42	38	1 1/2	-24	M 52 x 2	32	99.5	41.5	25.5	55	7000050900	HF/24-S-L42-DN38

## CES

Hose fittings with metric thread and  
24° cone

ISO 12151-2 (ISO 8434-1)

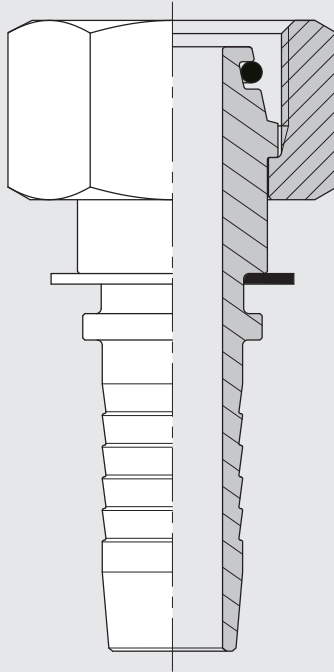
S series



Series	Hose size			d2	dx	lg	lx	l1	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
S 6	6	1/4	-04	M 14 x 1.5	4	55	27	15	17	7002126700	HF/24-S-S6-DN06
S 8	6	1/4	-04	M 16 x 1.5	4	55	27	15	17	7000051300	HF/24-S-S8-DN06
S 8	8	5/16	-05	M 16 x 1.5	5.5	55	27	15	17	7002127000	HF/24-S-S8-DN08
S 10	6	1/4	-04	M 18 x 1.5	4	55	27	15	19	7000051400	HF/24-S-S10-DN06
S 10	8	5/16	-05	M 18 x 1.5	5.5	55	27	15	19	7000051600	HF/24-S-S10-DN08
S 10	10	3/8	-06	M 18 x 1.5	7	57	27.5	15.5	19	7000051800	HF/24-S-S10-DN10
S 12	6	1/4	-04	M 20 x 1.5	4	57	29	17	22	7002127500	HF/24-S-S12-DN06
S 12	8	5/16	-05	M 20 x 1.5	5.5	57	29	17	22	7000051700	HF/24-S-S12-DN08
S 12	10	3/8	-06	M 20 x 1.5	7	59	29.5	17.5	22	7000051900	HF/24-S-S12-DN10
S 14	10	3/8	-06	M 22 x 1.5	7	61	31.5	17.5	24	7000052000	HF/24-S-S14-DN10
S 16	12	1/2	-08	M 24 x 1.5	9.5	62.5	33	19	27	7000052200	HF/24-S-S16-DN12
S 20	16	5/8	-10	M 30 x 2	12.5	71	37	21	32	7000052300	HF/24-S-S20-DN16
S 20	19	3/4	-12	M 30 x 2	15	78	39	23	32	7000052400	HF/24-S-S20-DN19
S 25	19	3/4	-12	M 36 x 2	15	82	43	25	36	7000052500	HF/24-S-S25-DN19
S 25	25	1	-16	M 36 x 2	19.5	90	43	25	36	7000052600	HF/24-S-S25-DN25
S 30	25	1	-16	M 42 x 2	19.5	92	45	25	46	7000052700	HF/24-S-S30-DN25
S 38	31	1 1/4	-20	M 52 x 2	26	106	51.5	29.5	55	7000052900	HF/24-S-S38-DN31



## Hose fittings with 24° taper L series

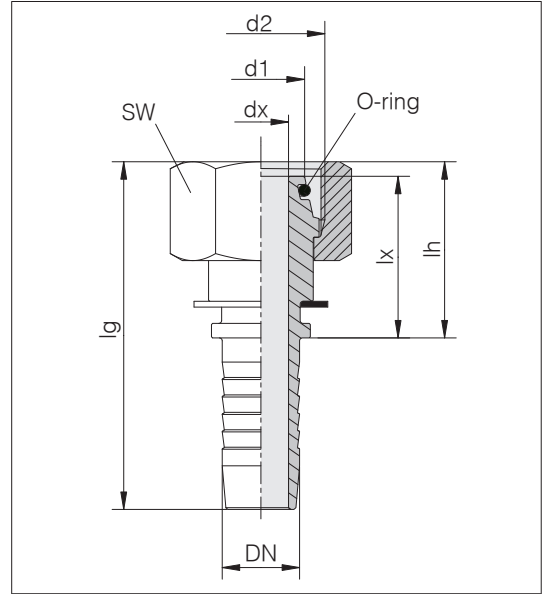


# DKOL

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
d1												
L 6	5	3/16	-03	M 12 x 1,5	3	47	25	25	14	4 x 1,5	7000036400	HF/24-SWOS-L6-DN05
L 6	6	1/4	-04	M 12 x 1,5	3	50	21,5	22	14	4 x 1,5	7000036600	HF/24-SWOS-L6-DN06 <sup>3)</sup>
L 8	6	1/4	-04	M 14 x 1,5	4	53	25	25	17	6 x 1,5	7000036700	HF/24-SWOS-L8-DN06
L 8	8	5/16	-05	M 14 x 1,5	4	51,5	23,5	23,5	17	6 x 1,5	7002212200	HF/24-SWOS-L8-DN08
L 10	6	1/4	-04	M 16 x 1,5	4	56,5	27,5	28,5	19	7,5 x 1,5	7000036800	HF/24-SWOS-L10-DN06
L 10	8	5/16	-05	M 16 x 1,5	5,5	54	25	26	19	7,5 x 1,5	7000037000	HF/24-SWOS-L10-DN08
L 10	10	3/8	-06	M 16 x 1,5	6	54	23,5	24,5	19	7,5 x 1,5	7000037200	HF/24-SWOS-L10-DN10 <sup>3)</sup>
L 12	6	1/4	-04	M 18 x 1,5	4	55,5	26,5	27,5	22	9 x 1,5	7000036900	HF/24-SWOS-L12-DN06
L 12	8	5/16	-05	M 18 x 1,5	5,5	55,5	26,5	27,5	22	9 x 1,5	7000037100	HF/24-SWOS-L12-DN08
L 12	10	3/8	-06	M 18 x 1,5	7	56,5	26	27	22	9 x 1,5	7000037300	HF/24-SWOS-L12-DN10
L 12	12	1/2	-08	M 18 x 1,5	9,5	56	25	26,5	22	9 x 1,5	7002211600	HF/24-SWOS-L12-DN12
L 15	10	3/8	-06	M 22 x 1,5	7	59,5	27,5	30	27	12 x 2	7000037400	HF/24-SWOS-L15-DN10
L 15	12	1/2	-08	M 22 x 1,5	9,5	60	28,5	30,5	27	12 x 2	7000037500	HF/24-SWOS-L15-DN12
L 15	16	5/8	-10	M 22 x 1,5	12,5	61,5	26	27,5	27	12 x 2	7004397700	HF/24-SWOS-L15-DN16
L 18	12	1/2	-08	M 26 x 1,5	9,5	61,5	29,5	32	32	15 x 2	7000037600	HF/24-SWOS-L18-DN12
L 18	16	5/8	-10	M 26 x 1,5	12,5	66,5	30,5	32,5	32	15 x 2	7000037700	HF/24-SWOS-L18-DN16
L 18	19	3/4	-12	M 26 x 1,5	15	70	28	31	32	15 x 2	7002211700	HF/24-SWOS-L18-DN19
L 22	16	5/8	-10	M 30 x 2	19,5	80,5	30,5	33,5	36	20 x 2	7004397800	HF/24-SWOS-L22-DN25
L 22	16	1	-10	M 30 x 2	12,5	68	30,5	34	36	20 x 2	7002211800	HF/24-SWOS-L22-DN16
L 22	19	3/4	-12	M 30 x 2	15	75,5	33	36,5	36	20 x 2	7000038000	HF/24-SWOS-L22-DN19
L 28	19	3/4	-12	M 36 x 2	15	77	34	38	41	26 x 2	7002211900	HF/24-SWOS-L28-DN19
L 28	25	1	-16	M 36 x 2	19,5	85	35	38	41	26 x 2	7000038100	HF/24-SWOS-L28-DN25
L 35	25	1	-16	M 45 x 2	19,5	89,5	38,5	42,5	50	32 x 2,5	7002212000	HF/24-SWOS-L35-DN25
L 35	31	1 1/4	-20	M 45 x 2	26	99	41,5	44,5	50	32 x 2,5	7000038200	HF/24-SWOS-L35-DN31
L 35	38	1 1/2	-24	M 45 x 2	28	100,5	38,5	42,5	50	32 x 2,5	7002212100	HF/24-SWOS-L35-DN38

<sup>3)</sup> Crimped union nuts

Continued on following page

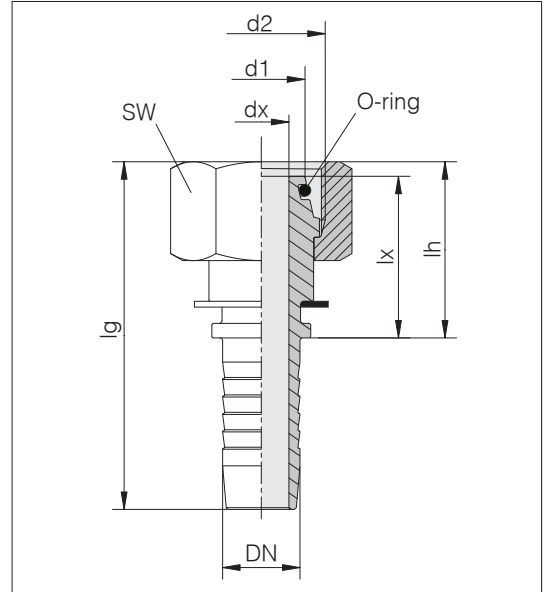


## DKOL

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



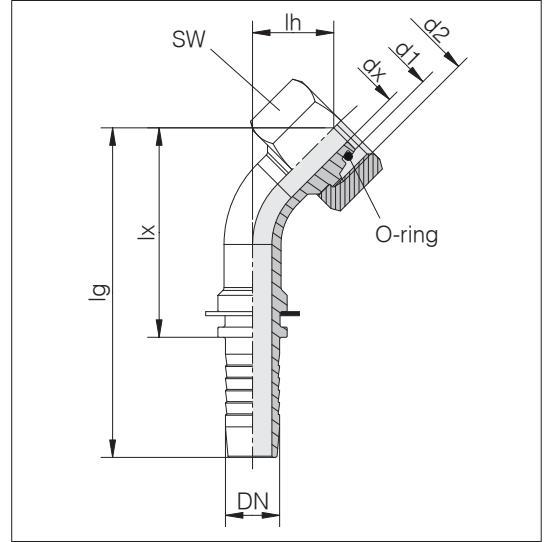
Series	Hose size			d2 metric	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
	Tube OD	DN	Inch									
L 42	31	1 1/4	-20	M 52 x 2	26	98.5	41	44	60	38 x 2,5	7004397600	HF/24-SWOS-L42-DN31
L 42	38	1 1/2	-24	M 52 x 2	32	102	41	44	60	38 x 2,5	7000038300	HF/24-SWOS-L42-DN38

# DKOL 45

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
d1												
L 6	5	3/16	-03	M 12 x 1.5	3	58	36	16.5	14	4 x 1,5	7000044800	HF/24-SWOE45-L6-DN05
L 6	6	1/4	-04	M 12 x 1.5	3	66	38	19.5	14	4 x 1,5	7002210100	HF/24-SWOE45-L6-DN06 <sup>3)</sup>
L 8	6	1/4	-04	M 14 x 1.5	4	65	37	17.5	17	6 x 1,5	7000040900	HF/24-SWOE45-L8-DN06
L 8	8	5/16	-05	M 14 x 1.5	4	71.5	43.5	21.5	17	6 x 1,5	7002210200	HF/24-SWOE45-L8-DN08
L 10	6	1/4	-04	M 16 x 1.5	4	65	37	18	19	7,5 x 1,5	7000041000	HF/24-SWOE45-L10-DN06
L 10	8	5/16	-05	M 16 x 1.5	5.5	67.5	39.5	17.5	19	7,5 x 1,5	7000041200	HF/24-SWOE45-L10-DN08
L 10	10	3/8	-06	M 16 x 1.5	6	77.5	48	23.5	19	7,5 x 1,5	7000041400	HF/24-SWOE45-L10-DN10 <sup>3)</sup>
L 12	6	1/4	-04	M 18 x 1.5	4	66.5	38.5	19	22	9 x 1,5	7002209600	HF/24-SWOE45-L12-DN06
L 12	8	5/16	-05	M 18 x 1.5	5.5	69	41	19	22	9 x 1,5	7004122100	HF/24-SWOE45-L12-DN08
L 12	10	3/8	-06	M 18 x 1.5	7	74	44.5	20	22	9 x 1,5	7000041500	HF/24-SWOE45-L12-DN10
L 15	10	3/8	-06	M 22 x 1.5	7	73.5	44	20.5	27	12 x 2	7002209700	HF/24-SWOE45-L15-DN10
L 15	12	1/2	-08	M 22 x 1.5	9.5	80	50.5	21.5	27	12 x 2	7000041700	HF/24-SWOE45-L15-DN12
L 15	16	5/8	-10	M 22 x 1.5	9.5	100	66	29	27	12 x 2	7004396400	HF/24-SWOE45-L15-DN16
L 18	12	1/2	-08	M 26 x 1.5	9.5	81.5	52	22	32	15 x 2	7002209800	HF/24-SWOE45-L18-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	95	61	24.5	32	15 x 2	7000041900	HF/24-SWOE45-L18-DN16
L 22	16	5/8	-10	M 30 x 2	12.5	96	62	26.5	36	20 x 2	7002209900	HF/24-SWOE45-L22-DN16
L 22	19	3/4	-12	M 30 x 2	15	107.5	68.5	26.5	36	20 x 2	7000042200	HF/24-SWOE45-L22-DN19
L 28	19	3/4	-12	M 36 x 2	15	109.5	70.5	30	41	26 x 2	7002210000	HF/24-SWOE45-L28-DN19
L 28	25	1	-16	M 36 x 2	19.5	132.5	85.5	30	41	26 x 2	7000042300	HF/24-SWOE45-L28-DN25
L 28	31	1 1/4	-20	M 36 x 2	22	163.5	109	41	41	26 x 2	7004397000	HF/24-SWOE45-L28-DN31
L 35	31	1 1/4	-20	M 45 x 2	26	160	105.5	37.5	50	32 x 2,5	7000042400	HF/24-SWOE45-L35-DN31
L 42	38	1 1/2	-24	M 52 x 2	32	181	123	43.5	60	38 x 2,5	7000042500	HF/24-SWOE45-L42-DN38

<sup>3)</sup> Crimped union nuts

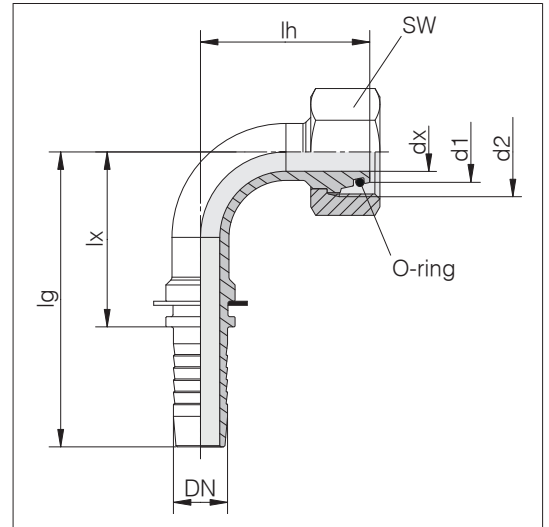


## DKOL 90

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM

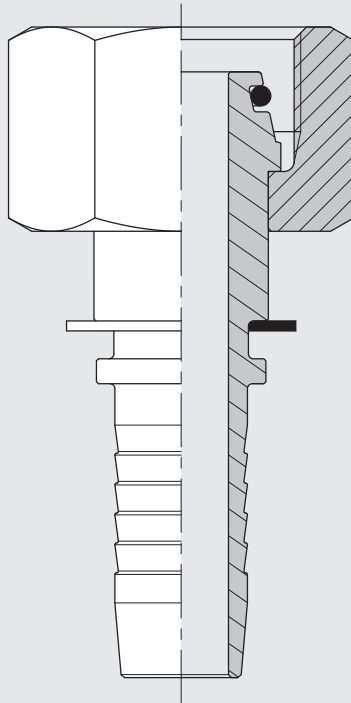


Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
d1												
L 6	5	3/16	-03	M 12 x 1.5	3	49.5	27.5	31	14	4 x 1,5	7000040600	HF/24-SWOE-L6-DN05
L 6	6	1/4	-04	M 12 x 1.5	3	55	27	37.5	14	4 x 1,5	7000045000	HF/24-SWOE-L6-DN06 <sup>3)</sup>
L 8	6	1/4	-04	M 14 x 1.5	4	55	27	33.5	17	6 x 1,5	7000045100	HF/24-SWOE-L8-DN06
L 8	8	5/16	-05	M 14 x 1.5	4	57	29	39	17	6 x 1,5	7002211100	HF/24-SWOE-L8-DN08
L 10	6	1/4	-04	M 16 x 1.5	4	55	27	34	19	7,5 x 1,5	7000220800	HF/24-SWOE-L10-DN06
L 10	8	5/16	-05	M 16 x 1.5	5.5	57	29	33.5	19	7,5 x 1,5	7000045400	HF/24-SWOE-L10-DN08
L 10	10	3/8	-06	M 16 x 1.5	6	65	35.5	42.5	19	7,5 x 1,5	7000045600	HF/24-SWOE-L10-DN10 <sup>3)</sup>
L 12	6	1/4	-04	M 18 x 1.5	4	55.5	27.5	35	22	9 x 1,5	7002210600	HF/24-SWOE-L12-DN06
L 12	8	5/16	-05	M 18 x 1.5	5.5	58	30	35	22	9 x 1,5	7000045500	HF/24-SWOE-L12-DN08
L 12	10	3/8	-06	M 18 x 1.5	7	65	35.5	37	22	9 x 1,5	7000045700	HF/24-SWOE-L12-DN10
L 12	12	1/2	-08	M 18 x 1.5	7.5	71	41.5	48.5	22	9 x 1,5	7004392600	HF/24-SWOE-L12-DN12
L 15	10	3/8	-06	M 22 x 1.5	7	64	34.5	38	27	12 x 2	7002210700	HF/24-SWOE-L15-DN10
L 15	12	1/2	-08	M 22 x 1.5	9.5	71.5	42	43	27	12 x 2	7000045900	HF/24-SWOE-L15-DN12
L 15	16	5/8	-10	M 22 x 1.5	9.5	87	53	56.5	27	12 x 2	7004704300	HF/24-SWOE-L15-DN16
L 18	12	1/2	-08	M 26 x 1.5	9.5	71.5	42	43	32	15 x 2	7002210800	HF/24-SWOE-L18-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	87	53	50.5	32	15 x 2	7000046100	HF/24-SWOE-L18-DN16
L 18	19	3/4	-12	M 26 x 1.5	12.5	99.5	60.5	61	32	15 x 2	7004395100	HF/24-SWOE-L18-DN19
L 22	16	5/8	-10	M 30 x 2	12.5	86	52	53	36	20 x 2	7002210900	HF/24-SWOE-L22-DN16
L 22	19	3/4	-12	M 30 x 2	15	99	60	55	36	20 x 2	7000046400	HF/24-SWOE-L22-DN19
L 22	25	1 1/4	-16	M 30 x 2	16	126.5	79.5	74	36	20 x 2	7004393000	HF/24-SWOE-L22-DN25
L 28	19	3/4	-12	M 36 x 2	15	99	60	59.5	41	26 x 2	7002211000	HF/24-SWOE-L28-DN19
L 28	25	1	-16	M 36 x 2	19.5	127	80	67	41	26 x 2	7000046500	HF/24-SWOE-L28-DN25
L 35	31	1 1/4	-20	M 45 x 2	26	153	98.5	81	50	32 x 2,5	7000046600	HF/24-SWOE-L35-DN31
L 35	38	1 1/2	-24	M 45 x 2	28	171	113	104	50	32 x 2,5	7004395700	HF/24-SWOE-L35-DN38
L 42	38	1 1/2	-24	M 52 x 2	32	170	112	99	60	38 x 2,5	7000046700	HF/24-SWOE-L42-DN38

<sup>3)</sup> Crimped union nuts



## Hose fittings with 24° taper S series

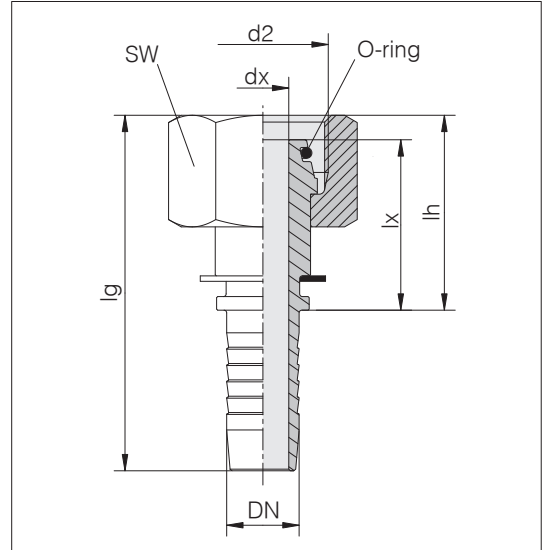


# DKOS

Hose fittings with 24° taper and O-ring  
fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD d1	DN	Inch	Dash	metric								
S 6	6	1/4	-04	M 14 x 1.5	2.5	52.5	22.5	24.5	17	4 x 1,5	7002212800	HF/24-SWOS-S6-DN06
S 8	5	3/16	-03	M 16 x 1.5	3	50	25.5	28	19	6 x 1,5	7000038500	HF/24-SWOS-S8-DN05
S 8	6	1/4	-04	M 16 x 1.5	4	55.5	26	27.5	19	6 x 1,5	7000038700	HF/24-SWOS-S8-DN06
S 10	6	1/4	-04	M 18 x 1.5	4	58	27.5	30	22	7.5 x 1,5	7000038800	HF/24-SWOS-S10-DN06
S 10	8	5/16	-05	M 18 x 1.5	5.5	57.5	27.5	29.5	22	7.5 x 1,5	7002212300	HF/24-SWOS-S10-DN08
S 10	10	3/8	-06	M 18 x 1.5	5.5	56	24.5	26.5	22	7.5 x 1,5	7002212400	HF/24-SWOS-S10-DN10
S 12	6	1/4	-04	M 20 x 1.5	4	58	27.5	29.5	24	9 x 1,5	7002212500	HF/24-SWOS-S12-DN06
S 12	8	5/16	-05	M 20 x 1.5	5.5	57	26.5	29	24	9 x 1,5	7000039100	HF/24-SWOS-S12-DN08
S 12	10	3/8	-06	M 20 x 1.5	7	58.5	27.5	29	24	9 x 1,5	7000039300	HF/24-SWOS-S12-DN10
S 12	12	1/2	-08	M 20 x 1.5	7.5	57	25.5	27.5	24	9 x 1,5	7002212600	HF/24-SWOS-S12-DN12
S 14	10	3/8	-06	M 22 x 1.5	7	64.5	30.5	35	27	10 x 2	7000039400	HF/24-SWOS-S14-DN10
S 14	12	1/2	-08	M 22 x 1.5	9.5	60	26	30.5	27	10 x 2	7002212700	HF/24-SWOS-S14-DN12
S 16	10	3/8	-06	M 24 x 1.5	7	64	30.5	34.5	30	12 x 2	7004397900	HF/24-SWOS-S20-DN10
S 16	12	1/2	-08	M 24 x 1.5	9.5	65	31.5	35.5	30	12 x 2	7000039600	HF/24-SWOS-S16-DN12
S 16	16	5/8	-10	M 24 x 1.5	10	63	27.5	29	30	12 x 2	7004398000	HF/24-SWOS-S16-DN16
S 20	16	5/8	-10	M 30 x 2	12.5	74.5	37.5	40.5	36	16,3 x 2,4	7000039700	HF/24-SWOS-S20-DN16
S 20	19	3/4	-12	M 30 x 2	14	81	39	42	36	16,3 x 2,4	7000039800	HF/24-SWOS-S20-DN19
S 25	19	3/4	-12	M 36 x 2	15	87	42	48	46	20,3 x 2,4	7000040000	HF/24-SWOS-S25-DN19
S 25	25	1	-16	M 36 x 2	18	88.5	36	41.5	46	20,3 x 2,4	7000040100	HF/24-SWOS-S25-DN25 <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19.5	97.5	43	50.5	50	25,3 x 2,4	7000040200	HF/24-SWOS-S30-DN25
S 38	31	1 1/4	-20	M 52 x 2	26	113.5	50	59	60	33,3 x 2,4	7000040400	HF/24-SWOS-S38-DN31

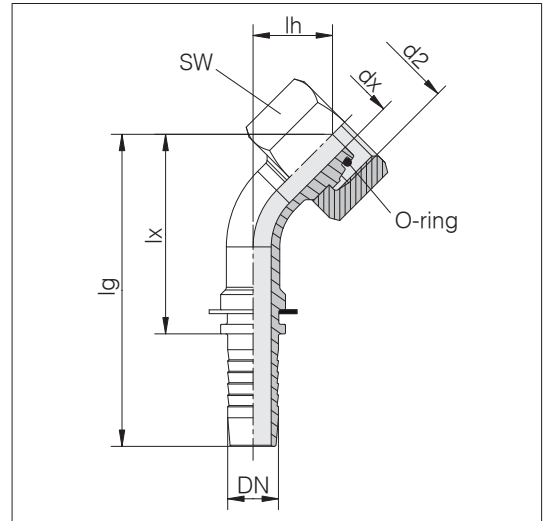
<sup>3)</sup> Crimped union nuts

## DKOS 45

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD d1	DN	Inch	Dash	metric								
S 6	6	1/4	-04	M 14 x 1.5	2.5	67.5	39.5	19	17	4 x 1,5	7002210500	HF/24-SWOE45-S6-DN06
S 8	5	3/16	-03	M 16 x 1.5	3	58.5	36.5	17	19	6 x 1,5	7000042700	HF/24-SWOE45-S8-DN05 <sup>2)</sup>
S 8	6	1/4	-04	M 16 x 1.5	4	65.5	37.5	18.5	19	6 x 1,5	7000042900	HF/24-SWOE45-S8-DN06
S 10	6	1/4	-04	M 18 x 1.5	4	65	37	18	22	7,5 x 1,5	7000043000	HF/24-SWOE45-S10-DN06
S 10	8	5/16	-05	M 18 x 1.5	5.5	67.5	39.5	18	22	7,5 x 1,5	7002210300	HF/24-SWOE45-S10-DN08
S 10	10	3/8	-06	M 18 x 1.5	5.5	76	46.5	24	22	7,5 x 1,5	7002210400	HF/24-SWOE45-S10-DN10
S 12	8	5/16	-05	M 20 x 1.5	5.5	69	41	19	24	9 x 1,5	7000043300	HF/24-SWOE45-S12-DN08
S 12	10	3/8	-06	M 20 x 1.5	7	75	45.5	21	24	9 x 1,5	7000043500	HF/24-SWOE45-S12-DN10
S 14	10	3/8	-06	M 22 x 1.5	7	75.5	46	21	27	10 x 2	7000043600	HF/24-SWOE45-S14-DN10
S 16	10	3/8	-06	M 24 x 1.5	7	76	46.5	22	30	12 x 2	7004398100	HF/24-SWOE45-S16-DN10
S 16	12	1/2	-08	M 24 x 1.5	9.5	81.5	52	23	30	12 x 2	7000043800	HF/24-SWOE45-S16-DN12
S 20	16	5/8	-10	M 30 x 2	12.5	98.5	64.5	28	36	16,3 x 2,4	7000043900	HF/24-SWOE45-S20-DN16
S 20	19	3/4	-12	M 30 x 2	14	110.5	71.5	29.5	36	16,3 x 2,4	7000044000	HF/24-SWOE45-S20-DN19
S 25	19	3/4	-12	M 36 x 2	15	110.5	71.5	29.5	46	20,3 x 2,4	7000044200	HF/24-SWOE45-S25-DN19
S 25	25	1	-16	M 36 x 2	18	142.5	95.5	40	46	20,3 x 2,4	7000044300	HF/24-SWOE45-S25-DN25 <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19.5	135	88	34	50	25,3 x 2,4	7000044400	HF/24-SWOE45-S30-DN25
S 38	31	1 1/4	-20	M 52 x 2	26	162	107.5	39.5	60	33,3 x 2,4	7000044600	HF/24-SWOE45-S38-DN31

<sup>3)</sup> Crimped union nuts

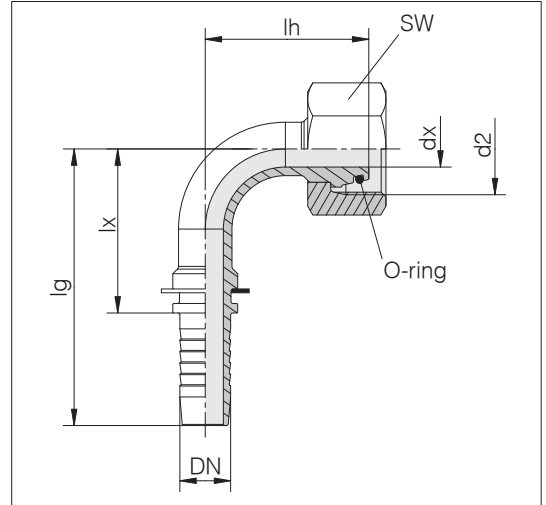
<sup>2)</sup> Special sizes only on request

# DKOS 90

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM

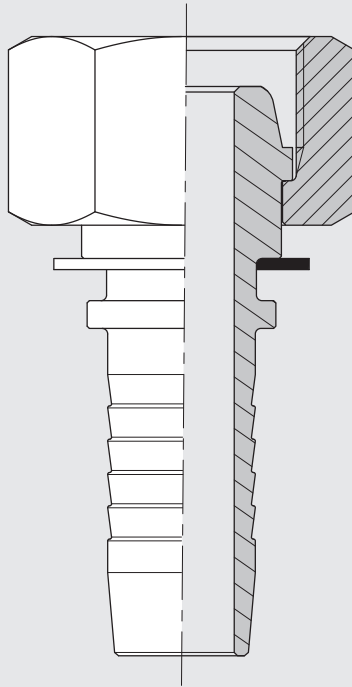


Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
d1												
S 6	6	1/4	-04	M 14 x 1.5	2.5	57	29	35	17	4 x 1,5	7002211500	HF/24-SWOE-S6-DN06
S 8	5	3/16	-03	M 16 x 1.5	3	50	28	32	19	6 x 1,5	7000046900	HF/24-SWOE-S8-DN05 <sup>2)</sup>
S 8	6	1/4	-04	M 16 x 1.5	4	55	27	34	19	6 x 1,5	7000047100	HF/24-SWOE-S8-DN06
S 10	6	1/4	-04	M 18 x 1.5	4	55	27	34	22	7,5 x 1,5	7000047200	HF/24-SWOE-S10-DN06
S 10	8	5/16	-05	M 18 x 1.5	5.5	58	30	34	22	7,5 x 1,5	7002211200	HF/24-SWOE-S10-DN08
S 10	10	3/8	-06	M 18 x 1.5	5.5	63	33.5	43.5	22	7,5 x 1,5	7002211300	HF/24-SWOE-S10-DN10
S 12	6	1/4	-04	M 20 x 1.5	4	55	27	34.5	24	9 x 1,5	7002211400	HF/24-SWOE-S12-DN06
S 12	8	5/16	-05	M 20 x 1.5	5.5	58	30	35	24	9 x 1,5	7000047500	HF/24-SWOE-S12-DN08
S 12	10	3/8	-06	M 20 x 1.5	7	65	35.5	38.5	24	9 x 1,5	7000047700	HF/24-SWOE-S12-DN10
S 14	10	3/8	-06	M 22 x 1.5	7	65	35.5	39	27	10 x 2	7000047800	HF/24-SWOE-S14-DN10
S 16	12	1/2	-08	M 24 x 1.5	9.5	71.5	42	44.5	30	12 x 2	7000048000	HF/24-SWOE-S16-DN12
S 20	12	1/2	-08	M 30 x 2	9.5	71.5	42	50	36	16,3 x 2,4	7004398200	HF/24-SWOE-S20-DN12
S 20	16	5/8	-10	M 30 x 2	12.5	87.5	53.5	55.5	36	16,3 x 2,4	7000048100	HF/24-SWOE-S20-DN16
S 20	19	3/4	-12	M 30 x 2	14	99	60	59	36	16,3 x 2,4	7000048200	HF/24-SWOE-S20-DN19
S 25	19	3/4	-12	M 36 x 2	15	99	60	59.5	46	20,3 x 2,4	7000048400	HF/24-SWOE-S25-DN19
S 25	25	1	-16	M 36 x 2	18	125	78	81	46	20,3 x 2,4	7000048500	HF/24-SWOE-S25-DN25 <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19.5	125	78	70.5	50	25,3 x 2,4	7000048600	HF/24-SWOE-S30-DN25
S 38	31	1 1/4	-20	M 52 x 2	26	153	98.5	83.5	60	33,3 x 2,4	7000048800	HF/24-SWOE-S38-DN31

<sup>3)</sup> Crimped union nuts

<sup>2)</sup> Special sizes only on request

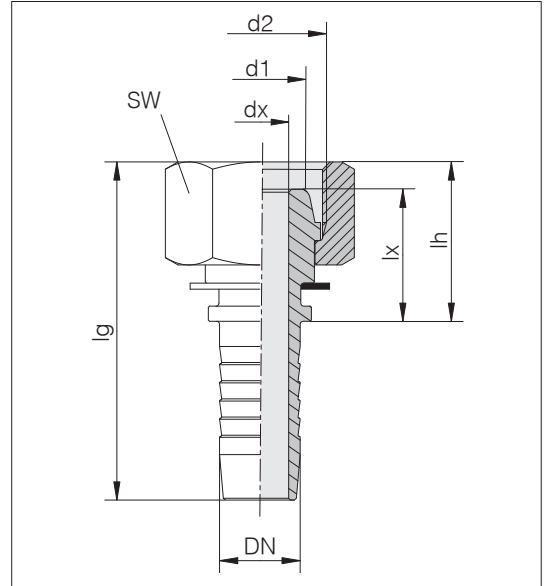
## Hose fittings with universal taper



# DKM/L

Hose fittings with universal taper  
fit in bore type  
W DIN 3861/ISO 8434-1 and  
bore type Y DIN 3863

DIN 3868:1982



Series	Hose size			d2	dx	lg	lx	lh	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
L 8	6	1/4	-04	M 14 x 1.5	4	51	19.5	23	17	7000295200	HF/24/60-SWS-L8-DN06
L 10	6	1/4	-04	M 16 x 1.5	4	51	19.5	23	19	7000295300	HF/24/60-SWS-L10-DN06
L 10	8	5/16	-05	M 16 x 1.5	5.5	51.5	20	23.5	19	7000295400	HF/24/60-SWS-L10-DN08
L 10	10	3/8	-06	M 16 x 1.5	7	53.5	19.5	24	19	7000295500	HF/24/60-SWS-L10-DN10 <sup>3)</sup>
L 12	6	1/4	-04	M 18 x 1.5	4	53	20.5	25	22	7004401600	HF/24/60-SWS-L12-DN06
L 12	8	5/16	-05	M 18 x 1.5	5.5	53	20.5	25	22	7000295600	HF/24/60-SWS-L12-DN08
L 12	10	3/8	-06	M 18 x 1.5	7	54	20.5	24.5	22	7000295700	HF/24/60-SWS-L12-DN10
L 15	10	3/8	-06	M 22 x 1.5	7	55.5	21	26	27	7000295800	HF/24/60-SWS-L15-DN10
L 15	12	1/2	-08	M 22 x 1.5	9.5	56.5	22	27	27	7000295900	HF/24/60-SWS-L15-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	63	24.5	29	32	7000296000	HF/24/60-SWS-L18-DN16

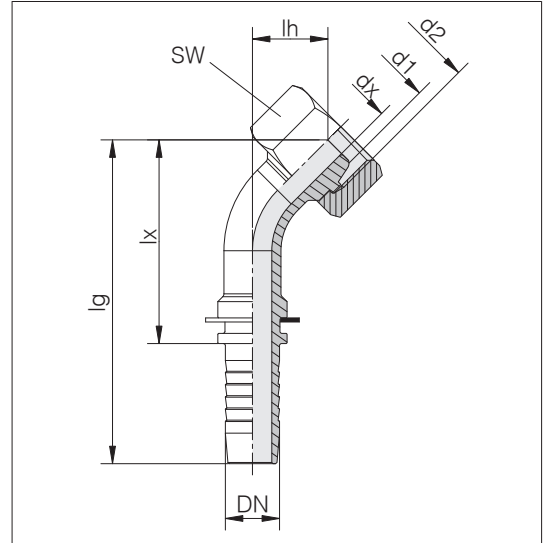
<sup>3)</sup> Crimped union nuts



## DKM/L 45

Hose fittings with universal taper  
fit in bore type  
W DIN 3861/ISO 8434-1 and  
bore type Y DIN 3863

