

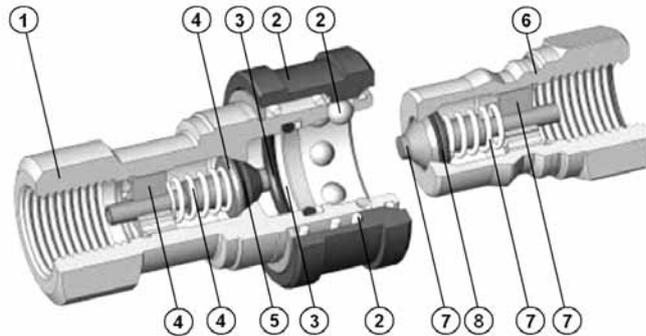
HIGH PRESSURE - quick release couplings

Quick release couplings solve the problem of quick connection and disconnection of flexible hose assemblies. The connection can be made faster and easier than in the case of standard screwed couplings (threaded, flanged) because it is made by hand, with no tools. Usually, it requires only pushing a plug into a socket. Locking occurs automatically, using the spring mechanism.

The most often the plug is blocked in the socket with steel balls. In many cases connection and disconnection can be made with one hand only ("one hand operation").

The use of quick release couplings facilitates assembly. It enables fast and easy replacement of interchangeable modules of hydraulic systems, saving time and money.

Construction - basic elements (illustrated by the example of ISO-B quick release double shut-off coupling)



Socket:

- 1 - body
- 2 - blocking mechanism (sleeve, spring, steel balls)
- 3 - seal (O-ring, stopper ring)
- 4 - valve (valve head, spring, valve holder)
- 5 - valve seal (O-ring)

Plug:

- 6 - body
- 7 - valve (valve head, spring, valve holder)
- 8 - valve seal (O-ring)

Types of quick release couplings

straight-through	single shut-off	double shut-off	double shut-off, dry-break (leak-free)
no valves	valve only on supply side (most often in socket)	valves on both socket and plug side	valves on both socket and plug side, (flat surface face - "flat face" and appropriate sealing)

Standards

Quick release couplings are manufactured according to generally acknowledged standards or according to the manufacturer's standards. The most common in hydraulics:

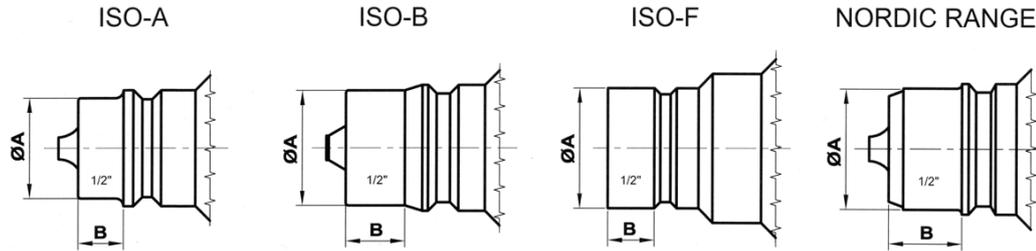
- ISO 7241-1 A (ISO-A)
- ISO 7241-1 B (ISO-B)
- ISO 16028 (ISO-F)

Standards define the dimensional requirements for sockets and plugs, strength requirements (working pressure, bursting pressure) and others (flow rate, connection strength, spillage volume, etc.). Dimensional requirements deal with a plug profile in particular (shape and dimensions). Manufacturing according to the same profile standard ensures so called "interchangeability" and allows connection of sockets and plugs from different producers. However, this connection does not guarantee all functional features of an original set of couplers (socket and plug from the same manufacturer) and should be properly verified.

HIGH PRESSURE - quick release couplings

Plug profiles

(according to international and producers standards: NORDIC RANGE, TEMA STANDARD, CEJN 525)



size [inch]	dimensions [mm]							
	ISO-A		ISO-B		ISO-F		NORDIC RANGE	
	A	B	A	B	A	B	A	B
3/16	-	-	10.85	7.9	-	-	9.3	6.8
1/4	11.8	5.6	14.15	9.65	16.15	5.75	11.9	11.8
3/8	17.25	8.9	19.05	12.45	19.7	4.75	19.9	13.7
1/2	20.5	9.3	23.5	12.2	24.5	9.85	24.6	15
5/8	-	-	-	-	27	9.85	-	-
3/4	29.05	16	31.4	18.8	29.9	11.4	32.7	18.5
1	34.3	19.85	37.75	20.6	36	10.9	41	21.5
1.1/4	44.95	25	-	-	-	-	-	-
1.1/2	54.95	30.7	44.45	32.6	-	-	-	-
2	65.05	35.1	63.2	38.1	-	-	-	-

Material and sealing

The components of quick release couplings are usually made of steel, brass, stainless steel. The choice of proper material is vital for:

- quick release coupling resistance under pressure (also resistance to pulsating pressure and vibrations).
- mechanical wear of the plug and movable components when influenced by friction, resistance to mechanical impact.
- internal corrosion resistance to the medium.
- external corrosion resistance to operation conditions.

In order to obtain properties adequate for certain application, the body of the socket is made of zinc-plated steel, brass (chrome-plated, nickel-plated), or stainless steel. The body of the plug is made of hardened zinc-plated steel, brass or stainless steel, valves made of brass or zinc alloys, balls and springs of appropriate stainless steel.

The O-rings of quick release coupling are made of various elastomeric materials. NBR is a basic material used in hydraulic systems. A socket-plug seal has an additional stopper ring made of PTFE. Quick release couplings of Nordic Range have a double seal (two O-rings) that increases the durability of the sealing.

material	working temp.	characteristics and use of seals
NBR (nitrile)	from -40°C up to +100°C	Basic seal for hydraulics. Resistant to hydraulic oil, mineral oil, fuel (but not biodiesel), water up to +80 °C, glycol, grease, compressed air up to +70 °C, methane, propane, butane, ethanol and methanol.
Viton (FPM / FKM)	from -25°C up to +200°C	Excellent resistance to high temperature, oils, greases, aromatic substances. Resistant to most chemicals. Can be used for steam up to +150 °C.
EPDM	from -40°C up to +150°C	Good resistance to high temperatures. Especially recommended for hot water and steam. Good resistance to brake fluids, glycol and fire resistant hydraulic fluids. Resistant to many of the non-aggressive chemicals. Not suitable for mineral oils and gasoline.
PUR (polyurethane)	from -40°C up to +100°C	Compared to NBR, more resistant to pressure pulsation, but more sensitive to dirt. Mainly used for hydraulic oil.

HIGH PRESSURE - quick release couplings

medium	seal material			quick release coupling material		
	NBR	Viton	EPDM	steel	SS	brass
oils (hydraulic oil, motor oil, grease)	●	▲	X	●	▲	●
fuels (diesel oil, fuel oil)	▲	●	X	●	▲	●
gases	contact TUBES INTERNATIONAL®			▲	●	●
steam (up to +150°C)	X	●	▲	▲	●	●
water (up to +80°C)	●	▲	▲	▲	●	●
water (over +80°C)	X	●	●	▲	●	●

● - recommended ▲ - conditional use X - not recommended

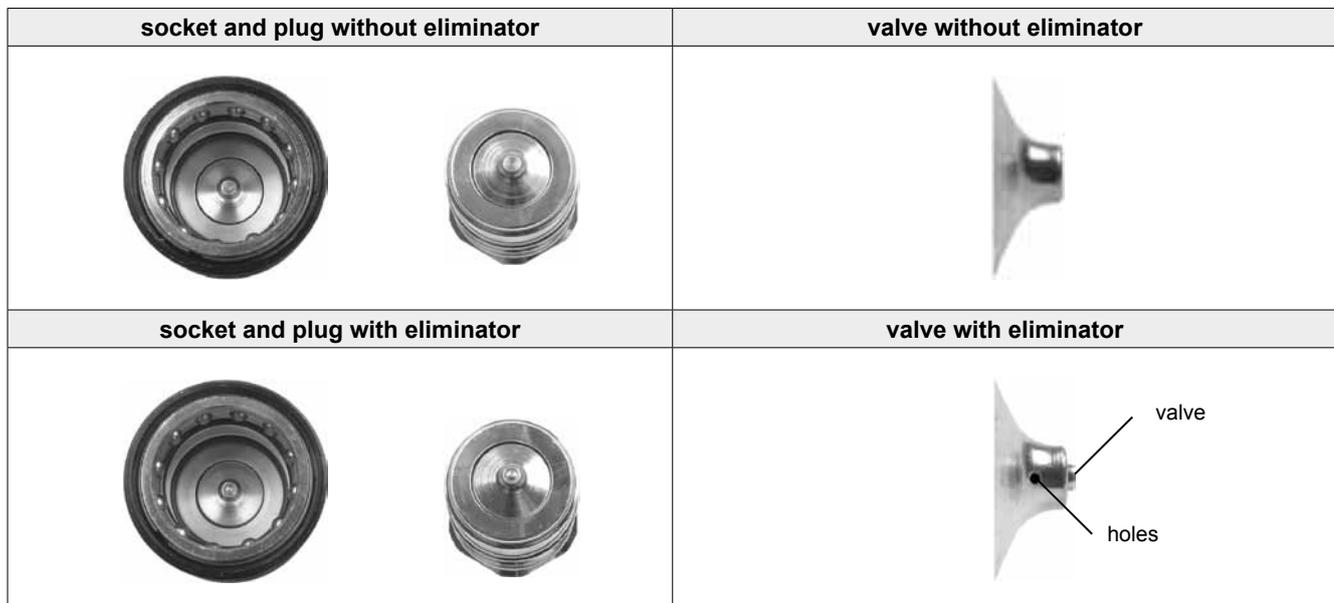
If a quick release coupling is used for a medium other than hydraulic oil, always contact TUBES INTERNATIONAL® for the proper seal selection!

Working pressure

The working pressure of a quick release coupling is its maximum working pressure (including temporary pressure build-up), above which the coupling must not operate. The safety factor is the relation of bursting pressure to the maximum working pressure. In the hydraulic systems the safety factor should be 4 : 1. The value of bursting pressure, working pressure and safety factor should be defined for both connected and disconnected quick release coupling (closed valves). For the disconnected quick release couplings these values are usually lower.

Pressure eliminator

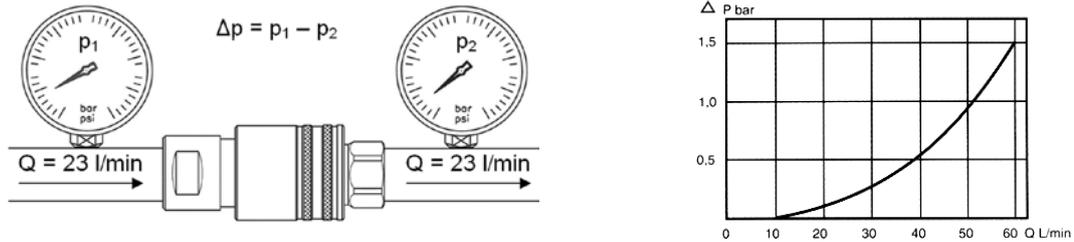
The application of a socket or a plug with a pressure eliminator facilitates connection of quick release couplings when residual pressure in the system is high. The eliminator, a tiny release valve with two small holes, is built into the socket or plug. Once the quick release coupling is connected, release valve opens, the medium flows out through the holes causing the drop of the static pressure.



