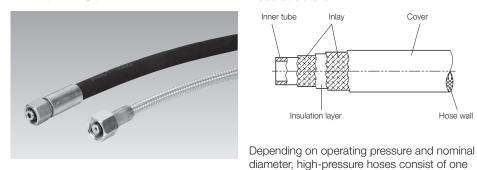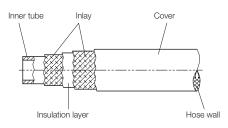# Hydraulic Accessories
High-pressure hoses, connector blocks, couplings and plug-in connectors

Hydraulic high-pressure hoses
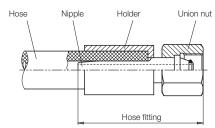**assembled ready for connection**
max. operating pressure 250 / 500 bar

Hose structure

Inner tube   Inlay   Cover

Insulation layer   Hose wall

Depending on operating pressure and nominal diameter, high-pressure hoses consist of one or several layers of wire or textile mesh or spiral inlays.

Hose union

Hose   Nipple   Holder   Union nut

Hose fitting

After pressing of the hose fittings at both ends the high-pressure hose is ready for connection.

Application
High-pressure hoses are used for energy and signal transmission in hydraulic systems. Especially when connecting movable elements, but also for the connection of hydraulic sub-assemblies which are not fixed on a common base, e.g. power units and clamping fixtures.

Advantages
- Quadruple safety
- Every desired length available
- Preferred lengths available from stock
- Marking with manufacturing date as per DIN EN
- ND 4 - high-pressure hose in series with wire braiding

Service life
The application time including storage time should not exceed 6 years, the net storage time 2 years.
High temperatures, frequent motion cycles or high pulse frequencies can reduce the application time.
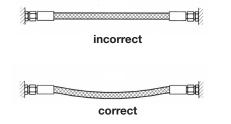
Maintenance
Before putting into operation and then at least once a year, the high-pressure hoses have to be checked by an expert if they are still leak-proof.
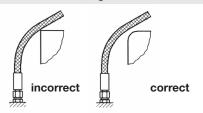
Important notes
Inappropriate installation, use and maintenance can reduce the service life of high-pressure hoses.
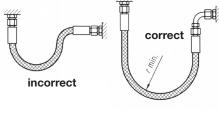
Mounting instructions
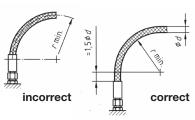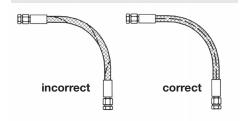
Upsetting or tensile stress
incorrect

correct

Mechanical damage
incorrect   **correct**

Bending radii
incorrect   **correct**

r min.

r min.   =1,5 ϕ d ϕ d r min.

incorrect   **correct**

Torsional stress
incorrect   **correct**

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Subject to modifications

Dimensions / Technical data

High-pressure hose	ND		4	4	6.3	6
Max. operating pressure	[bar]		250	500	250	500
Port size			8L	8S	8L	8S
Union nut			m8L	m8S	m8L	m8S
SW	[mm]		17	19	17	19
D hose Ø	[mm]		9.5*	9.5*	15	17.5
D1 holder Ø	[mm]		13	13	19	19
Min. bending radius	[mm]		50	50	100	100
Fitting length a	[mm]		42	42	50	52
Minimum length	[mm]		150	150	200	200
specific Increase in volume per bar and meter	$\left[\dfrac{cm^3}{bar*m}\right]$		0.006	0.006	0.008	0.006
Part no.			**93751 XXXXX**	**93752 XXXXX**	**93206 XXXXX**	**93706 XXXXX**
Preferred lengths	L = 500	[mm]	**93751 00500**	**93752 00500**	**93206 00500**	**93706 00500**
	1000	[mm]	**93751 01000**	**93752 01000**	**93206 01000**	**93706 01000**
	1600	[mm]	**93751 01600**	**93752 01600**	**93206 01600**	**93706 01600**
	2500	[mm]	**93751 02500**	**93752 02500**	**93206 02500**	**93706 02500**

* with wire braiding

Marking hose

on the hose there is the following marking:

- name or code of the manufacturer
- number of European standard
- type
- nominal diameter
- quarter and the last two figures of the year of manufacture
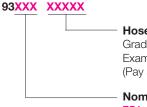
Marking fitting

On the fitting there is the following marking:

- name or code of the manufacturer
- month of manufacture
- the last two figures of the year of manufacture
- nominal pressure PN of the hose fitting
- part number of the complete hydraulic hose

Important notes!