DIN 3868:1982



Series	Hose size			d2	dx	lg	lx	lh	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
d1											
L 8	6	1/4	-04	M 14 x 1.5	4	62.5	34.5	14.5	17	7000297000	HF/24/60-SWE45-L8-DN06
L 10	6	1/4	-04	M 16 x 1.5	4	63	35	15.5	19	7000297100	HF/24/60-SWE45-L10-DN06 <sup>2)</sup>
L 10	8	5/16	-05	M 16 x 1.5	5.5	64.5	36.5	15	19	7000297200	HF/24/60-SWE45-L10-DN08 <sup>2)</sup>
L 10	10	3/8	-06	M 16 x 1.5	7	72.5	43	19.5	19	7000297300	HF/24/60-SWE45-L10-DN10 <sup>2)3)</sup>
L 12	8	5/16	-05	M 18 x 1.5	5.5	65	37	15.5	22	7000297400	HF/24/60-SWE45-L12-DN08 <sup>2)</sup>
L 12	10	3/8	-06	M 18 x 1.5	7	71	41.5	18	22	7000297500	HF/24/60-SWE45-L12-DN10
L 15	10	3/8	-06	M 22 x 1.5	7	71.5	42	18.5	27	7000297600	HF/24/60-SWE45-L15-DN10 <sup>2)</sup>
L 15	12	1/2	-08	M 22 x 1.5	9.5	79.5	50	18.5	27	7000297700	HF/24/60-SWE45-L15-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	95	61	24	32	7000297800	HF/24/60-SWE45-L18-DN16

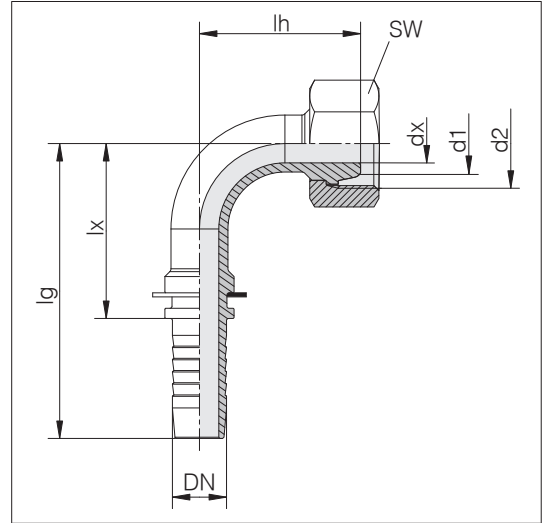
<sup>2)</sup> Special sizes only on request

<sup>3)</sup> Crimped union nuts

# DKM/L 90

Hose fittings with universal taper  
fit in bore type  
W DIN 3861/ISO 8434-1 and  
bore type Y DIN 3863

DIN 3868:1982

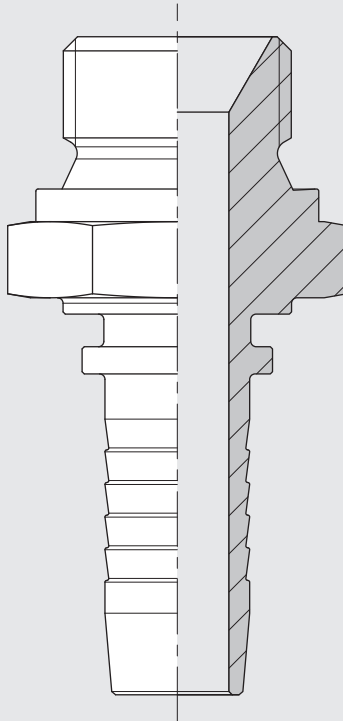


Series	Hose size			d2	dx	lg	lx	lh	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
L 8	6	1/4	-04	M 14 x 1.5	4	55	27	30	17	7000296100	HF/24/60-SWE-L8-DN06
L 10	6	1/4	-04	M 16 x 1.5	4	56	28	30	19	7000296200	HF/24/60-SWE-L10-DN06
L 10	8	5/16	-05	M 16 x 1.5	5.5	58	30	30	19	7000296300	HF/24/60-SWE-L10-DN08
L 10	10	3/8	-06	M 16 x 1.5	7	63	33.5	38	19	7000296400	HF/24/60-SWE-L10-DN10 <sup>3)</sup>
L 12	8	5/16	-05	M 18 x 1.5	5.5	58	30	30.5	22	7000296500	HF/24/60-SWE-L12-DN08
L 12	10	3/8	-06	M 18 x 1.5	7	64	34.5	35	22	7000296600	HF/24/60-SWE-L12-DN10
L 15	10	3/8	-06	M 22 x 1.5	7	64	34.5	35.5	27	7000296700	HF/24/60-SWE-L15-DN10
L 15	12	1/2	-08	M 22 x 1.5	9.5	71.5	42	39.5	27	7000296800	HF/24/60-SWE-L15-DN12
L 18	16	5/8	-10	M 26 x 1.5	12.5	88	54	49.5	32	7000296900	HF/24/60-SWE-L18-DN16

<sup>3)</sup> Crimped union nuts



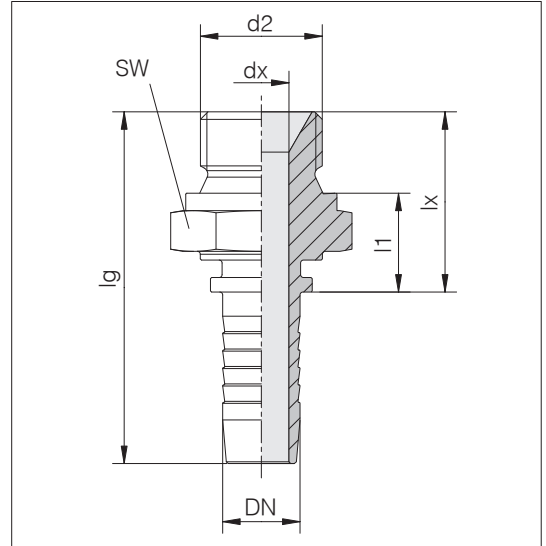
## Hose fittings with BSP thread



# AGR

Hose fittings with BSP thread and 60° cone, cylindrical

ISO 12151-6 (ISO 8434-6)



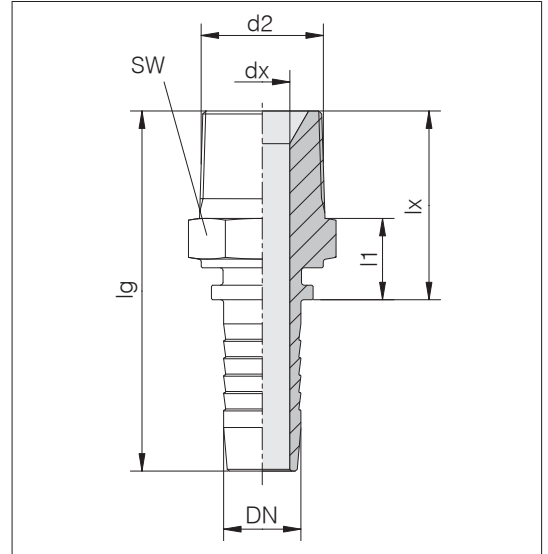
Hose size			d2 BSP	dx	lx	lg	l1	SW	Order-No.	Designation
DN	Inch	Dash								
6	1/4	-04	G 1/8	4	20.5	48.5	12.5	14	7000311900	HF/60-S-5-DN06
6	1/4	-04	G 1/4	4	24	52	13	19	7000312000	HF/60-S-8-DN06
6	1/4	-04	G 3/8	4	26	54	14	22	7000312100	HF/60-S-10-DN06
6	1/4	-04	G 1/2	4	30.5	58.5	16.5	27	7002122500	HF/60-S-12-DN06
8	5/16	-05	G 1/4	5.5	24.5	52.5	13.5	19	7002121700	HF/60-S-8-DN08
8	5/16	-05	G 3/8	5.5	26	54	14	22	7000312200	HF/60-S-10-DN08
10	3/8	-06	G 1/4	7	24.5	54	13.5	19	7002121900	HF/60-S-8-DN10
10	3/8	-06	G 3/8	7	26	55.5	14	22	7000312300	HF/60-S-10-DN10
10	3/8	-06	G 1/2	7	30	59.5	16	27	7000312500	HF/60-S-12-DN10
12	1/2	-08	G 3/8	9.5	27	56.5	15	22	7000312400	HF/60-S-10-DN12
12	1/2	-08	G 1/2	9.5	31	60.5	17	27	7000312600	HF/60-S-12-DN12
12	1/2	-08	G 3/4	9.5	33	62.5	17	32	7000312900	HF/60-S-20-DN12
12	1/2	-08	G 5/8	9.5	33	62.5	17	30	7000312700	HF/60-S-16-DN12
16	5/8	-10	G 3/4	12.5	33	67	17	32	7000313000	HF/60-S-20-DN16
16	5/8	-10	G 5/8	12.5	33	67	17	30	7000312800	HF/60-S-16-DN16
19	3/4	-12	G 3/4	15	34.5	73.5	18.5	32	7000313100	HF/60-S-20-DN19
19	3/4	-12	G 1	15	39.5	78.5	20.5	41	7000313200	HF/60-S-25-DN19
25	1	-16	G 1	19.5	39.5	86.5	20.5	41	7000313300	HF/60-S-25-DN25
25	1	-16	G 1 1/4	19.5	40.5	87.5	20.5	50	7000313400	HF/60-S-32-DN25
31	1 1/4	-20	G 1 1/4	26	42.5	97	22.5	50	7000313500	HF/60-S-32-DN31
38	1 1/2	-24	G 1 1/2	32	45.5	103.5	23.5	55	7000313600	HF/60-S-38-DN38
51	2	-32	G 2	42	52	124.5	27	70	7000313700	HF/60-S-50-DN51

Can also be used as threaded stud in accordance with DIN 3852-2 Form A.



## AGR K

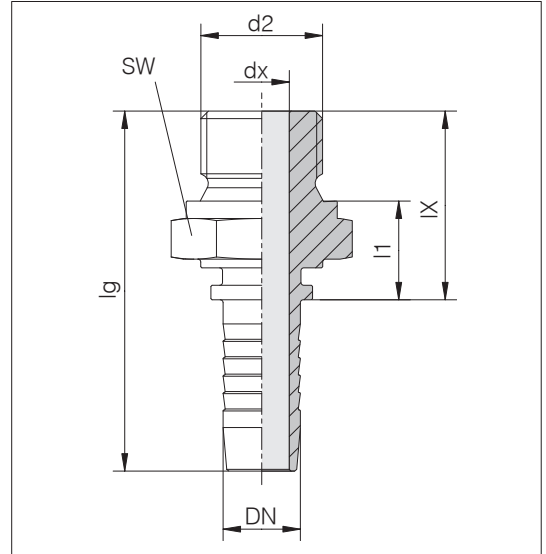
Hose fittings with BSP thread, tapered



Hose size			d2	dx	lx	lg	l1	SW	Order-No.	Designation
DN	Inch	Dash	BSP							
5	3/16	-03	R 1/8	3	21	43	12	12	7000318000	HF/60-SDS-R1/8T-DN05
6	1/4	-04	R 1/8	4	21	49	12	12	7000318100	HF/60-SDS-R1/8T-DN06
6	1/4	-04	R 1/4	4	25.5	53.5	12	14	7000318200	HF/60-SDS-R1/4T-DN06
6	1/4	-04	R 3/8	4	26	54	12	19	7000318300	HF/60-SDS-R3/8T-DN06
8	5/16	-05	R 3/8	5.5	26	54	12	19	7000318400	HF/60-SDS-R3/8T-DN08
10	3/8	-06	R 3/8	7	27	56.5	13	19	7000318500	HF/60-SDS-R3/8T-DN10
10	3/8	-06	R 1/2	7	31.5	61	13	22	7000318600	HF/60-SDS-R1/2T-DN10
12	1/2	-08	R 1/2	9.5	32.5	62	14	22	7000318700	HF/60-SDS-R1/2T-DN12
16	5/8	-10	R 3/4	12.5	35	69	15	27	7000318800	HF/60-SDS-R3/4T-DN16
19	3/4	-12	R 3/4	15	37.5	76.5	17.5	27	7000318900	HF/60-SDS-R3/4T-DN19
19	3/4	-12	R 1	15	41.5	80.5	17.5	36	7000319000	HF/60-SDS-R1T-DN19
25	1	-16	R 1	19.5	41.5	88.5	17.5	36	7000319100	HF/60-SDS-R1T-DN25
25	1	-16	R 1 1/4	19.5	44.5	91.5	18.5	46	7000319200	HF/60-SDS-R11/4T-DN25
31	1 1/4	-20	R 1 1/4	26	46.5	101	20.5	46	7000319300	HF/60-SDS-R11/4T-DN31
38	1 1/2	-24	R 1 1/2	32	47.5	105.5	20.5	50	7000319400	HF/60-SDS-R11/2T-DN38
51	2	-32	R 2	42	55	127.5	24	65	7000319500	HF/60-SDS-R2T-DN51

# AGR F

Hose fittings with BSP thread, flat sealing

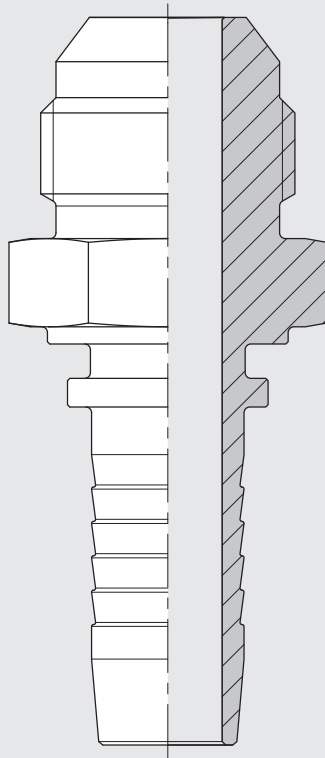


Hose size			d2 BSP	dx	lx	lg	l1	SW	Order-No.	Designation
DN	Inch	Dash								
6	1/4	-04	G 1/4	4	23.5	51.5	13	19	7000319600	HF/GP-SDS-G1/4A-DN06
10	3/8	-06	G 3/8	7	26.5	56	14	22	7000319700	HF/GP-SDS-G3/8A-DN10
10	3/8	-06	G 1/2	7	31.5	61	16	27	7000319800	HF/GP-SDS-G1/2A-DN10
12	1/2	-08	G 1/2	9.5	32.5	62	17	27	7000319900	HF/GP-SDS-G1/2A-DN12
19	3/4	-12	G 3/4	15	35	74	18.5	32	7000320000	HF/GP-SDS-G3/4A-DN19

Can also be used as threaded stud in accordance with DIN 3852-2 Form A.



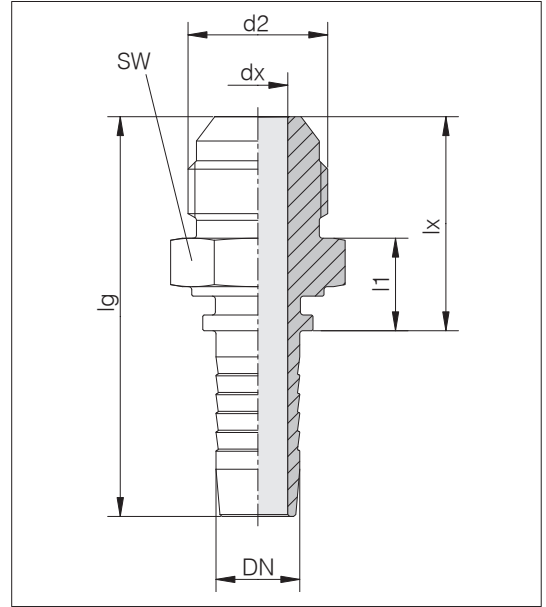
## Hose fittings with UN/UNF thread



# AGJ

Hose fittings with UN/UNF thread and 37° taper (JIC)

ISO 12151-5 (ISO 8434-2)



Hose size DN	Inch	Dash	d2 UN/UNF	lg	dx	lx	l1	SW	Order-No.	Designation
6	1/4	-04	7/16-20 UNF	53.5	4	25.5	11.5	14	7000313800	HF/37-S-6-DN06
6	1/4	-04	1/2-20 UNF	54	4	26	12	17	7000313900	HF/37-S-8-DN06
6	1/4	-04	9/16 - 18 UNF	53.5	4	25.5	11.5	17	7000314100	HF/37-S-10-DN06
8	5/16	-05	1/2-20 UNF	53.5	5.5	25.5	11.5	14	7000314000	HF/37-S-8-DN08
8	5/16	-05	9/16 - 18 UNF	53.5	5.5	25.5	11.5	19	7000314200	HF/37-S-10-DN08
10	3/8	-06	1/2-20 UNF	55.5	7	26	12	19	7002129000	HF/37-S-8-DN10
10	3/8	-06	9/16 - 18 UNF	55.5	7	26	12	19	7000314300	HF/37-S-10-DN10
10	3/8	-06	3/4-16 UNF	59	7	29.5	13	22	7000314400	HF/37-S-12-DN10
10	3/8	-06	7/8-14 UNF	62.5	7	33	14	24	7000314600	HF/37-S-16-DN10
12	1/2	-08	3/4-16 UNF	60	9.5	30.5	14	22	7000314500	HF/37-S-12-DN12
12	1/2	-08	7/8-14 UNF	63.5	9.5	34	14.5	24	7000314700	HF/37-S-16-DN12
12	1/2	-08	1 1/16-12 UN	67.5	9.5	38	16	27	7000314900	HF/37-S-20-DN12
16	5/8	-10	3/4-16 UNF	65.5	12.5	31.5	15	24	7002129700	HF/37-S-12-DN16
16	5/8	-10	7/8-14 UNF	68	12.5	34	14.5	24	7000314800	HF/37-S-16-DN16
16	5/8	-10	1 1/16-12 UN	72	12.5	38	16	32	7000315000	HF/37-S-20-DN16
19	3/4	-12	7/8-14 UNF	76.5	15	37.5	18	27	7002130200	HF/37-S-16-DN19
19	3/4	-12	1 1/16-12 UN	79	15	40	18	27	7000315100	HF/37-S-20-DN19
19	3/4	-12	1 3/16 - 12 UN	79.5	15	40.5	18	32	7002130800	HF/37-S-22-DN19
19	3/4	-12	1 5/16-12 UN	80	15	41	18	34	7000315300	HF/37-S-25-DN19
25	1	-16	1 1/16-12 UN	87	15	40	18	32	7000315200	HF/37-S-20-DN25
25	1	-16	1 5/16-12 UN	88.5	19.5	41.5	18.5	36	7000315400	HF/37-S-25-DN25
25	1	-16	1 5/8-12 UN	90	19.5	43	18.5	42	7000315500	HF/37-S-30-DN25
31	1 1/4	-20	1 5/8-12 UN	100.5	26	46	21.5	46	7000315600	HF/37-S-30-DN31
31	1 1/4	-20	1 7/8-12 UN	105	26	50.5	23	50	7000315700	HF/37-S-38-DN31 <sup>2)</sup>
38	1 1/2	-24	1 7/8-12 UN	109	32	51	23.5	50	7000315800	HF/37-S-38-DN38 <sup>2)</sup>
38	1 1/2	-24	2 1/2-12 UN	118.5	32	60.5	26.5	65	7002131600	HF/37-S-50-DN38

<sup>2)</sup> Special sizes only on request

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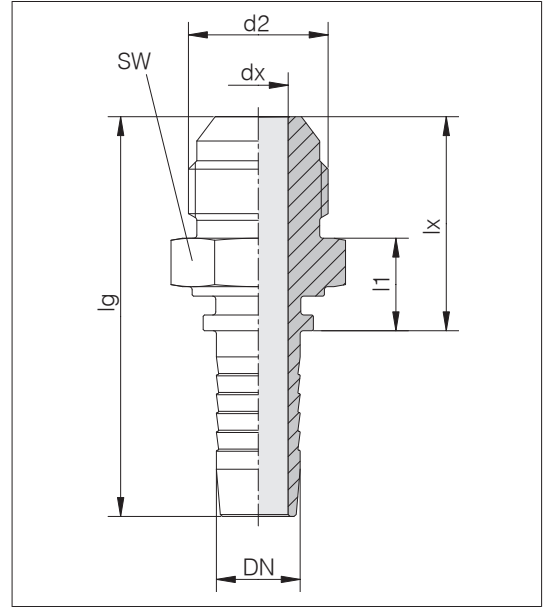




## AGJ

Hose fittings with UN/UNF thread and 37° taper (JIC)

ISO 12151-5 (ISO 8434-2)

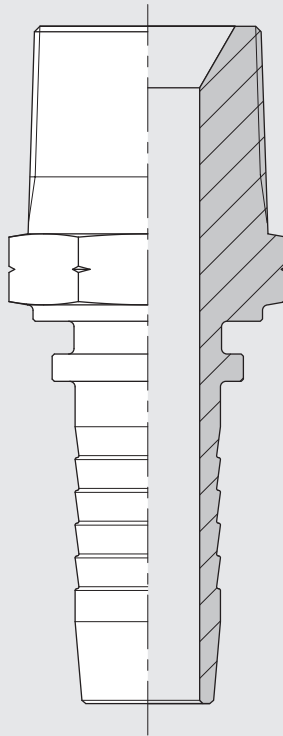


Hose size		Dash	d2 UN/UNF	lg	dx	lx	l1	SW	Order-No.	Designation
DN	Inch									
51	2	-32	2 1/2-12 UN	133.5	42	61	27	65	7000315900	HF/37-S-50-DN51 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request



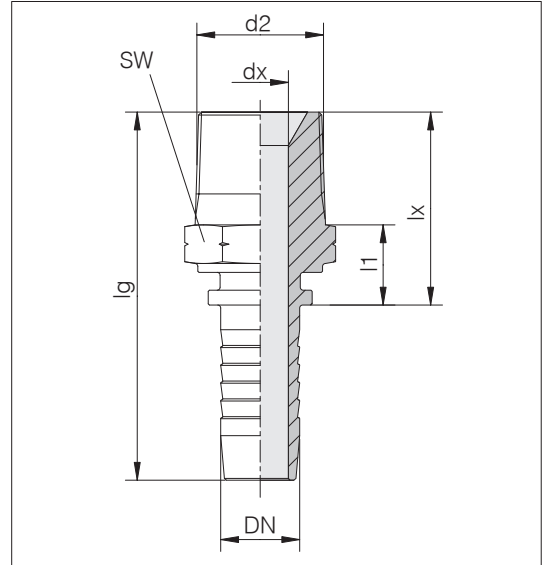
## Hose fittings with NPTF thread



# AGN

Hose fittings with NPTF thread, tapered

SAE J 516

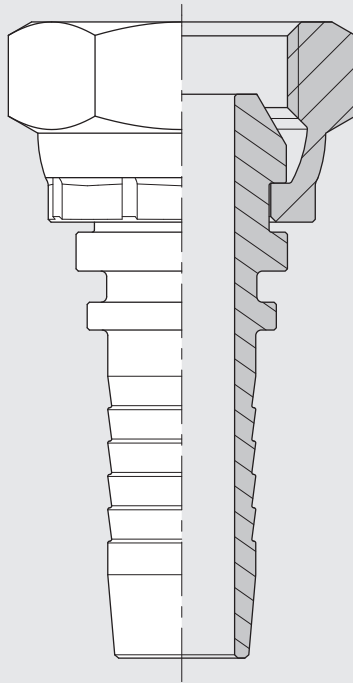


Hose size		Dash	d2 NPTF	dx	lg	lx	l1	SW	Order-No.	Designation
DN	Inch									
5	3/16	-03	1/8 NPTF	3	44	22	12	12	7000320100	HF/GP-SDS-NF1/8T-DN05
5	3/16	-03	1/4 NPTF	3	47.5	25.5	12	14	7002119200	HF/GP-SDS-NF1/4T-DN05
6	1/4	-04	1/8 NPTF	4	50	22	12	12	7000320200	HF/GP-SDS-NF1/8T-DN06
6	1/4	-04	1/4 NPTF	4	53.5	25.5	12	14	7000320300	HF/GP-SDS-NF1/4T-DN06
6	1/4	-04	3/8 NPTF	4	54	26	12	19	7000320500	HF/GP-SDS-NF3/8T-DN06
8	5/16	-05	3/8 NPTF	5.5	54	26	12	19	7000320600	HF/GP-SDS-NF3/8T-DN08
10	3/8	-06	1/4 NPTF	7	55	25.5	12	16	7000320400	HF/GP-SDS-NF1/4T-DN10
10	3/8	-06	3/8 NPTF	7	56.5	27	13	19	7000320700	HF/GP-SDS-NF3/8T-DN10
10	3/8	-06	1/2 NPTF	7	61	31.5	13	22	7000320900	HF/GP-SDS-NF1/2T-DN10
12	1/2	-08	3/8 NPTF	9.5	57.5	28	14	19	7000320800	HF/GP-SDS-NF3/8T-DN12
12	1/2	-08	3/4 NPTF	9.5	64.5	35	16	27	7000321200	HF/GP-SDS-NF3/4T-DN12
12	1/2	-08	1/2 NPTF	9.5	62	32.5	13.5	22	7000321000	HF/GP-SDS-NF1/2T-DN12
16	5/8	-10	3/4 NPTF	12.5	69	35	16	27	7002120400	HF/GP-SDS-NF3/4T-DN16
16	5/8	-10	1/2 NPTF	12.5	68	34	15	24	7000321100	HF/GP-SDS-NF1/2T-DN16
19	3/4	-12	3/4 NPTF	15	76.5	37.5	17.5	27	7000321300	HF/GP-SDS-NF3/4T-DN19
19	3/4	-12	1 NPTF	15	80.5	41.5	17.5	36	7000321400	HF/GP-SDS-NF1T-DN19
25	1	-16	3/4 NPTF	19.5	83.5	36.5	17.5	32	7002120700	HF/GP-SDS-NF3/4T-DN25
25	1	-16	1 NPTF	19.5	88.5	41.5	17.5	36	7000321500	HF/GP-SDS-NF1T-DN25
25	1	-16	1 1/4 NPTF	19.5	91.5	44.5	18.5	46	7000321600	HF/GP-SDS-NF1 1/4T-DN25 <sup>2)</sup>
31	1 1/4	-20	1 1/4 NPTF	26	101	46.5	20.5	46	7000321700	HF/GP-SDS-NF1 1/4T-DN31
38	1 1/2	-24	1 1/2 NPTF	32	105.5	47.5	20.5	50	7000321800	HF/GP-SDS-NF1 1/2T-DN38
51	2	-32	2 NPTF	42	127.5	55	24	65	7000321900	HF/GP-SDS-NF2T-DN51

<sup>2)</sup> Special sizes only on request



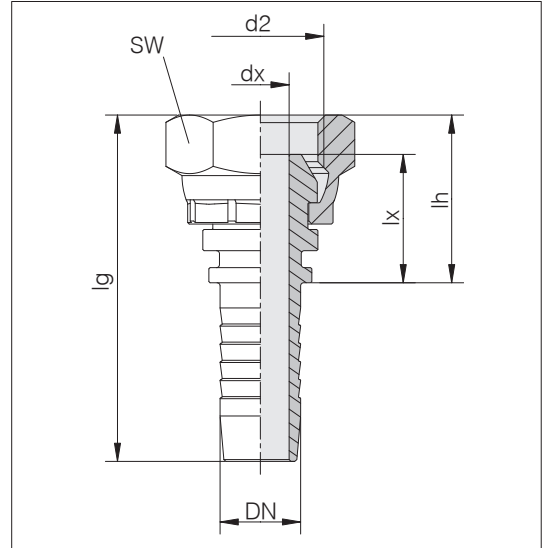
## Hose fittings with BSP thread and 60° taper



# DKR

Hose fittings with BSP thread and 60° taper

ISO 12151-6 (ISO 8434-6)



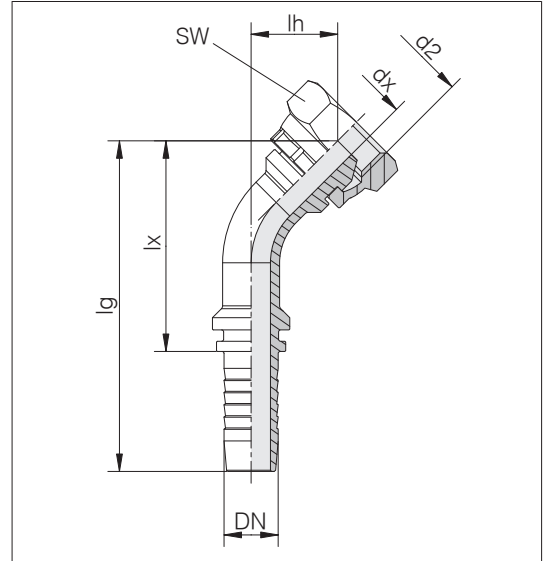
Hose size			d2	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch	Dash	BSP							
5	3/16	-03	G 1/8	3	41.5	15.5	19.5	14	7000276800	HF/60-SWS-5-DN05 <sup>3)</sup>
5	3/16	-03	G 1/4	3	42.5	15.5	20.5	19	7000277000	HF/60-SWS-8-DN05
6	1/4	-04	G 1/8	3	47.5	15.5	19.5	14	7000276900	HF/60-SWS-5-DN06 <sup>3)</sup>
6	1/4	-04	G 1/4	4	49.5	16.5	21.5	19	7000277100	HF/60-SWS-8-DN06
6	1/4	-04	G 3/8	4	53	19	25	22	7000277300	HF/60-SWS-10-DN06
6	1/4	-04	G 1/2	4	53.5	20	25.5	27	7002132500	HF/60-SWS-12-DN06
8	5/16	-05	G 1/4	5.5	50	16.5	22	19	7000277200	HF/60-SWS-8-DN08 <sup>3)</sup>
8	5/16	-05	G 3/8	5.5	53	19	25	22	7000277400	HF/60-SWS-10-DN08
10	3/8	-06	G 1/4	7	52.5	17.5	23	19	7002132400	HF/60-SWS-8-DN10 <sup>3)</sup>
10	3/8	-06	G 3/8	7	54.5	19	25	22	7000277500	HF/60-SWS-10-DN10
10	3/8	-06	G 1/2	7	56.5	20.5	27	27	7000277700	HF/60-SWS-12-DN10
12	1/2	-08	G 3/8	7	54	18.5	24.5	22	7000277600	HF/60-SWS-10-DN12 <sup>3)</sup>
12	1/2	-08	G 1/2	9.5	57.5	21.5	28	27	7000277800	HF/60-SWS-12-DN12
12	1/2	-08	G 3/4	9.5	60.5	22	31.5	32	7000278100	HF/60-SWS-20-DN12 <sup>3)</sup>
12	1/2	-08	G 5/8	9.5	59	20	29.5	30	7000277900	HF/60-SWS-16-DN12 <sup>3)</sup>
16	5/8	-10	G 1/2	9.5	64	24	30	27	7004132400	HF/60-SWS-12-DN16
16	5/8	-10	G 3/4	12.5	65.5	22.5	32	32	7000278200	HF/60-SWS-20-DN16 <sup>3)</sup>
16	5/8	-10	G 5/8	12.5	64	20	29.5	30	7000278000	HF/60-SWS-16-DN16 <sup>3)</sup>
19	3/4	-12	G 3/4	15	73	24.5	34	32	7000278300	HF/60-SWS-20-DN19 <sup>3)</sup>
19	3/4	-12	G 1	15	78.5	28.5	39.5	38	7000278400	HF/60-SWS-25-DN19 <sup>3)</sup>
25	1	-16	G 1	19.5	86.5	28.5	39.5	38	7000278500	HF/60-SWS-25-DN25 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

## DKR 45

Hose fittings with BSP thread and 60° taper

ISO 12151-6 (ISO 8434-6)



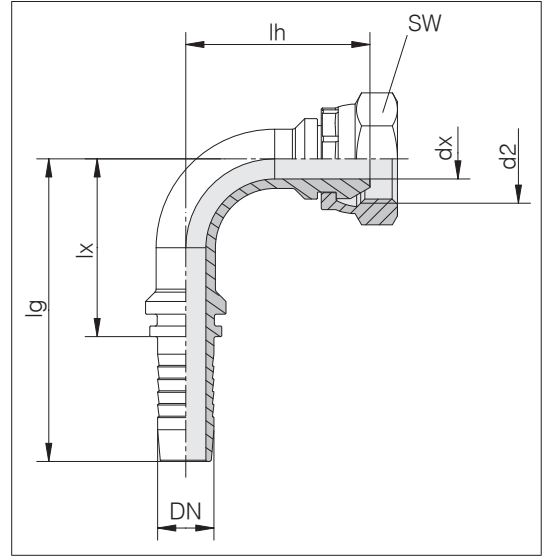
Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch									
5	3/16	-03	G 1/8	3	54	32	14	14	7000280100	HF/60-SWE45-5-DN05 <sup>3)</sup>
6	1/4	-04	G 1/8	3	62.5	34.5	14	14	7000280200	HF/60-SWE45-5-DN06 <sup>3)</sup>
6	1/4	-04	G 1/4	4	60.5	32.5	12.5	19	7000280300	HF/60-SWE45-8-DN06
6	1/4	-04	G 3/8	4	62	34	14	22	7000280400	HF/60-SWE45-10-DN06
8	5/16	-05	G 1/4	5.5	65	37	16.5	19	7002132900	HF/60-SWE45-8-DN08 <sup>3)</sup>
8	5/16	-05	G 3/8	5.5	64	36	14.5	22	7000280500	HF/60-SWE45-10-DN08
10	3/8	-06	G 3/8	7	69.5	40	16.5	22	7000280600	HF/60-SWE45-10-DN10
10	3/8	-06	G 1/2	7	70.5	41	17.5	27	7000280700	HF/60-SWE45-12-DN10
12	1/2	-08	G 1/2	9.5	78.5	49	18	27	7000280800	HF/60-SWE45-12-DN12
12	1/2	-08	G 3/4	9.5	83.5	54	23.5	32	7000281100	HF/60-SWE45-20-DN12 <sup>3)</sup>
12	1/2	-08	G 5/8	9.5	80.5	51	20.5	30	7000280900	HF/60-SWE45-16-DN12 <sup>3)</sup>
16	5/8	-10	G 3/4	12.5	98	64	27	32	7000281200	HF/60-SWE45-20-DN16 <sup>3)</sup>
16	5/8	-10	G 5/8	12.5	96	62	24.5	30	7000281000	HF/60-SWE45-16-DN16 <sup>3)</sup>
19	3/4	-12	G 3/4	15	109	70	29.5	32	7000281300	HF/60-SWE45-20-DN19 <sup>3)</sup>
19	3/4	-12	G 1	15	111	72	31.5	38	7000281400	HF/60-SWE45-25-DN19 <sup>3)</sup>
25	1	-16	G 1	19.5	137	90	35	38	7000281500	HF/60-SWE45-25-DN25 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

# DKR 90

Hose fittings with BSP thread and 60° taper

ISO 12151-6 (ISO 8434-6)