HIGH PRESSURE - quick release couplings

Flow

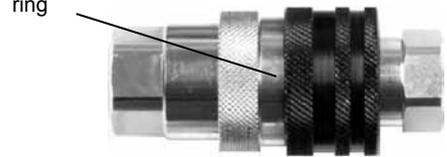
A quick release coupling, the one with a valve in particular, causes pressure loss in an installation transferring fluid. The higher the flow rate Q (measured in l/min) through a quick release coupling (and so fluid velocity), the bigger the pressure loss Δp (measured in bars), which is the difference of pressure value in the installation in front of and behind the quick release coupling. Experimentally obtained charts of pressure loss for different flow rates are prepared for each type and size of the quick release couplings. For hydraulic quick release couplings the tests are performed with hydraulic oil of approximately 32 cSt viscosity at ambient temperature. The charts of pressure loss Δp or flow rate Q through the quick release coupling with specified pressure drop (e.g. 1 bar, 2 bar, 4 bar) are provided in the coupling description. The comparison of flow rates is only acceptable when the flow rates of quick release couplings are compared at the same value of pressure drop.



Protection against accidental disconnection

Disconnection of standard quick release couplings requires backward pull of the plug-locking sleeve in the socket. To prevent accidental disconnection, some of the quick release couplings are equipped with locking sleeve security mechanism preventing backward pull and accidental disconnection.

This feature is implemented by an additional safety locking ring (which needs to be moved in the direction of sleeve and turned) or security pin (safety lock- turning of the sleeve is only possible in a proper position of a cut in the sleeve).

safety locking ring	locking pin
 <p>ring</p> <p>quick release coupling unlocked</p>	 <p>pin</p> <p>quick release coupling unlocked</p>
 <p>quick release coupling locked</p>	 <p>quick release coupling locked</p>

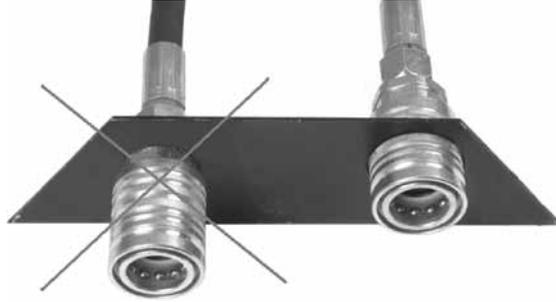
Air inclusion

When a quick release coupling is connected (disconnected), air inclusion follows to the inside of the installation. This causes disturbances in the system, for example unsynchronised operation of actuators. The amount of air that gets into the system depends on the shape of valves faces. The larger the space between the valves during the connection of a plug with a socket, the more air gets into the system. The smallest air inclusion is specific to "flat-face" quick release couplings.

HIGH PRESSURE - quick release couplings

„Push-pull” system

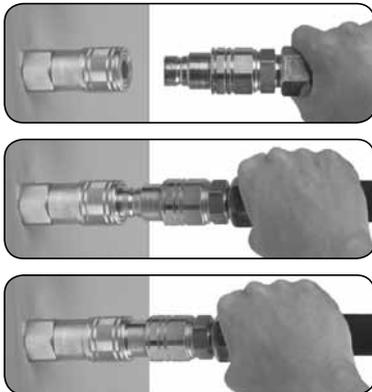
The application of “push-pull” quick release couplings protects flexible hose assemblies from tearing apart in case of accidental strain (e.g. a tractor drives away from a seeder - a mechanical coupler has already been unhooked but hydraulic installation is still connected). The “push-pull” system works properly only if the socket is fixed to the body of equipment (housing) with a knurled locking sleeve (see picture below). When the hose assembly is strained, automatic disconnection of the quick release coupling follows. This prevents damage of the hydraulic installation and possible oil loss. There is also a type of quick release couplings with emergency breakaway function.



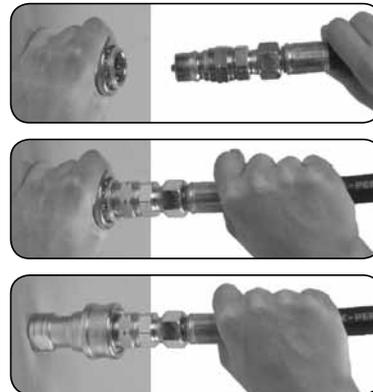
„One hand operation” - connection and disconnection with one hand

To connect standard quick release coupling, locking sleeve must be pulled back and the plug must be pushed into the socket. In order to increase the ease of handling, some of the quick release couplings are connected (disconnected) with one hand. The connection takes place automatically after only pushing the plug into the socket. In order to disconnect such a coupling, the locking sleeve must be pulled back and the plug will pop out.

One hand operation



Standard



Leakage

When connecting (disconnecting) a quick release coupling, leakage of medium occurs. The volume of the leakage depends on the shape of a valve face. It ranges from a fraction of millilitre for “flat-face” quick release couplings to a dozen of millilitres for big poppet-type quick release couplings.



HIGH PRESSURE - quick release couplings

Failure-free operation - protection against contamination

Hydraulic hose assemblies equipped with quick release couplings are often disconnected for longer periods of time. It often happens e.g. in construction, road and agricultural equipment. The application of blank plugs/caps for sockets and plugs protects quick release couplings against contamination and ensures failure-free operation. Lubricators (lubricating blank plugs) enable operation in the conditions of high contamination and in winter - prevent freezing of quick release couplings

Blank caps



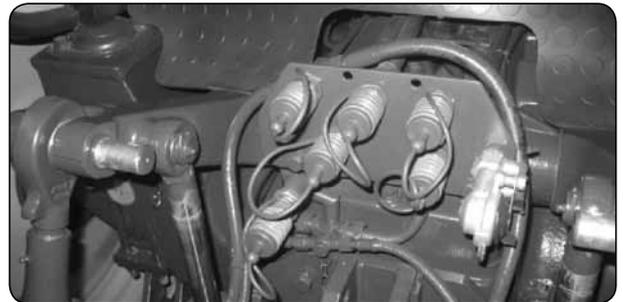
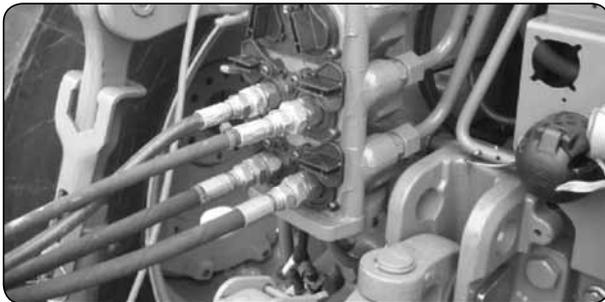
Lubricating blank plugs



Assembly of quick release couplings

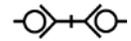
Assembly of a quick release coupling depends on the type of a socket and a plug as well as construction of high pressure system in which quick release coupling is to work. As a standard, plugs are mounted on flexible hose assemblies while the sockets are attached to the body of a machine or equipment.

sealing method	example		
using connectors	<p>TI-ZMW121-22-08</p>	<p>HD-GE-15L-BE-08X</p>	<p>HQ-IA12-M-08G</p>
on 24° cone	<p>TI-ZMW121-22-08</p>		<p>HQ-IA12-M-15L</p>
using metal-rubber seal	<p>TI-ZBZ110-08-08</p>	<p>TI-UDB-08</p>	<p>HQ-IA12-M-08G</p>
sealing on a thread (PTFE tape or anaerobic sealant)	<p>TI-ZBZ130-08-08</p>	<p>UG-TAPE-12</p>	<p>HQ-IA12-M-08G</p>



HIGH PRESSURE - quick release couplings

Couplings DIN standard



DNP, HQ (1/4" ÷ 2")

- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to 400 bar (safety factor 4:1)
- Material:** Galvanized steel
- Seal:** NBR (from -25°C up to +100°C)
- Advantages:** One of the least expensive quick release couplings used in agriculture

Standard quick release couplings with dimensions different from ISO-A (except 1/2" size)* and ISO-B. Used in agricultural machinery mainly.

Socket	size [inch]	female thread size	code	
			DNP	HQ
			1/4	1/4" BSP
3/8	3/8" BSP	DP-PDV1-1010002	HQ-DINV10-F-06G	
1/2	1/2" BSP	DP-PAV1-1313002*	HQ-IA12-F-08G*	
3/4	3/4" BSP	DP-PDV1-2019002	HQ-DINV19-F-12G	
1	1" BSP	DP-PDV1-2525002	HQ-DINV25-F-16G	
1.1/4	1.1/4" BSP	DP-PDV1-3031002	-	
1.1/2	1.1/2" BSP	DP-PDV1-3939002	-	
2	2" BSP	DP-PDV1-5051002	-	

Plug	size [inch]	female thread size	code	
			DNP	HQ
			1/4	1/4" BSP
3/8	3/8" BSP	DP-PDV1-1010003	HQ-DINV10-M-06G	
1/2	1/2" BSP	DP-PAV1-1313003*	HQ-IA12-M-08G*	
3/4	3/4" BSP	DP-PDV1-2019003	HQ-DINV19-M-12G	
1	1" BSP	DP-PDV1-2525003	HQ-DINV25-M-16G	
1.1/4	1.1/4" BSP	DP-PDV1-3031003	-	
1.1/2	1.1/2" BSP	DP-PDV1-3939003	-	
2	2" BSP	DP-PDV1-5051003	-	

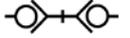
* - manufactured according to ISO 7241-1 A

Operating parameters

size [inch]	working pressure [bar]		flow rate at Δp = 3 bar [l/min]	
	DNP	HQ	DNP	HQ
1/4	400	375	23	22
3/8	350	350	49	58
1/2	250	320	89	94
3/4	250	300	143	165
1	250	275	205	272
1.1/4	220	-	407	-
1.1/2	200	-	650	-
2	100	-	1370	-

HIGH PRESSURE - quick release couplings

Couplings according to ISO-A standard



DNP, HQ (1/4" ÷ 2")

- Standard:** ISO 7241-1 A
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to 400 bar (safety factor 4:1)
- Material:** Galvanized steel
- Seal:** NBR (from -25°C up to +100°C)
- Advantages:** Inexpensive quick release couplings

Quick release couplings widely used in agricultural machines. Sockets are available in a standard and "push-pull" type (automatic disconnection in case of accidental strain of a hose assembly). Commonly known as "euro quick release couplings". Interchangeable with ISO-A quick release couplings of different producers.