We deliver only completely pressed high-pressure hoses with mounted union nut. Pipe sockets with removable cutting ring and union nut are no longer allowed.

Code for part numbers

93XXX XXXXX

Hose length L in mm
Gradation: 5 mm
Example: L = 750 mm : **00750**
(Pay attention to the minimum length as per chart)

Nominal diameter, union nut and nominal pressure
751 : ND 4 – m8L – 250 bar
752 : ND 4 – m8S – 500 bar
206 : ND 6.3 – m8L – 250 bar
706 : ND 6 – m8S – 500 bar

Further hose lengths and union nuts are available on request

Length tolerances as per DIN 20066

Hose length L	Tolerance
≤ 630 mm	+7 / −3 mm
631 – 1250 mm	+12 / −4 mm
1251 – 2500 mm	+20 / −6 mm
2501 – 8000 mm	+1.5 / −0.5 %
> 8001 mm	+3 / −1 %

Code for part numbers

27001 XXXX

for variable lengths with hose connection on both sides
Union nut M 14 x 1.5 or M 12 x 1.5*

*When selecting hose connection M 12 x 1.5
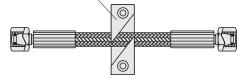only max. operating pressure of 250 bar is admissible

Accessory

Hose holder

made from Delrin

Part no. 5 50 65 0003

Connecting block

with pilot-operated check valves

Connecting threads	Part no.
2 x G 3/8 + 6 x G 1/4	8 98 25 0290
8 x G 3/8	8 98 25 0300

Control pressure = 0.38 x operating pressure + 12

Circuit diagram

Plug-in connectors

for plates and piping boards
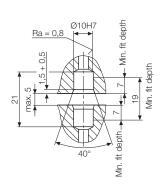
Installation example

Locking ring

Ra = 0,8

Installation dimensions short version

Installation dimensions long version

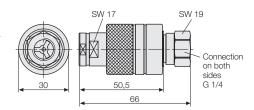| Length [mm]	Nominal diameter [mm]	Max. operating pressure [bar]	Seal	Part no.
14	5	500	FKM	9 210 132
19	5	500	FKM	9 210 127

Quick-disconnect couplings

Description

The quick-disconnect couplings are couplings of sturdy design which lock automatically after uncoupling.

Connection and disconnection is made in the unpressurised condition.

The displacement of the sleeve to the corresponding coupling or uncoupling direction enables an easy one-hand operation.

SW 17   SW 19

Connection on both sides G 1/4

30   50,5   66

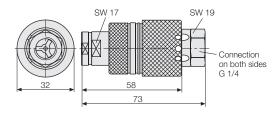| Description	Part no.
Coupling complete	9384006
Coupler	9384106
Nipple	9384206
Dust cap for coupler	9384300
Dust cap for nipple	9384400
Spare seal O-ring	3001091
Spare seal back-up ring	3000228

Coded couplings

Description

In case of more than one coupling port there is the risk of confusion when coupling. Coded couplings are not only marked by colour but additionally by means of a pin inside of the coupling which only fits into the groove of the corresponding nipple. The risk of confusion is thereby eliminated.

The easy handling of the coded Push-Pull couplings allows for a quick and safe finding of the mechanical code.

SW 17   SW 19

Connection on both sides G 1/4

32   58   73

Coding	Part no. Coupling complete	Part no. Coupler separate	Part no. Nipple separate
black	9384715	9384716	9384717
white*	9384725	9384726	9384727
red	9384735	9384736	9384737
yellow	9384745	9384746	9384747
green	9384755	9384756	9384757
blue	9384765	9384766	9384767

* The white coded nipple is provided with a preloaded valve (VSV) which limits a possible pressure built-up through internal leakages in hydraulic clamping elements to approx. 5 bar. The pre-loaded valve is not effective in coupled mode.