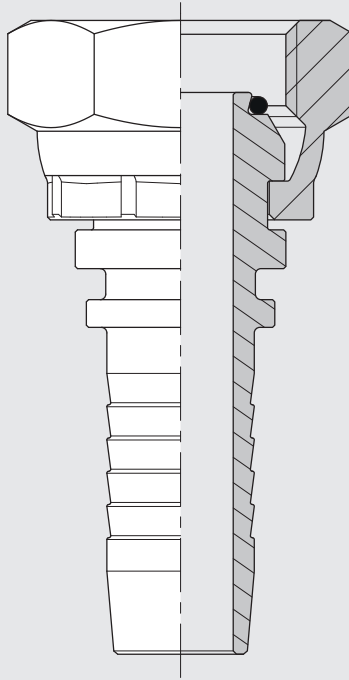


Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch									
5	3/16	-03	G 1/8	3	47.5	25.5	27.5	14	7000278600	HF/60-SWE-5-DN05 <sup>3)</sup>
6	1/4	-04	G 1/8	3	57	29	27.5	14	7000278700	HF/60-SWE-5-DN06 <sup>3)</sup>
6	1/4	-04	G 1/4	4	55	27	27	19	7000278800	HF/60-SWE-8-DN06
6	1/4	-04	G 3/8	4	55	27	29	22	7000278900	HF/60-SWE-10-DN06
8	5/16	-05	G 1/4	5.5	57.5	29.5	31.5	19	7002132600	HF/60-SWE-8-DN08 <sup>3)</sup>
8	5/16	-05	G 3/8	5.5	58	30	29	22	7000279000	HF/60-SWE-10-DN08
10	3/8	-06	G 3/8	7	64	34.5	33	22	7000279100	HF/60-SWE-10-DN10
10	3/8	-06	G 1/2	7	64	34.5	34	27	7000279200	HF/60-SWE-12-DN10
12	1/2	-08	G 3/8	9.5	71.5	42	42.5	22	7002132700	HF/60-SWE-10-DN12 <sup>3)</sup>
12	1/2	-08	G 1/2	9.5	69	39.5	41	27	7000279300	HF/60-SWE-12-DN12
12	1/2	-08	G 3/4	9.5	71.5	42	46.5	32	7000279600	HF/60-SWE-20-DN12 <sup>3)</sup>
12	1/2	-08	G 5/8	9.5	71.5	42	42.5	30	7000279400	HF/60-SWE-16-DN12 <sup>3)</sup>
16	5/8	-10	G 3/4	12.5	87	53	56	32	7000279700	HF/60-SWE-20-DN16 <sup>3)</sup>
16	5/8	-10	G 5/8	12.5	87	53	52.5	30	7000279500	HF/60-SWE-16-DN16 <sup>3)</sup>
19	3/4	-12	G 3/4	15	96	57	60	32	7000279800	HF/60-SWE-20-DN19 <sup>3)</sup>
19	3/4	-12	G 1	15	99	60	62	38	7000279900	HF/60-SWE-25-DN19 <sup>3)</sup>
25	1	-16	G 1	19.5	119	72	78	38	7000280000	HF/60-SWE-25-DN25 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts



## Hose fittings with BSP thread and 60° taper O-ring

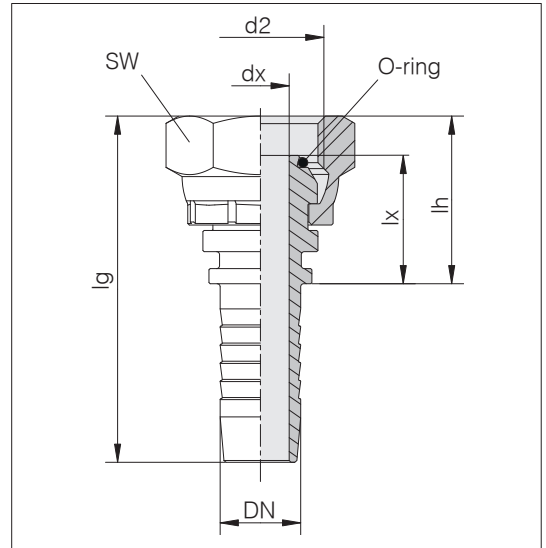


# DKOR

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

Standard O-ring material is NBR



Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
6	1/4	-04	G 1/4	4	49.5	16.5	21.5	19	6 x 1	7000281600	HF/60-SWOS-8-DN06
10	3/8	-06	G 3/8	7	54.5	19	25	22	8,1 x 1,6	7000281700	HF/60-SWOS-10-DN10
12	1/2	-08	G 1/2	9.5	57.5	21.5	28	27	12,1 x 1,6	7000281800	HF/60-SWOS-12-DN12
16	5/8	-10	G 5/8	12.5	64	20	29.5	30	13,1 x 1,6	7000281900	HF/60-SWOS-16-DN16 <sup>2) 3)</sup>
19	3/4	-12	G 3/4	15	73	24.5	34	32	17,1 x 1,6	7000282000	HF/60-SWOS-20-DN19 <sup>3)</sup>
25	1	-16	G 1	19.5	86.5	28.5	38.5	38	22,1 x 1,6	7000282100	HF/60-SWOS-25-DN25 <sup>3)</sup>
25	1	-16	G 1 1/4	19.5	88	31	41	50	29,1 x 1,6	7000282200	HF/60-SWOS-32-DN25
31	1 1/4	-20	G 1 1/4	26	97.5	32.5	43	50	29,1 x 1,6	7000282300	HF/60-SWOS-32-DN31 <sup>3)</sup>
31	1 1/4	-20	G 1 1/2	26	101	34	46.5	55	35,1 x 1,6	7000282400	HF/60-SWOS-38-DN31 <sup>2) 3)</sup>
38	1 1/2	-24	G 1 1/2	32	104.5	34	46.5	55	35,1 x 1,6	7000282500	HF/60-SWOS-38-DN38 <sup>3)</sup>
38	1 1/2	-24	G 2	32	113	39	55	70	48,1 x 1,6	7000282600	HF/60-SWOS-50-DN38 <sup>2) 3)</sup>
51	2	-32	G 2	42	126	37.5	53.5	70	48,1 x 1,6	7000282700	HF/60-SWOS-50-DN51 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

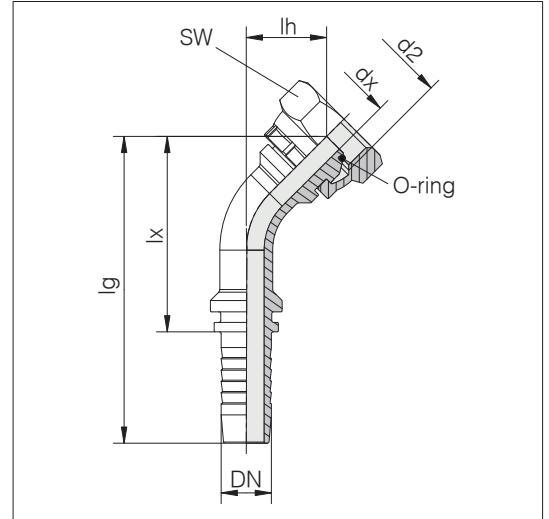
<sup>2)</sup> Special sizes only on request

## DKOR 45

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

Standard O-ring material is NBR



Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
6	1/4	-04	G 1/4	4	60.5	32.5	12.5	19	6 x 1	7000283900	HF/60-SW0E45-8-DN06
10	3/8	-06	G 3/8	7	69.5	40	16.5	22	8,1 x 1,6	7000284000	HF/60-SW0E45-10-DN10
12	1/2	-08	G 1/2	9.5	78.5	49	17.5	27	12,1 x 1,6	7000284100	HF/60-SW0E45-12-DN12
16	5/8	-10	G 5/8	12.5	96	62	24.5	30	13,1 x 1,6	7000284200	HF/60-SW0E45-16-DN16 <sup>2(3)</sup>
19	3/4	-12	G 3/4	15	108	69	28.5	32	17,1 x 1,6	7000284300	HF/60-SW0E45-20-DN19 <sup>2(3)</sup>
25	1	-16	G 1	19.5	137	90	35	38	22,1 x 1,6	7000284400	HF/60-SW0E45-25-DN25 <sup>2(3)</sup>
25	1	-16	G 1 1/4	19.5	134.5	87.5	32	50	29,1 x 1,6	7000284500	HF/60-SW0E45-32-DN25 <sup>2)</sup>
31	1 1/4	-20	G 1 1/4	26	165	110.5	45.5	50	29,1 x 1,6	7000284600	HF/60-SW0E45-32-DN31 <sup>3)</sup>
31	1 1/4	-20	G 1 1/2	26	165	110.5	45	55	35,1 x 1,6	7000284700	HF/60-SW0E45-38-DN31 <sup>2(3)</sup>
38	1 1/2	-24	G 1 1/2	32	187.5	129.5	49.5	55	35,1 x 1,6	7000284800	HF/60-SW0E45-38-DN38 <sup>3)</sup>
38	1 1/2	-24	G 2	32	189.5	131.5	51.5	70	48,1 x 1,6	7000284900	HF/60-SW0E45-50-DN38 <sup>2(3)</sup>
51	2	-32	G 2	42	231.5	159	67	70	48,1 x 1,6	7000285000	HF/60-SW0E45-50-DN51 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

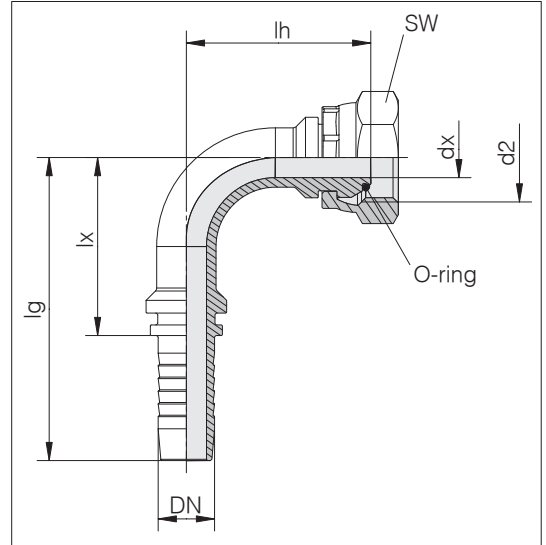
<sup>2)</sup> Special sizes only on request

# DKOR 90

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

Standard O-ring material is NBR

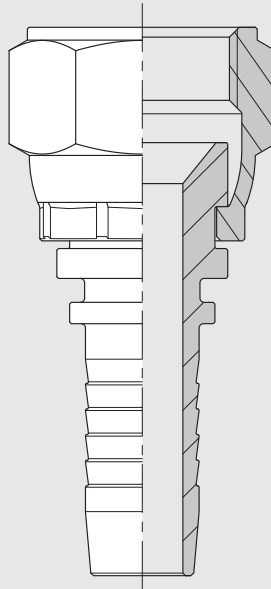


Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
6	1/4	-04	G 1/4	4	55	27	27	19	6 x 1	7000282800	HF/60-SWOE-8-DN06
10	3/8	-06	G 3/8	7	64	34.5	33	22	8,1 x 1,6	7000282900	HF/60-SWOE-10-DN10
12	1/2	-08	G 1/2	9.5	72.5	43	38	27	12,1 x 1,6	7000283000	HF/60-SWOE-12-DN12
16	5/8	-10	G 5/8	12.5	87	53	52.5	30	13,1 x 1,6	7000283100	HF/60-SWOE-16-DN16 <sup>2)</sup> <sup>3)</sup>
19	3/4	-12	G 3/4	15	99	60	58.5	32	17,1 x 1,6	7000283200	HF/60-SWOE-20-DN19 <sup>3)</sup>
25	1	-16	G 1	19.5	126	79	74	38	22,1 x 1,6	7000283300	HF/60-SWOE-25-DN25 <sup>3)</sup>
25	1	-16	G 1 1/4	19.5	127	80	69.5	50	29,1 x 1,6	7000283400	HF/60-SWOE-32-DN25 <sup>2)</sup>
31	1 1/4	-20	G 1 1/4	26	150.5	96	92	50	29,1 x 1,6	7000283500	HF/60-SWOE-32-DN31 <sup>3)</sup>
31	1 1/4	-20	G 1 1/2	26	150.5	96	91.5	55	35,1 x 1,6	7000283600	HF/60-SWOE-38-DN31 <sup>2)</sup> <sup>3)</sup>
38	1 1/2	-24	G 1 1/2	32	175.5	117.5	105	55	35,1 x 1,6	7000283700	HF/60-SWOE-38-DN38 <sup>3)</sup>
51	2	-32	G 2	42	216.5	144	135.5	70	48,1 x 1,6	7000283800	HF/60-SWOE-50-DN51 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

<sup>2)</sup> Special sizes only on request

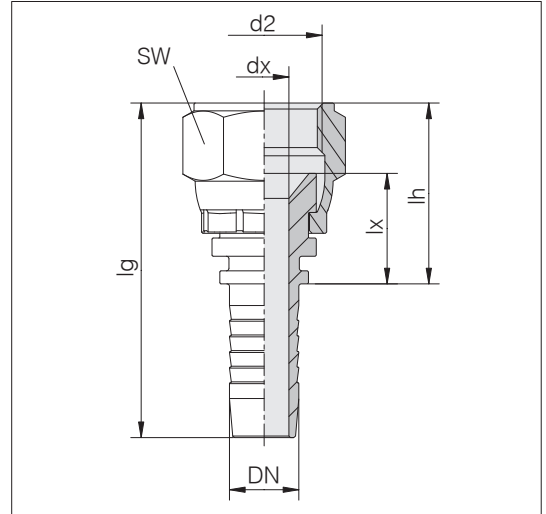
## Hose fittings with UN/UNF thread and 37° cone



# DKJ

Hose fittings with UN/UNF thread and 37° cone (JIC)

ISO 12151-5 (ISO 8434-2)



Hose size DN	Inch	Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
5	3/16	-03	7/16-20 UNF	3	45.5	14	23.5	14	7000285100	HF/37-SWS-6-DN05 <sup>3)</sup>
6	1/4	-04	7/16-20 UNF	4	51.5	14	23.5	14	7000285200	HF/37-SWS-6-DN06 <sup>3)</sup>
6	1/4	-04	1/2-20 UNF	4	52.5	15	24.5	17	7000285300	HF/37-SWS-8-DN06 <sup>3)</sup>
6	1/4	-04	9/16 - 18 UNF	4	54.5	16.5	26.5	19	7000285500	HF/37-SWS-10-DN06 <sup>3)</sup>
8	5/16	-05	1/2-20 UNF	5.5	52.5	15	24.5	17	7000285400	HF/37-SWS-8-DN08 <sup>3)</sup>
8	5/16	-05	9/16 - 18 UNF	5.5	55	17	27	19	7000285600	HF/37-SWS-10-DN08 <sup>3)</sup>
10	3/8	-06	9/16 - 18 UNF	7	56	16.5	26.5	19	7000285700	HF/37-SWS-10-DN10 <sup>3)</sup>
10	3/8	-06	3/4-16 UNF	7	60	19	30.5	24	7000285800	HF/37-SWS-12-DN10 <sup>3)</sup>
10	3/8	-06	7/8-14 UNF	7	63	20	33.5	27	7000286000	HF/37-SWS-16-DN10 <sup>3)</sup>
12	1/2	-08	3/4-16 UNF	9.5	59.5	18.5	30	24	7000285900	HF/37-SWS-12-DN12 <sup>3)</sup>
12	1/2	-08	7/8-14 UNF	9.5	64.5	21	35	27	7000286100	HF/37-SWS-16-DN12 <sup>3)</sup>
12	1/2	-08	1 1/16-12 UN	9.5	67	21.5	37.5	32	7000286300	HF/37-SWS-20-DN12 <sup>3)</sup>
16	5/8	-10	3/4-16 UNF	12.5	64.5	20	31.5	24	7002212900	HF/37-SWS-12-DN16 <sup>3)</sup>
16	5/8	-10	7/8-14 UNF	12.5	67.5	19.5	33.5	27	7000286200	HF/37-SWS-16-DN16 <sup>3)</sup>
16	5/8	-10	1 1/16-12 UN	12.5	72	22	38	32	7000286400	HF/37-SWS-20-DN16 <sup>3)</sup>
19	3/4	-12	3/4-16 UNF	15	72.5	22	33.5	24	7002213000	HF/37-SWS-12-DN19 <sup>3)</sup>
19	3/4	-12	7/8-14 UNF	15	75.5	23.5	36.5	27	7002213100	HF/37-SWS-16-DN19 <sup>3)</sup>
19	3/4	-12	1 1/16-12 UN	15	79	24	40	32	7000286500	HF/37-SWS-20-DN19 <sup>3)</sup>
19	3/4	-12	1 3/16 - 12 UN	15	80.5	25	41.5	36	7002251300	HF/37-SWS-22-DN19 <sup>3)</sup>
19	3/4	-12	1 5/16-12 UN	15	81	25	42	41	7000286700	HF/37-SWS-25-DN19 <sup>3)</sup>
25	1	-16	1 1/16-12 UN	15	87	24	40	32	7000286600	HF/37-SWS-20-DN25 <sup>3)</sup>
25	1	-16	1 5/16-12 UN	19.5	89	25	42	41	7000286800	HF/37-SWS-25-DN25 <sup>3)</sup>
25	1	-16	1 5/8-12 UN	19.5	90.5	27	43.5	50	7000286900	HF/37-SWS-30-DN25 <sup>3)</sup>
31	1 1/4	-20	1 5/8-12 UN	26	98.5	27.5	44	50	7000287000	HF/37-SWS-30-DN31 <sup>3)</sup>
31	1 1/4	-20	1 7/8-12 UN	26	103.5	29.5	49	60	7000287100	HF/37-SWS-38-DN31 <sup>3)</sup>
38	1 1/2	-24	1 7/8-12 UN	32	107	29.5	49	60	7000287200	HF/37-SWS-38-DN38 <sup>3)</sup>
51	2	-32	2 1/2-12 UN	42	131.5	35.5	59	75	7002251400	HF/37-SWS-50-DN51 <sup>3)</sup>

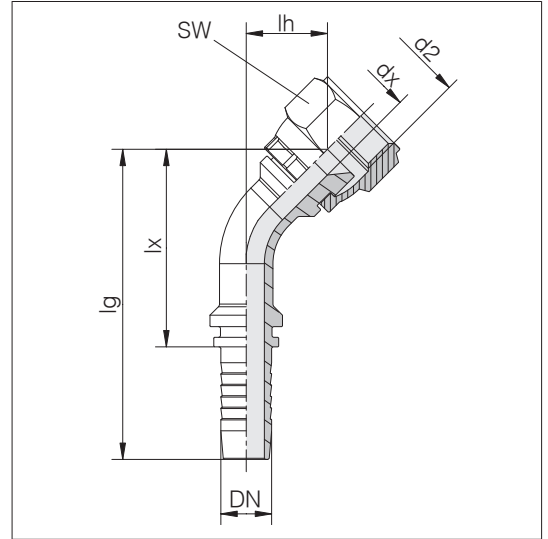
<sup>3)</sup> Crimped union nuts



## DKJ 45

Hose fittings with UN/UNF thread and 37° cone (JIC)

ISO 12151-5 (ISO 8434-2)



Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch									
6	1/4	-04	7/16-20 UNF	4	61.5	33.5	12.5	14	7000289300	HF/37-SWE45-6-DN06 <sup>3)</sup>
6	1/4	-04	1/2-20 UNF	4	62	34	13.5	17	7000289400	HF/37-SWE45-8-DN06 <sup>3)</sup>
6	1/4	-04	9/16 - 18 UNF	4	62.5	34.5	14	19	7000289500	HF/37-SWE45-10-DN06 <sup>3)</sup>
8	5/16	-05	9/16 - 18 UNF	5.5	64	36	15	19	7000289600	HF/37-SWE45-10-DN08 <sup>3)</sup>
10	3/8	-06	9/16 - 18 UNF	7	70.5	41	17.5	19	7000289700	HF/37-SWE45-10-DN10 <sup>3)</sup>
10	3/8	-06	3/4-16 UNF	7	72	42.5	19	24	7000289800	HF/37-SWE45-12-DN10 <sup>3)</sup>
10	3/8	-06	7/8-14 UNF	7	72.5	43	19.5	27	7000290000	HF/37-SWE45-16-DN10 <sup>3)</sup>
12	1/2	-08	3/4-16 UNF	9.5	80.5	51	20.5	24	7000289900	HF/37-SWE45-12-DN12 <sup>3)</sup>
12	1/2	-08	7/8-14 UNF	9.5	81.5	52	21.5	27	7000290100	HF/37-SWE45-16-DN12 <sup>3)</sup>
12	1/2	-08	1 1/16-12 UN	9.5	82.5	53	22.5	32	7000290300	HF/37-SWE45-20-DN12 <sup>3)</sup>
16	5/8	-10	7/8-14 UNF	12.5	96.5	62.5	25.5	27	7000290200	HF/37-SWE45-16-DN16 <sup>3)</sup>
16	5/8	-10	1 1/16-12 UN	12.5	97	63	26	32	7000290400	HF/37-SWE45-20-DN16 <sup>3)</sup>
19	3/4	-12	1 1/16-12 UN	15	108	69	28.5	32	7000290500	HF/37-SWE45-20-DN19 <sup>3)</sup>
19	3/4	-12	1 3/16 - 12 UN	15	108.5	69.5	29	36	7002251900	HF/37-SWE45-22-DN19 <sup>2) 3)</sup>
19	3/4	-12	1 5/16-12 UN	15	108.5	69.5	29	41	7000290600	HF/37-SWE45-25-DN19 <sup>3)</sup>
25	1	-16	1 5/16-12 UN	19.5	134.5	87.5	32.5	41	7000290700	HF/37-SWE45-25-DN25 <sup>3)</sup>
25	1	-16	1 5/8-12 UN	19.5	135.5	88.5	34	50	7000290800	HF/37-SWE45-30-DN25 <sup>3)</sup>
31	1 1/4	-20	1 5/8-12 UN	26	161	106.5	41	50	7000290900	HF/37-SWE45-30-DN31 <sup>3)</sup>
31	1 1/4	-20	1 7/8-12 UN	26	162	107.5	42	60	7000291000	HF/37-SWE45-38-DN31 <sup>2) 3)</sup>
38	1 1/2	-24	1 7/8-12 UN	32	184.5	126.5	46.5	60	7000291100	HF/37-SWE45-38-DN38 <sup>3)</sup>
51	2	-32	2 1/2-12 UN	42	231	158.5	67	75	7000291200	HF/37-SWE45-50-DN51 <sup>3)</sup>

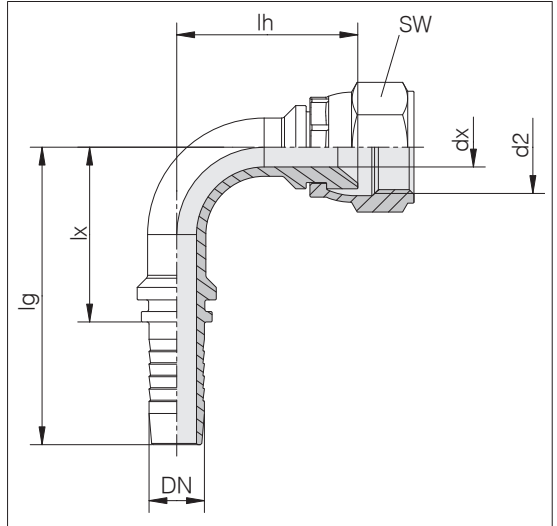
<sup>3)</sup> Crimped union nuts

<sup>2)</sup> Special sizes only on request

# DKJ 90

Hose fittings with UN/UNF thread and 37° cone (JIC)

ISO 12151-5 (ISO 8434-2)



Hose size DN	Inch	Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
5	3/16	-03	7/16-20 UNF	3	47.5	25.5	26	14	7000287300	HF/37-SWE-6-DN05 <sup>2)</sup> <sup>3)</sup>
6	1/4	-04	7/16-20 UNF	4	57	29	26	14	7000287400	HF/37-SWE-6-DN06 <sup>3)</sup>
6	1/4	-04	1/2-20 UNF	4	57	29	27	17	7000287500	HF/37-SWE-8-DN06 <sup>3)</sup>
6	1/4	-04	9/16 - 18 UNF	4	57	29	28	19	7000287600	HF/37-SWE-10-DN06 <sup>3)</sup>
8	5/16	-05	9/16 - 18 UNF	5.5	57.5	29.5	30.5	19	7000287700	HF/37-SWE-10-DN08 <sup>3)</sup>
10	3/8	-06	9/16 - 18 UNF	7	63	33.5	35	19	7000287800	HF/37-SWE-10-DN10 <sup>3)</sup>
10	3/8	-06	3/4-16 UNF	7	63	33.5	37	24	7000287900	HF/37-SWE-12-DN10 <sup>3)</sup>
10	3/8	-06	7/8-14 UNF	7	63	33.5	38	27	7000288100	HF/37-SWE-16-DN10 <sup>3)</sup>
12	1/2	-08	3/4-16 UNF	9.5	71.5	42	42.5	24	7000288000	HF/37-SWE-12-DN12 <sup>3)</sup>
12	1/2	-08	7/8-14 UNF	9.5	71.5	42	43.5	27	7000288200	HF/37-SWE-16-DN12 <sup>3)</sup>
12	1/2	-08	1 1/16-12 UN	9.5	71.5	42	45	32	7000288400	HF/37-SWE-20-DN12 <sup>3)</sup>
16	5/8	-10	7/8-14 UNF	12.5	87	53	54	27	7000288300	HF/37-SWE-16-DN16 <sup>3)</sup>
16	5/8	-10	1 1/16-12 UN	12.5	87	53	54.5	32	7000288500	HF/37-SWE-20-DN16 <sup>3)</sup>
19	3/4	-12	1 1/16-12 UN	15	97	58	56	32	7000288600	HF/37-SWE-20-DN19 <sup>3)</sup>
19	3/4	-12	1 3/16 - 12 UN	15	99	60	58.5	36	7002251600	HF/37-SWE-22-DN19 <sup>2)</sup> <sup>3)</sup>
19	3/4	-12	1 5/16-12 UN	15	99	60	58.5	41	7000288700	HF/37-SWE-25-DN19 <sup>3)</sup>
25	1	-16	1 5/16-12 UN	19.5	126	79	70.5	41	7000288800	HF/37-SWE-25-DN25 <sup>3)</sup>
25	1	-16	1 5/8-12 UN	19.5	126	79	72.5	50	7000288900	HF/37-SWE-30-DN25 <sup>3)</sup>
31	1 1/4	-20	1 5/8-12 UN	26	150.5	96	86	50	7000289000	HF/37-SWE-30-DN31 <sup>3)</sup>
31	1 1/4	-20	1 7/8-12 UN	26	150.5	96	87	60	7000289100	HF/37-SWE-38-DN31 <sup>2)</sup> <sup>3)</sup>
38	1 1/2	-24	1 7/8-12 UN	32	175.5	117.5	100.5	60	7000289200	HF/37-SWE-38-DN38 <sup>3)</sup>
51	2	-32	2 1/2-12 UN	42	216.5	144	135	75	7002251700	HF/37-SWE-50-DN51 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

<sup>2)</sup> Special sizes only on request

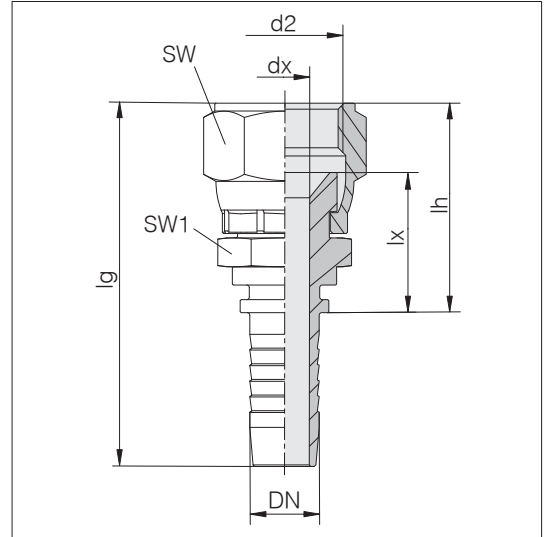




## DKJ-WS

Hose fittings with UN/UNF thread and 37° cone (JIC)

ISO 12151-5 (ISO 8434-2)

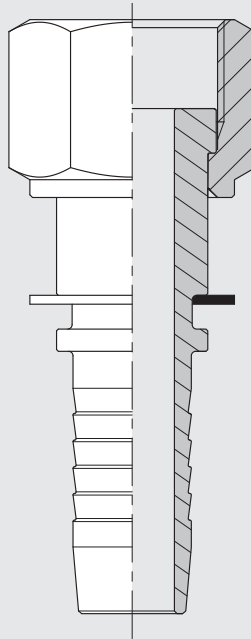


Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	SW1	Order-No.	Designation
DN	Inch										
6	1/4	-04	7/16-20 UNF	4	57	19.5	29	14	14	7007048400	HF/37-SWS-6-DN06-WS14 <sup>3)</sup>
6	1/4	-04	9/16 - 18 UNF	4	59.5	21.5	31.5	19	14	7007050800	HF/37-SWS-10-DN06-WS14 <sup>3)</sup>
10	3/8	-06	3/4-16 UNF	7	66.5	25.5	37	24	19	7007049000	HF/37-SWS-12-DN10-WS19 <sup>3)</sup>
10	3/8	-06	9/16 - 18 UNF	7	62	22.5	32.5	19	17	7007048700	HF/37-SWS-10-DN10-WS17 <sup>3)</sup>
12	1/2	-08	3/4-16 UNF	9.5	68	27	38.5	24	22	7007049300	HF/37-SWS-12-DN12-WS22 <sup>3)</sup>
12	1/2	-08	7/8-14 UNF	9.5	72	28.5	42.5	27	22	7007049600	HF/37-SWS-16-DN12-WS22 <sup>3)</sup>
16	5/8	-10	7/8-14 UNF	12.5	76.5	28.5	42.5	27	24	7007049900	HF/37-SWS-16-DN16-WS24 <sup>3)</sup>
19	3/4	-12	1 1/16-12 UN	15	85.5	30.5	46.5	32	27	7007050200	HF/37-SWS-20-DN19-WS27 <sup>3)</sup>
25	1	-16	1 5/8-12 UN	19.5	98.5	34.5	51.5	41	36	7007050500	HF/37-SWS-25-DN25-WS36 <sup>3)</sup>

<sup>3)</sup> Crimped union nuts



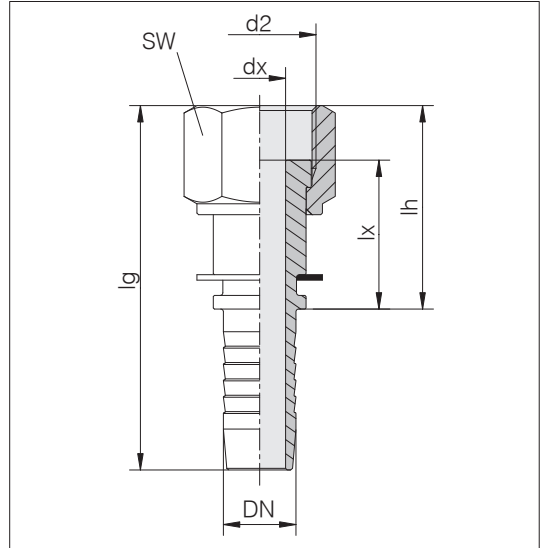
## Hose fittings ORFS with UN/UNF thread



# ORFS

Hose fittings with UN/UNF thread and face sealing (ORFS)

ISO 12151-1 (ISO 8434-3)

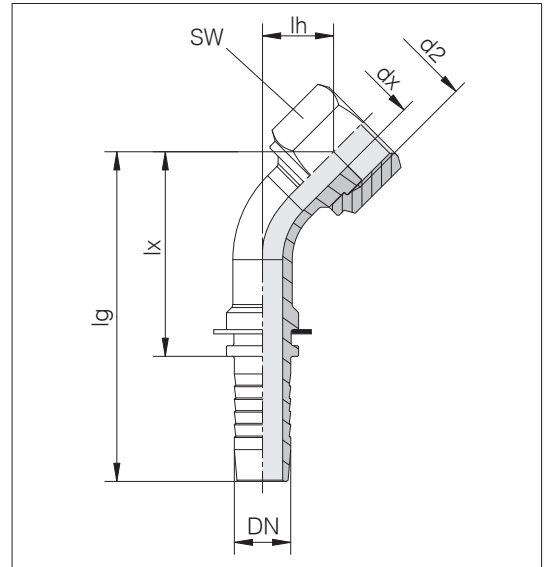


Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch									
6	1/4	-04	9/16 - 18 UNF	4	57.5	21.5	29.5	17	7000291300	HF/90-SWS-6-DN06
6	1/4	-04	11/16 - 16 UN	4	60	23.5	32	22	7000291400	HF/90-SWS-10-DN06
8	5/16	-05	11/16 - 16 UN	5.5	60	23.5	32	22	7000291500	HF/90-SWS-10-DN08
10	3/8	-06	11/16 - 16 UN	7	61.5	23.5	32	22	7000291600	HF/90-SWS-10-DN10
10	3/8	-06	13/16 - 16 UN	7	66	26.5	36.5	24	7000291700	HF/90-SWS-12-DN10
12	1/2	-08	13/16 - 16 UN	9.5	67	27.5	37.5	24	7000291800	HF/90-SWS-12-DN12
12	1/2	-08	1 - 14 UNS	9.5	73.5	31.5	44	30	7000291900	HF/90-SWS-16-DN12
12	1/2	-08	1 3/16 - 12 UN	9.5	79	36	49.5	36	7000292100	HF/90-SWS-20-DN12
16	5/8	-10	1 - 14 UNS	12.5	78	31.5	44	30	7000292000	HF/90-SWS-16-DN16
16	5/8	-10	1 3/16 - 12 UN	12.5	81.5	34	47.5	36	7002251500	HF/90-SWS-22-DN16
19	3/4	-12	1 3/16 - 12 UN	15	88	35.5	49	36	7000292200	HF/90-SWS-20-DN19
19	3/4	-12	1 7/16 - 12 UN	15	91	38.5	52	41	7000292300	HF/90-SWS-25-DN19
25	1	-16	1 7/16 - 12 UN	19.5	97	36.5	50	41	7000292400	HF/90-SWS-25-DN25
31	1 1/4	-20	1 11/16 - 12 UN	26	106	38	51.5	50	7000292500	HF/90-SWS-30-DN31
38	1 1/2	-24	2 - 12 UN	32	109.5	38	51.5	60	7000292600	HF/90-SWS-38-DN38

## ORFS 45

Hose fittings with UN/UNF thread and face sealing (ORFS)

ISO 12151-1 (ISO 8434-3)

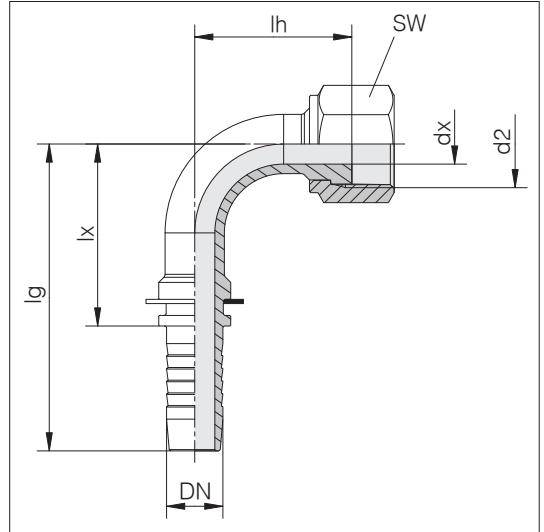


Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch									
6	1/4	-04	9/16 - 18 UNF	4	60	32	13	17	7000294100	HF/90-SWE45-6-DN06
6	1/4	-04	11/16 - 16 UN	4	61	33	13.5	22	7000294200	HF/90-SWE45-10-DN06
10	3/8	-06	11/16 - 16 UN	7	69	39.5	16	22	7000294300	HF/90-SWE45-10-DN10
10	3/8	-06	13/16 - 16 UN	7	69.5	40	16.5	24	7000294400	HF/90-SWE45-12-DN10
12	1/2	-08	13/16 - 16 UN	9.5	77	47.5	17	24	7000294500	HF/90-SWE45-12-DN12
12	1/2	-08	1 - 14 UNS	9.5	80.5	51	19.5	30	7000294600	HF/90-SWE45-16-DN12
16	5/8	-10	1 - 14 UNS	12.5	93.5	59.5	22.5	30	7000294700	HF/90-SWE45-16-DN16
16	5/8	-10	1 3/16 - 12 UN	12.5	95.5	61.5	24	36	7002252000	HF/90-SWE45-22-DN16
19	3/4	-12	1 3/16 - 12 UN	15	104	65	25	36	7000294800	HF/90-SWE45-20-DN19
25	1	-16	1 7/16 - 12 UN	19.5	130.5	83.5	27.5	41	7000294900	HF/90-SWE45-25-DN25
31	1 1/4	-20	1 11/16 - 12 UN	26	155	100.5	34	50	7000295000	HF/90-SWE45-30-DN31
38	1 1/2	-24	2 - 12 UN	32	177	119	38	60	7000295100	HF/90-SWE45-38-DN38

# ORFS 90

Hose fittings with UN/UNF thread and face sealing (ORFS)

ISO 12151-1 (ISO 8434-3)