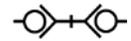
Socket STANDARD type	size [inch]	thread size [inch]	code	
			DNP	HQ
	1/4	1/4 BSP fem.	DP-PAV1-0606002	HQ-IA06-F-04G
	3/8	3/8 BSP fem.	DP-PAV1-1010002	HQ-IA10-F-06G
	1/2	1/2 BSP fem.	DP-PAV1-1313002	HQ-IA12-F-08G
	3/4	3/4 BSP fem.	DP-PAV1-2019002	HQ-IA19-F-12G
	1	1 BSP fem.	DP-PAV1-2525002	HQ-IA25-F-16G
	1.1/4	1.1/4 BSP fem.	DP-PAV1-3031002	HQ-IA32-F-20G
	1.1/2	1.1/2 BSP fem.	DP-PAV1-3939002	HQ-IA40-F-24G
	2	2 BSP fem.	DP-PAV1-5051002	HQ-IA50-F-32G

Plug STANDARD type	size [inch]	thread size [inch]	code	
			DNP	HQ
	1/4	1/4 BSP fem.	DP-PAV1-0606003	HQ-IA06-M-04G
	3/8	3/8 BSP fem.	DP-PAV1-1010003	HQ-IA10-M-06G
	1/2	1/2 BSP fem.	DP-PAV1-1313003	HQ-IA12-M-08G
	3/4	3/4 BSP fem.	DP-PAV1-2019003	HQ-IA19-M-12G
	1	1 BSP fem.	DP-PAV1-2525003	HQ-IA25-M-16G
	1.1/4	1.1/4 BSP fem.	DP-PAV1-3031003	HQ-IA32-M-20G
	1.1/2	1.1/2 BSP fem.	DP-PAV1-3939003	HQ-IA40-M-24G
	2	2 BSP fem.	DP-PAV1-5051003	HQ-IA50-M-32G

Plug STANDARD (DIN 2353)	size [inch]	thread size [mm]	code	
			DNP	HQ
	1/2	M18x1.5 male (12L)	DP-PPV3-1318303	HQ-IA12-M-12L
		M22x1.5 male (15L)	DP-PPV3-1322303	HQ-IA12-M-15L

HIGH PRESSURE - quick release couplings

Couplings according to ISO-A standard



Socket PUSH PULL type	size [inch]	thread size	code	
			DNP	HQ
	1/2	1/2" BSP female	DP-PPV1-1313002	HQ-IA12P-F-08G
		M18x1.5 male (12L)	DP-PPV3-1318302	HQ-IA12P-F-12L
		M22x1.5 male (15L)	DP-PPV3-1322302	HQ-IA12P-F-15L
		M22x1.5 male (15L)*	DP-PPV3-1322502	HQ-IA12P-F-15L-B

* - socket version for panel mounting

Socket blank plug	size [inch]	material	code	
			DNP	HQ
	1/4	PVC or PE	DP-SPAV-06002	HQ-IA06-F-RED
	3/8		DP-SPAV-10002	HQ-IA10-F-RED
	1/2		DP-SPAV-13002	HQ-IA12-F-RED
	3/4		DP-SPAV-20002	HQ-IA19-F-RED
	1		DP-SPAV-25002	HQ-IA25-F-RED
	1.1/4	aluminium	DP-SPAV-30202	-
	1.1/2		DP-SPAV-39202	-
	2		DP-SPAV-50202	-

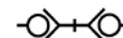
Plug blank cap	size [inch]	material	code	
			DNP	HQ
	1/4	PVC or PE	DP-SPAV-06003	HQ-IA06-M-RED
	3/8		DP-SPAV-10003	HQ-IA10-M-RED
	1/2		DP-SPAV-13003	HQ-IA12-M-RED
	3/4		DP-SPAV-20003	HQ-IA19-M-RED
	1		DP-SPAV-25003	HQ-IA25-M-RED
	1.1/4	aluminium	DP-SPAV-30203	-
	1.1/2		DP-SPAV-39203	-
	2		DP-SPAV-50203	-

Operating parameters

size [inch]	working pressure [bar]		flow rate at $\Delta p = 3$ bar [l/min]	
	DNP	HQ	DNP	HQ
1/4	350	400	13	12
3/8	350	350	70	49
1/2	250	320	88	88
3/4	250	300	168	147
1	200	250	236	325
1.1/4	200	250	413	518
1.1/2	190	230	595	705
2	160	170	1341	1231

HIGH PRESSURE - quick release couplings

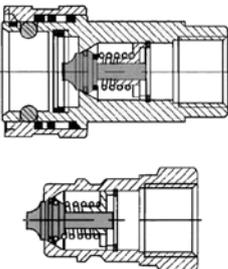
Couplings according to ISO-A standard

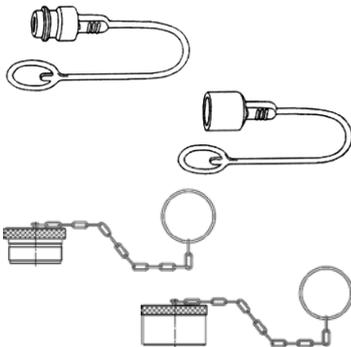


DRAGON (1/4" ÷ 2")

Standard: ISO 7241-1 A
Applications: Hydraulics (hydraulic oil)
Working press.: Up to 350 bar (safety factor 4:1)
Material: Galvanized steel
Seal: NBR (from -20°C up to +100°C)
Advantages: Inexpensive quick release couplings

Quick release couplings widely used in agricultural machines. Commonly known as "euro quick release couplings". Interchangeable with ISO-A quick release couplings of different producers.

Socket and plug 	size [inch]	female thread [inch]	code	
			socket	plug
	1/4	1/4 BSP	DG-IA06-F-04G	DG-IA06-M-04G
	3/8	3/8 BSP	DG-IA10-F-06G	DG-IA10-M-06G
	1/2	1/2 BSP	DG-IA12-F-08G	DG-IA12-M-08G
	3/4	3/4 BSP	DG-IA19-F-12G	DG-IA19-M-12G
	1	1 BSP	DG-IA25-F-16G	DG-IA25-M-16G
	1.1/4	1.1/4 BSP	DG-IA32-F-20G	DG-IA32-M-20G
	1.1/2	1.1/2 BSP	DG-IA40-F-24G	DG-IA40-M-24G
	2	2 BSP	DG-IA50-F-32G	DG-IA50-M-32G

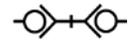
Blank plugs/caps 	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	PVC or PE	DP-SPAV-06002	DP-SPAV-06003
	3/8		DP-SPAV-10002	DP-SPAV-10003
	1/2		DP-SPAV-13002	DP-SPAV-13003
	3/4		DP-SPAV-20002	DP-SPAV-20003
	1	aluminium	DP-SPAV-25002	DP-SPAV-25003
	1.1/4		DP-SPAV-30202	DP-SPAV-30203
	1.1/2		DP-SPAV-39202	DP-SPAV-39203
	2		DP-SPAV-50202	DP-SPAV-50203

Operating parameters

size [inch]	working pressure [bar]	flow rate at $\Delta p = 3$ bar [l/min]
1/4	350	16
3/8	315	28
1/2	250	67
3/4	250	98
1	230	225
1.1/4	230	320
1.1/2	180	480
2	130	710

HIGH PRESSURE - quick release couplings

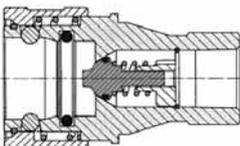
Couplings according to ISO-B standard

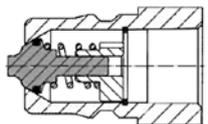


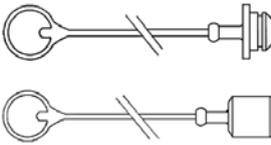
DRAGON (1/4" ÷ 1")

- Standard:** ISO 7241-1 B
- Applications:** Industrial (water, fuel, oil, gas and chemicals)
- Working press.:** Up to 250 bar (safety factor 4:1)
- Material:** Brass, AISI 316 steel
- Seal:** NBR (from -20°C up to +100°C)
Viton (from -25°C up to +175°C)
- Advantages:** Least expensive high pressure quick release coupling made of brass and stainless steel

Quick release couplings intended for application in high pressure industrial installation. Compatible with ISO-B quick release couplings of other producers. Depending on application, the material of the quick release coupling and seal must be chosen.

Socket 	size [inch]	female thread [inch]	code	
			brass (NBR)	AISI 316 (Viton)
	1/4	1/4 BSP	DG-IB06-F-04GB	DG-IB06-F-04GSS
	3/8	3/8 BSP	DG-IB10-F-06GB	DG-IB10-F-06GSS
	1/2	1/2 BSP	DG-IB12-F-08GB	DG-IB12-F-08GSS
	3/4	3/4 BSP	DG-IB19-F-12GB	DG-IB19-F-12GSS
	1	1 BSP	DG-IB25-F-16GB	DG-IB25-F-16GSS

Plug 	size [inch]	female thread [inch]	code	
			brass (NBR)	AISI 316 (Viton)
	1/4	1/4 BSP	DG-IB06-M-04GB	DG-IB06-M-04GSS
	3/8	3/8 BSP	DG-IB10-M-06GB	DG-IB10-M-06GSS
	1/2	1/2 BSP	DG-IB12-M-08GB	DG-IB12-M-08GSS
	3/4	3/4 BSP	DG-IB19-M-12GB	DG-IB19-M-12GSS
	1	1 BSP	DG-IB25-M-16GB	DG-IB25-M-16GSS

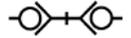
Blank plugs/caps 	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	PVC	DP-SPBV-06002	DP-SPBV-06003
	3/8		DP-SPBV-10002	DP-SPBV-10003
	1/2		DP-SPBV-13002	DP-SPBV-13003
	3/4		DP-SPBV-20002	DP-SPBV-20003
	1		DP-SPBV-25002	DP-SPBV-25003

Operating parameters

size [inch]	working pressure [bar]		flow rate at Δp = 3 bar [l/min]
	brass	AISI 316	
1/4	180	250	16
3/8	180	200	28
1/2	160	200	66
3/4	120	160	97
1	120	125	225

HIGH PRESSURE - quick release couplings

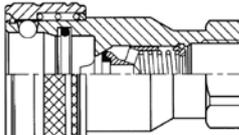
Couplings according to ISO-B standard

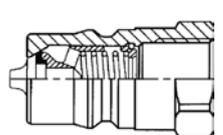


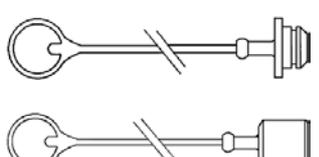
HANSEN (3/16" ÷ 1")

- Standard:** ISO 7241-1 B
Applications: Hydraulics (hydraulic oil), Industrial (water, steam, fuel, oil, gas and chemicals)
Working press.: Up to 345 bar (safety factor 4:1)
Material: Brass, galvanized steel, stainless steel
Seal: NBR (from -40°C up to +120°C) - standard
 Viton (from -25°C up to +205°C) - option
 EPDM (from -45°C up to +150°C) - option
Advantages: Increased resistance to pulsating pressure

Quick release couplings available from 1/2" to 1" made of special hardened steel which ensures increased resistance to pulsating pressure. Depending on application, the material of a quick release coupling and seal must be chosen. Interchangeable with ISO-B quick release couplings of different producers. For pulsating pressure in disconnected couplings, the maximum working pressure must be reduced by 50%.