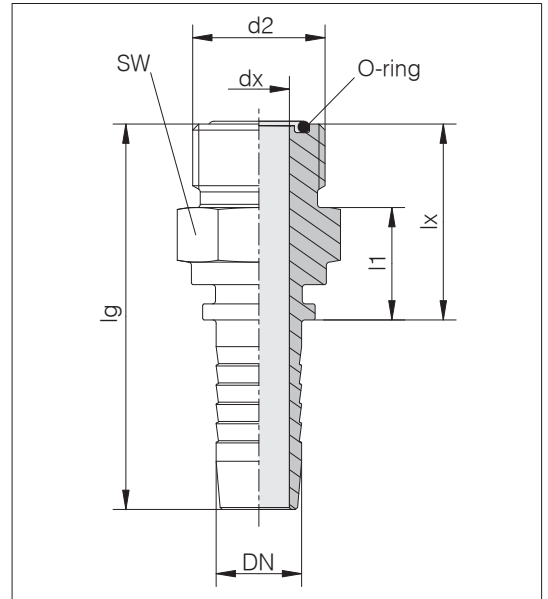
Hose size			d2	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch	Dash	UN/UNF							
6	1/4	-04	9/16 - 18 UNF	4	55	27	27	17	7000292700	HF/90-SWE-6-DN06
6	1/4	-04	11/16 - 16 UN	4	55	27	28	22	7000292800	HF/90-SWE-10-DN06
8	5/16	-05	11/16 - 16 UN	5.5	58	30	28	22	7000292900	HF/90-SWE-10-DN08
10	3/8	-06	11/16 - 16 UN	7	64	34.5	32	22	7000293000	HF/90-SWE-10-DN10
10	3/8	-06	13/16 - 16 UN	7	64	34.5	33	24	7000293100	HF/90-SWE-12-DN10
12	1/2	-08	13/16 - 16 UN	9.5	72	42	37	24	7000293200	HF/90-SWE-12-DN12
12	1/2	-08	1 - 14 UNS	9.5	72.5	43	41	30	7000293300	HF/90-SWE-16-DN12
12	1/2	-08	1 3/16 - 12 UN	9.5	71.5	42	43.5	36	7000293500	HF/90-SWE-20-DN12
16	5/8	-10	1 - 14 UNS	12.5	88	54	47.5	30	7000293400	HF/90-SWE-16-DN16
16	5/8	-10	1 3/16 - 12 UN	12.5	88	54	50	36	7002251800	HF/90-SWE-22-DN16
19	3/4	-12	1 3/16 - 12 UN	15	99.5	60.5	52	36	7000293600	HF/90-SWE-20-DN19
19	3/4	-12	1 7/16 - 12 UN	15	98.5	59.5	56	41	7000293700	HF/90-SWE-25-DN19
25	1	-16	1 7/16 - 12 UN	19.5	125	78	66	41	7000293800	HF/90-SWE-25-DN25
31	1 1/4	-20	1 11/16 - 12 UN	26	151.5	97	76	50	7000293900	HF/90-SWE-30-DN31
38	1 1/2	-24	2 - 12 UN	32	176.5	118.5	89	60	7000294000	HF/90-SWE-38-DN38

## AORFS

Hose fittings with UN/UNF thread and face sealing (ORFS)

ISO 12151-1 (ISO 8434-3)

Standard O-ring material is NBR



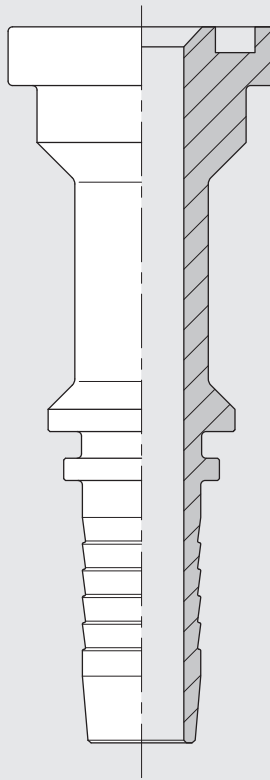
Hose size			d2	dx	lg	lx	SW	l1	O-ring	Order-No.	Designation
DN	Inch	Dash	UN/UNF								
6	1/4	-04	9/16 - 18 UNF	4	52.5	24.5	17	14.5	7,65 x 1,78	7000316000	HF/90-S-6-DN06
6	1/4	-04	11/16 - 16 UN	4	54	26	19	15	9,25 x 1,78	7000316100	HF/90-S-10-DN06
8	5/16	-05	11/16 - 16 UN	5.5	54	26	19	15	9,25 x 1,78	7000316200	HF/90-S-10-DN08
10	3/8	-06	11/16 - 16 UN	6.5	56	26.5	19	15.5	9,25 x 1,78	7000316300	HF/90-S-10-DN10
10	3/8	-06	13/16 - 16 UN	7	58.5	29	22	16	12,42 x 1,78	7002131900	HF/90-S-12-DN10
12	1/2	-08	13/16 - 16 UN	9.5	60	30.5	22	17.5	12,42 x 1,78	7000316400	HF/90-S-12-DN12
12	1/2	-08	1 - 14 UNS	9.5	63.5	34	27	18.5	15,60 x 1,78	7002132000	HF/90-S-16-DN12
12	1/2	-08	1 3/16 - 12 UN	9.5	66.5	37	32	20	18,77 x 1,78	7002132100	HF/90-S-20-DN12
16	5/8	-10	1 - 14 UNS	12.5	68	34	27	18.5	15,60 x 1,78	7000316500	HF/90-S-16-DN16
16	5/8	-10	1 3/16 - 12 UN	12.5	71	37	32	20	18,77 x 1,78	7002132200	HF/90-S-22-DN16
19	3/4	-12	1 3/16 - 12 UN	15	78	39	32	22	18,77 x 1,78	7000316600	HF/90-S-20-DN19
19	3/4	-12	1 7/16 - 12 UN	15	82.5	43.5	41	26	23,52 x 1,78	7002132300	HF/90-S-25-DN19
25	1	-16	1 7/16 - 12 UN	19.5	90.5	43.5	41	26	23,52 x 1,78	7000316700	HF/90-S-25-DN25
31	1 1/4	-20	1 11/16 - 12 UN	26	101.5	47	46	29.5	29,87 x 1,78	7000316800	HF/90-S-30-DN31
38	1 1/2	-24	2 - 12 UN	32	109	51	55	33.5	37,82 x 1,78	7000316900	HF/90-S-38-DN38

<sup>2)</sup> Special sizes only on request





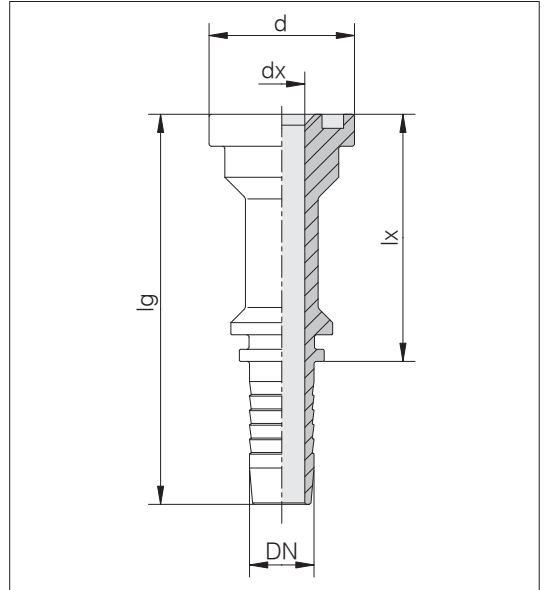
## Hose fittings with SAE flange standard series (3000 psi)



# FL3

Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)

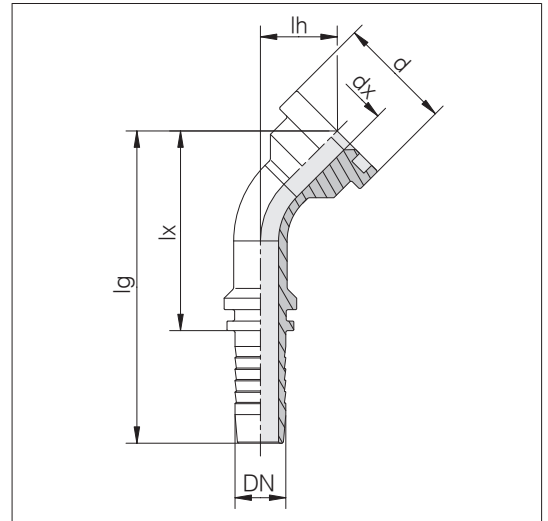


Fl. size Inch	Hose size			d	dx	lg	lx	Order-No.	Designation
	DN	Inch	Dash						
1/2	12	1/2	-08	30	9.5	80.5	51	7000058700	HF/F-S-DN12-3S1/2
3/4	12	1/2	-08	38	9.5	85.5	56	7000058800	HF/F-S-DN12-3S3/4
3/4	16	5/8	-10	38	12.5	90	56	7000059000	HF/F-S-DN16-3S3/4
3/4	19	3/4	-12	38	15	96.5	57.5	7000059200	HF/F-S-DN19-3S3/4
1	19	3/4	-12	44.5	15	99.5	60.5	7000059300	HF/F-S-DN19-3S1
1	25	1	-16	44.5	19.5	110.5	63.5	7000059500	HF/F-S-DN25-3S1
1 1/4	25	1	-16	50.8	19.5	113.5	66.5	7000059600	HF/F-S-DN25-3S11/4
1 1/4	31	1 1/4	-20	50.8	26	125.5	71	7000059800	HF/F-S-DN31-3S11/4
1 1/2	31	1 1/4	-20	60.3	26	128.5	74	7000059900	HF/F-S-DN31-3S11/2
1 1/2	38	1 1/2	-24	60.3	32	135	77	7000060000	HF/F-S-DN38-3S11/2
2	38	1 1/2	-24	71.4	32	138	80	7000060100	HF/F-S-DN38-3S2
2	51	2	-32	71.4	42	153	80.5	7000060200	HF/F-S-DN51-3S2
2 1/2	51	2	-32	84.1	42	156	83.5	7000060300	HF/F-S-DN51-3S21/2

## FL3 45

Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)

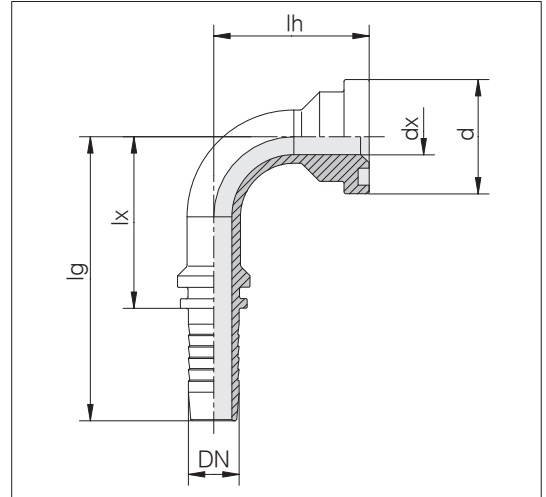


Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
1/2	12	1/2	-08	30	9.5	81	51.5	21	7000060400	HF/F-E45-DN12-3S1/2
3/4	12	1/2	-08	38	9.5	84.5	55	24.5	7000060500	HF/F-E45-DN12-3S3/4
3/4	16	5/8	-10	38	12.5	97.5	63.5	27.5	7000060700	HF/F-E45-DN16-3S3/4
3/4	19	3/4	-12	38	15	107.5	68.5	28	7000060900	HF/F-E45-DN19-3S3/4
1	19	3/4	-12	44.5	15	109.5	70.5	30	7000061000	HF/F-E45-DN19-3S1
1	25	1	-16	44.5	19.5	132	85	30.5	7000061300	HF/F-E45-DN25-3S1
1 1/4	25	1	-16	50.8	19.5	134	87	32	7000061200	HF/F-E45-DN25-3S11/4
1 1/4	31	1 1/4	-20	50.8	26	155.5	101	36	7000061500	HF/F-E45-DN31-3S11/4
1 1/2	31	1 1/4	-20	60.3	26	160	105.5	40	7000061600	HF/F-E45-DN31-3S11/2
1 1/2	38	1 1/2	-24	60.3	32	170	112	46	7000061700	HF/F-E45-DN38-3S11/2
2	38	1 1/2	-24	71.4	32	182	124	46	7000061800	HF/F-E45-DN38-3S2
2	51	2	-32	71.4	42	216.5	144	50	7000061900	HF/F-E45-DN51-3S2

# FL3 90

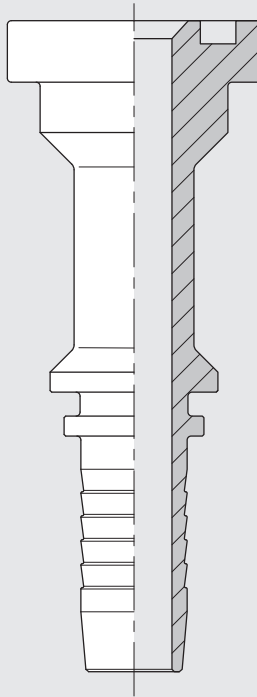
Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)



Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
1/2	12	1/2	-08	30	9.5	71.5	42	43.5	7000062100	HF/F-E-DN12-3S1/2
3/4	12	1/2	-08	38	9.5	71.5	42	48.5	7000062200	HF/F-E-DN12-3S3/4
3/4	16	5/8	-10	38	12.5	87	53	55	7000062400	HF/F-E-DN16-3S3/4
3/4	19	3/4	-12	38	15	99	60	57	7000062600	HF/F-E-DN19-3S3/4
1	19	3/4	-12	44.5	15	99	60	60	7000062700	HF/F-E-DN19-3S1
1	25	1	-16	44.5	19.5	125.5	78.5	67.5	7000062900	HF/F-E-DN25-3S1
1 1/4	25	1	-16	50.8	19.5	125.5	78.5	70	7000063000	HF/F-E-DN25-3S11/4
1 1/4	31	1 1/4	-20	50.8	26	150	95.5	79	7000063200	HF/F-E-DN31-3S11/4
1 1/2	31	1 1/4	-20	60.3	26	150.5	96	84.5	7000063300	HF/F-E-DN31-3S11/2
1 1/2	38	1 1/2	-24	60.3	32	169	111	99	7000063400	HF/F-E-DN38-3S11/2
2	38	1 1/2	-24	71.4	32	172	114	101	7000063500	HF/F-E-DN38-3S2
2	51	2	-32	71.4	42	216	143.5	115.5	7000063600	HF/F-E-DN51-3S2

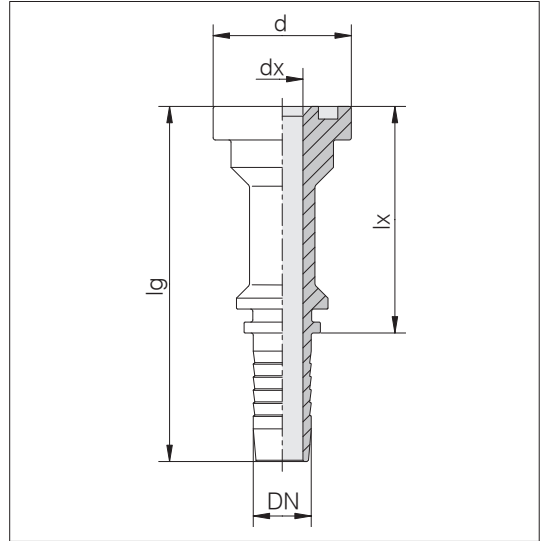
## Hose fittings with SAE flange high pressure series (6000 psi)



# FL6

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)



Fl. size Inch	Hose size			d	dx	lg	lx	Order-No.	Designation
	DN	Inch	Dash						
1/2	12	1/2	-08	31.7	9.5	81.5	52	7000069700	HF/F-S-DN12-6S1/2
3/4	12	1/2	-08	41.3	9.5	89.5	60	7000069800	HF/F-S-DN12-6S3/4
3/4	16	5/8	-10	41.3	12.5	97	63	7000070000	HF/F-S-DN16-6S3/4
3/4	19	3/4	-12	41.3	15	104.5	65.5	7000070200	HF/F-S-DN19-6S3/4
1	19	3/4	-12	47.6	15	109	70	7000070300	HF/F-S-DN19-6S1
1	25	1	-16	47.6	19.5	121.5	74.5	7000070500	HF/F-S-DN25-6S1
1 1/4	25	1	-16	54	19.5	126	79	7000070600	HF/F-S-DN25-6S11/4
1 1/4	31	1 1/4	-20	54	26	138	83.5	7000070800	HF/F-S-DN31-6S11/4
1 1/2	31	1 1/4	-20	63.5	26	142.5	88	7000070900	HF/F-S-DN31-6S11/2 <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	32	150.5	92.5	7000071000	HF/F-S-DN38-6S11/2
2	38	1 1/2	-24	79.4	32	155	97	7000071100	HF/F-S-DN38-6S2 <sup>2)</sup>
2	51	2	-32	79.4	42	174	101.5	7000071200	HF/F-S-DN51-6S2 <sup>2)</sup>

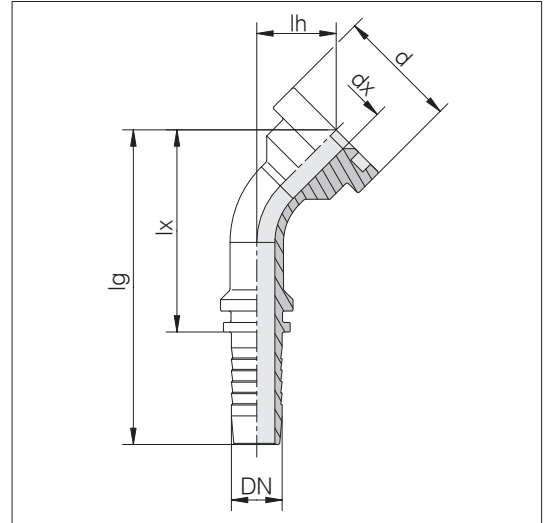
<sup>2)</sup> Special sizes only on request



## FL6 45

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)



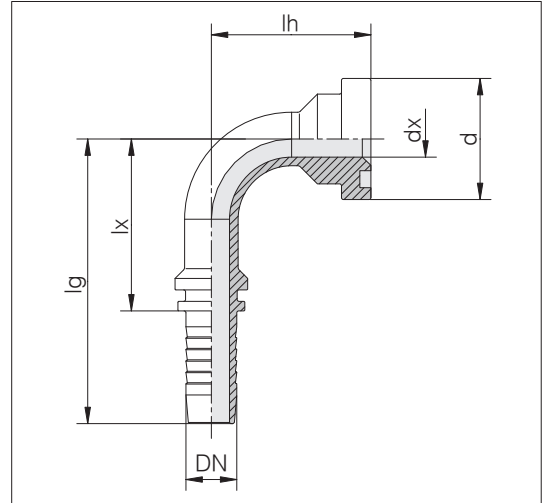
Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
1/2	12	1/2	-08	31.7	9.5	82	52.5	22	7000071300	HF/F-E45-DN12-6S1/2
3/4	12	1/2	-08	41.3	9.5	87.5	58	27.5	7000071400	HF/F-E45-DN12-6S3/4
3/4	16	5/8	-10	41.3	12.5	100.5	66.5	30.5	7000071600	HF/F-E45-DN16-6S3/4
3/4	19	3/4	-12	41.3	15	111.5	72.5	31	7000071800	HF/F-E45-DN19-6S3/4
1	19	3/4	-12	47.6	15	114.5	75.5	35	7000071900	HF/F-E45-DN19-6S1
1	25	1	-16	47.6	19.5	137	90	35.5	7000072100	HF/F-E45-DN25-6S1
1 1/4	25	1	-16	54	19.5	142	95	40.5	7000072200	HF/F-E45-DN25-6S11/4
1 1/4	31	1 1/4	-20	54	26	164	109.5	44	7000072400	HF/F-E45-DN31-6S11/4
1 1/2	31	1 1/4	-20	63.5	26	170	115.5	50.5	7000072500	HF/F-E45-DN31-6S11/2 <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	32	190	132	52	7000072600	HF/F-E45-DN38-6S11/2 <sup>2)</sup>
2	38	1 1/2	-24	79.4	32	201	143	63.5	7000072700	HF/F-E45-DN38-6S2 <sup>2)</sup>
2	51	2	-32	79.4	42	236	163.5	67.5	7000072800	HF/F-E45-DN51-6S2 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

# FL6 90

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)

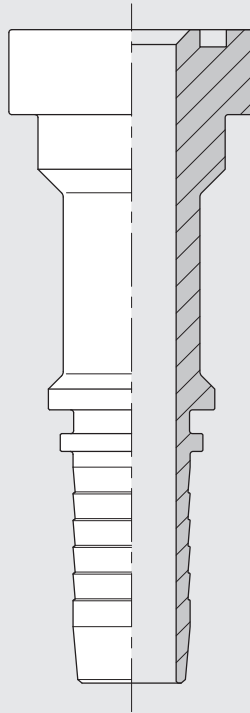


Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
1/2	12	1/2	-08	31.7	9.5	71.5	42	44.5	7000072900	HF/F-E-DN12-6S1/2
3/4	12	1/2	-08	41.3	9.5	71.5	42	52.5	7000073000	HF/F-E-DN12-6S3/4
3/4	16	5/8	-10	41.3	12.5	87	53	59	7000073200	HF/F-E-DN16-6S3/4
3/4	19	3/4	-12	41.3	15	99	60	61	7000073400	HF/F-E-DN19-6S3/4
1	19	3/4	-12	47.6	15	99	60	67	7000073500	HF/F-E-DN19-6S1
1	25	1	-16	47.6	19.5	125.5	78.5	74.5	7000073700	HF/F-E-DN25-6S1
1 1/4	25	1	-16	54	19.5	126	79	81.5	7000073800	HF/F-E-DN25-6S11/4
1 1/4	31	1 1/4	-20	54	26	150.5	96	90.5	7000074000	HF/F-E-DN31-6S11/4
1 1/2	31	1 1/4	-20	63.5	26	150.5	96	99	7000074100	HF/F-E-DN31-6S11/2 <sup>1)</sup>
1 1/2	38	1 1/2	-24	63.5	32	175.5	117.5	108.5	7000074200	HF/F-E-DN38-6S11/2 <sup>1)</sup>
2	38	1 1/2	-24	79.4	32	175.5	117.5	124.5	7000074300	HF/F-E-DN38-6S2 <sup>1)</sup>
2	51	2	-32	79.4	42	219.5	147	140	7000074400	HF/F-E-DN51-6S2 <sup>1)</sup>

<sup>1)</sup> Standard size



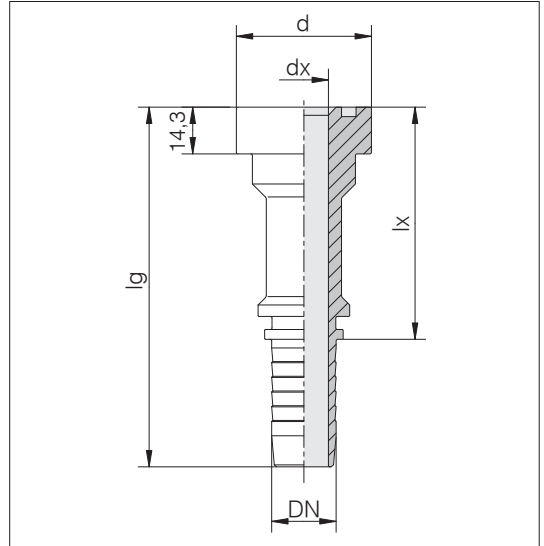
## Hose fittings with flange high pressure series (9000 psi)



# FLCAT

Hose fittings with flange high pressure series (9000 psi)

ISO 12151-3 (ISO 6162-2)



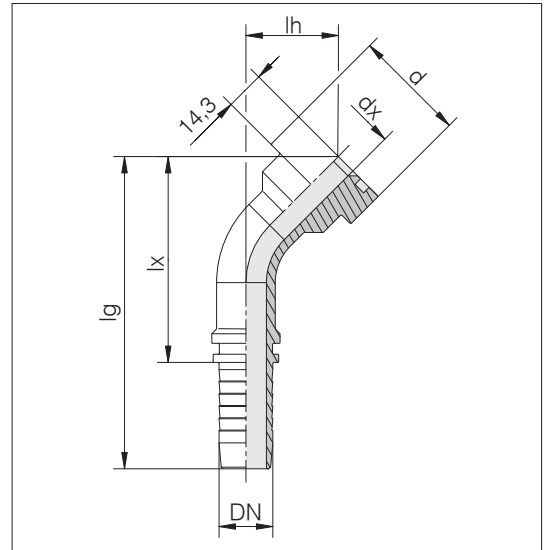
Fl. size Inch	Hose size			d	dx	lg	lx	Order-No.	Designation
	DN	Inch	Dash						
3/4	19	3/4	-12	41.3	15	110	71	7000307700	HF/F-CS-DN19-6S3/4 <sup>2)</sup>
1	19	3/4	-12	47.6	15	114.5	75.5	7000307800	HF/F-CS-DN19-6S1 <sup>2)</sup>
1	25	1	-16	47.6	19.5	127	80	7000307900	HF/F-CS-DN25-6S1 <sup>2)</sup>
1 1/4	25	1	-16	54	19.5	131.5	84.5	7000308000	HF/F-CS-DN25-6S11/4 <sup>2)</sup>
1 1/4	31	1 1/4	-20	54	26	143.5	89	7000308100	HF/F-CS-DN31-6S11/4 <sup>2)</sup>
1 1/2	31	1 1/4	-20	63.5	26	148	93.5	7000308200	HF/F-CS-DN31-6S11/2 <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	32	156	98	7000308300	HF/F-CS-DN38-6S11/2 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

## FLCAT 45

Hose fittings with flange high pressure series (9000 psi)

ISO 12151-3 (ISO 6162-2)



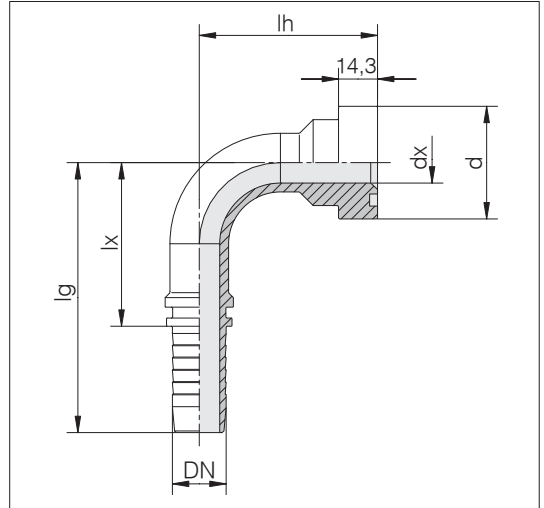
Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	15	114	75	34.5	7000309100	HF/F-CE45-DN19-6S3/4 <sup>2)</sup>
1	19	3/4	-12	47.6	15	118	79	38.5	7000309200	HF/F-CE45-DN19-6S1 <sup>2)</sup>
1	25	1	-16	47.6	19.5	140.5	93.5	38.5	7000309300	HF/F-CE45-DN25-6S1 <sup>2)</sup>
1 1/4	25	1	-16	54	19.5	145	98	43	7000309400	HF/F-CE45-DN25-6S11/4 <sup>2)</sup>
1 1/4	31	1 1/4	-20	54	26	167	112.5	47	7000309500	HF/F-CE45-DN31-6S11/4 <sup>2)</sup>
1 1/2	31	1 1/4	-20	63.5	26	171	116.5	51.5	7000309600	HF/F-CE45-DN31-6S11/2 <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	32	191	133	53	7000309700	HF/F-CE45-DN38-6S11/2 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

# FLCAT 90

Hose fittings with flange high pressure series (9000 psi)

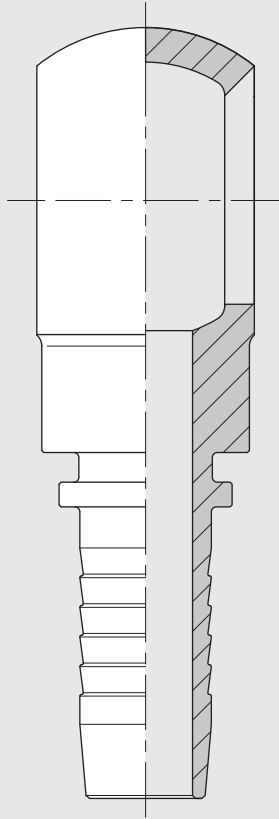
ISO 12151-3 (ISO 6162-2)



Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	15	99	60	66.5	7000308400	HF/F-CE-DN19-6S3/4 <sup>2)</sup>
1	19	3/4	-12	47.6	15	99	60	71.5	7000308500	HF/F-CE-DN19-6S1 <sup>2)</sup>
1	25	1	-16	47.6	19.5	126	79	79	7000308600	HF/F-CE-DN25-6S1 <sup>2)</sup>
1 1/4	25	1	-16	54	19.5	126	79	85.5	7000308700	HF/F-CE-DN25-6S11/4 <sup>2)</sup>
1 1/4	31	1 1/4	-20	54	26	150.5	96	94.5	7000308800	HF/F-CE-DN31-6S11/4 <sup>2)</sup>
1 1/2	31	1 1/4	-20	63.5	26	150.5	96	100.5	7000308900	HF/F-CE-DN31-6S11/2 <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	32	175.5	117.5	110	7000309000	HF/F-CE-DN38-6S11/2 <sup>2)</sup>

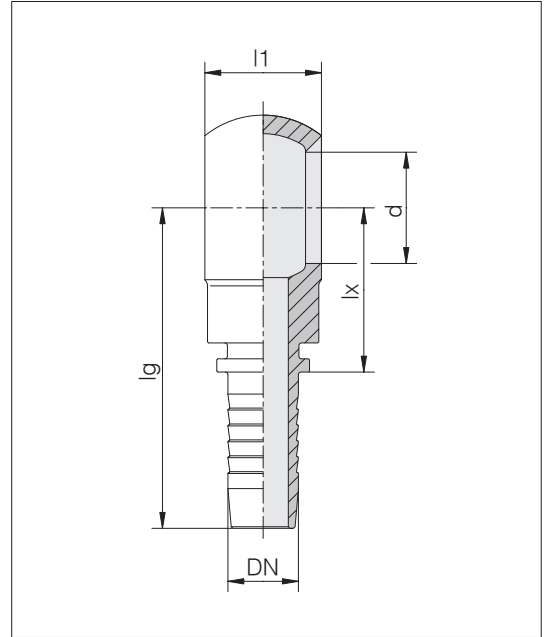
<sup>2)</sup> Special sizes only on request

## Ring eyelets



# RNR

Ring eyes for inch banjo bolts

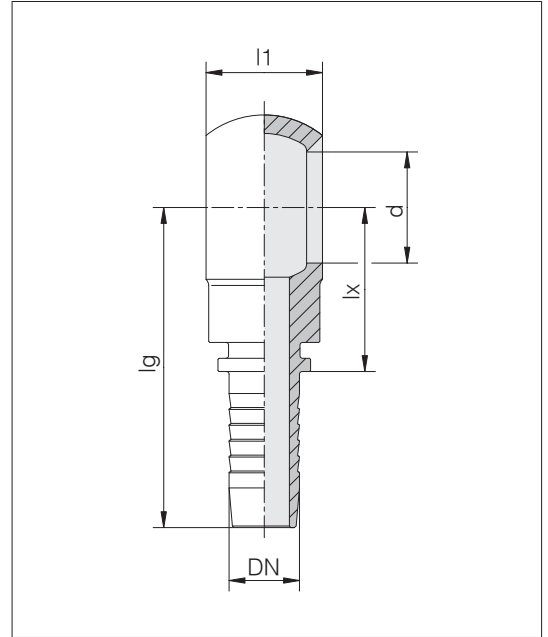


Hose size			d	lg	l1	lx	Order-No.	Designation
DN	Inch	Dash						
6	1/4	-04	G 1/4	49.5	14	21.5	7000322000	HF/GP-BFE-1/4-DN06
8	5/16	-05	G 3/8	52.5	18	24.5	7000322100	HF/GP-BFE-3/8-DN08
10	3/8	-06	G 3/8	54	18	24.5	7000322200	HF/GP-BFE-3/8-DN10
10	3/8	-06	G 1/2	59.5	22	30	7000322300	HF/GP-BFE-1/2-DN10
12	1/2	-08	G 1/2	60.5	22	31	7000322400	HF/GP-BFE-1/2-DN12
12	1/2	-08	G 5/8	63	23.5	33.5	7000322500	HF/GP-BFE-5/8-DN12 <sup>2)</sup>
16	5/8	-10	G 5/8	67.5	23.5	33.5	7000322600	HF/GP-BFE-5/8-DN16 <sup>2)</sup>
16	5/8	-10	G 3/4	72	29	38	7000322700	HF/GP-BFE-3/4-DN16 <sup>2)</sup>
19	3/4	-12	G 3/4	78.5	29	39.5	7000322800	HF/GP-BFE-3/4-DN19
19	3/4	-12	G 1	87	38	48	7000322900	HF/GP-BFE-1-DN19 <sup>2)</sup>
25	1	-16	G 1	95	38	48	7000323000	HF/GP-BFE-1-DN25

<sup>2)</sup> Special sizes only on request

## RBM

Ring eyes for metric banjo bolts



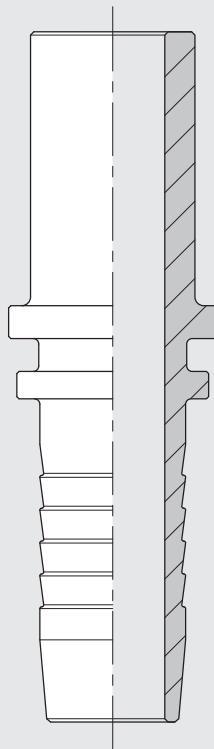
Hose size			d	lg	l1	lx	Order-No.	Designation
DN	Inch	Dash						
6	1/4	-04	M 12	46.5	12.5	18.5	7000323100	HF/GP-BFE-M12-DN06
6	1/4	-04	M 14	49.5	14	21.5	7000323200	HF/GP-BFE-M14-DN06
8	5/16	-05	M 14	54.5	14	26.5	7000323300	HF/GP-BFE-M14-DN08
8	5/16	-05	M 16	52.5	18	24.5	7000323500	HF/GP-BFE-M16-DN08
10	3/8	-06	M 14	56	14	26.5	7000323400	HF/GP-BFE-M14-DN10
10	3/8	-06	M 16	54	18	24.5	7000323600	HF/GP-BFE-M16-DN10
10	3/8	-06	M 18	57	20	27.5	7000323700	HF/GP-BFE-M18-DN10
12	1/2	-08	M 18	58	20	28.5	7000323800	HF/GP-BFE-M18-DN12
12	1/2	-08	M 22	60.5	22	31	7000323900	HF/GP-BFE-M22-DN12
16	5/8	-10	M 22	69.5	22	35.5	7000324000	HF/GP-BFE-M22-DN16
16	5/8	-10	M 26	72	29	38	7000324100	HF/GP-BFE-M26-DN16
19	3/4	-12	M 26	78.5	29	39.5	7000324200	HF/GP-BFE-M26-DN19 <sup>2)</sup>
19	3/4	-12	M 30	82	30	43	7000324300	HF/GP-BFE-M30-DN19 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request





## Hose Fittings with tube socket L series

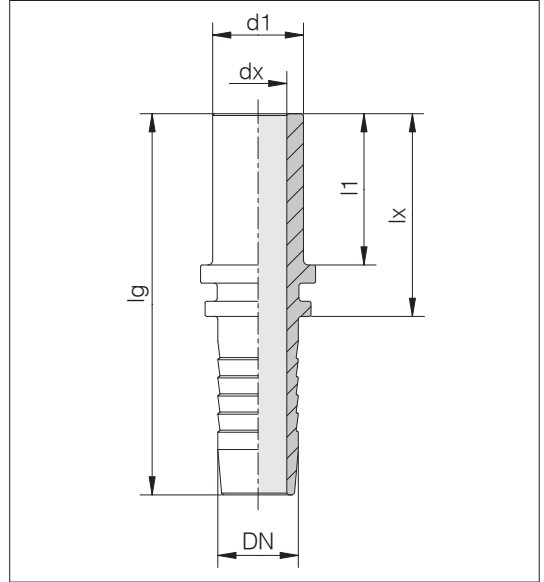


# BEL

Hose fittings with pipe attachment for cutting ring fittings

ISO 8434-1

L series



Series	Hose size			dx	lg	l1	lx	Order-No.	Designation
Tube OD d1	DN	Inch	Dash						
L 6	5	3/16	-03	3	50.5	23	28.5	7000297900	HF/24-SWSX-L6-DN05
L 6	6	1/4	-04	4	57.5	23	29.5	7000298000	HF/24-SWSX-L6-DN06
L / S 8	6	1/4	-04	4	58.5	24	30.5	7000298100	HF/24-SWSX-L8-DN06
L 10	8	5/16	-05	5.5	59.5	25	31.5	7000298200	HF/24-SWSX-L10-DN08
L 10	10	3/8	-06	7	62	25	32.5	7000298300	HF/24-SWSX-L10-DN10
L 12	10	3/8	-06	7	62.5	25	33	7000298400	HF/24-SWSX-L12-DN10
L 15	10	3/8	-06	7	61	25	31.5	7000298500	HF/24-SWSX-L15-DN10
L 15	12	1/2	-08	9.5	63	25	33.5	7000298600	HF/24-SWSX-L15-DN12
L 18	12	1/2	-08	9.5	65	27	35.5	7000298700	HF/24-SWSX-L18-DN12
L 18	16	5/8	-10	12.5	69.5	27	35.5	7000298800	HF/24-SWSX-L18-DN16
L 22	16	5/8	-10	12.5	71.5	29	37.5	7000298900	HF/24-SWSX-L22-DN16
L 22	19	3/4	-12	15	79	29	40	7000299000	HF/24-SWSX-L22-DN19
L 28	25	1	-16	19.5	87	30	40	7000299100	HF/24-SWSX-L28-DN25
L 35	31	1 1/4	-20	26	103	36	48.5	7000299200	HF/24-SWSX-L35-DN31 <sup>2)</sup>
L 42	38	1 1/2	-24	32	110.5	40	52.5	7000299300	HF/24-SWSX-L42-DN38 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