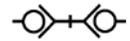
Socket	size [inch]	female thread [inch]	code			
			brass	galvanized steel	AISI 303	AISI 316
				3/16	1/8 NPT	HA-B1H11
1/4	1/4 BSP	HA-B2H16BS	HA-2H16BS	HA-LL2H16BS	HA-ML2H16BS	
	1/4 NPT	HA-B2H16	HA-2H16	HA-LL2H16	HA-ML2H16	
3/8	3/8 BSP	HA-B3H21BS	HA-3H21BS	HA-LL3H21BS	HA-ML3H21BS	
	3/8 NPT	HA-B3H21	HA-3H21	HA-LL3H21	HA-ML3H21	
1/2	1/2 BSP	HA-B4HP26BS	HA-4HP26BS	HA-LL4HP26BS	HA-ML4HP26BS	
	1/2 NPT	HA-B4HP26	HA-4HP26	HA-LL4HP26	HA-ML4HP26	
3/4	3/4 BSP	HA-B6HP31BS	HA-6HP31BS	HA-LL6HP31BS	HA-ML6HP31BS	
	3/4 NPT	HA-B6HP31	HA-6HP31	HA-LL6HP31	HA-ML6HP31	
1	1 BSP	HA-B8HP36BS	HA-8HP36BS	HA-LL8HP36BS	HA-ML8HP36BS	
	1 NPT	HA-B8HP36	HA-8HP36	HA-LL8HP36	HA-ML8HP36	

Plug	size [inch]	female thread [inch]	code			
			brass	galvanized steel	AISI 303	AISI 316
				3/16	1/8 NPT	HA-B1K11
1/4	1/4 BSP	HA-B2K16BS	HA-2K16BS	HA-LL2K16BS	HA-ML2K16BS	
	1/4 NPT	HA-B2K16	HA-2K16	HA-LL2K16	HA-ML2K16	
3/8	3/8 BSP	HA-B3K21BS	HA-3K21BS	HA-LL3K21BS	HA-ML3K21BS	
	3/8 NPT	HA-B3K21	HA-3K21	HA-LL3K21	HA-ML3K21	
1/2	1/2 BSP	HA-B4KP26BS	HA-4KP26BS	HA-LL4KP26BS	HA-ML4KP26BS	
	1/2 NPT	HA-B4KP26	HA-4KP26	HA-LL4KP26	HA-ML4KP26	
3/4	3/4 BSP	HA-B6KP31BS	HA-6KP31BS	HA-LL6KP31BS	HA-ML6KP31BS	
	3/4 NPT	HA-B6KP31	HA-6KP31	HA-LL6KP31	HA-ML6KP31	
1	1 BSP	HA-B8KP36BS	HA-8KP36BS	HA-LL8KP36BS	HA-ML8KP36BS	
	1 NPT	HA-B8KP36	HA-8KP36	HA-LL8KP36	HA-ML8KP36	

Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
				3/16
1/4	HA-PSDC2HK	HA-PPDC2HK		
3/8	HA-PSDC3HK	HA-PPDC3HK		
1/2	HA-PSDC4HK	HA-PPDC4HK		
3/4	HA-PSDC6HK	HA-PPDC6HK		
1	HA-PSDC8HK	HA-PPDC8HK		

HIGH PRESSURE - quick release couplings

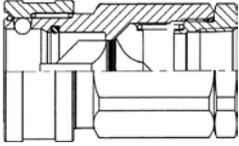
Couplings according to ISO-B standard

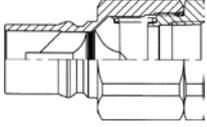


HANSEN (1.1/4" ÷ 2")

- Standard:** ISO 7241-1 B (except size 1.1/4")
Applications: Hydraulics (hydraulic oil), Industrial (water, steam, fuel, oil, gas and chemicals).
Working press.: Up to 150 bar (safety factor 4:1)
Material: Brass, galvanized steel, stainless steel
Seal: NBR (from -40°C up to +120°C) - standard
 Viton (from -25°C up to +205°C) - option
 EPDM (from -45°C up to +150°C) - option
Advantages: According to 97/23/WE: module A

Quick release couplings designed and manufactured according to PED (Pressure Equipment Directive) 97/23/WE: Module A. Depending on application, the material and seal of a quick release coupling must be chosen. Interchangeable with ISO-B quick release couplings of different producers. For pulsating pressure in disconnected couplings, the maximum working pressure must be reduced by 50%.

Socket 	size [inch]	female thread [inch]	code		
			brass	galvanized steel	AISI 303
	1.1/4	1.1/4 BSP	HA-B10H41BS	HA-10H41BS	HA-LL10H41BS
		1.1/4 NPT	HA-B10H41	HA-10H41	HA-LL10H41
	1.1/2	1.1/2 BSP	HA-B12H46BS	HA-12H46BS	HA-LL12H46BS
		1.1/2 NPT	HA-B12H46	HA-12H46	HA-LL12H46
	2	2 BSP	HA-B20H51BS	HA-20H51BS	HA-LL20H51BS
		2 NPT	HA-B20H51	HA-20H51	HA-LL20H51

Plug 	size [inch]	female thread [inch]	code		
			brass	galvanized steel	AISI 303
	1.1/4	1.1/4 BSP	HA-B10K41BS	HA-10K41BS	HA-LL10K41BS
		1.1/4 NPT	HA-B10K41	HA-10K41	HA-LL10K41
	1.1/2	1.1/2 BSP	HA-B12K46BS	HA-12K46BS	HA-LL12K46BS
		1.1/2 NPT	HA-B12K46	HA-12K46	HA-LL12K46
	2	2 BSP	HA-B20K51BS	HA-20K51BS	HA-LL20K51BS
		2 NPT	HA-B20K51	HA-20K51	HA-LL20K51

Blank plug/cap 	size [inch]	material	code	
			socket blank plug	plug blank cap
	1.1/2"	aluminium	HA-SDC12HK	HA-PDC12HK
	2"		HA-SDC20HK	HA-PDC20HK

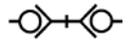
Operating parameters

size [inch]	working pressure [bar]			flow rate at Δp = 3 bar [l/min]
	brass	galvanized steel	stainless steel	
3/16	207	275	344	13
1/4	186	345	255	29
3/8	152	275	255	50
1/2	155	345	293	84
3/4	138	275	242	188
1	103	275	207	272
1.1/4	83 (37)*	200 (37)*	118 (37)*	442
1.1/2	104 (29)*	150 (29)*	152 (29)*	631
2	49 (21)*	100 (21)*	104 (21)*	1314

* - maximum working pressure for hazardous fluids

HIGH PRESSURE - quick release couplings

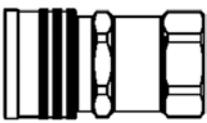
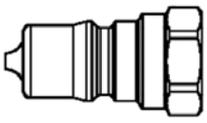
Couplings according to ISO-B standard

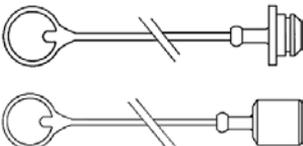


TEMA (1/4" ÷ 1")

- Standard:** ISO 7241-1 B
Applications: Hydraulics (hydraulic oil)
 Industrial (water, steam, fuel, oil, gas and chemicals)
Working press.: Up to 400 bar (safety factor 4:1)
Material: Chrome-plated brass (socket up to: 1/2")
 galvanized steel (other items)
Seal: NBR (from -30°C up to +100°C)
 Viton (from -25°C up to +200°C)
Advantages: double O-ring seal - perfect for gases

Quick release couplings (except 1/4" size) equipped with additional double O-ring seal are ideal for gas installations. Both a socket and a plug are also available with a static pressure eliminator. Depending on application, the material and seal of a quick release coupling must be chosen. Interchangeable with ISO-B quick release couplings of different producers.

picture	size [inch]	description	female thread [inch]	seal	socket code	plug code	
	1/4	with a valve	1/4	NBR	TA-H-IB2510	TA-H-IB2520	
		with a valve and an eliminator		Viton	TA-H-IB2510V	TA-H-IB2520V	
		3/8		with a valve	NBR	TA-H-IB3810	TA-H-IB3820
				with a valve and an eliminator	Viton	TA-H-IB3810V	TA-H-IB3820V
		1/2	with a valve	1/2	NBR	TA-H-IB5010	TA-H-IB5020
			with a valve and an eliminator		Viton	TA-H-IB5010V	TA-H-IB5020V
3/4			with a valve		NBR	TA-H-IB5011	TA-H-IB5021
		with a valve and an eliminator	Viton	TA-H-IB5011V	TA-H-IB5021V		
		1	with a valve	NBR	TA-H-IB7510	TA-H-IB7520	
with a valve and an eliminator			Viton	TA-H-IB7510V	TA-H-IB7520V		
with a valve	NBR		TA-H-IB7511	TA-H-IB7521			
with a valve and an eliminator	Viton	TA-H-IB7511V	TA-H-IB7521V				
with a valve	NBR	TA-H-IB10010	TA-H-IB10020				
with a valve and an eliminator	Viton	TA-H-IB10010V	TA-H-IB10020V				
with a valve	NBR	TA-H-IB10011	TA-H-IB10021				
with a valve and an eliminator	Viton	TA-H-IB10011V	TA-H-IB10021V				

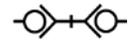
Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	PVC	TA-H-IB2516	TA-H-IB2526
	3/8		TA-H-IB3816	TA-H-IB3826
	1/2		TA-H-IB5016	TA-H-IB5026
	3/4		TA-H-IB7516	TA-H-IB7526
	1		TA-H-IB10016	TA-H-IB10026

Operating parameters

size [inch]	working pressure (coupling connected / disconnected) [bar]	flow rate at Δp = 3 bar [l/min]
1/4	400 / 280	21
3/8	320 / 320	56
1/2	300 / 250	107
3/4	300 / 235	208
1	250 / 185	292

HIGH PRESSURE - quick release couplings

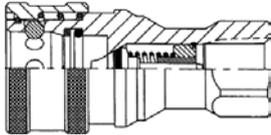
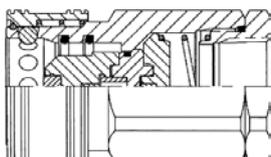
Couplings according to ISO-B standard

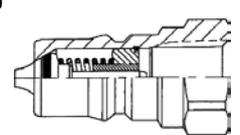
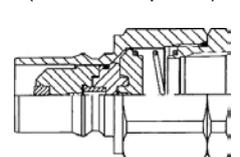


PERFECTING (3/16" ÷ 1.1/2")

- Standard:** ISO 7241-1 B (except size 1.1/4")
Applications: Hydraulics (hydraulic oil)
 Industrial (water, steam, fuel, oil, gas and chemicals)
Working press.: Up to 345 bar (safety factor 4:1)
Material: Brass, galvanized steel, stainless steel
Seal: NBR (from -40°C up to +120°C) - standard
 Viton (from -30°C up to +205°C) - option
 EPDM (from -55°C up to +150°C) - option
Advantages: Double O-ring seal

The socket of a quick release couplings made of brass and stainless steel in sizes above 1" is equipped with a second O-ring instead of a stopper ring. It ensures better sealing. Interchangeable with ISO-B quick release couplings of different producers. Available in AISI 316 steel or with blank caps.

Socket  (from 3/16" up to 1")  (from 1.1/4" up to 1.1/2")	size [inch]	female thread [inch]	code		
			brass	galvanized steel	AISI 303
	3/16	1/8 NPTF	PC-1HF1-B	PC-1HF1	PC-1HF1-S
	1/4	1/4 BSP	PC-2HBF2-B	PC-2HBF2	PC-2HBF2-S
		1/4 NPTF	PC-2HF2-B	PC-2HF2	PC-2HF2-S
	3/8	3/8 BSP	PC-3HBF3-B	PC-3HBF3	PC-3HBF3-S
		3/8 NPTF	PC-3HF3-B	PC-3HF3	PC-3HF3-S
	1/2	1/2 BSP	PC-4HBF4-B	PC-4HBF4	PC-4HBF4-S
		1/2 NPTF	PC-4HF4-B	PC-4HF4	PC-4HF4-S
	3/4	3/4 BSP	PC-6HBF6-B	PC-6HBF6	PC-6HBF6-S
		3/4 NPTF	PC-6HF6-B	PC-6HF6	PC-6HF6-S
	1	1 BSP	PC-8HBF8-B	PC-8HBF8	PC-8HBF8-S
		1 NPTF	PC-8HF8-B	PC-8HF8	PC-8HF8-S
	1.1/4	1.1/4 BSP	PC-10HBF10-B	PC-10HBF10	PC-10HBF10-S
		1.1/4 NPT	PC-10HF10-B	PC-10HF10	PC-10HF10-S
	1.1/2	1.1/2 BSP	PC-12HBF12-B	PC-12HBF12	PC-12HBF12-S
		1.1/2 NPT	PC-12HF12-B	PC-12HF12	PC-12HF12-S