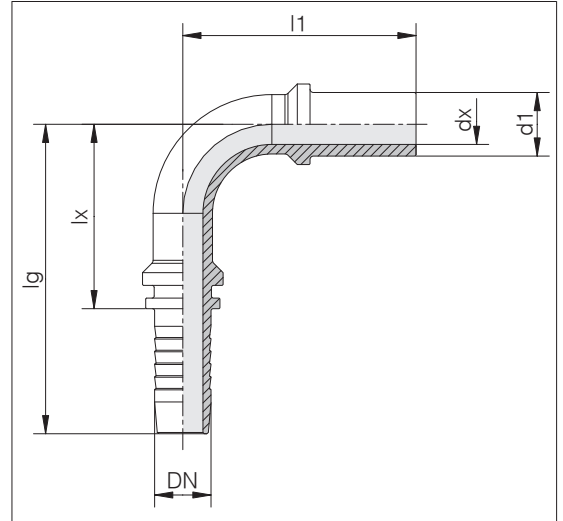


## BEL 90

Hose fittings with pipe attachment for cutting ring fittings

ISO 8434-1

L series

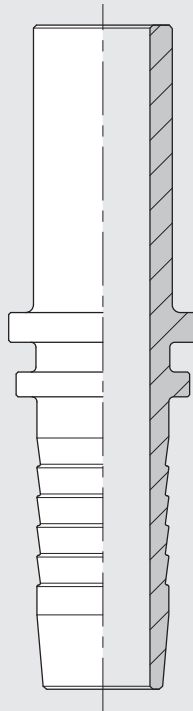


Series	Hose size			dx	lg	l1	lx	Order-No.	Designation
Tube OD	DN	Inch	Dash						
d1									
L 6	5	3/16	-03	3	47.5	41.5	25.5	7000299400	HF/24-SWEX-L6-DN05
L 6	6	1/4	-04	4	57	41.5	29	7000299500	HF/24-SWEX-L6-DN06
L / S 8	6	1/4	-04	4	57	42.5	29	7000299600	HF/24-SWEX-L8-DN06
L 10	8	5/16	-05	5.5	57.5	46	29.5	7000299700	HF/24-SWEX-L10-DN08
L 10	10	3/8	-06	7	63	51	33.5	7000299800	HF/24-SWEX-L10-DN10
L 12	10	3/8	-06	7	63	51	33.5	7000299900	HF/24-SWEX-L12-DN10
L 15	12	1/2	-08	9.5	71.5	56	42	7000300000	HF/24-SWEX-L15-DN12
L 18	12	1/2	-08	9.5	71.5	59.5	42	7000300100	HF/24-SWEX-L18-DN12
L 18	16	5/8	-10	12.5	87	68	53	7000300200	HF/24-SWEX-L18-DN16
L 22	16	5/8	-10	12.5	87	72	53	7000300300	HF/24-SWEX-L22-DN16 <sup>2)</sup>
L 22	19	3/4	-12	15	99	72.5	60	7000300400	HF/24-SWEX-L22-DN19
L 28	25	1	-16	19.5	126	86	79	7000300500	HF/24-SWEX-L28-DN25 <sup>2)</sup>
L 35	31	1 1/4	-20	26	150.5	106	96	7000300600	HF/24-SWEX-L35-DN31 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request



## Hose Fittings with tube socket S series

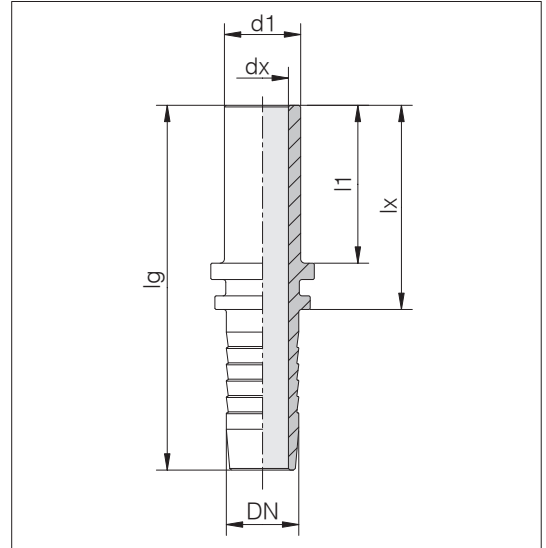


# BES

Hose fittings with pipe attachment for cutting ring fittings

ISO 8434-1

S series



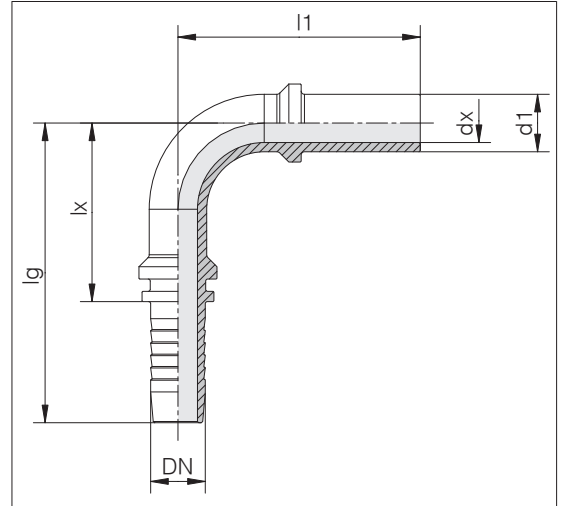
Series	Hose size			dx	lg	l1	lx	Order-No.	Designation
Tube OD	DN	Inch	Dash						
S 8	5	3/16	-03	3	51.5	24	29.5	7000300700	HF/24-SWSX-S8-DN05
S 10	6	1/4	-04	4	60.5	25	32.5	7000300800	HF/24-SWSX-S10-DN06
S 12	6	1/4	-04	4	59.5	25	31.5	7000300900	HF/24-SWSX-S12-DN06
S 12	8	5/16	-05	5.5	60	25	32	7000301000	HF/24-SWSX-S12-DN08
S 14	10	3/8	-06	7	66	29	36.5	7000301100	HF/24-SWSX-S14-DN10
S 14	12	1/2	-08	9.5	67	29	37.5	7000301200	HF/24-SWSX-S14-DN12
S 16	12	1/2	-08	9.5	70	32	40.5	7000301300	HF/24-SWSX-S16-DN12
S 20	16	5/8	-10	12.5	78.5	36	44.5	7000301400	HF/24-SWSX-S20-DN16
S 20	19	3/4	-12	15	86	36	47	7000301500	HF/24-SWSX-S20-DN19
S 25	19	3/4	-12	15	90	40	51	7000301600	HF/24-SWSX-S25-DN19
S 25	25	1	-16	19.5	97	40	50	7000301700	HF/24-SWSX-S25-DN25
S 30	25	1	-16	19.5	102	45	55	7000301800	HF/24-SWSX-S30-DN25
S 38	31	1 1/4	-20	26	117	50	62.5	7000301900	HF/24-SWSX-S38-DN31

## BES 90

Hose fittings with pipe attachment for cutting ring fittings

ISO 8434-1

S series



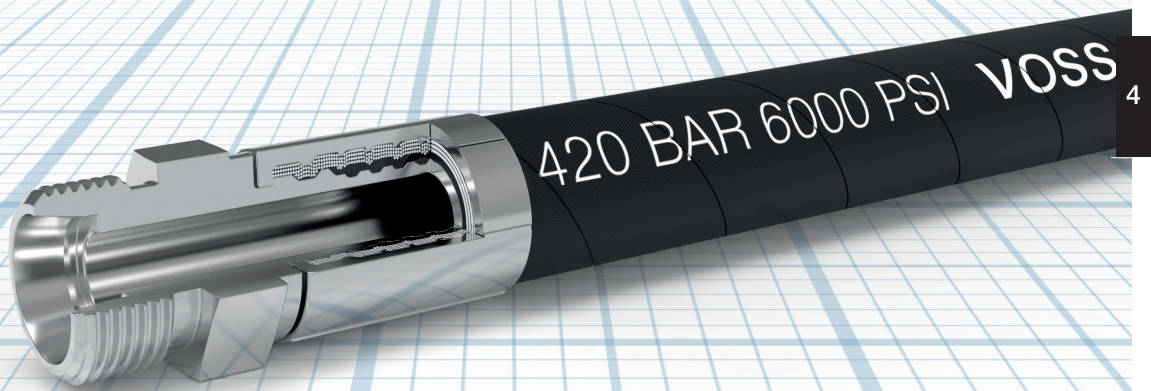
Series	Hose size			dx	lg	l1	lx	Order-No.	Designation
Tube OD	DN	Inch	Dash						
d1									
S 10	6	1/4	-04	4	57	43.5	29	7000302100	HF/24-SWEX-S10-DN06
S 12	6	1/4	-04	4	57	43.5	29	7000302200	HF/24-SWEX-S12-DN06 <sup>2)</sup>
S 12	8	5/16	-05	5.5	57.5	46	29.5	7000302300	HF/24-SWEX-S12-DN08
S 14	10	3/8	-06	7	63	55	33.5	7000302400	HF/24-SWEX-S14-DN10
S 14	12	1/2	-08	9.5	71.5	60	42	7000302500	HF/24-SWEX-S14-DN12 <sup>2)</sup>
S 16	12	1/2	-08	9.5	71.5	63	42	7000302600	HF/24-SWEX-S16-DN12 <sup>2)</sup>
S 20	16	5/8	-10	12.5	87	78	53	7000302700	HF/24-SWEX-S20-DN16 <sup>2)</sup>
S 20	19	3/4	-12	15	99	80.5	60	7000302800	HF/24-SWEX-S20-DN19 <sup>2)</sup>
S 25	19	3/4	-12	15	99	84.5	60	7000302900	HF/24-SWEX-S25-DN19 <sup>2)</sup>
S 25	25	1	-16	19.5	126	96	79	7000303000	HF/24-SWEX-S25-DN25 <sup>2)</sup>
S 30	25	1	-16	19.5	126	101	79	7000303100	HF/24-SWEX-S30-DN25 <sup>2)</sup>

<sup>2)</sup> Special sizes only on request





## Hose fittings VOSS NPS8 (Interlock)



## Content

## Type/Page

Double Skive swaged ferrules

MPF 3

MPF 4



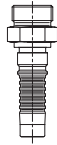
P.116



P.117

Hose fittings with 24° cone

MCES



P.120

Hose fittings with 24° taper S series

MDKOS

MDKOS 45

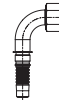
MDKOS 90



P.122



P.123



P.124

Hose fittings with BSP thread

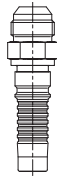
MAGR



P.126

Hose fittings with UN/UNF thread

MAGJ



P.128

## Content

## Type/Page

Hose fittings with  
NPTF thread

MAGN



P.130

Hose fittings with BSP thread and  
60° taper O-ring

MDKOR

MDKOR 45

MDKOR 90



P.132

P.133

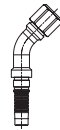
P.134

Hose fittings with UN/UNF thread  
and 37° cone O-ring

MDKOJ

MDKOJ 45

MDKOJ 90



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P.138

Hose fittings ORFS with UN/UNF  
thread

MORFS

MORFS 45

MORFS 90



P.140

P.141

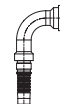
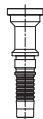
P.142

Hose fittings with SAE flange  
standard series (3000 psi)

MFL3

MFL3 45

MFL3 90



P.144

P.145

P.146

## Content

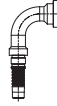
## Type/Page

Hose fittings with SAE flange high pressure series (6000 psi)

MFL6

MFL6 45

MFL6 90



P.148

P.149

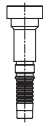
P.150

Hose fittings with flange high pressure series (9000 psi)

MFLCAT

MFLCAT 45

MFLCAT 90

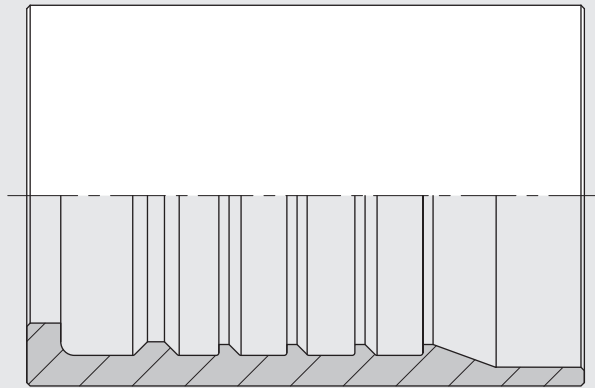


P.152

P.153

P.154

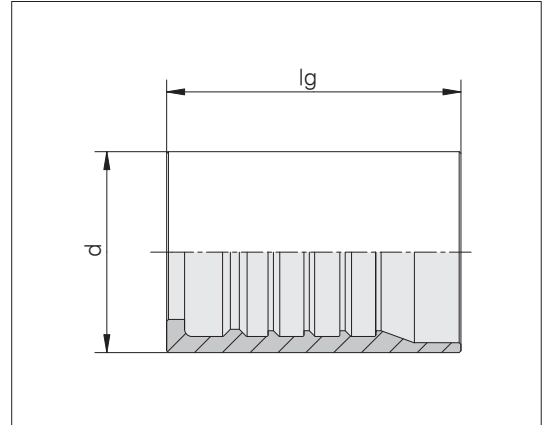
## Double Skive swaged ferrules



## MPF 3

Double Skive swaged ferrules with interlock for spiral hoses acc. to

EN 856 4SH  
EN 856 R13  
SAE 100 R13/R15



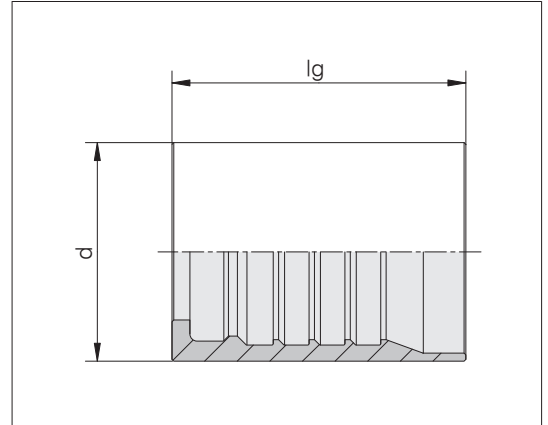
Hose size			d	lg	Tube type	Order-No.	Designation
DN	Inch	Dash					
16	5/8	-10	36	56	4SH-R15	7004608700	HF-FER/MPF3-DN16-IL
19	3/4	-12	40	62	4SH-R13-R15	7000035600	HF-FER/MPF3-DN19-IL
25	1	-16	47	75	4SH-R13-R15	7000035700	HF-FER/MPF3-DN25-IL
31	1 1/4	-20	56	82	4SH	7000035800	HF-FER/MPF3-DN31-IL
38	1 1/2	-24	63	93	4SH	7000035900	HF-FER/MPF3-DN38-IL
51	2	-32	80	100	4SH	7000036000	HF-FER/MPF3-DN51-IL

## MPF 4

Double Skive swaged ferrules for spiral tubes in acc. with

EN 856 R13

SAE 100 R13/R15

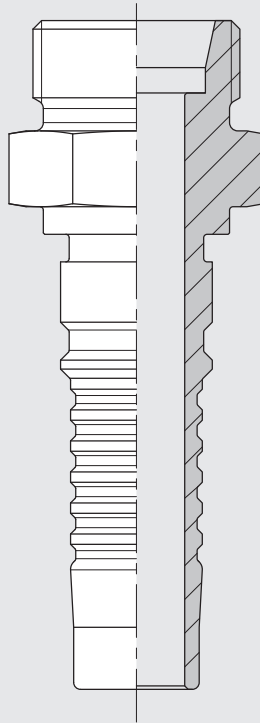


Hose size			d	lg	Tube type	Order-No.	Designation
DN	Inch	Dash					
31	1 1/4	-20	61	82	R13-R15	7000036100	HF-FER/MPF4-DN31-IL
38	1 1/2	-24	71	93	R13-R15	7000036200	HF-FER/MPF4-DN38-IL
51	2	-32	85	100	R13	7000036300	HF-FER/MPF4-DN51-IL





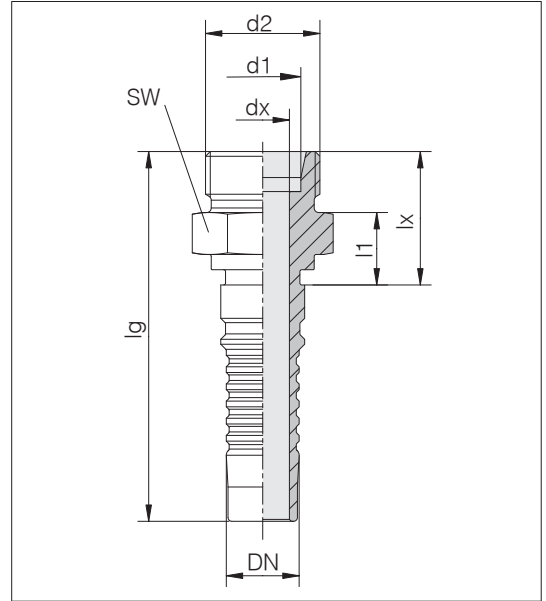
## Hose fittings with 24° cone



# MCES

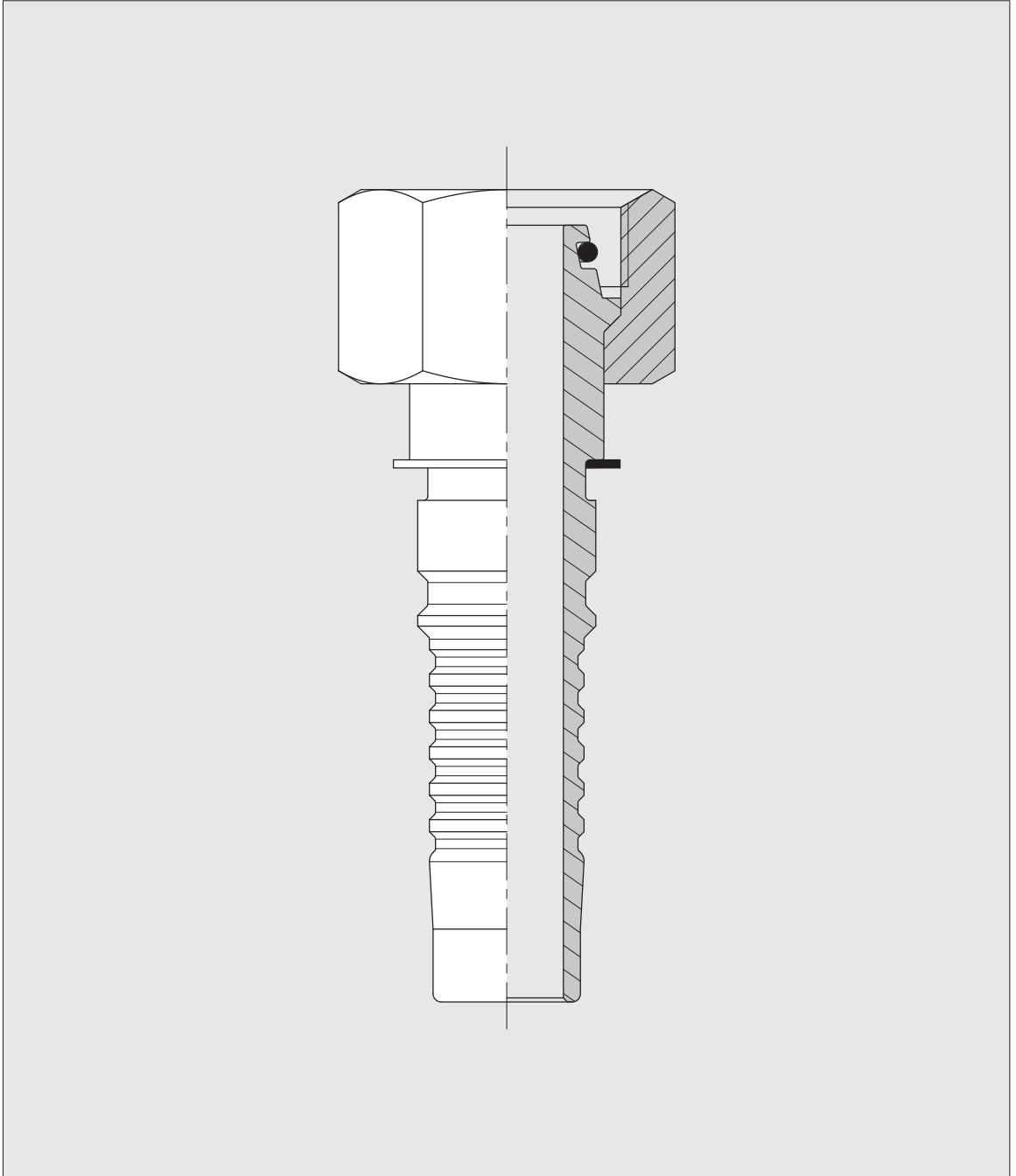
Hose fittings with metric thread and 24° cone

ISO 12151-2 (ISO 8434-1)



Series	Hose size			d2	dx	lg	lx	l1	SW	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric							
d1											
S 20	16	5/8	-10	M 30 x 2	11	94	36	20	32	7004401700	HF/24-S-S20-DN16-IL
S 20	19	3/4	-12	M 30 x 2	14	97	35	19	32	7000055200	HF/24-S-S20-DN19-IL
S 25	19	3/4	-12	M 36 x 2	14	99	37	19	41	7000055300	HF/24-S-S25-DN19-IL
S 30	25	1	-16	M 42 x 2	19	117	43	23	46	7000055500	HF/24-S-S30-DN25-IL
S 38	31	1 1/4	-20	M 52 x 2	25	126	46	24	55	7000055700	HF/24-S-S38-DN31-IL

## Hose fittings with 24° taper S series

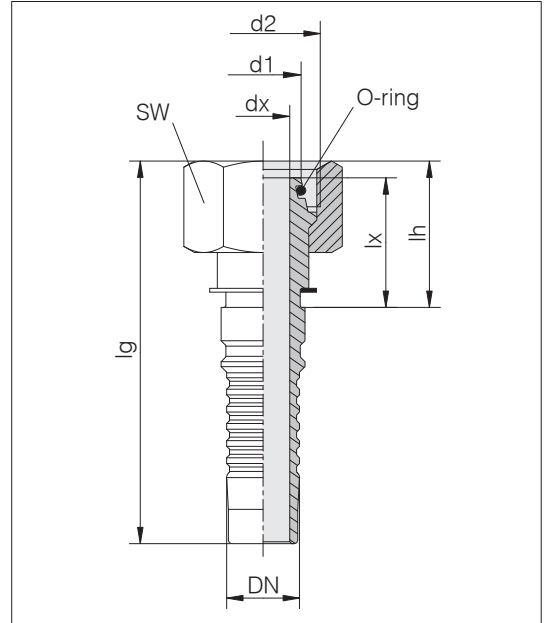


# MDKOS

Hose fittings with 24° taper and O-ring  
fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
S 20	16	5/8	-10	M 30 x 2	11	94	33	36	36	16,3 x 2,4	7004400700	HF/24-SWOS-S20-DN16-IL
S 20	19	3/4	-12	M 30 x 2	14	99	34	37	36	16,3 x 2,4	7004643800	HF/24-SWOS-S20-DN19-IL
S 25	19	3/4	-12	M 36 x 2	14	105	37	43	46	20,3 x 2,4	7004649200	HF/24-SWOS-S25-DN19-IL
S 25	25	1	-16	M 36 x 2	19	112	33	38	46	20,3 x 2,4	7004649500	HF/24-SWOS-S25-DN25-IL <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19	120.5	39	46.5	50	25,3 x 2,4	7004649800	HF/24-SWOS-S30-DN25-IL
S 30	31	1 1/4	-20	M 42 x 2	25	124	36.5	44	50	25,3 x 2,4	7005716600	HF/24-SWOS-S30-DN31-IL
S 38	31	1 1/4	-20	M 52 x 2	25	133.5	44.5	53.5	60	33,3 x 2,4	7004650100	HF/24-SWOS-S38-DN31-IL
S 38	38	1 1/2	-24	M 52 x 2	31	139	38.5	47.5	65	33,3 x 2,4	7004650400	HF/24-SWOS-S38-DN38-IL <sup>3)</sup>

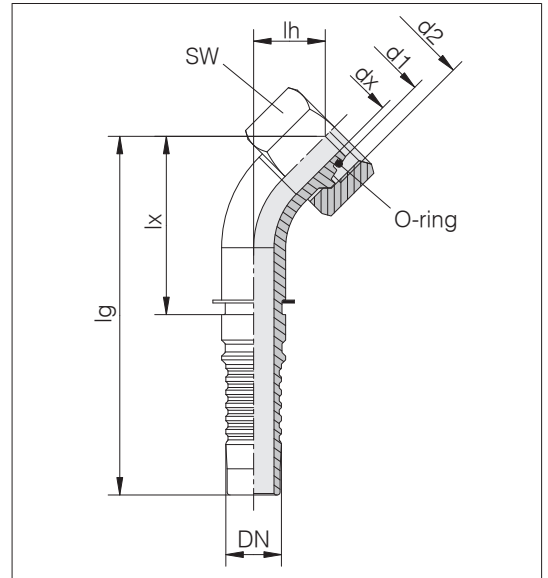
<sup>3)</sup> Crimped union nuts

## MDKOS 45

Hose fittings with 24° taper and O-ring fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
S 20	19	3/4	-12	M 30 x 2	14	137	75	31	36	16,3 x 2,4	7004671100	HF/24-SWOE45-S20-DN19-IL
S 25	19	3/4	-12	M 36 x 2	14	137	75	31	46	20,3 x 2,4	7004672300	HF/24-SWOE45-S25-DN19-IL
S 25	25	1	-16	M 36 x 2	19	171	97	41.5	46	20,3 x 2,4	7004672700	HF/24-SWOE45-S25-DN25-IL <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19	163	89	31	50	25,3 x 2,4	7004673100	HF/24-SWOE45-S30-DN25-IL
S 38	31	1 1/4	-20	M 52 x 2	25	195	115	40	60	33,3 x 2,4	7004673500	HF/24-SWOE45-S38-DN31-IL
S 38	38	1 1/2	-24	M 52 x 2	31	232	140.5	55.5	65	33,3 x 2,4	7004674200	HF/24-SWOE45-S38-DN38-IL <sup>3)</sup>

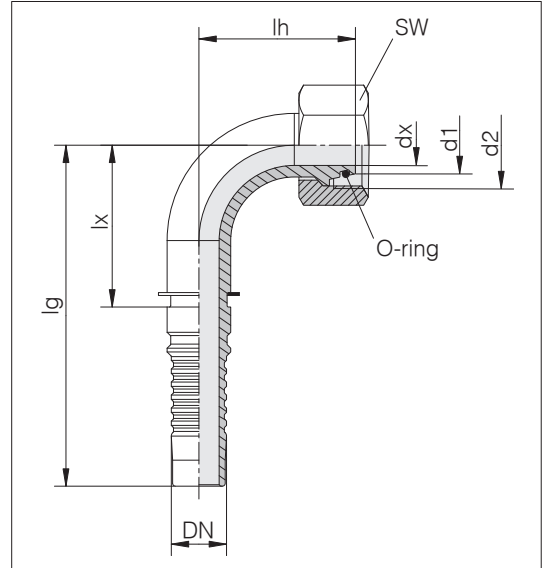
<sup>3)</sup> Crimped union nuts

# MDKOS 90

Hose fittings with 24° taper and O-ring  
fit in bore type  
W DIN 3861/ISO 8434-1

ISO 12151-2 (ISO 8434-1)

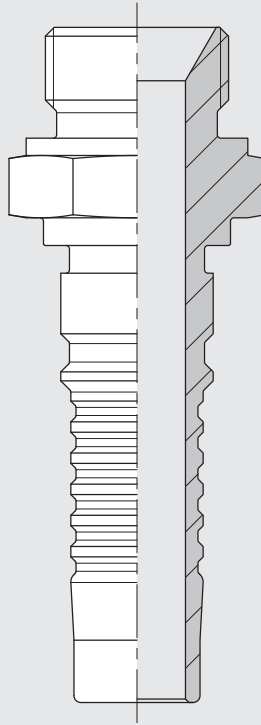
Standard O-ring material is FKM



Series	Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
Tube OD	DN	Inch	Dash	metric								
S 20	19	3/4	-12	M 30 x 2	14	125	63	63	36	16,3 x 2,4	7004659700	HF/24-SWOE-S20-DN19-IL
S 25	19	3/4	-12	M 36 x 2	14	125	63	63.5	46	20,3 x 2,4	7004665500	HF/24-SWOE-S25-DN19-IL
S 25	25	1	-16	M 36 x 2	19	157	83	84	46	20,3 x 2,4	7004665900	HF/24-SWOE-S25-DN25-IL <sup>3)</sup>
S 30	25	1	-16	M 42 x 2	19	160	86	69	50	25,3 x 2,4	7004666300	HF/24-SWOE-S30-DN25-IL
S 38	31	1 1/4	-20	M 52 x 2	25	187.5	107.5	88.5	60	33,3 x 2,4	7004666700	HF/24-SWOE-S38-DN31-IL
S 38	38	1 1/2	-24	M 52 x 2	31	217	125.5	117	65	33,3 x 2,4	7004667100	HF/24-SWOE-S38-DN38-IL <sup>3)</sup>

<sup>3)</sup> Crimped union nuts

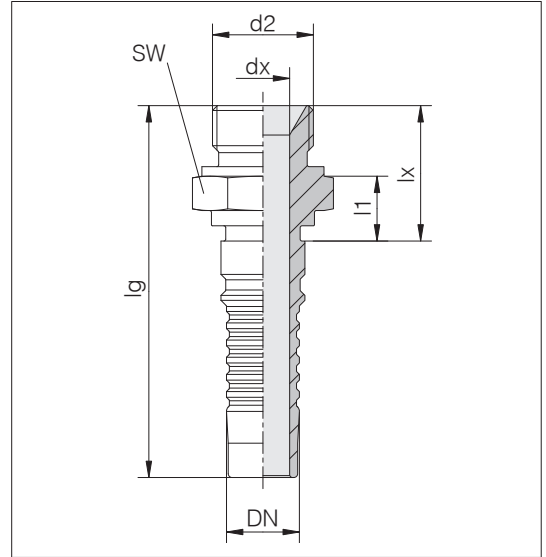
## Hose fittings with BSP thread



# MAGR

Hose fittings with BSP thread and 60° cone, cylindrical

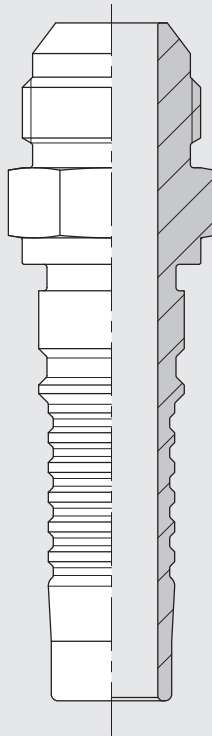
ISO 12151-6 (ISO 8434-6)



Hose size			d2 BSP	dx	lx	lg	l1	SW	Order-No.	Designation
DN	Inch	Dash								
19	3/4	-12	G 3/4	14	35.5	97.5	19.5	32	7000317000	HF/60-S-20-DN19-IL
25	1	-16	G 1	19	40.5	114.5	21.5	41	7000317100	HF/60-S-25-DN25-IL
31	1 1/4	-20	G 1 1/4	25	45.5	125.5	25.5	50	7000317200	HF/60-S-25-DN31-IL
38	1 1/2	-24	G 1 1/2	31	52	143.5	30	55	7000317300	HF/60-S-25-DN38-IL
51	2	-32	G 2	42	58	162	33	70	7000317400	HF/60-S-50-DN51-IL



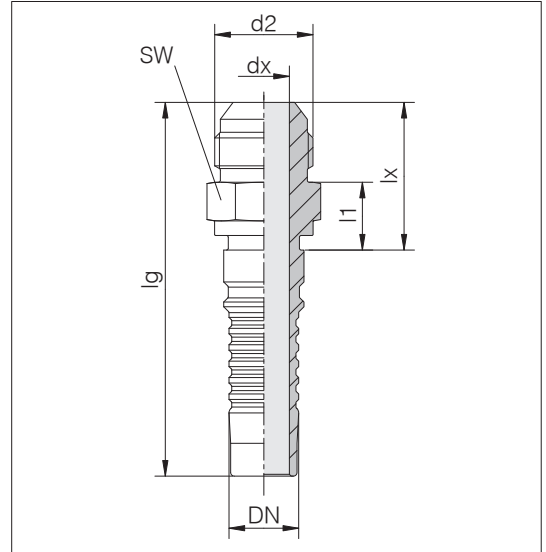
## Hose fittings with UN/UNF thread



# MAGJ

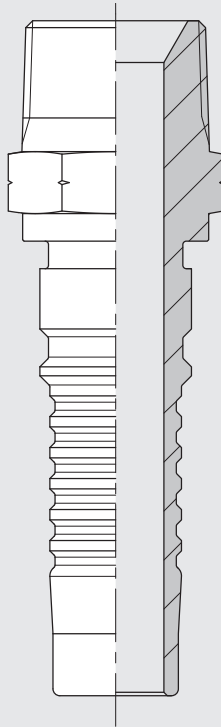
Hose fittings with UN/UNF thread and 37° taper (JIC)

ISO 12151-5 (ISO 8434-2)



Hose size			d2	dx	lx	lg	l1	SW	Order-No.	Designation
DN	Inch	Dash	UN/UNF							
19	3/4	-12	1 1/16-12 UN	14	40.5	102.5	18.6	27	7000317500	HF/37-S-20-DN19-IL
25	1	-16	1 5/16-12 UN	19	43	117	19.9	36	7000317600	HF/37-S-25-DN25-IL
31	1 1/4	-20	1 5/8-12 UN	25	47	127	22.7	46	7000317700	HF/37-S-30-DN31-IL
38	1 1/2	-24	1 7/8-12 UN	31	54	145.5	26.5	50	7000317800	HF/37-S-38-DN38-IL
51	2	-32	2 1/2-12 UN	42	65.5	169.5	31.6	65	7000317900	HF/37-S-50-DN51-IL

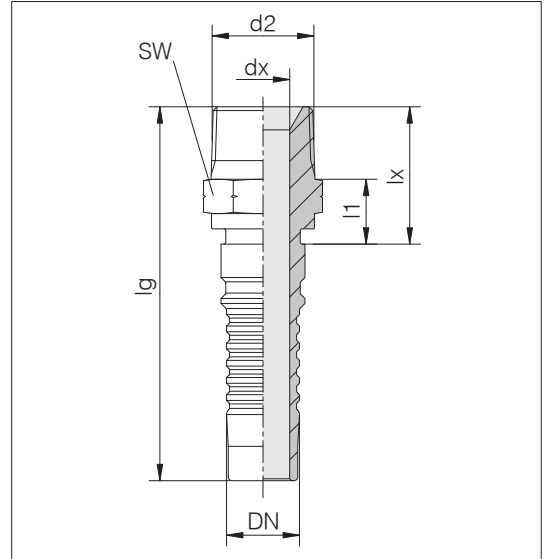
## Hose fittings with NPTF thread



# MAGN

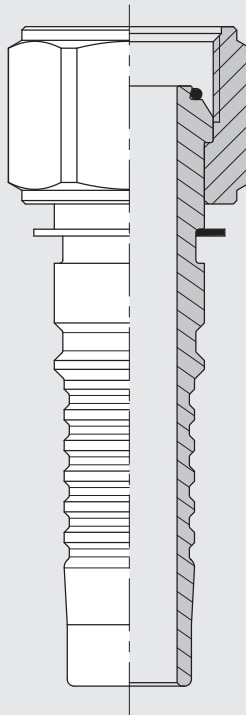
Hose fittings with NPTF thread, tapered

SAE J 516



Hose size			d2	dx	lg	lx	l1	SW	Order-No.	Designation
DN	Inch	Dash	NPTF							
19	3/4	-12	3/4 NPTF	14	98	36	17	27	7000324400	HF/GP-SDS-NF3/4T-DN19-IL
25	1	-16	1 NPTF	19	116	42	18	36	7000324500	HF/GP-SDS-NF1T-DN25-IL
31	1 1/4	-20	1 1/4 NPTF	25	124.5	44.5	20	46	7000324600	HF/GP-SDS-NF1 1/4T-DN31-IL
38	1 1/2	-24	1 1/2 NPTF	31	139.5	48	22.5	50	7000324700	HF/GP-SDS-NF1 1/2T-DN38-IL
51	2	-32	2 NPTF	42	157	53	27	65	7000324800	HF/GP-SDS-NF2T-DN51-IL