Plug  (from 3/16" up to 1")  (from 1.1/4" up to 1.1/2")	size [inch]	female thread [inch]	code		
			brass	galvanized steel	AISI 303
	3/16	1/8 NPTF	PC-H1F1-B	PC-H1F1	PC-H1F1-S
	1/4	1/4 BSP	PC-H2BF2-B	PC-H2BF2	PC-H2BF2-S
		1/4 NPTF	PC-H2F2-B	PC-H2F2	PC-H2F2-S
	3/8	3/8 BSP	PC-H3BF3-B	PC-H3BF3	PC-H3BF3-S
		3/8 NPTF	PC-H3F3-B	PC-H3F3	PC-H3F3-S
	1/2	1/2 BSP	PC-H4BF4-B	PC-H4BF4	PC-H4BF4-S
		1/2 NPTF	PC-H4F4-B	PC-H4F4	PC-H4F4-S
	3/4	3/4 BSP	PC-H6BF6-B	PC-H6BF6	PC-H6BF6-S
		3/4 NPTF	PC-H6F6-B	PC-H6F6	PC-H6F6-S
	1	1 BSP	PC-H8BF8-B	PC-H8BF8	PC-H8BF8-S
		1 NPTF	PC-H8F8-B	PC-H8F8	PC-H8F8-S
	1.1/4	1.1/4 BSP	PC-H10BF10-B	PC-H10BF10	PC-H10BF10-S
		1.1/4 NPT	PC-H10F10-B	PC-H10F10	PC-H10F10-S
	1.1/2	1.1/2 BSP	PC-H12BF12-B	PC-H12BF12	PC-H12BF12-S
		1.1/2 NPT	PC-H12F12-B	PC-H12F12	PC-H12F12-S

Operating parameters

size [inch]	working pressure [bar]			flow rate at Δp = 3 bar [l/min]
	brass	galvanized steel	AISI 303	
3/16	207	275	241	16
1/4	207	345	241	23
3/8	207	275	241	55
1/2	172	275	241	83
3/4	138	275	207	151
1	103	275	138	260
1.1/4	69	172	138	476
1.1/2	69	172	103	642

HIGH PRESSURE - quick release couplings

Dry break couplings according to ISO-F standard



DNP PLT1 (1/4" ÷ 1.1/2")

- Standard:** ISO 16028 (except size 1.1/2")
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to 300 bar (safety factor: 4:1)
- Material:** Galvanized steel
- Seal:** NBR (from -25°C up to +100°C)
- Advantages:** Inexpensive dry-break quick release couplings

Dry-break, "flat-face" quick release couplings in an economical version. Mainly used in construction machinery. Sockets have safety locking pins preventing accidental disconnection. One hand operation. Interchangeable with ISO-F quick release couplings of different producers.

Socket and plug	size [inch]	female thread [inch]	code	
			socket	plug
	1/4	1/4 BSP	DP-PLT1-0606002	DP-PLT1-0606003
	3/8	3/8 BSP	DP-PLT1-1310002	DP-PLT1-1310003
		1/2 BSP	DP-PLT1-1313002	DP-PLT1-1313003
	1/2	1/2 BSP	DP-PLT1-2013002	DP-PLT1-2013003
		3/4 BSP	DP-PLT1-2019002	DP-PLT1-2019003
	3/4	3/4 BSP	DP-PLT1-2519002	DP-PLT1-2519003
		1 BSP	DP-PLT1-2525002	DP-PLT1-2525003
	1	1.1/4 BSP	DP-PLT1-3031002	DP-PLT1-3031003
	1.1/2	1.1/2 BSP	DP-PLT1-3939002	DP-PLT1-3939003

Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	PVC	DP-SPLT-06002	DP-SPLT-06003
	3/8		DP-SPLT-13002	DP-SPLT-13003
	1/2		DP-SPLT-20002	DP-SPLT-20003
	3/4		DP-SPLT-25002	DP-SPLT-25003
	1		DP-SPLT-30002	DP-SPLT-30003

Operating parameters

size [inch]	working pressure [bar]	flow rate at Δp = 3 bar [l/min]
1/4	300	24
3/8	250	54
1/2	250	98
3/4	250	228
1	250	300
1.1/2	250	650

HIGH PRESSURE - quick release couplings

Dry break couplings according to ISO-F standard



CEJN X64/X65, DNP PLT4/PLK4, HQ IF (3/16" ÷ 1.1/2")

- Standard:** ISO 16028 (except size 3/16" and 1.1/2")
- Applications:** Hydraulics (hydraulic oil)
Industrial
- Working press.:** Up to: 720 bar
- Material:** Galvanized steel
- Seal:** NBR (from -25°C up to +100°C) - standard
Viton (from -15°C up to +200°C) - option
- Advantages:** Dry break, increased resistance to corrosion
(HQ, CJ quick release couplings)

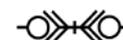
Dry break, "flat face" quick release couplings designed mainly for construction equipment in which high pressure peaks occur. HQ and CJ quick release couplings have zinc-nickel plated coating which provides several times better resistance to corrosion than zinc-plated one. Sockets have a safety locking pin preventing accidental disconnection. A plug with a static pressure eliminator is also available. One hand operation. Depending on application, the seal material must be chosen. Interchangeable with ISO-F quick release couplings of different producers.

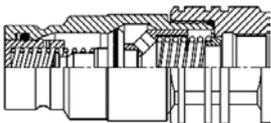
Socket	size [inch]	female thread [inch]	code		
			CEJN X65	DNP PLT4	HQ IF
	3/16	1/8 BSP	CJ-H-101651201	DP-PLT4-0404112	-
	1/4	1/4 BSP	CJ-H-102651202	DP-PLT4-0606112	HQ-IF06-F-04G
	3/8	3/8 BSP	CJ-H-103651204	DP-PLT4-1310112	HQ-IF10-F-06G
		1/2 BSP	CJ-H-103651205	DP-PLT4-1313112	HQ-IF10-F-08G
	1/2	1/2 BSP	CJ-H-105651205	DP-PLT4-2013112	HQ-IF12-F-08G
		3/4 BSP	CJ-H-105651207	DP-PLT4-2019112	HQ-IF12-F-12G
	5/8	3/4 BSP	CJ-H-106651201	DP-PLT4-2219112	HQ-IF16-F-12G
	3/4	3/4 BSP	CJ-H-107651201	DP-PLT4-2519112	HQ-IF19-F-12G
		1 BSP	CJ-H-107651203	DP-PLT4-2525112	HQ-IF19-F-16G
	1	1 BSP	CJ-H-100651203	DP-PLT4-3025112	-
		1.1/4 BSP	CJ-H-100651204	DP-PLT4-3031112	HQ-IF25-F-20G
	1.1/2	1.1/2 BSP	-	-	HQ-IF40-F-24G

Plug	size [inch]	female thread [inch]	code		
			CEJN X65	DNP PLT4	HQ IF
	3/16	1/8 BSP	CJ-H-101656201	DP-PLT4-0404113	-
	1/4	1/4 BSP	CJ-H-102656202	DP-PLT4-0606113	HQ-IF06-M-04G
	3/8	3/8 BSP	CJ-H-103656204	DP-PLT4-1310113	HQ-IF10-M-06G
		1/2 BSP	CJ-H-103656205	DP-PLT4-1313113	HQ-IF10-M-08G
	1/2	1/2 BSP	CJ-H-105656205	DP-PLT4-2013113	HQ-IF12-M-08G
		3/4 BSP	CJ-H-105656207	DP-PLT4-2019113	HQ-IF12-M-12G
	5/8	3/4 BSP	CJ-H-106656201	DP-PLT4-2219113	HQ-IF16-M-12G
	3/4	3/4 BSP	CJ-H-107656201	DP-PLT4-2519113	HQ-IF19-M-12G
		1 BSP	CJ-H-107656203	DP-PLT4-2525113	HQ-IF19-M-16G
	1	1 BSP	CJ-H-100656203	DP-PLT4-3025113	-
		1.1/4 BSP	CJ-H-100656204	DP-PLT4-3031113	HQ-IF25-M-20G
	1.1/2	1.1/2 BSP	-	-	HQ-IF40-M-24G

HIGH PRESSURE - quick release couplings

Dry break couplings according to ISO-F standard



Plug with pressure eliminator	size [inch]	female thread [inch]	code		
			CEJN X64	DNP PLK4	HQ IFP
	1/4	1/4 BSP	CJ-H-102646202	DP-PLK4-0606113	-
	3/8	3/8 BSP	CJ-H-103646204	DP-PLK4-1310113	HQ-IFP10-M-06G
		1/2 BSP	CJ-H-103646205	DP-PLK4-1313113	HQ-IFP10-M-08G
	1/2	1/2 BSP	CJ-H-105646205	DP-PLK4-2013113	HQ-IFP12-M-08G
		3/4 BSP	CJ-H-105646207	DP-PLK4-2019113	-
	5/8	3/4 BSP	CJ-H-106646201	DP-PLK4-2219113	-
	3/4	3/4 BSP	CJ-H-107646201	DP-PLK4-2519113	-
		1 BSP	CJ-H-107646203	DP-PLK4-2525113	HQ-IFP19-M-16G
	1	1 BSP	-	DP-PLK4-3025113	-
		1.1/4 BSP	-	DP-PLK4-3031113	-

Socket blank plug	size [inch]	material	code		
			CEJN	DNP	HQ
	3/16	PVC	CJ-H-091651000	-	-
	1/4		CJ-H-092651000	DP-SPLT-06002	HQ-IF06-F-RED
	3/8		CJ-H-093651000	DP-SPLT-13002	HQ-IF10-F-RED
	1/2		CJ-H-095651000	DP-SPLT-20002	HQ-IF12-F-RED
	5/8		CJ-H-096651000	-	HQ-IF16-F-RED
	3/4		CJ-H-097651000	DP-SPLT-25002	HQ-IF19-F-RED
	1		-	DP-SPLT-30002	HQ-IF25-F-RED

Plug blank cap	size [inch]	material	code		
			CEJN	DNP	HQ
	3/16	PVC	CJ-H-091651050	-	-
	1/4		CJ-H-092651050	DP-SPLT-06003	HQ-IF06-M-RED
	3/8		CJ-H-093651050	DP-SPLT-13003	HQ-IF10-M-RED
	1/2		CJ-H-095651050	DP-SPLT-20003	HQ-IF12-M-RED
	5/8		CJ-H-096651050	-	HQ-IF16-M-RED
	3/4		CJ-H-097651050	DP-SPLT-25003	HQ-IF19-M-RED
	1		-	DP-SPLT-30003	HQ-IF25-M-RED

Operating parameters

size [inch]	working / bursting pressure * [bar]				flow rate at $\Delta p = 3$ bar [l/min]					
	CEJN	DNP		HOLMBURY	CEJN		DNP		HOLMBURY	
		PLT4	PLK4	IF	X65	X64	PLT4	PLK4	IF	IFP
3/16	720 / 1800	500 / 2500	-	-	7.5	-	10.5	-	-	-
1/4	500 / 1500	400 / 1900	400 / 1900	400 / 1700	24	20	24	28	30	-
3/8	400 / 1200	350 / 1600	350 / 1400	350 / 1500	44	44	66	44	67	58
1/2	400 / 1200	350 / 1700	350 / 1400	350 / 1200	93	77	100	90	122	122
5/8	400 / 1200	350 / 1500	350 / 1400	350 / 1200	139	116	128	150	188	-
3/4	400 / 1200	350 / 1800	300 / 1200	350 / 1450	188	171	232	180	290	204
1	350 / 1200	350 / 1500	300 / 1200	260 / 800	330	290	300	232	382	-
1.1/2	-	-	-	250 / 1100	-	-	-	-	1200	-

* - the value of bursting pressure is given for a connected quick release coupling.

HIGH PRESSURE - quick release couplings

Dry break couplings according to ISO-F standard



PH IF (1/4" ÷ 2")

- Standard:** ISO 16028 (to the size of 1 ")
- Applications:** Hydraulics (hydraulic oil)
Industrial (water, steam, fuel, oil, gas and chemicals)
- Working press.:** Up to 315 bar (safety factor 4:1)
- Material:** AISI 316 Ti steel
- Seal:** Viton (from -20°C up to +200°C)
- Advantages:** Made of stainless steel

Dry break, "flat face" quick release couplings are intended for application in industry and high pressure hydraulics. A sockets has a safety locking pin preventing accidental disconnection. One hand operation. Interchangeable with ISO-F quick release couplings of different producers.

Socket and plug	size [inch]	female thread [inch]	code	
			socket	plug
	1/4	1/4 BSP	PH-IF06-F-04G-SS	PH-IF06-M-04G-SS
	3/8	3/8 BSP	PH-IF10-F-06G-SS	PH-IF10-M-06G-SS
	1/2	1/2 BSP	PH-IF12-F-08G-SS	PH-IF12-M-08G-SS
	5/8	3/4 BSP	PH-IF16-F-12G-SS	PH-IF16-M-12G-SS
	3/4	1 BSP	PH-IF19-F-16G-SS	PH-IF19-M-16G-SS
	1	1.1/4 BSP	PH-IF25-F-20G-SS	PH-IF25-M-20G-SS
	1.1/2	1.1/2 BSP	PH-IF40-F-24G-SS	PH-IF40-M-24G-SS
	2	2 BSP	PH-IF50-F-32G-SS	PH-IF50-M-32G-SS

Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	PVC	HQ-IF06-F-RED	HQ-IF06-M-RED
	3/8		HQ-IF10-F-RED	HQ-IF10-M-RED
	1/2		HQ-IF12-F-RED	HQ-IF12-M-RED
	5/8		HQ-IF16-F-RED	HQ-IF16-M-RED
	3/4		HQ-IF19-F-RED	HQ-IF19-M-RED
	1		HQ-IF25-F-RED	HQ-IF25-M-RED

Operating parameters

size [inch]	working pressure [bar]	flow rate at Δp = 3 bar [l/min]
1/4	315	29
3/8	250	45
1/2	250	103
5/8	250	158
3/4	250	194
1	200	270
1.1/2	90	758
2	60	1256

HIGH PRESSURE - quick release couplings

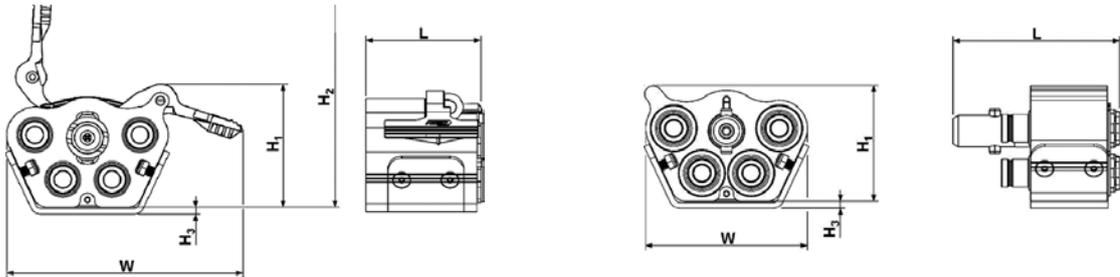
Multiple coupling system



CEJN Multi-X (3/8" ÷ 3/4")

- Standard:** ISO 16028
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to: 350 bar - feed (safety factor 3.4:1),
Up to 50 bar - return
- Material:** Components made of galvanized steel,
anodized aluminium, zinc and brass
- Seal:** NBR (from -30°C up to +100°C)
- Advantages:** Connection of several quick release couplings
at the same time

CEJN Multi-X is a user friendly, multiple coupling system designed for the most challenging working conditions. Allows to connect 2 or 4 hose assemblies at the same time. A socket part is equipped with an assembly plate necessary to attach the multi coupling system to the machine's body. Plugs are equipped with a pressure eliminator which allows to connect the system when there is static pressure in the installation. Hose assemblies are connected with the socket and plug part of the multi coupling system using WEO system which prevents twisting of hoses.



Socket plate	coupling size	WEO coupling size	L [mm]	W [mm]	H1 [mm]	H2 [mm]	H3 [mm]	code
	2 x 3/8"	2 x 1/2"	83	168	70	138	5	CJ-H-109322000
	2 x 1/2"	2 x 3/4"	98	176	79	139	5	CJ-H-109322001
	4 x 3/8"	4 x 1/2"	83	168	88	155	5	CJ-H-109323000
	2 x 3/8"	2 x 1/2"	98	176	99	159	5	CJ-H-109324000
	2 x 1/2"	2 x 3/4"	98	176	99	159	5	CJ-H-109324001
	4 x 1/2"	4 x 3/4"	98	176	99	159	5	CJ-H-109324001
	2 x 1/2"	2 x 3/4"	120	214	107	170	5	CJ-H-109325000

Plug plate	coupling size	WEO coupling size	L [mm]	W [mm]	H1 [mm]	H2 [mm]	H3 [mm]	code
	2 x 3/8"	2 x 3/8"	116	116	66	-	5	CJ-H-109322050
	2 x 1/2"	2 x 1/2"	138	132	73	-	5	CJ-H-109322051
	4 x 3/8"	4 x 3/8"	116	116	83	-	5	CJ-H-109323050
	2 x 3/8"	2 x 3/8"	138	132	93	-	5	CJ-H-109324050
	2 x 1/2"	2 x 1/2"	138	132	93	-	5	CJ-H-109324051
	4 x 1/2"	4 x 1/2"	138	132	93	-	5	CJ-H-109324051
	2 x 1/2"	2 x 3/4"	182	179	97	-	5	CJ-H-109325050

HIGH PRESSURE - quick release couplings

Multiple coupling system

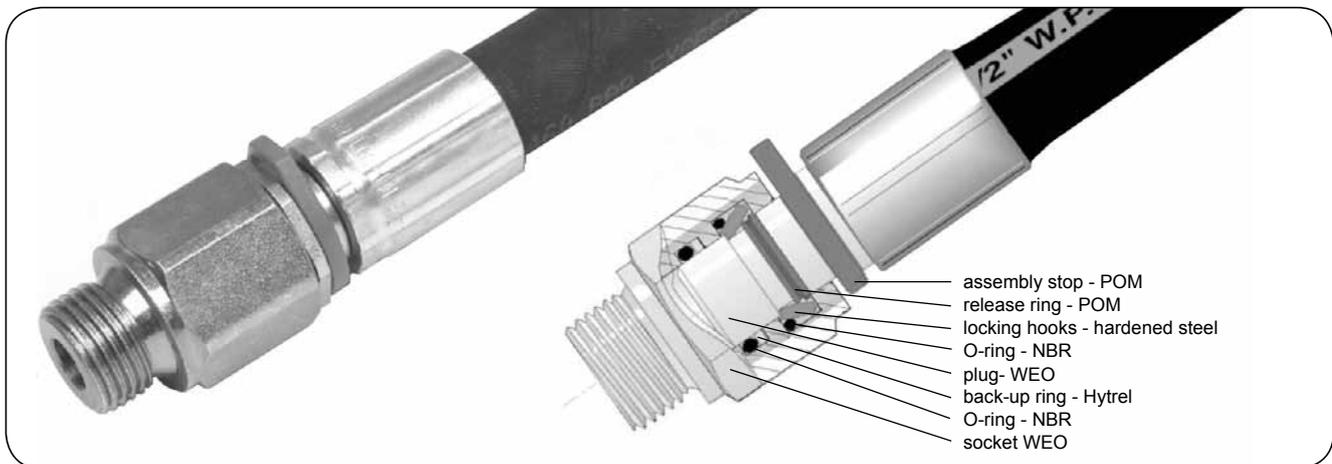
Blank plug/caps  (plug part)	coupling size [inch]	material	code	
			plug blank cap	socket blank cap
 (socket part)	2 x 3/8	PVC	CJ-H-099321050	CJ-H-099321000
	2 x 1/2		CJ-H-099321052	CJ-H-099321002
	4 x 3/8		CJ-H-099321051	CJ-H-099321001
	2 x 3/8 2 x 1/2		CJ-H-099321053	CJ-H-099321003
	4 x 1/2		CJ-H-099321053	CJ-H-099321003
	2 x 1/2 2 x 3/4		CJ-H-099321055	CJ-H-099321005

Adapter WEO - JIC 	WEO size [inch]	thread size [inch]	code
	3/8	9/16 - 18 UNF	CJ-H-147270609
	1/2	3/4 - 16 UNF	CJ-H-147270812
	3/4	1.1/16 - 12 UNF	CJ-H-147271217

Adapter WEO - BSP 	WEO size [inch]	thread size [inch]	code
	3/8	3/8 BSP	CJ-H-147240606
	1/2	1/2 BSP	CJ-H-147240808
	3/4	3/4 BSP	CJ-H-147241212

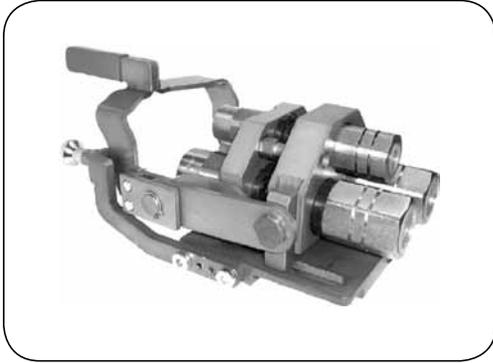
WEO - connection example

WEO system allows to assemble hydraulic hoses without the use of tools and spanners. The only tool needed is a screwdriver. It is an ideal solution in applications where there is not enough space to assemble the hoses in a traditional way. WEO system significantly reduces assembly time. After connection of a plug with a socket, the plug can align itself (swivel movement), what prevents hose kinking during operation.



HIGH PRESSURE - quick release couplings

Multiple coupling system

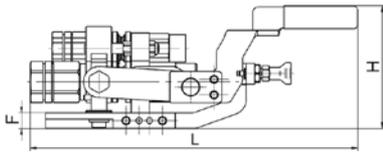


PISTER PMK (3/8" ÷ 3/4")

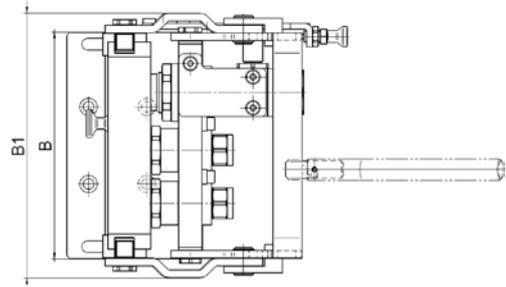
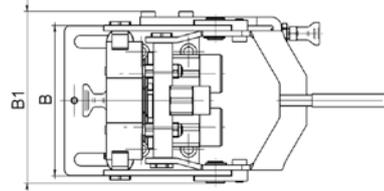
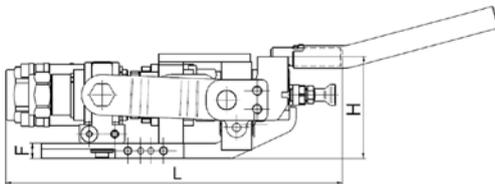
Standard:	Producer's standard
Applications:	Hydraulics (hydraulic oil)
Working press.:	Up to 450 bar
Material:	Zinc-nickel plated steel
Seal:	NBR (from -20°C up to +60°C)
Advantages:	Simultaneous connection of several couplings

Robust PISTER PMK multicouplings intended for heavy duty operation. Possible connection of up to three hose assemblies simultaneously. The zinc-nickel coating is significantly more resistant to corrosion, than regular zinc-plating. The plug side serves as the housing of the multicoupling. The socket side is available as an exchangeable plate exclusively. There are two types of multicouplings: type 1 - for diggers up to 8 tons (3/8" and 1/2") or 16 tons (3/4"), type 2 - for diggers up to 30 tons.