## Hose fittings with BSP thread and 60° taper O-ring

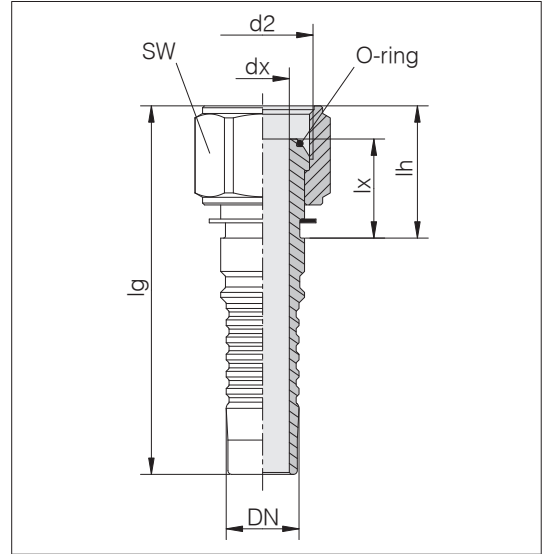


# MDKOR

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

Standard O-ring material is NBR



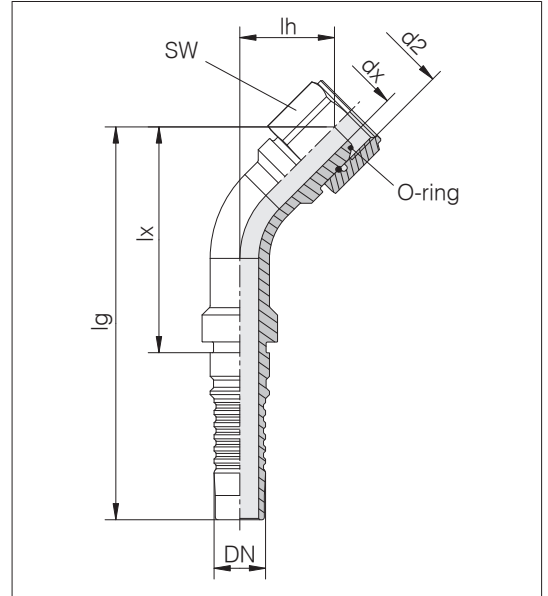
Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch	Dash	BSP								
19	3/4	-12	G 3/4	14	96.5	26	34.5	32	17,1 x 1,6	7000303200	HF/60-SWOS-20-DN19-IL
25	1	-16	G 1	19	113	28.5	39	41	22,1 x 1,6	7000303300	HF/60-SWOS-25-DN25-IL
31	1 1/4	-20	G 1 1/4	25	126	36	46	50	29,1 x 1,6	7000303400	HF/60-SWOS-32-DN31-IL
38	1 1/2	-24	G 1 1/2	31	146	42	54,5	55	35,1 x 1,6	7000303500	HF/60-SWOS-38-DN38-IL
51	2	-32	G 2	42	163	43	59	70	48,1 x 1,6	7000303600	HF/60-SWOS-50-DN51-IL

## MDKOR 45

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

Standard O-ring material is NBR



Hose size		Dash	d2 BSP	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
19	3/4	-12	G 3/4	14	140	78	34.5	32	17,1 x 1,6	7000304200	HF/60-SWOE45-20-DN19-IL
25	1	-16	G 1	19	169.5	95.5	39	41	22,1 x 1,6	7000304300	HF/60-SWOE45-25-DN25-IL
31	1 1/4	-20	G 1 1/4	25	201	121	51.5	50	29,1 x 1,6	7000304400	HF/60-SWOE45-32-DN31-IL
38	1 1/2	-24	G 1 1/2	31	235	143.5	60	60	35,1 x 1,6	7000304500	HF/60-SWOE45-38-DN38-IL <sup>2)</sup>
51	2	-32	G 2	41	279	175	68.5	70	48,1 x 1,6	7000304600	HF/60-SWOE45-50-DN51-IL <sup>2)</sup>

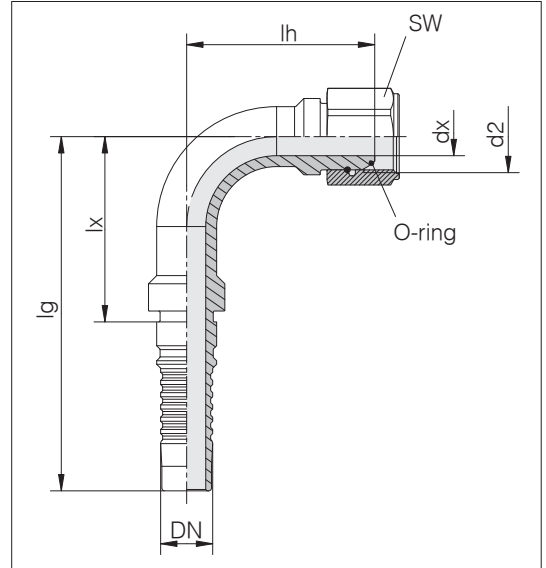
<sup>2)</sup> Special sizes only on request

# MDKOR 90

Hose fittings with BSP thread and 60° taper O-Ring

ISO 12151-6 (ISO 8434-6)

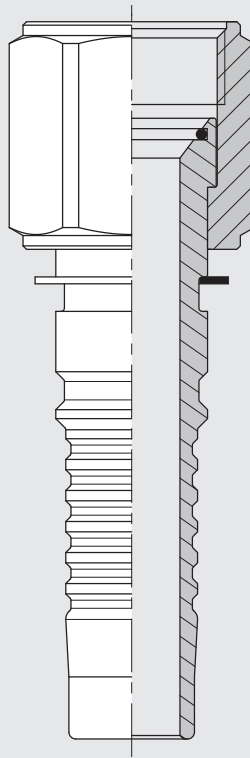
Standard O-ring material is NBR



Hose size			d2	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch	Dash	BSP								
19	3/4	-12	G 3/4	14	127.5	65.5	68.5	32	17,1 x 1,6	7000303700	HF/60-SWOE-20-DN19-IL
25	1	-16	G 1	19	158	84	82	41	22,1 x 1,6	7000303800	HF/60-SWOE-25-DN25-IL
31	1 1/4	-20	G 1 1/4	25	182	102	106.5	50	29,1 x 1,6	7000303900	HF/60-SWOE-32-DN31-IL
38	1 1/2	-24	G 1 1/2	31	215.5	124	123.5	60	35,1 x 1,6	7000304000	HF/60-SWOE-38-DN38-IL
51	2	-32	G 2	41	248	144	144.5	70	48,1 x 1,6	7000304100	HF/60-SWOE-50-DN51-IL



## Hose fittings with UN/UNF thread and 37° cone O-ring

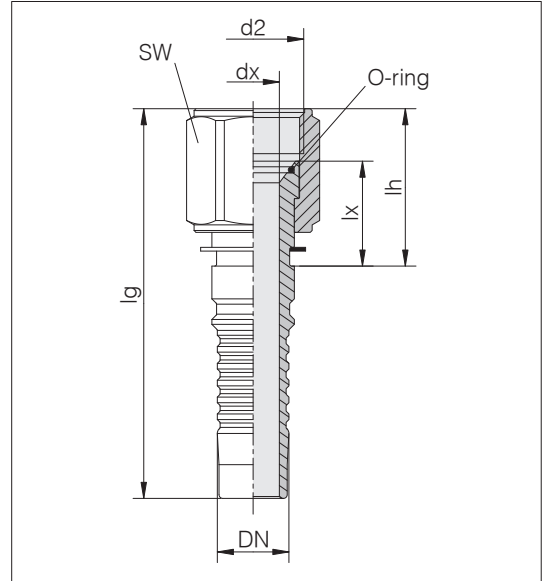


# MDKOJ

Hose fittings with UN/UNF thread and 37° cone (JIC) O-Ring

In accordance with ISO 12151-5 (ISO 8434-2)

Standard O-ring material is NBR



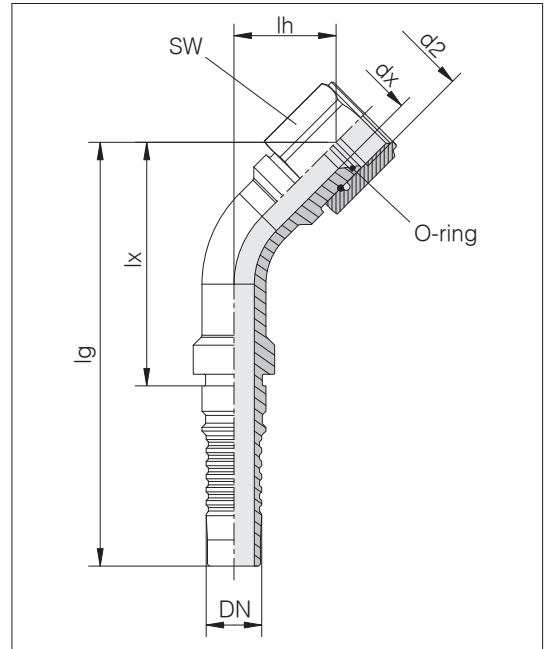
Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
19	3/4	-12	1 1/16-12 UN	14	104	28	42	32	19 x 1,5	7000304700	HF/37-SWS-20-DN19-IL
25	1	-16	1 5/16-12 UN	19	119	29.5	45	41	25 x 1,5	7000304800	HF/37-SWS-25-DN25-IL
31	1 1/4	-20	1 5/8-12 UN	25	129	35	49	50	31,47 x 1,78	7000304900	HF/37-SWS-30-DN31-IL
38	1 1/2	-24	1 7/8-12 UN	31	152	40.5	60.5	55	37,82 x 1,78	7000305000	HF/37-SWS-38-DN38-IL
51	2	-32	2 1/2-12 UN	42	170	42	66	75	50 x 2	7000305100	HF/37-SWS-50-DN51-IL

## MDKOJ 45

Hose fittings with UN/UNF thread and  
37° cone (JIC) O-Ring

In accordance with ISO 12151-5 (ISO 8434-2)

Standard O-ring material is NBR



Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
19	3/4	-12	1 1/16-12 UN	14	140	78	34.5	32	19 x 1,5	7000305700	HF/37-SWE45-20-DN19-IL
25	1	-16	1 5/16-12 UN	19	169.5	95.5	39	41	25 x 1,5	7000305800	HF/37-SWE45-25-DN25-IL
31	1 1/4	-20	1 5/8-12 UN	25	199	119	49.5	50	31,47 x 1,78	7000305900	HF/37-SWE45-30-DN31-IL
38	1 1/2	-24	1 7/8-12 UN	31	233	141.5	58	55	37,82 x 1,78	7000306000	HF/37-SWE45-38-DN38-IL <sup>2)</sup>
51	2	-32	2 1/2-12 UN	41	275	171	64	75	50 x 2	7000306100	HF/37-SWE45-50-DN51-IL <sup>2)</sup>

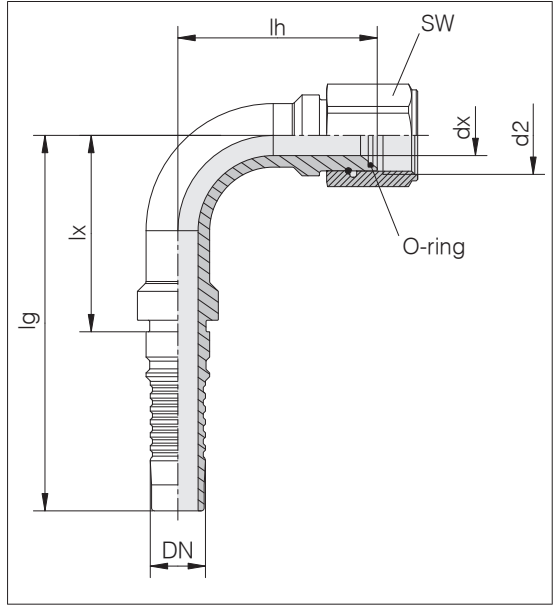
<sup>2)</sup> Special sizes only on request

# MDKOJ 90

Hose fittings with UN/UNF thread and 37° cone (JIC) O-Ring

In accordance with ISO 12151-5 (ISO 8434-2)

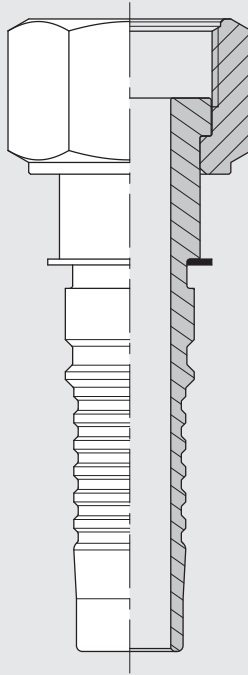
Standard O-ring material is NBR



Hose size		Dash	d2 UN/UNF	dx	lg	lx	lh	SW	O-ring	Order-No.	Designation
DN	Inch										
19	3/4	-12	1 1/16-12 UN	14	127.5	65.5	68.5	32	19 x 1,5	7000305200	HF/37-SWE-20-DN19-IL
25	1	-16	1 5/16-12 UN	19	158	84	82	41	25 x 1,5	7000305300	HF/37-SWE-25-DN25-IL
31	1 1/4	-20	1 5/8-12 UN	25	180	100	103	50	31,47 x 1,78	7000305400	HF/37-SWE-30-DN31-IL
38	1 1/2	-24	1 7/8-12 UN	31	215.5	124	120.5	55	37,82 x 1,78	7000305500	HF/37-SWE-38-DN38-IL
51	2	-32	2 1/2-12 UN	41	248	144	138.5	75	50 x 2	7000305600	HF/37-SWE-50-DN51-IL <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

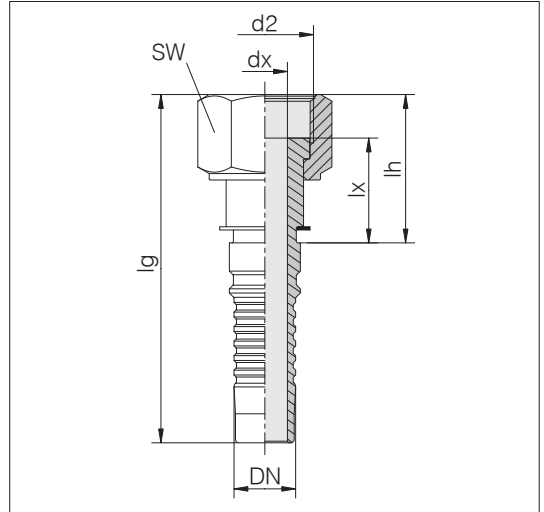
## Hose fittings ORFS with UN/UNF thread



# MORFS

Hose fittings with UN/UNF thread and face sealing (ORFS)

ISO 12151-1 (ISO 8434-3)

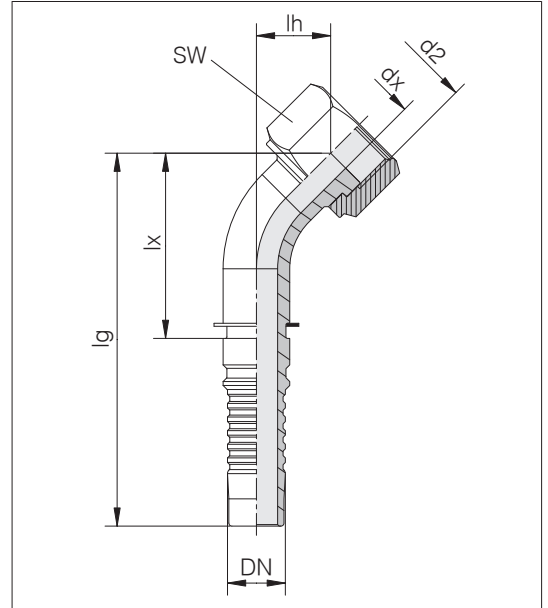


Hose size			d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch	Dash								
19	3/4	-12	1 3/16 - 12 UN	14	108	32.5	46	36	7000306200	HF/90-SWS-22-DN19-IL
19	3/4	-12	1 7/16 - 12 UN	14	109	33.5	47	41	7000306300	HF/90-SWS-25-DN19-IL
25	1	-16	1 7/16 - 12 UN	19	122	34.5	48	41	7000306400	HF/90-SWS-25-DN25-IL
31	1 1/4	-20	1 11/16 - 12 UN	25	129	35.5	49	50	7000306500	HF/90-SWS-30-DN31-IL
38	1 1/2	-24	2 - 12 UN	31	141	36	49.5	60	7000306600	HF/90-SWS-38-DN38-IL

## MORFS 45

Hose Fittings with UN/UNF thread and front sealing (ORFS)

ISO 12151-1 (ISO 8434-3)

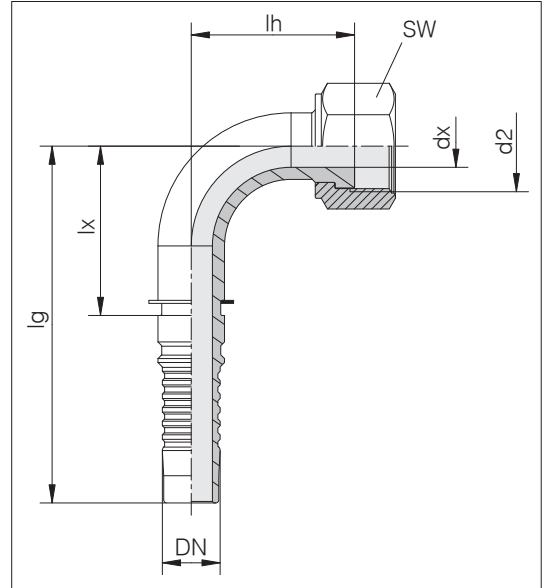


Hose size			d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
DN	Inch	Dash								
19	3/4	-12	1 3/16 - 12 UN	14	133	71	26.5	36	7000307200	HF/90-SWE45-22-DN19-IL
19	3/4	-12	1 7/16 - 12 UN	14	135.5	73.5	29.5	41	7000307300	HF/90-SWE45-25-DN19-IL
25	1	-16	1 7/16 - 12 UN	19	160.5	86.5	31	41	7000307400	HF/90-SWE45-25-DN25-IL
31	1 1/4	-20	1 11/16 - 12 UN	25	178	98	34.5	50	7000307500	HF/90-SWE45-30-DN31-IL
38	1 1/2	-24	2 - 12 UN	31	209	117.5	39	60	7000307600	HF/90-SWE45-38-DN38-IL

# MORFS 90

Hose Fittings with UN/UNF thread and front sealing (ORFS)

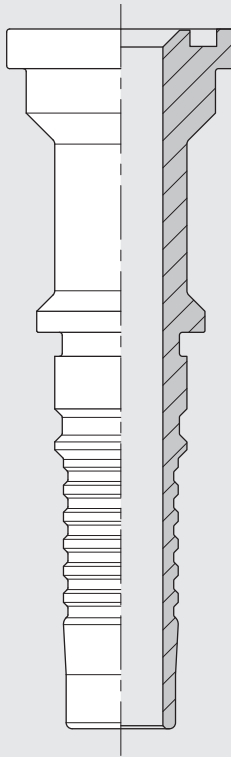
ISO 12151-1 (ISO 8434-3)



Hose size DN	Inch	Dash	d2 UN/UNF	dx	lg	lx	lh	SW	Order-No.	Designation
19	3/4	-12	1 3/16 - 12 UN	14	126	64	56	36	7000306700	HF/90-SWE-22-DN19-IL
19	3/4	-12	1 7/16 - 12 UN	14	126	64	60	41	7000306800	HF/90-SWE-25-DN19-IL
25	1	-16	1 7/16 - 12 UN	19	157.5	83.5	70.5	41	7000306900	HF/90-SWE-25-DN25-IL
31	1 1/4	-20	1 11/16 - 12 UN	25	174.5	94.5	76	50	7000307000	HF/90-SWE-30-DN31-IL
38	1 1/2	-24	2 - 12 UN	31	207	115.5	88.5	60	7000307100	HF/90-SWE-38-DN38-IL



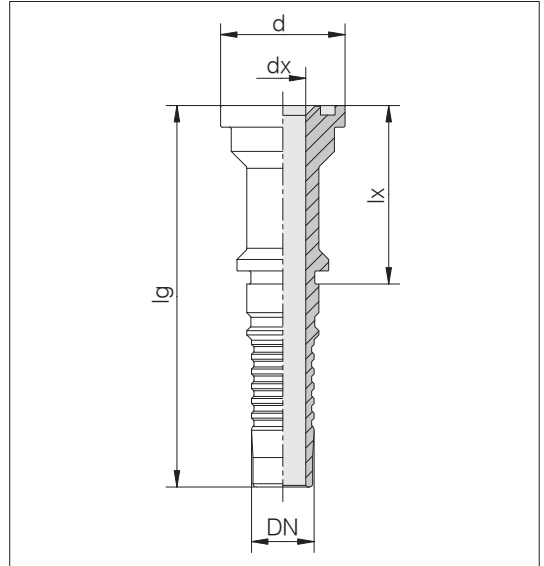
## Hose fittings with SAE flange standard series (3000 psi)



# MFL3

Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)

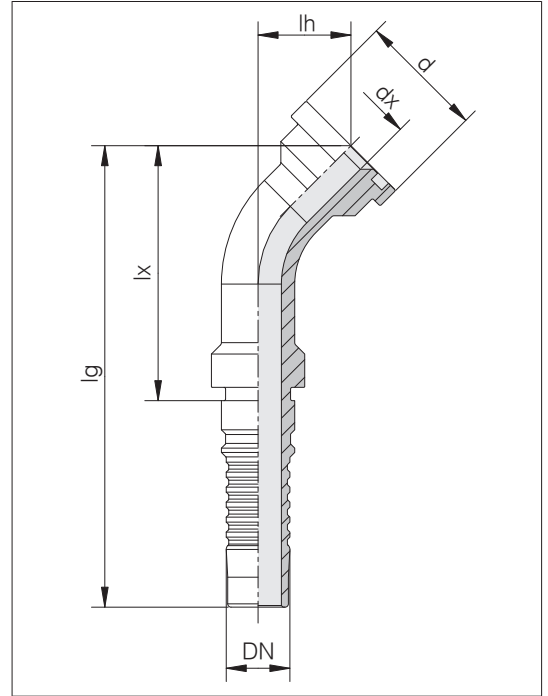


Fl. size Inch	Hose size			d	dx	lg	lx	Order-No.	Designation
	DN	Inch	Dash						
3/4	19	3/4	-12	38	14	116.5	54.5	7000097000	HF/F-S-DN19-3S3/4-IL
1	19	3/4	-12	44.5	14	119.5	57.5	7000097100	HF/F-S-DN19-3S1-IL
1	25	1	-16	44.5	19	135.5	61.5	7000097300	HF/F-S-DN25-3S1-IL
1 1/4	25	1	-16	50.8	19	138.5	64.5	7000097400	HF/F-S-DN25-3S1 1/4-IL
1 1/4	31	1 1/4	-20	50.8	25	148.5	68.5	7000097500	HF/F-S-DN31-3S1 1/4-IL
1 1/2	31	1 1/4	-20	60.3	25	151.5	71.5	7000097600	HF/F-S-DN31-3S1 1/2-IL
1 1/2	38	1 1/2	-24	60.3	31	166.5	75	7000097700	HF/F-S-DN38-3S1 1/2-IL
2	38	1 1/2	-24	71.4	31	169.5	78	7000097800	HF/F-S-DN38-3S2-IL
2	51	2	-32	71.4	42	183.5	79.5	7000097900	HF/F-S-DN51-3S2-IL

## MFL3 45

Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)



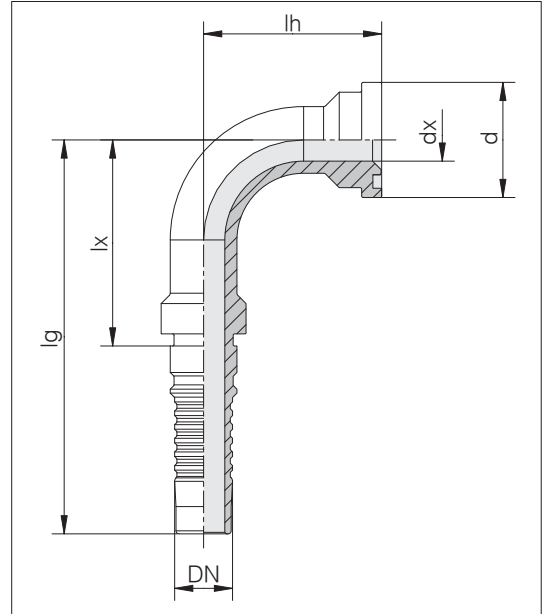
Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	38	14	132.5	70.5	27.5	7000098000	HF/F-E45-DN19-3S3/4-IL
1	19	3/4	-12	44.5	14	134.5	72.5	29.5	7000098100	HF/F-E45-DN19-3S1-IL
1	25	1	-16	44.5	19	159	85	28.5	7000098400	HF/F-E45-DN25-3S1-IL
1 1/4	25	1	-16	50.8	19	161	87	30.5	7000098300	HF/F-E45-DN25-3S11/4-IL
1 1/4	31	1 1/4	-20	50.8	25	181.5	101.5	34.5	7000098500	HF/F-E45-DN31-3S11/4-IL
1 1/2	31	1 1/4	-20	60.3	25	187	107	37.5	7000098600	HF/F-E45-DN31-3S11/2-IL
1 1/2	38	1 1/2	-24	60.3	31	212.5	121	41.5	7000098700	HF/F-E45-DN38-3S11/2-IL
2	38	1 1/2	-24	71.4	31	233.5	142	58.5	7000098800	HF/F-E45-DN38-3S2-IL <sup>2)</sup>
2	51	2	-32	71.4	41	261.5	157.5	58.5	7000098900	HF/F-E45-DN51-3S2-IL

<sup>2)</sup> Special sizes only on request

# MFL3 90

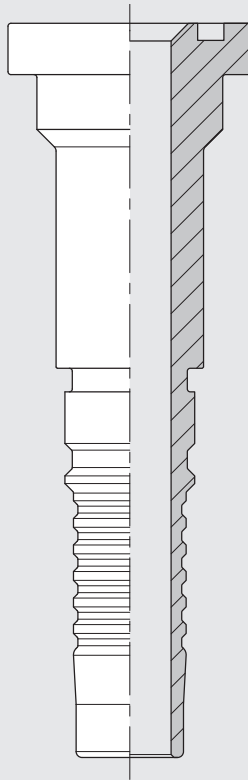
Hose fittings with SAE flange standard series (3000 psi)

ISO 12151-3 (ISO 6162-1)



Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	38	14	127.5	65.5	58	7000099000	HF/F-E-DN19-3S3/4-IL
1	19	3/4	-12	44.5	14	127.5	65.5	61	7000099100	HF/F-E-DN19-3S1-IL
1	25	1	-16	44.5	19	158	84	67	7000099300	HF/F-E-DN25-3S1-IL
1 1/4	25	1	-16	50.8	19	155	81	70.5	7000099400	HF/F-E-DN25-3S11/4-IL
1 1/4	31	1 1/4	-20	50.8	25	180.5	100.5	79.5	7000099500	HF/F-E-DN31-3S11/4-IL
1 1/2	31	1 1/4	-20	60.3	25	182	102	87	7000099600	HF/F-E-DN31-3S11/2-IL
1 1/2	38	1 1/2	-24	60.3	31	208.5	117	99	7000099700	HF/F-E-DN38-3S11/2-IL
2	38	1 1/2	-24	71.4	31	218	126.5	104	7000099800	HF/F-E-DN38-3S2-IL
2	51	2	-32	71.4	41	248.5	144.5	122.5	7000099900	HF/F-E-DN51-3S2-IL

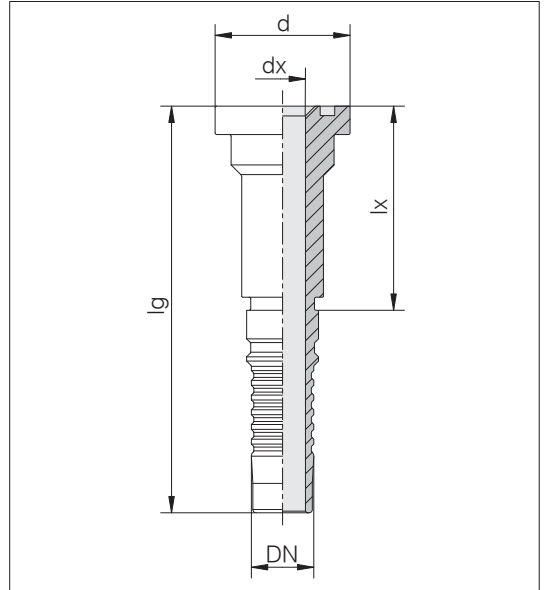
## Hose fittings with SAE flange high pressure series (6000 psi)



# MFL6

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)

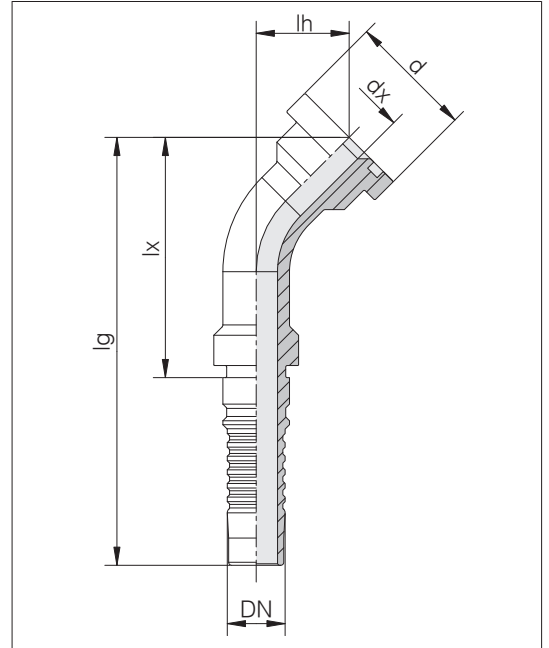


Fl. size Inch	Hose size			d	dx	lg	lx	Order-No.	Designation
	DN	Inch	Dash						
3/4	19	3/4	-12	41.3	14	124.5	62.5	7000100000	HF/F-S-DN19-6S3/4-IL
3/4	25	1	-16	41.3	14	137.5	63.5	7000100200	HF/F-S-DN25-6S3/4-IL
1	19	3/4	-12	47.6	14	129	67	7000100100	HF/F-S-DN19-6S1-IL
1	25	1	-16	47.6	19	146.5	72.5	7000100300	HF/F-S-DN25-6S1-IL
1	31	1 1/4	-20	47.6	19	153.5	73.5	7002296900	HF/F-S-DN31-6S1-IL
1 1/4	25	1	-16	54	19	151	77	7000100400	HF/F-S-DN25-6S1 1/4-IL
1 1/4	31	1 1/4	-20	54	25	162.5	82.5	7000100500	HF/F-S-DN31-6S1 1/4-IL
1 1/4	38	1 1/2	-24	54	25	174.5	83	7002297000	HF/F-S-DN38-6S1 1/4-IL
1 1/2	31	1 1/4	-20	63.5	25	167	87	7000100600	HF/F-S-DN31-6S1 1/2-IL
1 1/2	38	1 1/2	-24	63.5	31	183.5	92	7000100700	HF/F-S-DN38-6S1 1/2-IL
1 1/2	51	2	-32	63.5	31	199	95	7002297100	HF/F-S-DN51-6S1 1/2-IL
2	38	1 1/2	-24	79.4	31	188	96.5	7002297200	HF/F-S-DN38-6S2-IL
2	51	2	-32	79.4	42	202	98	7000100800	HF/F-S-DN51-6S2-IL

## MFL6 45

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)

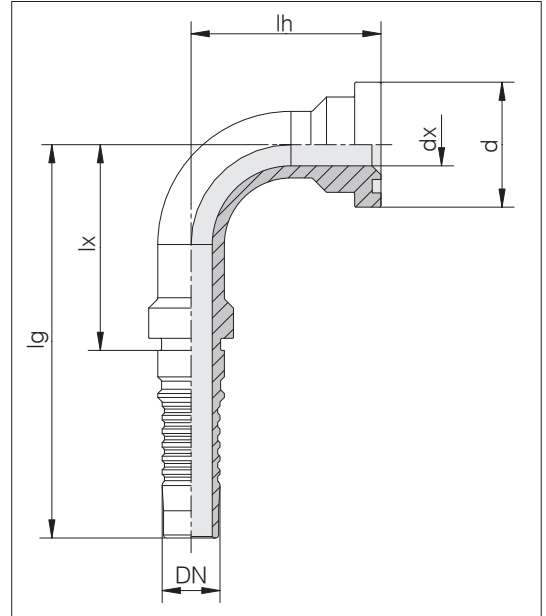


Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	14	135.5	73.5	30	7000100900	HF/F-E45-DN19-6S3/4-IL
3/4	25	1	-16	41.3	14	150.5	76.5	30	7002297600	HF/F-E45-DN25-6S3/4-IL
1	19	3/4	-12	47.6	14	139.5	77.5	34.5	7000101000	HF/F-E45-DN19-6S1-IL
1	25	1	-16	47.6	19	164	90	33.5	7000101200	HF/F-E45-DN25-6S1-IL
1	31	1 1/4	-20	47.6	19	173.5	93.5	33.5	7000072300	HF/F-E45-DN31-6S1-IL
1 1/4	25	1	-16	54	19	169	95	38.5	7000101300	HF/F-E45-DN25-6S1 1/4-IL
1 1/4	31	1 1/4	-20	54	25	191	111	41.5	7000101400	HF/F-E45-DN31-6S1 1/4-IL
1 1/4	38	1 1/2	-24	54	25	205	113.5	41.5	7002297700	HF-F-E45-DN38-6S1 1/4-IL
1 1/2	31	1 1/4	-20	63.5	25	197	117	47.5	7000101500	HF/F-E45-DN31-6S1 1/2-IL
1 1/2	38	1 1/2	-24	63.5	31	222	130.5	49	7000101600	HF/F-E45-DN38-6S1 1/2-IL
2	38	1 1/2	-24	79.4	31	236	144.5	61	7002297800	HF/F-E45-DN38-6S2-IL
2	51	2	-32	79.4	41	275	171	64.5	7000101700	HF/F-E45-DN51-6S2-IL

# MFL6 90

Hose fittings with SAE flange high pressure series (6000 psi)

ISO 12151-3 (ISO 6162-2)



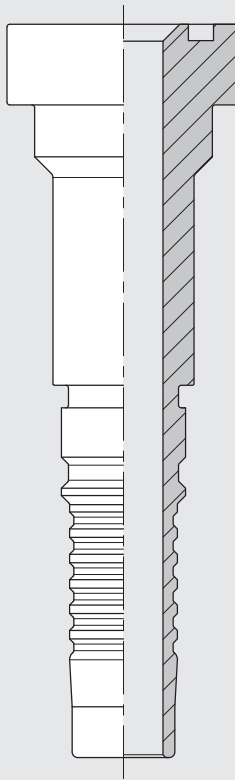
Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	14	127.5	65.5	62	7000101800	HF/F-E-DN19-6S3/4-IL
3/4	25	1	-16	41.3	14	142.5	68.5	62	7002297300	HF/F-E-DN25-6S3/4-IL
1	19	3/4	-12	47.6	14	127.5	65.5	68	7000101900	HF/F-E-DN19-6S1-IL
1	25	1	-16	47.6	19	154.5	80.5	74	7000102100	HF/F-E-DN25-6S1-IL
1	31	1 1/4	-20	47.6	19	164	84	74	7000073900	HF/F-E-DN31-6S1
1 1/4	25	1	-16	54	19	156	82	83.5	7000102200	HF/F-E-DN25-6S11/4-IL
1 1/4	31	1 1/4	-20	54	25	182	102	93	7000102300	HF/F-E-DN31-6S11/4-IL
1 1/4	38	1 1/2	-24	54	25	196	104.5	93	7002297400	HF/F-E-DN38-6S11/4-IL
1 1/2	31	1 1/4	-20	63.5	25	182	102	101.5	7000102400	HF/F-E-DN31-6S11/2-IL
1 1/2	38	1 1/2	-24	63.5	31	213.5	122	110	7000102500	HF/F-E-DN38-6S11/2-IL
2	38	1 1/2	-24	79.4	31	215.5	124	126	7002297500	HF/F-E-DN38-6S2-IL <sup>2)</sup>
2	51	2	-32	79.4	41	250.5	146.5	141	7000102600	HF/F-E-DN51-6S2-IL