1 type



2 type

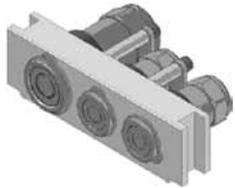


picture	type	couplings size [inch]	thread connections [inch]	B [mm]	B1 [mm]	F [mm]	H [mm]	L [mm]	code
	1	2 x 1/2	2 x 3/4 BSP	140	161	15	75	311	PI-PMK-13-13-1
	1	2 x 1/2 1 x 3/8	2 x 3/4 BSP 1 x 3/8 BSP	140	160	15	119	315	PI-PMK-13-10-13-1
	1	2 x 3/4	2 x 1 BSP	165	204	15	100	341	PI-PMK-20-20-1
	2	1 x 3/4 1 x 1/2	1 x 1 BSP 1 x 1/2 BSP	165	204	15	100	320	PI-PMK-20HV-13-2*
	2	1 x 1/2 1 x 3/4	1 x 1/2 BSP 1 x 1 BSP	165	204	15	100	320	PI-PMK-13-20HV-2*
	2	2 x 3/4	2 x 1 BSP	165	204	15	100	320	PI-PMK-20HV-20HV-2*
	2	2 x 1/2 1 x 3/4	2 x 1/2 BSP 1 x 1 BSP	235	274	15	100	320	PI-PMK-13-13-20HV-2*
	2	1 x 3/4 2 x 1/2	1 x 1 BSP 2 x 1/2 BSP	235	274	15	100	320	PI-PMK-20HV-13-13-2*
	2	2 x 3/4 1 x 1/2	2 x 1 BSP 1 x 1/2 BSP	235	274	15	100	320	PI-PMK-20HV-13-20HV-2*

* - 3/4" coupling has an additional hydraulic locking device to prevent accidental disconnection during operation.

HIGH PRESSURE - quick release couplings

Multiple coupling system

picture	type	couplings size [inch]	thread connections [inch]	code
	1	2 x 1/2	2 x 3/4 BSP	PI -WP-13-13-1
	1	2 x 1/2 1 x 3/8	2 x 3/4 BSP 1 x 3/8 BSP	PI -WP-13-10-13-1
	1	2 x 3/4	2 x 1 BSP	PI -WP-20-20-1
	2	1 x 3/4 1 x 1/2	1 x 1 BSP 1 x 1/2 BSP	PI -WP-20-13-2
	2	1 x 1/2 1 x 3/4	1 x 1/2 BSP 1 x 1 BSP	PI -WP-13-20-2
	2	2 x 3/4	2 x 1 BSP	PI -WP-20-20-2
	2	2 x 1/2 1 x 3/4	2 x 1/2 BSP 1 x 1 BSP	PI -WP-13-13-20-2
	2	1 x 3/4 2 x 1/2	1 x 1 BSP 2 x 1/2 BSP	PI -WP-20-13-13-2
	2	2 x 3/4 1 x 1/2	2 x 1 BSP 1 x 1/2 BSP	PI -WP-20-13-20-2
	1	1 x cap 1 x 1/2	1 x 3/4 BSP	PI -WP-13SK-13-1
	1	1 x 1/2 1 x cap	1 x 3/4 BSP	PI -WP-13-13SK-1
	1	1 x cap 1 x 3/4	1 x 1 BSP	PI -WP-20SK-20-1
	1	1 x 3/4 1 x cap	1 x 1 BSP	PI -WP-20-20SK-1
	2	1 x cap 1 x 3/4	1 x 1 BSP	PI -WP-20-13SK-2
	2	1 x 3/4 1 x cap	1 x 1 BSP	PI -WP-13SK-20-2
	2	1 x cap 1 x 1/2 1 x 3/4	1 x 1/2 BSP 1 x 1 BSP	PI -WP-13SK-13-20-2
	2	2 x cap 1 x 3/4	1 x 1 BSP	PI -WP-13SK-13SK-20-2
	2	1 x 3/4 1 x 1/2 1 x cap	1 x 1 BSP 1 x 1/2 BSP	PI -WP-20-13-13SK-2
	2	1 x 3/4 2 x cap	1 x 1 BSP	PI -WP-20-13SK-13SK-2

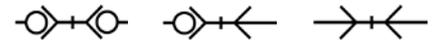
picture	type	max. couplings size [inch]	material	code
	1	2 x 1/2	plastic	PI -PS-13-13
	1	3 x 1/2		PI -PS-13-13-13
	1 i 2	2 x 3/4		PI -PS-20-20
	2	3 x 3/4		PI -PS-20-20-20

Operating parameters

type	couplings size [inch]	thread connections [inch]	working pressure [bar]	flow rate - Δp = 3 bar [l/min]
1	3/8	3/8 BSP	330	50
1	1/2	3/4 BSP	330	90
1	3/4	1 BSP	330	170
2	1/2	1/2 BSP	450	90
2	3/4	1 BSP	450	250

HIGH PRESSURE - quick release couplings

NORDIC RANGE couplings



CEJN 525, TEMA STANDARD (3/16" ÷ 2")

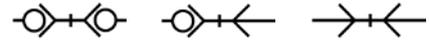
- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
Industrial (water, steam, fuels and oils, gases, chemicals),
- Working press.:** Up to 450 bar
- Material:** Chrome-plated brass (TEMA sockets up to 1")
galvanized steel (other items)
- Seal:** NBR (from -30°C up to +100°C)
Viton (from -15°C up to +200°C)
- Advantages:** Double O-ring seal, locking ring

Quick release couplings designed for heavy duty operation. Sockets, except 3/16" size, equipped with an additional O-ring are perfect for gas installations. Both a socket and a plug are available with a static pressure eliminator. The socket, except 3/16" size, has an additional safety locking ring preventing accidental disconnection. They can be used as single shut-off only in 3/16" and 1/4" sizes and only from the socket side. Depending on application, the seal material must be chosen.

picture	size [inch]	description	female thread [inch]	seal	code	
					CEJN	TEMA
	3/16	with valve	1/8 BSP	NBR	-	TA-H-2310
				Viton	-	TA-H-2310V
		without valve		NBR	-	TA-H-2310UV
				Viton	-	TA-H-2310UVV
	1/4	with valve	1/4 BSP	NBR	CJ-H-105251202	TA-H-2510
				Viton	CJ-H-105251212	TA-H-2510V
		without valve		NBR	CJ-H-105250202	TA-H-2510UV
				Viton	-	TA-H-2510UVV
	3/8	with valve	3/8 BSP	NBR	CJ-H-105251204	TA-H-3810
				Viton	CJ-H-105251214	TA-H-3810V
		without valve		NBR	CJ-H-105250204	TA-H-3810UV
				Viton	-	TA-H-3810UVV
		with valve and eliminator		NBR	CJ-H-105251234	TA-H-3811
				Viton	-	TA-H-3811V
	1/2	with valve	1/2 BSP	NBR	CJ-H-105251205	TA-H-5010
				Viton	CJ-H-105251215	TA-H-5010V
		without valve		NBR	CJ-H-105250205	TA-H-5010UV
				Viton	-	TA-H-5010UVV
		with valve and eliminator		NBR	CJ-H-105251235	TA-H-5011
				Viton	-	TA-H-5011V
	3/4	with valve	3/4 BSP	NBR	CJ-H-105251207	TA-H-7510
				Viton	CJ-H-105251217	TA-H-7510V
		without valve		NBR	CJ-H-105250207	TA-H-7510UV
				Viton	-	TA-H-7510UVV
with valve and eliminator		NBR		CJ-H-105251237	TA-H-7511	
		Viton		-	TA-H-7511V	
1	with valve	1 BSP	NBR	CJ-H-105251209	TA-H-10010	
			Viton	CJ-H-105251219	TA-H-10010V	
	without valve		NBR	CJ-H-105250209	TA-H-10010UV	
			Viton	-	TA-H-10010UVV	
	with valve and eliminator		NBR	CJ-H-105251239	TA-H-10011	
			Viton	-	TA-H-10011V	
1.1/2	with valve	1.1/2 BSP	NBR	-	TA-H-15010	
			Viton	-	TA-H-15010V	
	without valve		NBR	-	TA-H-15010UV	
			Viton	-	TA-H-15010UVV	
	with valve and eliminator		NBR	-	TA-H-15011	
			Viton	-	TA-H-15011V	
2	with valve	2 BSP	NBR	-	TA-H-20010	
			Viton	-	TA-H-20010V	
	without valve		NBR	-	TA-H-20010UV	
			Viton	-	TA-H-20010UVV	

HIGH PRESSURE - quick release couplings

NORDIC RANGE couplings



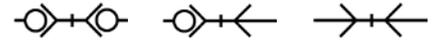
picture	size [inch]	description	female thread [inch]	seal	code	
					CEJN	TEMA
<p>(3/16" and 1/4" size)</p>	3/16	with valve	1/8 BSP	NBR	-	TA-H-2320
		without valve		Viton	-	TA-H-2320V
	1/4	with valve	1/4 BSP	-	-	TA-H-2320UV
		without valve		NBR	CJ-H-105256202	TA-H-2520
	3/8	with a valve	3/8 BSP	Viton	CJ-H-105256212	TA-H-2520V
				-	CJ-H-105255202	TA-H-2520UV
		without valve		NBR	CJ-H-105256204	TA-H-3820
		with valve and eliminator		Viton	CJ-H-105256214	TA-H-3820V
		-		CJ-H-105255204	TA-H-3820UV	
		-		NBR	CJ-H-105256234	TA-H-3821
	1/2	with valve	1/2 BSP	Viton	-	TA-H-3821V
				NBR	CJ-H-105256205	TA-H-5020
		without valve		Viton	CJ-H-105256215	TA-H-5020V
		with valve and eliminator		-	CJ-H-105255205	TA-H-5020UV
	3/4	with valve	3/4 BSP	NBR	CJ-H-105256235	TA-H-5021
				Viton	-	TA-H-5021V
		without valve		NBR	CJ-H-105256207	TA-H-7520
		with valve and eliminator		Viton	CJ-H-105256217	TA-H-7520V
	1	with valve	1 BSP	-	CJ-H-105255207	TA-H-7520UV
				NBR	CJ-H-105256237	TA-H-7521
		without valve		Viton	-	TA-H-7521V
		with valve and eliminator		NBR	CJ-H-105256209	TA-H-10020
	1.1/2	with valve	1.1/2 BSP	Viton	CJ-H-105256219	TA-H-10020V
				-	CJ-H-105255209	TA-H-10020UV
without valve		NBR		CJ-H-105256239	TA-H-10021	
with valve and eliminator		Viton		-	TA-H-10021V	
2	with valve	2 BSP	NBR	-	TA-H-15020	
			Viton	-	TA-H-15020V	
	without valve		-	-	TA-H-15020UV	
	-		NBR	-	TA-H-15021	
-	Viton	-	TA-H-15021V			
-	NBR	-	TA-H-20020			
-	Viton	-	TA-H-20020V			
-	-	-	TA-H-20020UV			