<sup>2)</sup> Special sizes only on request





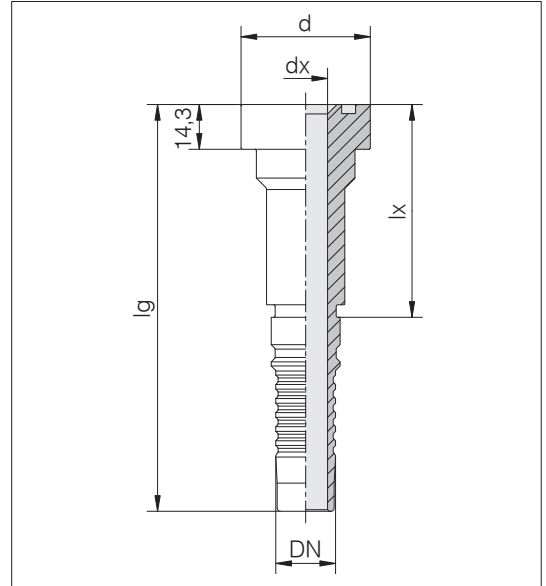
## Hose fittings with flange high pressure series (9000 psi)



# MFLCAT

Hose fittings with flange high pressure series (9000 psi)

ISO 12151-3 (ISO 6162-2)

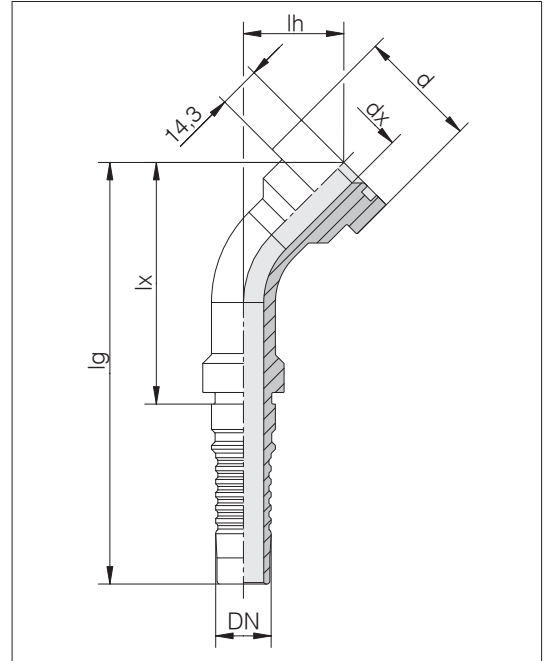


Fl. size Inch	Hose size DN	Inch	Dash	d	dx	lg	lx	Order-No.	Designation
3/4	19	3/4	-12	41.3	14	130	68	7000309800	HF/F-CS-DN19-6S3/4-IL
1	19	3/4	-12	47.6	14	133.5	71.5	7000309900	HF/F-CS-DN19-6S1-IL
1	25	1	-16	47.6	19	150	76	7000310000	HF/F-CS-DN25-6S1-IL
1 1/4	25	1	-16	54	19	155	81	7000310100	HF/F-CS-DN25-6S11/4-IL
1 1/4	31	1 1/4	-20	54	25	166.5	86.5	7000310200	HF/F-CS-DN31-6S11/4-IL
1 1/2	31	1 1/4	-20	63.5	25	168.5	88.5	7000310300	HF/F-CS-DN31-6S11/2-IL
1 1/2	38	1 1/2	-24	63.5	31	185	93.5	7000310400	HF/F-CS-DN38-6S11/2-IL

## MFLCAT 45

Hose fittings with flange high pressure series (9000 psi)

ISO 12151-3 (ISO 6162-2)



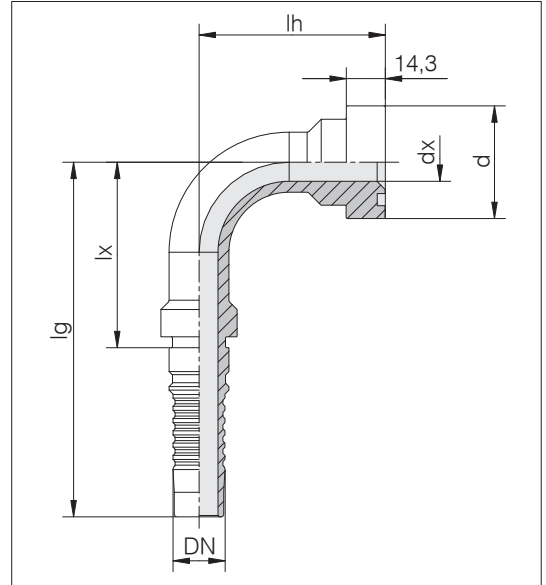
Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	14	139	77	34	7000311200	HF/F-CE45-DN19-6S3/4-IL <sup>2)</sup>
1	19	3/4	-12	47.6	14	143	81	37.5	7000311300	HF/F-CE45-DN19-6S1-IL <sup>2)</sup>
1	25	1	-16	47.6	19	167	93	36.5	7000311400	HF/F-CE45-DN25-6S1-IL
1 1/4	25	1	-16	54	19	172	98	41.5	7000311500	HF/F-CE45-DN25-6S1 1/4-IL
1 1/4	31	1 1/4	-20	54	25	194	114	44.5	7000311600	HF/F-CE45-DN31-6S1 1/4-IL
1 1/2	31	1 1/4	-20	63.5	25	198	118	48.5	7000311700	HF/F-CE45-DN31-6S1 1/2-IL <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	31	224	132.5	51	7000311800	HF/F-CE45-DN38-6S1 1/2-IL <sup>2)</sup>

<sup>2)</sup> Special sizes only on request

# MFLCAT 90

Hose fittings with flange high pressure series (9000 psi)

ISO 12151-3 (ISO 6162-2)

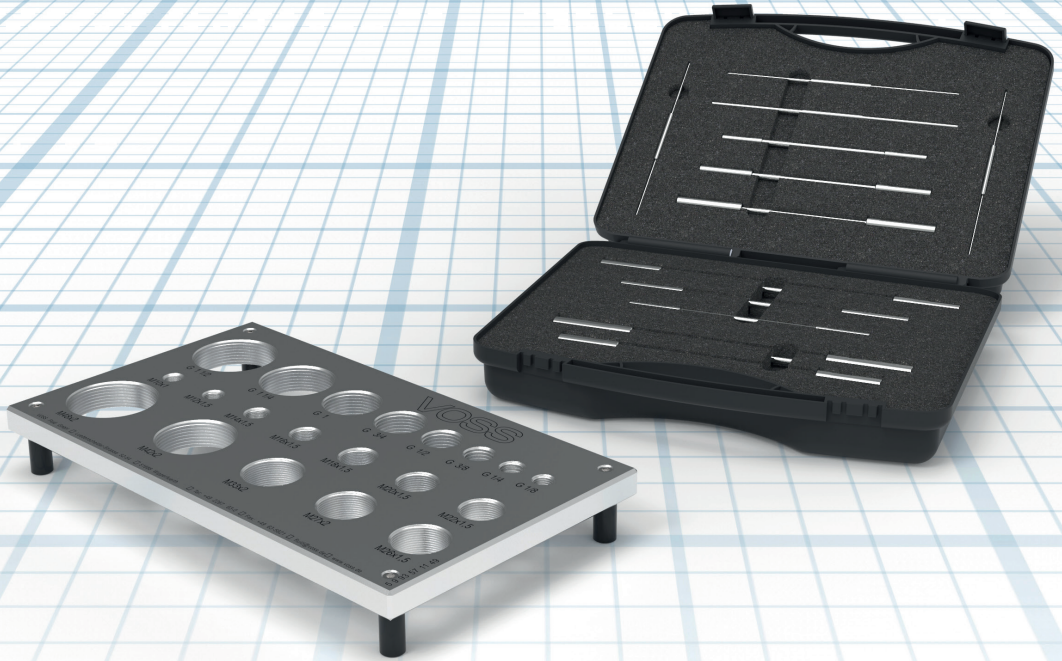


Fl. size Inch	Hose size			d	dx	lg	lx	lh	Order-No.	Designation
	DN	Inch	Dash							
3/4	19	3/4	-12	41.3	14	127.5	65.5	67.5	7000310500	HF/F-CE-DN19-6S3/4-IL
1	19	3/4	-12	47.6	14	127.5	65.5	72.5	7000310600	HF/F-CE-DN19-6S1-IL
1	25	1	-16	47.6	19	158	84	78.5	7000310700	HF/F-CE-DN25-6S1-IL
1 1/4	25	1	-16	54	19	158	84	85	7000310800	HF/F-CE-DN25-6S11/4-IL
1 1/4	31	1 1/4	-20	54	25	182	102	97	7000310900	HF/F-CE-DN31-6S11/4-IL
1 1/2	31	1 1/4	-20	63.5	25	182	102	103	7000311000	HF/F-CE-DN31-6S11/2-IL <sup>2)</sup>
1 1/2	38	1 1/2	-24	63.5	31	214	122.5	111.5	7000311100	HF/F-CE-DN38-6S11/2-IL

<sup>2)</sup> Special sizes only on request



## Tools and accessories



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## Precise checking of gauge accuracy

For a simple and precise check of the crimping of VOSS Fluid hose fittings.

**The mandrel reference gauges are used to easily and precisely check the correct crimping of VOSS Fluid hose fittings and are available as a complete kit including illustrated operating instructions.**

The case contains test mandrels, which are divided into standard and pull-off proof fittings (Interlock) depending on the series. With the help of the operating instructions, it is easy to evaluate the test results of the pressed hose fitting. For better understanding, the entire test procedure is explained both in text and pictures in the operating instructions.



## Prevent size confusion

VOSS thread gauge board for determining threaded studs

**The VOSS thread gauge board facilitates the determination of metric and imperial or UN/UNF and NPT threaded studs and thus prevents the danger of confusion.**

Due to the high geometrical similarity of metric and imperial threads or UN/UNF and NPT, they are sometimes difficult to differentiate. Some threads can also be screwed into seemingly correct threaded bores. Since mix-ups of this kind can lead to hazards for both people and the environment, we recommend compliance with the instructions in the various norms.

With the VOSS thread gauge board, the threads can be checked once again for their correct form before use.

## Mandrel gauges

For a simple and precise check of the crimping of VOSS fluid hose fittings



Type	Order-No.	Designation
Mandrel gauge case complete	7004791900	SC/HF-TGHCC-DN05-DN51



## Thread gauge board

For determining thread sizes of threaded studs

Metric fine thread, cylindrical  
M 10 x 1 - M 48 x 2

Inch-size BSPP thread, cylindrical  
G 1/8" - G 1 1/2"

UN/UNF, cylindrical  
7/16-20 UNF-2 - 1 7/8-12 UN-2A

NPT thread, tapered  
1/8 NPT - 1 1/2 NPT

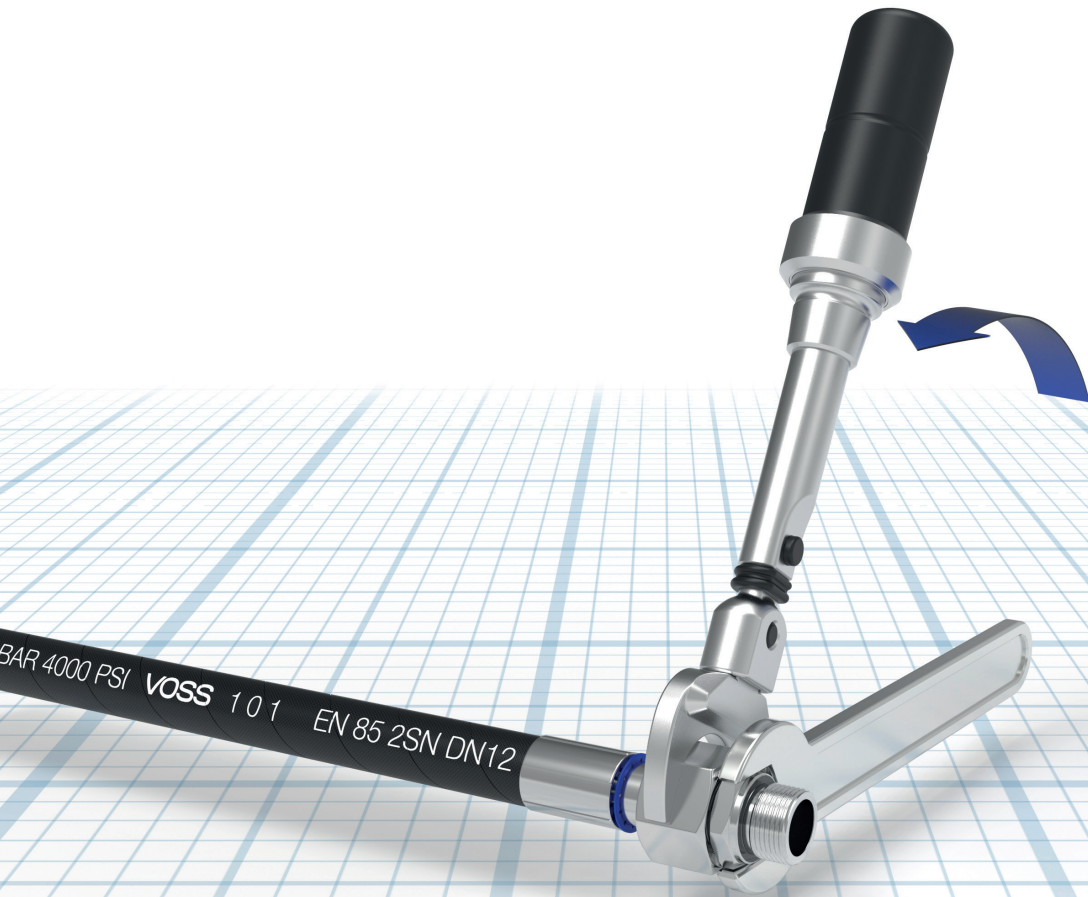


Type	Order-No.	Designation
Metric / Inch	5993571149	TD-TIB
UN/UNF / NPT	7004123800	TD-TIB2



## Assembly instructions

For reliable and correct pre- and final assembly



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## Important notes on VOSS assembly instructions

**To achieve the greatest possible performance security and functional reliability of the VOSS products it is mandatory to comply with every assembly instruction, the operating conditions and the tube recommendations.**

Do not start assembly until you are sure that you have understood the operating and assembly instructions for the individual VOSS products and accessories. Incorrect handling can lead to risks for the safety and leak tightness and can lead to the complete failure of the connection.

Neither compliance with the operating and assembly instructions nor the conditions and methods for installation, operation, use and maintenance of the individual products can be monitored by the manufacturer. Improper execution can lead to property damage and as a consequence can endanger persons. Therefore VOSS Fluid GmbH does not accept any responsibility and liability whatsoever for losses, damages or costs that result from or are in any way related to incorrect installation, improper operation and false use and incorrect maintenance. Non-compliance results in the loss of the warranty.

VOSS Fluid GmbH reserves the right to make changes and additions to the information provided without prior notification. If required, please request the latest version of the operating and assembly instructions or visit our download section at: **[www.voss-fluid.net](http://www.voss-fluid.net)**.

## General information on VOSS assembly instructions

Before and during the entire assembly process always pay attention to the cleanliness of all components including the tubes and hoses. Dirt can lead to the failure of the system.

Before assembly, make sure all preparatory measures have been taken as per the respective instructions.

The current version of the crimping dimensions can be found at: **[www.voss-fluid.net](http://www.voss-fluid.net)**.

Tube and hose preparation should always be carried out as conscientiously as the actual pre- and final assembly of the connection. When starting to assemble VOSS components with elastomer seals, you must check the following:

- Cleanliness and damage-free condition of the groove and/or contact surface
- Cleanliness and damage-free condition of the elastomer seals

## Determination of the tightening torques for screw couplings

The tightening torques contained in the catalog apply under the following conditions:

- Steel couplings with VOSS coat surface coating.
- The specified nominal pressure ratings assume a tensile strength of the mating material of  $\geq 600 \text{ N/mm}^2$ .
- Comply with our recommendations on lubrication of the threaded studs.

For other strength, elasticity module and friction coupling values the tightening torques have to be empirically adapted by the user.

Compliance with the recommended tightening torques is the prerequisite for the full utilization of the pressure specifications and the corresponding safety.

The tightening torques for the threads are listed as recommendations in the table for the corresponding coupling types.

## Explanation of the symbols and further notes



Visual inspection



Tighten hand-tight or perform other manual work



Tighten with a tool according to the instructions



Oil, lubricate at the point marked with an arrow

All dimensions in millimeters [mm].

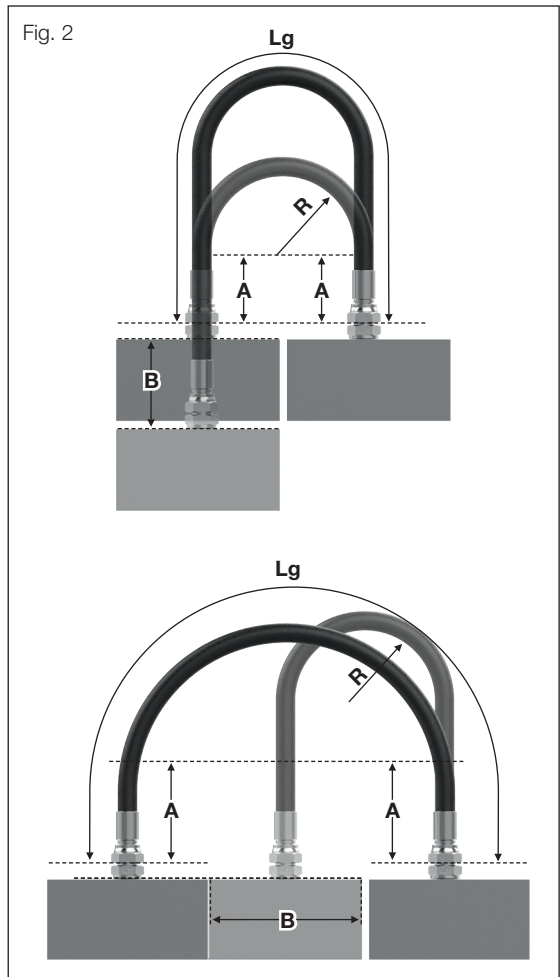
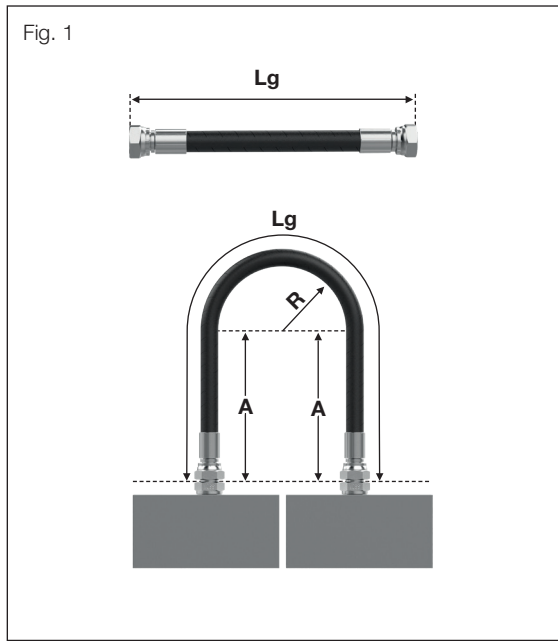
# Hose assembly technology

## Length determination of hose assemblies

Please follow the following instructions to achieve an optimum service life of the hose assemblies.

- The minimum length of a hose corresponds to approx. 8 times the outer diameter for steel wire hoses and approx. 6 times for hoses with textile inserts.
- The bending radius under maximum operating pressure must not be less than the hose manufacturer's specifications.
- Assembly without movement (Fig. 1)  $L_g = 2A + \pi * R$
- Assembly with movement (Fig. 2)  $L_g = 2A + \pi * R + B$

DN	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
A mm	100	110	120	130	140	150	170	200	230	260



R = Bending radius, A = Straight hose length, Lg = Length of hose assembly,  $\pi$  = Pi





## Installation instructions for hose assemblies according to ISO 8331

- Avoid tensile stress and twisting
- Do not bend hose assemblies excessively – use angle fittings if necessary
- Note minimum bending radius
- Hose assemblies should follow the natural hose bend as far as possible



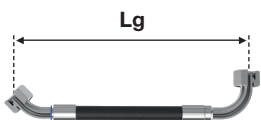
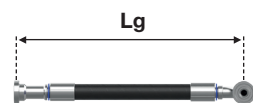
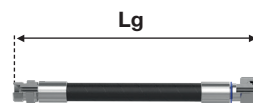
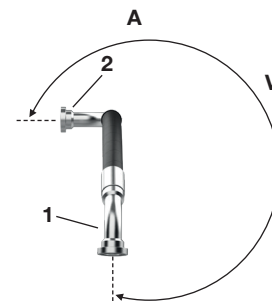
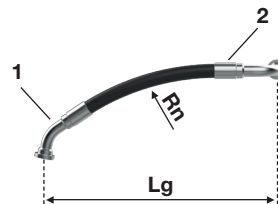
**Attention!**  
Not like this:



## Length determination and alignment of hose assemblies with bent fittings

The twisting angle between two bend fittings of a hose assembly is only stated if they are mounted offset to each other or if one or more bend fittings do not follow the natural hose bend  $R_n$ . If the rear bend fitting (2), in contrast to the front fitting (1), does not follow the natural hose bend, a torsion angle "V" for the rear fitting (2) must be specified counterclockwise (see DIN 20066).

The total length of a hose assembly is measured between the taper coupling of the fittings.



# Assembly instructions for pressing the hose

## 1 Notes



Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date!

The compression values in the VOSS Swaging Diameter Chart dimensions are the basis for every crimping of hydraulic hoses with VOSS hose fittings. The current version of the overview can be found at any time at [www.voss-fluid.net](http://www.voss-fluid.net). The following instructions apply exclusively to hydraulic hoses with steel spiral or braided inserts.

## 2 Hose preparation

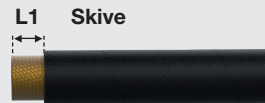


### Assembly of standard hose assemblies with or without skive ferrule (Skive, No Skive)

1. Saw off the hose at right angles. Use a suitable sawing device for this purpose. Cut off the first and last centimeters of each new hose roll. Remove any dirt particles from the hose.



2. Then remove the upper material (rubber), if necessary, except for the wire mesh without damaging it. The skiving length "L1" is indicated in the Swaging Diameter Chart with a tolerance of  $\pm 1$  mm. This step is not necessary for No Skive fittings.



3. Push the ferrule onto the end of the hose, then push the foot of the hose fitting into the end of the hose. If necessary, lubricate the nipples with hydraulic oil (e.g. mineral oil-based HLP46) to facilitate assembly. Make sure that the hose is in the correct position.



4. When crimping, take the specifications from the Swaging Diameter Chart. The crimping diameter must be checked and the collapse of the inner bore of the nipple must be verified with the VOSS mandrel gauges.



### Attention!

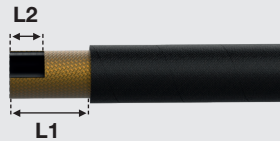
When starting a new hose reel, check the hose diameter and adjust the crimping dimensions if necessary.

## Assembly of interlock hose assemblies with inner and outer skiving ferrules (Double Skive)

**1.** Saw off the hose at right angles. Use a suitable sawing device for this purpose. Cut off the first and last centimeters of each new hose roll. Remove any dirt particles from the hose.



**2.** Remove the upper material (rubber) in the specified length "L1" except for the wire mesh without damaging it. Then skive the tube core according to the instructions. The skiving lengths "L1" and "L2" are stated in the Swaging Diameter Chart with a tolerance of  $\pm 1$  mm.



**3.** Push the ferrule onto the end of the hose, then push the foot of the hose fitting into the end of the hose. If necessary, lubricate the nipples with hydraulic oil (e.g. mineral oil-based HLP46) to facilitate assembly. Make sure that the hose is in the correct position.



**4.** When crimping, take the specifications from the Swaging Diameter Chart. The crimping diameter must be checked and the collapse of the inner bore of the nipple must be verified with the VOSS mandrel gauges.



### Attention!

When starting a new hose reel, check the hose diameter and adjust the crimping dimensions if necessary.

## Test instructions for crimping of VOSS Fluid hose fittings

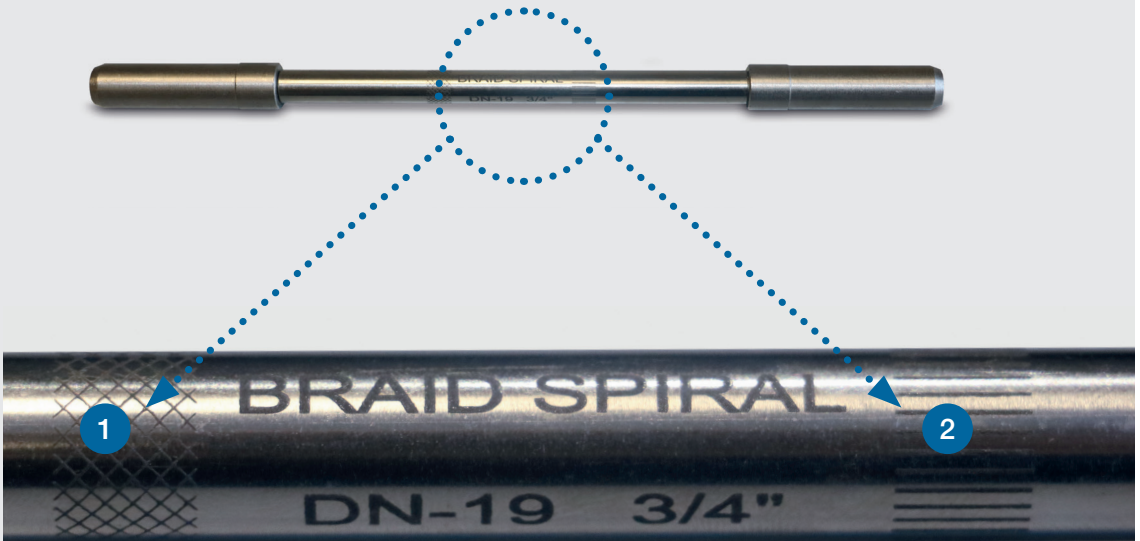


### Note

The compression values in the VOSS Swaging Diameter Chart are the basis for every crimping of hydraulic hoses with VOSS hose fittings. The current version of the overview can be found at any time at [www.voss-fluid.net](http://www.voss-fluid.net).

### 1 Selecting the test mandrel

Series: NPS3 (Standard)



The inspection gauges are differentiated by braided sleeving and the spiral hose. Every nominal width can be allocated to an inspection gauge.

Care must be taken to select the correct side depending on the type of hose (see marking on the test mandrel)



Braided hose



Spiral hose

Series: NPS8 (Interlock)



The inspection gauges of the pull-off proof fittings (Interlock) are suitable for two different nominal diameters as indicated by the marking. Make sure that the correct side is selected per size.

## 2 Test procedure

- Insert the test mandrel as far as possible in the fitting and mark the position reached with your finger on the shaft (make sure that the gauge side is correct!).
- Now pull the gauge out of the fitting and continue to keep your finger on the marked position (cf. Figure 1).
- Check for the correct position of the test mandrel by holding the inspection gauge on the fitting from the outside (cf. Figure 2).
- The correct test result is obtained when the circumferential marking groove of the test mandrel is close to the center of the swaged ferrule.

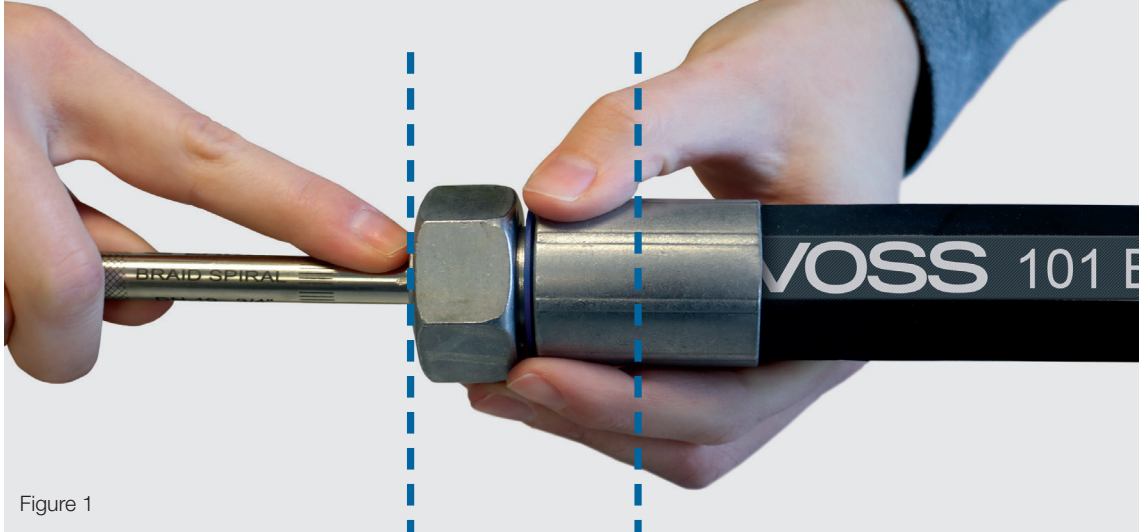


Figure 1

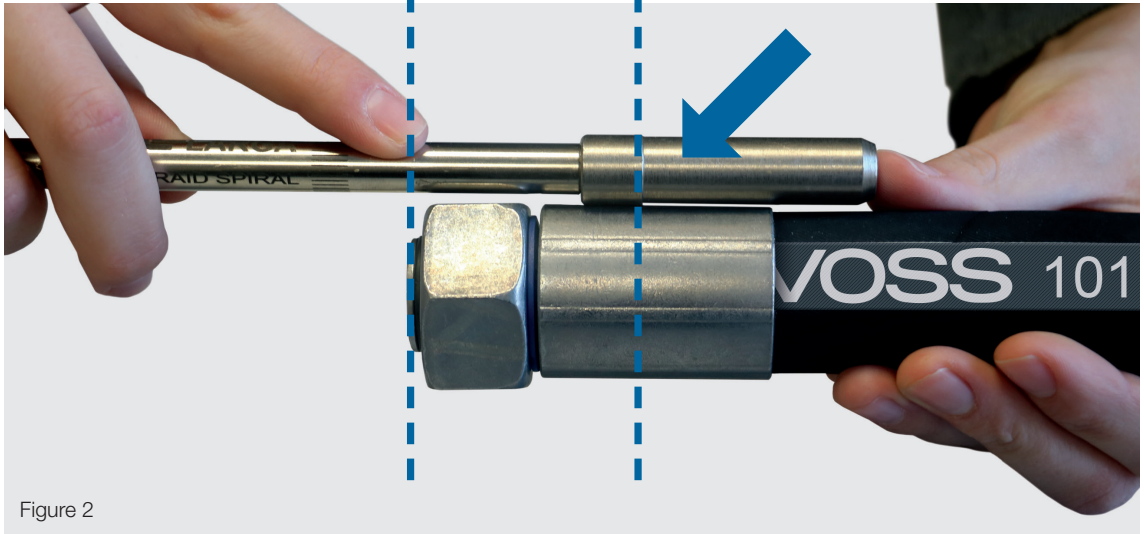


Figure 2

### 3 Evaluation of different test results

#### Ideal nipple inset

The gauge stays plugged in the fitting nearly centered. The fitting was correctly injected and the press diameter should not be changed. We recommend checking the press diameters during production, so that tolerance fluctuations can be detected in good time. In any case, the press diameter must be checked when changing a hose batch!



#### Nipple inset insufficient

The gauge can be freely pushed through the fitting. The fitting was not sufficiently pressed. The press diameter has to be further reduced.

**Attention: The injection is not functioning!**

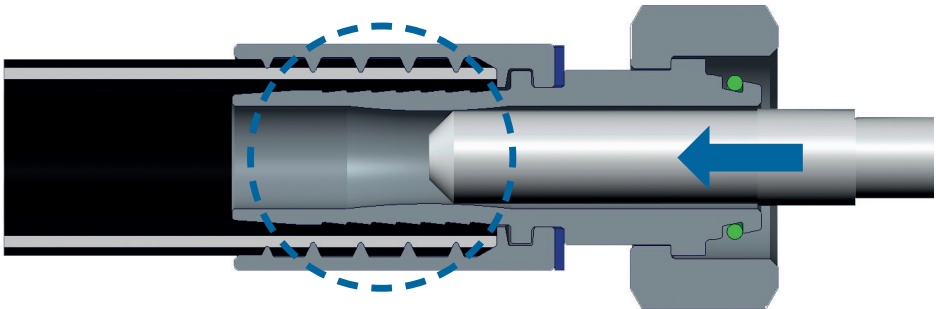
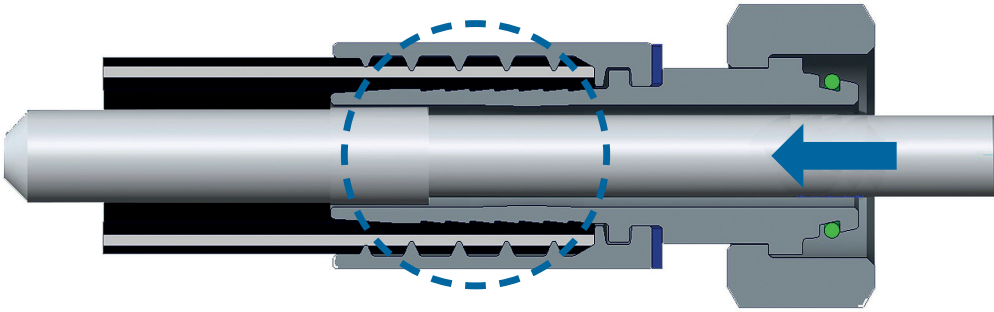
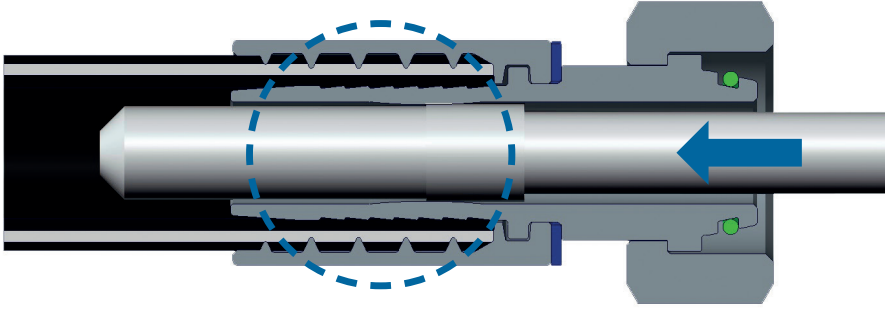


#### Nipple inset too strong

The gauge can only be slightly inserted into the fitting. The fitting has been compressed too much. The press diameter must be selected larger.

**Attention: The injection is not functioning!**





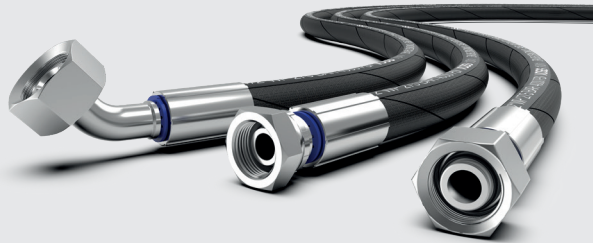
# Assembly instructions DKOL / DKOS

## 1 Notes



Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date!

These assembly instructions describe the final assembly of VOSS hose fittings according to ISO 12151-2 (ISO 8434-1)



## 2 Assembly of the taper couplings



### Assembly procedure

1. Check whether the O-ring is seated without twisting in the groove of the taper coupling.
2. Lightly apply lubricant (e.g. mineral oil-based hydraulic oil HLP46) to the thread, cone surface and O-ring!
3. Insert the taper in the aligned condition into the cone.

### Attention!

After this, no further directional correction may be made.

4. Tighten union nut hand-tight.
5. Then finish mounting the union nut depending on displacement or torque.

### Attention!

The connection is tightened via the union nut and not via the counter-connection. A marking line on the union nut and the union body eases compliance with the tightening distance.



## 3 Assembly requirements

As an alternative to distance-dependent mounting, torque-dependent mounting is also possible. The tightening torques are recommended values. They were ascertained under the following conditions: VOSS coat coating, waxed union nut, taper, O-ring and thread oiled.

Series	Tube OD [mm]	Union nut thread	Distance dependent assembly Revolutions	Tightening torque [Nm] ± 5 %
L	6	M 12 x 1.5	approx. 1/4	20
L	8	M 14 x 1.5	approx. 1/4	30
L	10	M 16 x 1.5	approx. 1/4	40
L	12	M 18 x 1.5	approx. 1/4	50
L	15	M 22 x 1.5	approx. 1/4	70
L	18	M 26 x 1.5	approx. 1/4	90
L	22	M 30 x 2	approx. 1/4	120
L	28	M 36 x 2	approx. 1/4	160
L	35	M 45 x 2	approx. 1/4	250
L	42	M 52 x 2	approx. 1/4	380
S	6	M 14 x 1.5	approx. 1/4	25
S	8	M 16 x 1.5	approx. 1/4	40
S	10	M 18 x 1.5	approx. 1/4	50
S	12	M 20 x 1.5	approx. 1/4	60
S	16	M 24 x 1.5	approx. 1/4	85
S	20	M 30 x 2	approx. 1/4	140
S	25	M 36 x 2	approx. 1/4	190
S	30	M 42 x 2	approx. 1/4	270
S	38	M 52 x 2	approx. 1/4	400

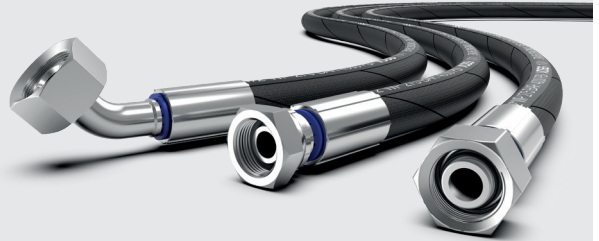
# Assembly instructions DKR and DKOR

## 1 Notes



Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date!

These assembly instructions describe the final assembly of VOSS hose fittings according to ISO 12151-6 (ISO 8434-6).



## 2 Assembly of the taper couplings



### Assembly procedure

1. Check whether the O-ring is seated without twisting in the groove of the taper coupling.
2. Lightly apply lubricant (e.g. mineral oil-based hydraulic oil HLP32) to the thread, surface and O-ring!
3. Insert the taper coupling in the aligned condition into the cone.

### Attention!

After this, no further directional correction may be made.

4. Tighten union nut hand-tight.
5. Then finish mounting the union nut in a distance- or torque-dependent manner.

### Attention!

The connection is tightened via the union nut and not via the counter-connection. A marking line on the union nut and the union body eases compliance with the tightening distance.



## 3 Assembly requirements

As an alternative to distance-dependent mounting, torque-dependent mounting is also possible. The tightening torques are recommended values. They were ascertained under the following conditions: VOSS coat coating, waxed union nut, taper, O-ring and thread oiled.

### DKR

Union nut thread	Distance dependent assembly Revolutions	Tightening torque [Nm]
G 1/8"	approx. 1/6	10-15
G 1/4"	approx. 1/6	20-35
G 3/8"	approx. 1/6	35-45
G 1/2"	approx. 1/6	60-110
G 5/8"	approx. 1/6	80-120
G 3/4"	approx. 1/6	120-150
G 1"	approx. 1/6	140-200
G 1 1/4"	approx. 1/4	210-260
G 1 1/2"	approx. 1/4	290-340
G 2"	approx. 1/4	400-500

### DKOR

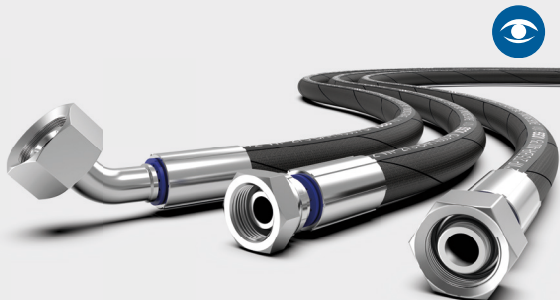
Union nut thread	Distance dependent assembly Revolutions	Tightening torque [Nm]
G 1/8"	approx. 1/6	10-15
G 1/4"	approx. 1/6	20-35
G 3/8"	approx. 1/6	35-45
G 1/2"	approx. 1/6	50-110
G 5/8"	approx. 1/6	60-120
G 3/4"	approx. 1/6	85-150
G 1"	approx. 1/6	115-200
G 1 1/4"	approx. 1/6	180-260
G 1 1/2"	approx. 1/6	240-340
G 2"	approx. 1/6	320-500

# Assembly instructions ORFS

## 1 Notes

Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date.

These assembly instructions describe the final assembly of VOSS hose fittings according to ISO 12151-1 (ISO 8434-3).



## 2 Assembly ORFS

### Assembly procedure

1. Lightly apply lubricant (e.g. mineral oil-based hydraulic oil HLP46) to the thread and the O-ring seal.
2. Tighten union nut hand-tight.
3. Tighten the union nut with a torque wrench according to the table below.

### Attention!

The connection is tightened via the union nut and not via the counter-connection.



## 3 Assembly requirements

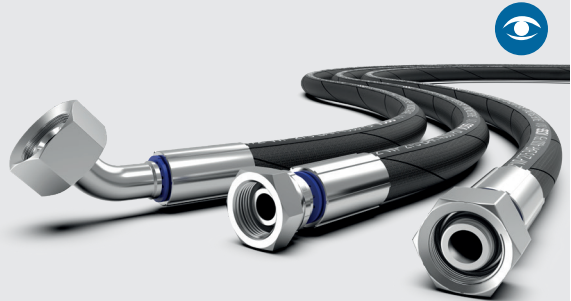
Union nut thread		Tightening torque [Nm]
9/16-18	UNF	15-18
11/16-16	UN	25-30
13/16-16	UN	45-55
1-14	UNS	60-70
1 3/16-12	UN	90-100
1 7/16-12	UN	125-140
1 11/16-12	UN	170-200
2-12	UN	200-230

## Assembly instructions DKJ

### 1 Notes

Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date.

These assembly instructions describe the final assembly of VOSS hose fittings according to ISO 12151-5 (ISO 8434-2).



### 2 Assembly of the 37° taper

#### Assembly sequence

1. Lightly apply lubricant (e.g. mineral oil-based hydraulic oil HLP46) to the thread and surface!
2. Insert the taper surface in the aligned condition into the cone and hand tighten. After this, no further directional correction may be made.
5. Then finish mounting the union nut depending on displacement or torque.

#### Attention!

The connection is tightened via the union nut and not via the counter-connection. A marking line on the union nut and the union body eases compliance with the tightening distance.



### 3 Assembly requirements

Union nut thread	Distance dependent assembly Revolutions	Tightening torque [Nm]
7/16-20 UNF	approx. 1/6	10-18
1/2-20 UNF	approx. 1/6	15-25
9/16-18 UNF	approx. 1/6	20-35
3/4-16 UNF	approx. 1/6	40-55
7/8-14 UNF	approx. 1/6	75-110
1 1/16-12 UN	approx. 1/4	105-145
1 3/16-12 UN	approx. 1/4	140-210
1 5/16-12 UN	approx. 1/4	170-240
1 5/8-12 UN	approx. 1/4	220-360
1 7/8-12 UN	approx. 1/4	300-600
2 1/2-12 UN	approx. 1/4	400-650

# Assembly instructions flanges

## 1 Notes



Before starting assembly, please check the general information in the current VOSS catalog and ensure that the assembly instructions are up to date!

These assembly instructions describe the final assembly of VOSS hose fittings according to ISO 12151-3 (ISO 6162).

## 2 Assembly of the SAE flange couplings



### Assembly of the flange couplings

1. Lightly apply lubricant (e.g. mineral oil-based hydraulic oil HLP46) to the O-ring and hexagon socket screws.

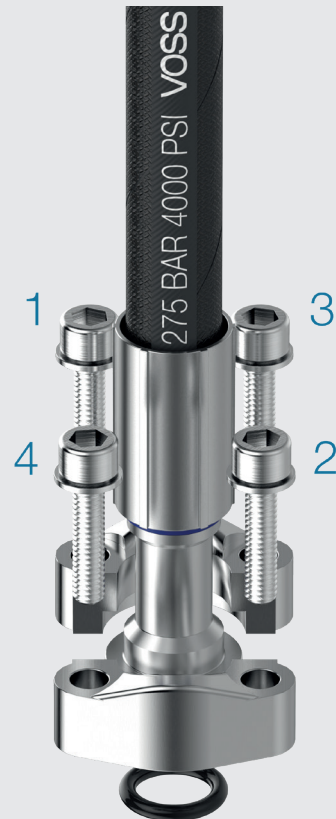
2. Carefully place the round sealing ring (O-ring) in the previously cleaned groove of the flange and tighten the flange evenly crosswise on the connecting surface by means of the 4 cheese head screws and the flange halves, observing the tightening torque.

### Tightening torques

Cheese-head screw ISO 4762-10.9*	Tightening torque Nm** -10 %
M 8	25
M 10	50
M 12	85
M 14	135
M 16	210

\* ISO 4762-10.9 (formerly DIN 912-10.9)

\*\* Nm = Recommended tightening torques for M 8 - M 16 cheese head screws at coefficient of friction  $\mu$  total: 0.14





## General technical instructions

Technical comments · Sealing types and threaded parts



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## Technical notes

### General safety information

- The products listed in this catalog are intended exclusively for fluid technology applications. They cover the spectrum from normal to extreme operating conditions.
- The highest possible performance and functional reliability with VOSS products require that the respective assembly instructions, operating conditions and hose recommendations are followed. Non-compliance with these instructions can impair the function and leads to the loss of our warranty.
- Connecting elements under pressure must be neither tightened nor loosened. Attention, danger to life!
- Hose assemblies must be designed in such a way that they are stress-free when unassembled and all connecting elements can be easily fitted.
- Please always ensure cleanliness when handling hydraulic components. Contamination or damage can impair the function of individual components or the entire hydraulic system.
- Please observe the respective manufacturer's instructions when handling lubricants.
- When handling VOSS products, please always follow the respective operating instructions. Non-observance can lead to dangers for people and the environment.

### Standardization

VOSS hose fittings correspond in design and dimensions to the latest version of the DIN 20066 standard and are available in various systems.

### Permitted pressure

The pressure specifications listed in the VOSS catalog refer to the nominal pressure.

The nominal pressure (PN) indicates the maximum working pressure of the coupling. This is the highest pressure at which the system or part of the system is intended to operate under stationary conditions. For load tests, the burst pressure must be at least 4 times the nominal pressure.

The selection of hoses and associated fittings are pressure-limited. Hydraulic hoses usually have a safety factor of 4, i.e. the burst pressure is 4 times the working pressure. The system pressure must not exceed the operating pressures specified for hoses and fittings. It should be noted that continuous operation under severe conditions, such as high load changes, movements of the hose assembly or high temperatures, can impair the connection between hose and fitting and shorten the service life of the hose assembly. Test methods for hose assemblies can be found in the standards for hoses.

### Permitted operating temperatures

Hose fittings

The temperature range from -40 °C to +120 °C applies to all steel threaded and flanged parts listed in this catalog (see also DIN 3859-1). If the temperature limits are exceeded, corresponding pressure reductions must be taken into account.

## Sealing materials

NBR as standard (e.g. Perbunan®)

- For threaded connections and flared cones 70 - 80 Shore A
- For collar rings 90 Shore A
- Temperature range -35° C to +100° C

On request FKM (e.g. Viton®)

- For threaded connections, flared cones and collar rings 75 - 85 Shore A
- Temperature range -25° C to +200° C

For elastomer seals, the instructions in DIN 7716 (requirements for storage, cleaning and maintenance) must be complied with.

- Storage dry and not above +25° C
- Protect from sunlight, ozone and strong artificial light

## Materials

In the standard version, VOSS hose fittings are manufactured from drawn steel in accordance with the technical delivery conditions as per DIN 3859-1.

## Surface protection

All VOSS hose fittings are optimally protected against corrosion as standard with the VOSS coat finish.

The VOSS corrosion protection is based on a zinc nickel-base layer, a passivation and usually sealing.

## Dimension specifications

The dimensions in the catalog are adapted to the current standards. We reserve the right to make changes due to technical development.

## Patents

We refer to our domestic and foreign patents, utility models, trademarks and property right applications.

## Certifications

Certifications See chapter 8.

## Media resistance

The VOSS hose fittings are designed for the use of commercially available hydraulic oils up to +100 °C and compressed air up to +80 °C.

For critical media our customer service must be consulted before use.

## Orders

All items listed in this catalog are delivered as shown. To improve stock keeping and to protect against dirt and damage, delivery is made in closed packaging units.

Orders should correspond to the contents of these packaging units. The quantities for the individual packaging units can be found in the current price list. If smaller quantities are required which are less than the contents of the packaging unit, we recommend that you purchase them from our dealers.

Our general terms and conditions apply as in **[www.voss-fluid.net](http://www.voss-fluid.net)**.

## Customer Service

Feel free to have our customer service department advise you. Please contact our sales department or one of our field representatives.

## Media, temperature resistance, pressure ranges

### Pressure reduction factors and temperatures

Pressure reductions within the permissible operating temperatures in °C	Material		
	Steel couplings	Seals of NBR (e.g. Perbunan®)	Seals of FKM (e.g. Viton®)
-60			
-50			
-40			
-35	0 %		
-25		0 %	
+20			0 %
+50			
+100			
+120			
+150	10 %		
+175	15 %		
+200	20 %		
+250	29 %		
+300			
+400			

Permitted operating temperatures
  Permissible ambient temperature for hydraulic applications
  Temperature not permitted

### Seal resistance with hydraulic oils

Pressure fluids	Temperature resistance of the seals	
	VOSS NBR	VOSS FKM
HL, HLP, HVLP	-35 °C to +100 °C	-25 °C to +200 °C <sup>4)</sup>
HTG, HETG (rapeseed oils)	up to +80 °C <sup>1)</sup>	up to +100 °C
HEPG (polyalkylene glycols) <sup>5)</sup>	up to +80 °C <sup>2)</sup>	up to +120 °C
HEES (synthetic ester oils)	up to +80 °C <sup>3)</sup>	up to +120 °C

<sup>1)</sup> With rapeseed oil, even the smallest amount of water (0.5%) can destroy the suitability of the seals for use.

<sup>2)</sup> Depending on the oil quality, excessive swelling of the seals and a reduction in low-temperature flexibility may occur.

<sup>3)</sup> The range of available HEES oils leads to widely varying swelling rates of the seals. Therefore, general compatibility cannot be guaranteed.

<sup>4)</sup> The temperature range -40 °C to +120 °C applies to screwed steel parts. Observe the application range of the hydraulic oils. E.g. flash point of HVLP +125 °C.

<sup>5)</sup> HEPG only applicable up to +80 °C.



## Maximum operating pressures for hose fittings

### VOSS NPS 3 (Standard)

Fittings	Hose diameter																													
	5		6		8		10		12		16		19		25		31		38		51									
	DN Inch Dash	3/16" -03	1/4" -04	5/16" -05	3/8" -06	1/2" -08	5/8" -10	3/4" -12	1" -16	1 1/4" -20	1 1/2" -24	2" -32	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR
<b>BSP 60°</b> ISO 12151-6 ISO 8434-6 BS 5200	1/8"	350 350*	1/4"	350 400*	3/8"	350 400*	3/8"	350 400*	1/2"	315 350*	5/8"	315 350*	3/4"	250 315*	1"	200 250*	1 1/4"	160 210*	1 1/2"	125 185*	2"	80 165*								
<b>JIC 37°</b> ISO 12151-5 ISO 8434-2 UNF-UN	7/16"	410	1/2"	410	9/16"	410	3/4"	345	7/8"	345	11/16"	345	11/16"	345	1 5/16"	275	1 5/8"	200	1 7/8"	170	2 1/2"	170								
<b>ORFS</b> ISO 12151-1 ISO 8434-3 UNF/UNS/UN			9/16"	630	11/16"	630	13/16"	410	1"	410	1"	410	13/16"	410	17/16"	410	1 11/16"	275	2"	275										
<b>24°</b> ISO 12151-2 ISO 8434-1 METRIC	L 6	415	L 8	400	L 10	350	L 12	330	L 15	315	L 18	315	L 22	215	L 28	165	L 35	160	L 42	160										
<b>24°</b> ISO 12151-2 ISO 8434-1 METRIC	S 8	630	S 10	630	S 12	630	S 14	630	S 16	420	S 20	420	S 25	420	S 30	420	S 38	315												
<b>FLANGE - FLANGES</b> ISO 12151-3 ISO 6162-1 ANSI J 518 S3000									1/2"	350			3/4"	350	1"	350	1 1/4"	276	1 1/2"	207	2"	207								
<b>FLANGE - FLANGES</b> ISO 12151-3 ISO 6162-2 ANSI J 518 S6000									1/2"	414			3/4"	414	1"	414	1 1/4"	414	1 1/2"	414	2"	414								
<b>RING-TYPE NIPPLE</b> (DIN 7642)	1/8"	200	1/4"	200	3/8"	200	3/8"	200	1/2"	200	5/8"	200	3/4"	200	1"	200														
			12	200	14	200	16	200	18	200	22	200	26	200																

\* Sealing with O-ring

# Maximum operating pressures for hose fittings

## VOSS NPS 8 (Interlock)

Fittings	Hose diameter											
	16		19		25		31		38		51	
	DN Inch Dash		3/4"		1"		1 1/4"		1 1/2"		2"	
	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR	THR.	BAR
<b>BSP 60°</b> ISO 12151-6 ISO 8434-6 BS 5200			3/4"	420	1"	420	1 1/4"	420	1 1/2"	420	2"	350
<b>JIC 37°</b> ISO 12151-5 ISO 8434-2 UNF-UN			1 1/16"	420	1 5/16"	420	1 5/8"	420	1 7/8"	420	2 1/2"	350
<b>ORFS</b> ISO 12151-1 ISO 8434-3 UNF/UNS/UN			1 3/16"	420	1 7/16"	420	1 11/16"	325	2"	290		
<b>24°</b> ISO 12151-2 ISO 8434-1 METRIC	S 20	420	S 25	420	S 30	420	S 38	420				
<b>FLANGE - FLANGES</b> ISO 12151-3 ISO 6162-1 ANSI J 518 S3000			3/4"	350	1"	350	1 1/4"	276	1 1/2"	207	2"	207
<b>FLANGE - FLANGES</b> ISO 12151-3 ISO 6162-2 ANSI J 518 S6000			3/4"	414	1"	414	1 1/4"	414	1 1/2"	414	2"	414

Hoses	DN	19	25	31	38	51
	Inch Dash	3/4" -12	1" -16	1 1/4" -20	1 1/2" -24	2" -32
EN 856 - 4SH ISO 3862-1 4SH		420	380	325	290	250
EN 856 - R13 ISO 3862 - 1 R13		350	350	350	350	350
SAE 100 - R15 ISO 3862 - 1 R15		420	420	420	420	





## Media resistance of VOSS hose fittings

VOSS coat surface protection is resistant to all common hydraulic fluids. Due to the variety of application areas, VOSS Fluid products also come into contact with other media, such as advanced synthetic hydraulic oils, fuels, cleaning agents or lubricants, gases or aggressive bases and acids.

When using media which cannot be described as standard hydraulic oil in general mechanical engineering, we recommend checking their suitability in advance. Please note

that in addition to the pure resistance to the surface coatings used by VOSS Fluid, the compatibility of the elastomers and other hydraulic components are also taken into consideration.

A general overview which can only serve as a guide is shown in the following table:

Medium	Fitting material	Sealing material		
	Steel	NBR	FKM	EPDM
Acetone	Resistant	Resistant	Resistant	Resistant
Ethanol (ethyl alcohol)	Resistant	Resistant	Resistant	Resistant
Ether	Resistant	Resistant	Resistant	Resistant
ASTM – Oil no. 1	Resistant	Resistant	Resistant	Resistant
ASTM – Oil no. 2	Resistant	Resistant	Resistant	Resistant
ASTM – Oil no. 3	Resistant	Resistant	Resistant	Resistant
ASTM – Oil no. 4	Resistant	Resistant	Resistant	Resistant
Brake fluid	Resistant	Resistant	Resistant	Resistant
Gasoline	Resistant	Resistant	Resistant	Resistant
Benzene	Resistant	Resistant	Resistant	Resistant
Steam	Resistant	Resistant	Resistant	Resistant
Diesel fuel	Resistant	Resistant	Resistant	Resistant
Compressed air (dry)	Resistant	Resistant	Resistant	Resistant
Natural gas	Resistant	Resistant	Resistant	Resistant
Crude oil	Resistant	Resistant	Resistant	Resistant
Liquid propane (LPG)	Resistant	Resistant	Resistant	Resistant
Transmission oil	Resistant	Resistant	Resistant	Resistant
Glycol (ethylene glycol)	Resistant	Resistant	Resistant	Resistant
Heating oil	Resistant	Resistant	Resistant	Resistant
Hydraulic oils (mineral oil based) HL/HLP	Resistant	Resistant	Resistant	Resistant
Hydraulic oils (polyglycol based) HEPG	Resistant	Resistant	Temperature dependent	Resistant
Hydraulic oils (bio-oil based) HEES	Resistant	Temperature dependent	Resistant	Resistant
Hydraulic oils (synthet. esters) HEES	Resistant	Temperature dependent	Resistant	Resistant
Hydraulic oils HFC	Resistant	Resistant	Resistant	Resistant
Carbon dioxide	Resistant	Resistant	Resistant	Resistant
Carbon monoxide	Resistant	Resistant	Resistant	Resistant
Methane	Resistant	Resistant	Resistant	Resistant
Methanol (methyl alcohol)	Resistant	Resistant	Resistant	Resistant
Mineral oils	Resistant	Resistant	Resistant	Resistant
Natural gas untreated	Resistant	Resistant	Resistant	Resistant
Petroleum	Resistant	Resistant	Resistant	Resistant
Crude oil	Resistant	Resistant	Resistant	Resistant
Soap solution	Resistant	Resistant	Resistant	Resistant
Shell Naturelle, HF-E-46	Resistant	Resistant	Resistant	Resistant
Silicone oils	Resistant	Resistant	Resistant	Resistant
Skydrol 500	Resistant	Resistant	Resistant	Resistant
Skydrol 7000	Resistant	Resistant	Resistant	Resistant
Turpentine	Resistant	Resistant	Resistant	Resistant
Water	Resistant	Resistant	Resistant	Resistant
Seawater	Resistant	Resistant	Resistant	Resistant

■ resistant   
 ■ conditionally resistant   
 ■ not resistant   
 \* temperature dependent

Please note that the media resistance of the materials always depends on the temperature of the medium used.

## Materials of the soft seals (elastomers)

Depending on the application, the use of different sealing materials may be necessary to ensure the highest protection against leakage. The selection of the suitable elastomer depends mainly on the media used and the temperature range.

VOSS Fluid designs the elastomers of the standard hose

fitting with the material NBR. The DKO fittings are supplied as standard with elastomers made of FKM (e.g. Viton®).

Optionally, VOSS Fluid also offers you other sealing materials.

Sealing material	Nitrile butadiene rubber	Hydrogenated NBR rubber	Fluorinated rubber	Ethylene propylene diene rubber
<b>Abbreviation (Example trade designation)</b>	NBR (e.g. Perbunan®)	HNBR	FKM (e.g. Viton®)	EPDM
<b>Temperature range</b>	-35 °C to +100 °C	-30 °C to +140 °C	-25 °C to +200 °C	-40 °C to +150 °C
<b>Low temperatures</b>	++	+	+	++
<b>Media resistance</b>	Good	Good	Very Good	Conditionally
<b>Ozone resistance</b>	Limited	Good	Very Good	Very Good

Please note that the function of elastomer seals is limited by external influences, media contact, friction or aging.

For this reason, you should check the elastomers for the following damage before assembly/pre-assembly and during maintenance or repair measures and replace them if necessary:

- Crack formation
- Rough or modified surface
- Deformation
- Hardening or softening
- Swelling
- Lack of elasticity

For elastomer seals, the instructions in DIN 7716 (requirements for storage, cleaning and maintenance) must be complied with.



## Ozone resistance of elastomer seals

Ozone is a naturally occurring gas that protects the environment from the sun's UV radiation. However, ozone is also one of the strongest oxidizing agents and attacks practically all organic compounds. Especially elastomer sealing materials such as soft seals made of NBR are very susceptible to this. Even at low ozone concentrations in the air, product quality and service life can be significantly impaired.

Ozone splits the polymer chains of the sealing material, which increases the risk of crack formation even at low elongation (less than 10 %). Depending on the temperature range and humidity, this risk is even increased.

**In its production and storage processes, VOSS Fluid always ensures the optimum conditions for the sealing materials that are used. For example, all seals are protected against heat sources, direct sunlight or contamination. Long storage times are also avoided.**

Consequently, to prevent damage, the following instructions for the storage of sealing materials should be followed:

- The storage temperature of elastomers must be between +5 °C and +25 °C.
- During storage, deformation of the gaskets should be avoided.
- Seal materials should be protected from direct contact with heat or light sources. Direct sunlight or strong artificial light with ultraviolet components should also be avoided.
- Extremely humid or dry conditions must also be avoided. Condensation must not occur, so the relative humidity in storage rooms must be below 70 %.
- Packaging, especially plastic bags, must be UV-protected.
- Please note that ozone can also be produced by other sources. For this reason, the storage rooms should be free of mercury vapor lamps, high-voltage equipment, electric motors or other equipment with electric sparks or discharges. Combustion gases and organic gases should also be excluded.
- Elastomer seals should not come into contact with solvents, oils and greases during storage.
- The service life of seals depends considerably on the type of elastomer. Under optimum conditions, seals made of NBR and HNBR can be stored for up to 6 years; those made of FKM for up to 10 years.
- Previously pre-assembled seals must be checked for damage or contamination before installation.

## Preventing faults and correcting malfunctions

All VOSS Fluid products are designed for the specified purpose under the aspects of reliable process performance as well as ease of assembly and user-friendliness.

In order to guarantee this in the later application, careful system selection of the hydraulic connection systems as well as professional assembly are of utmost importance.

More than 85% of all failures are caused by faulty assembly, which can result in an impairment of the sealing function or even the complete failure of a connection point.

Faulty hydraulic lines not only lead to immense reworking costs and loss of image, but can also have serious consequences such as accident or fire hazards as well as environmental pollution!

**Please be sure to comply with all the information given in this catalog as well as the assembly and operating instructions for VOSS connecting systems, tools and pre-assembly devices!**

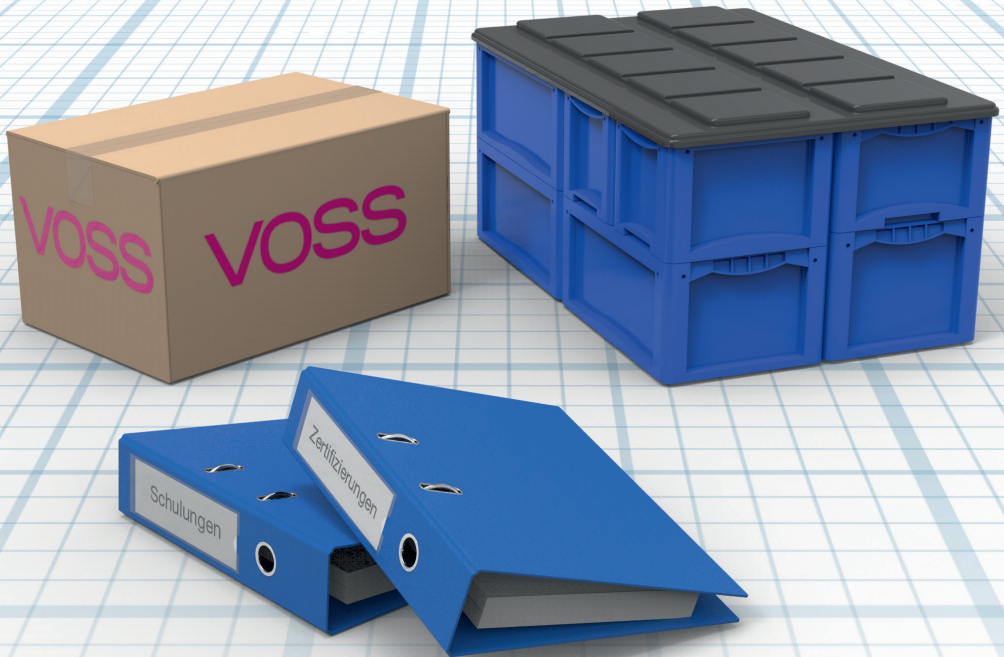
In addition, we recommend regular user training and assembly audits by our specialist personnel!



## Services

Save process costs - reduce throughput times

Increase process reliability through individual logistics solutions



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## Value Added Solutions



**Excellence**

Corrosion protection specialists	Intelligent logistic systems	Solutions for highest efficiency
----------------------------------	------------------------------	----------------------------------

The high added value by VOSS Fluid products and services provides the customer's own products and systems with lasting technical and economic advantages. This added value is defined by the three core competences from the areas of development and production, long-term corrosion protection and availability and services.

New potential for improvement for the customer is constantly being tapped through constant critical scrutiny of the company's own processes, ongoing investments and the deployment of qualified specialist personnel.

## Values added by VOSS Fluid

### Solutions for highest efficiency

#### ... increase the economic efficiency of using hose fittings in your company!

Thanks to their high product quality and user-friendliness, VOSS Fluid product solutions always guarantee sustained leak protection without a negative influence on the overall system costs.

- High process reliability in assembly
- Short assembly times / High productivity
- No rework
- Permanently leak-proof connections
- Use of the optimal components / systems
- **Quality improvement of your product**
- **Reduce the costs of your production**

### Corrosion protection specialists

#### ... protect your machines and systems against corrosion during a lifetime of use!

The high corrosion protection properties of the standard VOSS coat surface coating and the process reliable coating ensure optimum protection of VOSS hose fittings.

- Highest corrosion protection in hydraulic connection technology
- Support during system selection
- Optimum matching of VOSS components with regard to assembly capability
- Continuous development of the surface in terms of corrosion protection and mountability
- **Optimize your corrosion protection measures**
- **Increase your customer satisfaction**

### Intelligent logistic systems

#### ... provide intelligent logistics systems specially tailored to your needs!

The highest regional availability and extensive services optimize the customer's supply chain.

- Delivery service level > 99 %
- Reduction of inventory levels and replenishment times
- No scheduling necessary
- Complete support for KANBAN implementation
- Analysis and documentation of consumption
- Web-KANBAN as online monitoring of your entire threaded connection logistics
- **Simplification/automation of your supply chain**
- **Reduce your materials management costs**

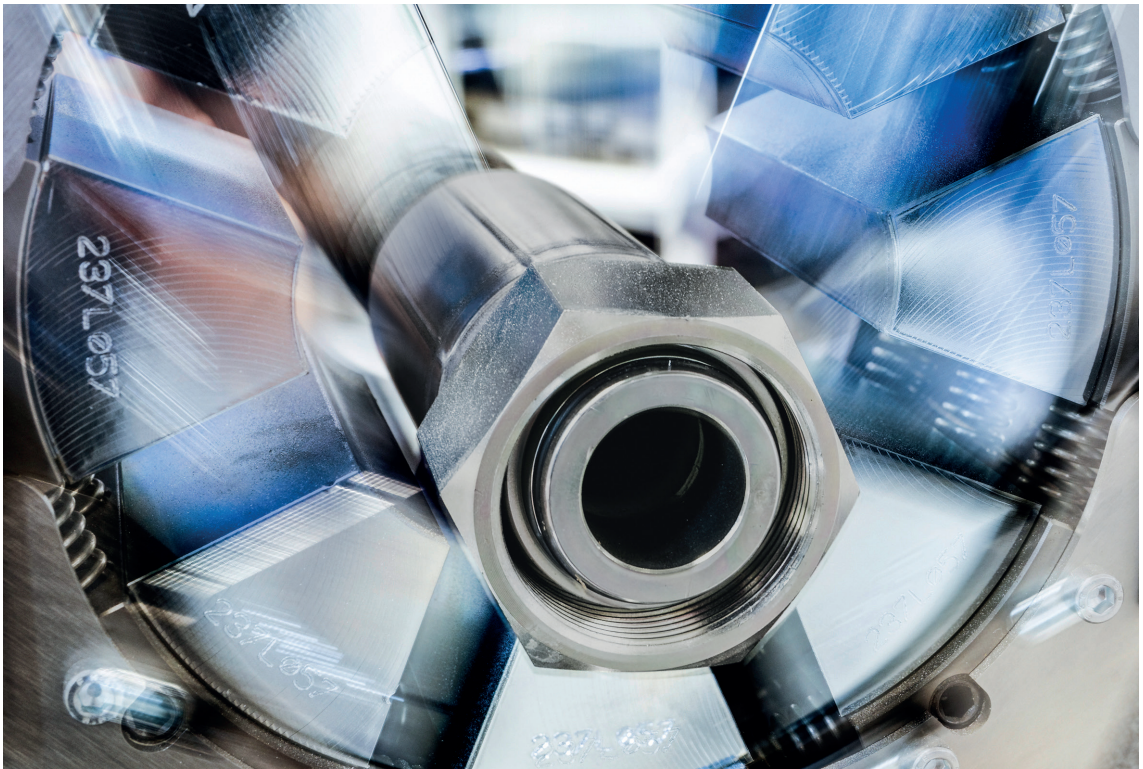


## Reduction of your costs in materials management

### 'VOSS-quality' assembly training and audits

The biggest enemy of the hydraulic system is leakage. There are many possible sources of error, but usually the human being is the key. Only highly qualified employees can detect and avoid potential errors at an early stage. VOSS offers regular training courses for this purpose. At our premises in Wipperfürth or at our customers' premises worldwide. Within the scope of an assembly audit, we look over your employees' shoulders, analyze processes, check assembly stations and equipment and ultimately work out a tailor-made training course that sustainably increases productivity. Fewer errors, faster results, lower costs.

- Assembly training for employee qualification in theory and practice
- Assembly audits for process reliability: inspection of all assembly processes including on-site inspection of pre-assembly devices and tools



## Reduce costs through C-parts management

### Savings potential

Only a fraction of the cost of hydraulic connection components is accounted for by the actual product.

The proportion of logistics costs is disproportionately high, as these components are usually articles from the C-parts range. However, the lack of such components causes the same disruptions in assembly as the lack of A-parts.

### C-Parts Management

"VOSS Fluid" knows the specific needs of the customers and has corresponding logistics systems and logistics solutions which lead to significant savings in process costs, reduction of throughput times and high process reliability. The key to the solution here is individuality.

A logistics solution based on the application is developed and practiced in cooperation with the customer. The following are examples of the rationalization of logistics through C-parts management from "VOSS Fluid".

- Card kanban
- 2-bin kanban
- Web-KANBAN
- Kit service
- Immediate service
- EDI

Further information on request.

Total costs "Hydraulic connection"		
<b>Product</b>	Price	15 – 25 %
<b>Logistics</b>	Identify needs Procurement administration Goods receipt Packaging and disposal Quality and inspection costs Inventory management Inventory costs Transport Assembly supply Downtime costs	75 – 85 %
<b>Total</b>		100%

## Certification and approvals

**VOSS Fluid is certified according to ISO 9001 and ISO 14001 by TÜV Rheinland. The VOSS hose fittings are approved by major inspection agencies.**

- DNV · GL
- Lloyds Register of Shipping
- American Bureau of Shipping

Other approvals on request.

### Fire resistance test according to ISO 15540

In order to determine the fire resistance duration of the hose assembly systems, they are exposed to fire in the form of a propane gas flame under standardized conditions during the test. At the same time, cooling water flows through the test specimens from the inside. After the flame treatment, the assemblies are then subjected to a final pressure test. The test pressure corresponds to 1.5 times the nominal pressure. The testbench used for the fire resistance test is also subject to specific criteria. The main components of the test device are the combustion chamber and the associated pressure test equipment. A precise monitoring system on the testbench also records all key measurable parameters during the ongoing testing process.

Standard parameters of the fire resistance test

- Test time: 30 minutes
- Flame temperature: 800° C
- Cooling water temperature: 80
- Cooling water pressure: 5 bar
- Test pressure: 1.5 x nominal pressure



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S300015000008	7000220500	37	S30120213010	7000318600	59
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S300015000013	7000220700	37	S30120219016A	7000318800	59
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S30120204006A	7000318100	59	S30130150050A	7000313700	58
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S30530116013Z	7000279400	70	S30531138038A	7000283700	74
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S80120525025	7000324500	130	S80440628019	7000306300	140
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S80837925019	7004672300	123	S80923050050	7000099900	146
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S80916032038	7002297000	148	S80936025032	7000072300	149
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S80923025019	7000099100	146	S80936050050	7000101700	149
S80923025025	7000099300	146			

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