Operating parameters

size [inch]	working pressure (coupling connected / disconnected) [bar]		bursting pressure (coupling connected / disconnected) [bar]		flow rate at $\Delta p = 3$ bar [l/min]	
	CEJN	TEMA	CEJN	TEMA	CEJN	TEMA
3/16	-	200 / 100	-	800 / 400	-	13
1/4	450 / 300	450 / 300	1800 / 1200	1800 / 1200	24	25
3/8	350 / 280	350 / 280	1300 / 1100	1300 / 1120	53	53
1/2	300 / 250	300 / 250	1100 / 1000	1200 / 1000	108	110
3/4	280 / 200	280 / 200	1000 / 800	1120 / 800	214	208
1	250 / 250	250 / 200	930 / 1000	930 / 800	322	295
1.1/2	-	200 / 180	-	800 / 720	-	652
2	-	180 / 150	-	720 / 600	-	1180

HIGH PRESSURE - quick release couplings

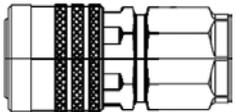
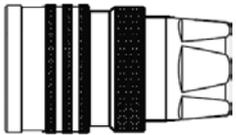
NORDIC RANGE (SS) couplings

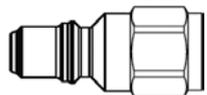
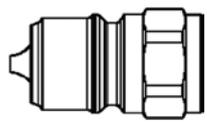
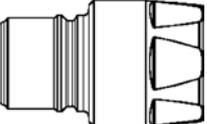


CEJN 526, TEMA STANDARD (3/16" ÷ 2")

Standard:	Producer's standard
Applications:	Hydraulics (hydraulic oil) Industrial (water, steam, fuels and oils, gases, chemicals)
Working press.:	Up to 300 bar
Material:	Stainless steel (AISI 316)
Seal:	Viton (from -20°C up to +200°C)
Advantages:	Double O-ring seal, locking ring

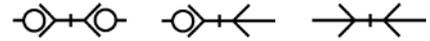
Quick release couplings designed for heavy duty operation. Sockets, except 3/16" size, are equipped with a safety locking ring preventing accidental disconnection and an additional O-ring (perfect for gas installations). Available with a static pressure eliminator. They can be used as single shut-off only in 3/16" and 1/4" sizes and only from the socket side. Depending on application, the seal material must be chosen. For pulsating pressure, the maximum working pressure must be reduced by 50%.

picture	size [inch]	description	female thread [inch]	code		
				CEJN	TEMA	
 (3/16" and 1/4" size)  (1.1/2" and 2" size)	3/16	with valve	1/8	-	TA-H-2310RFV	
		without valve	BSP	-	TA-H-2310RVUV	
	1/4	with valve	1/4	CJ-H-105261212	-	TA-H-2510RV
		without valve	BSP	-	-	TA-H-2510RVUV
	3/8	with valve	3/8	CJ-H-105261214	-	TA-H-3810RV
		without valve		BSP	-	TA-H-3810RVUV
		with valve and eliminator	-	-	TA-H-3811RV	
	1/2	with valve	1/2	CJ-H-105261215	-	TA-H-5010RV
		without valve		BSP	-	TA-H-5010RVUV
		with valve and eliminator	-	-	TA-H-5011RV	
	3/4	with valve	3/4	CJ-H-105261217	-	TA-H-7510RV
		without valve		BSP	-	TA-H-7510RVUV
		with valve and eliminator	-	-	TA-H-7511RV	
	1	with valve	1	CJ-H-105261219	-	TA-H-10010RV
		without valve		BSP	-	TA-H-10010RVUV
		with valve and eliminator	-	-	TA-H-10011RV	
1.1/2	with valve	1.1/2	-	-	TA-H-15010RV	
	without valve	BSP	-	-	TA-H-15010RVUV	
2	with valve	2	-	-	TA-H-20010RV	
	without valve	BSP	-	-	TA-H-20010RVUV	

picture	size [inch]	description	female thread [inch]	code		
				CEJN	TEMA	
 (3/16" and 1/4" size)  (from 3/8" up to 1" size)  (1.1/2" and 2" size)	3/16	with valve	1/8	-	TA-H-2320RFV	
		without valve	BSP	-	TA-H-2320RUV	
	1/4	with valve	1/4	CJ-H-105266212	-	TA-H-2520RV
		without valve	BSP	-	-	TA-H-2520RUV
	3/8	with valve	3/8	CJ-H-105266214	-	TA-H-3820RV
		without valve		BSP	-	TA-H-3820RUV
		with valve and eliminator	-	-	TA-H-3821RV	
	1/2	with valve	1/2	CJ-H-105266215	-	TA-H-5020RV
		without valve		BSP	-	TA-H-5020RUV
		with valve and eliminator	-	-	TA-H-5021RV	
	3/4	with valve	3/4	CJ-H-105266217	-	TA-H-7520RV
		without valve		BSP	-	TA-H-7520RUV
		with valve and eliminator	-	-	TA-H-7521RV	
	1	with valve	1	CJ-H-105266219	-	TA-H-10020RV
		without valve		BSP	-	TA-H-10020RUV
		with valve and eliminator	-	-	TA-H-10021RV	
1.1/2	with valve	1.1/2	-	-	TA-H-15020RV	
	without valve	BSP	-	-	TA-H-15020RUV	
2	with valve	2	-	-	TA-H-20020RV	
	without valve	BSP	-	-	TA-H-20020RUV	

HIGH PRESSURE - quick release couplings

NORDIC RANGE (SS) couplings

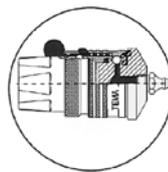


size [inch]	working pressure (coupling connected / disconnected) [bar]		bursting pressure (coupling connected / disconnected) [bar]		flow rate at $\Delta p = 3$ bar [l/min]	
	CEJN	TEMA	CEJN	TEMA	CEJN	TEMA
3/16	-	200 / 100	-	800 / 400	-	13
1/4	250 / 250	250 / 250	1000 / 1000	1000 / 1000	24	25
3/8	300 / 250	300 / 210	1200 / 1000	1200 / 840	53	53
1/2	300 / 250	300 / 250	1200 / 1000	1200 / 1000	108	110
3/4	200 / 200	250 / 200	1000 / 800	1000 / 800	214	208
1	200 / 150	250 / 200	800 / 600	1000 / 800	322	295
1.1/2	-	150 / 150	-	600 / 600	-	652
2	-	120 / 120	-	480 / 480	-	1180

NORDIC RANGE and NORDIC RANGE SS accessories

Seal kits for sockets	size [inch]	material	code	
			CEJN	TEMA
	3/16	NBR	-	TA-P-11310N
		Viton	-	TA-P-11310V
	1/4	NBR	CJ-H-105254900	TA-H-2500-PSN
		Viton	-	TA-H-2500-PSV
	3/8	NBR	CJ-H-105254901	TA-H-3800-PSN
		Viton	-	TA-H-3800-PSV
	1/2	NBR	CJ-H-105254902	TA-H-5000-PSN
		Viton	-	TA-H-5000-PSV
	3/4	NBR	CJ-H-105254903	TA-H-7500-PSN
		Viton	-	TA-H-7500-PSV
	1	NBR	CJ-H-105254904	TA-H-10000-PSN
		Viton	-	TA-H-10000-PSV
	1.1/2	NBR	-	TA-H-15000-PSN
		Viton	-	TA-H-15000-PSV
	2	NBR	-	TA-H-20000-PSN
		Viton	-	TA-H-20000-PSV

Socket lubricator	size [inch]	code
	3/8	TA-H-GR3
	1/2	TA-H-GR5
	3/4	TA-H-GR7
	1	TA-H-GR10



Blank plugs/caps

size [inch]	socket blank plug code		plug blank cap code		material		colour	
	CEJN	TEMA	CEJN	TEMA	CEJN	TEMA	CEJN	TEMA
3/16	-	TA-H-2315	-	TA-P-125	PVC	PVC	black	red
1/4	CJ-H-095251001	TA-H-2516	CJ-H-095251051	TA-H-2526				blue
3/8	CJ-H-095251002	TA-H-3816	CJ-H-095251052	TA-H-3826				
1/2	CJ-H-095251003	TA-H-5016	CJ-H-095251053	TA-H-5026				
3/4	CJ-H-095251004	TA-H-7516	CJ-H-095251054	TA-H-7526				
1	CJ-H-095251005	TA-H-10016	CJ-H-095251055	TA-H-10026				black
1.1/2	-	TA-H-15015	-	TA-H-15025				
2	-	TA-H-20015	-	TA-H-20025				

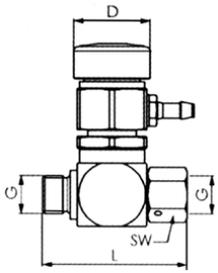
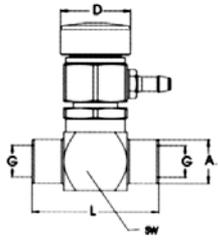
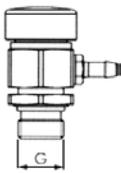
HIGH PRESSURE - quick release couplings



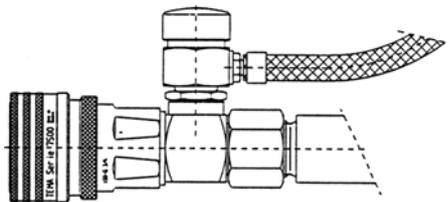
Release valve TEMA TA

Material: Body - zinc-plated steel
Valve - chrome-plated brass
Seal: NBR
Working temp.: Up to +90°C

Manual valve allows to release the excess of oil in installation back to the tank and to reduce the oil pressure in the installation with a valve. Mounted between the part of the system with quick release couplings and feeding part of the system (under pressure). After releasing the excess of hydraulic oil, connection of quick release couplings becomes possible.

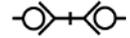
	code	DN [mm]	thread size G [inch]	SW [mm]	L [mm]	D [mm]	working press. [bar]
	TA-V-TA38	10	3/8	21	62	33	250
	TA-V-TA50	13	1/2	25	70	33	250
	TA-V-TA75	20	3/4	32	73	33	250
	TA-V-TA100	25	1	38	77	33	250
	TA-V-TA38-IW	10	3/8	28	60	33	250
	TA-V-TA50-IW	13	1/2	28	66	33	250
	TA-V-515	-	1/2	-	-	33	250
	TA-V-515RV *	-	1/2	-	-	33	250

* - stainless steel valve with Viton seal.



HIGH PRESSURE - quick release couplings

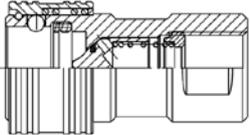
GROMELLE couplings

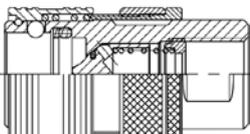


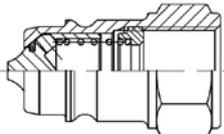
H-5000 series (1/8" ÷ 2")

- Standard:** Producer's standard
Applications: Hydraulics (hydraulic oil)
 Industrial (water, steam, fuels and oils, gases, chemicals)
Working press.: Up to 1000 bar (safety factor: 3:1)
Material: Galvanized steel, brass, AISI 316L steel
Seal: NBR (from -20°C to +100°C) - standard HA, HL
 Viton (from -20°C to +200°C) - standard HZ
 EPDM (from -40°C to +150°C) - option
Advantages: High working pressure

Quick release couplings designed to withstand high working pressure, pressure impulses, heavy mechanical loads, frequent connection and disconnection. A socket can be optionally equipped with a locking ring to prevent accidental disconnection. The material of the coupling and seal must be selected according to its application. For pulsating pressure, when the quick release coupling is disconnected, the maximum working pressure must be reduced by 50%.

Socket	size [inch]	female thread [inch]	code		
			galv. steel*	brass*	AISI 316L
	1/8	1/8 BSP	GR-HA-0500100	GR-HL-0500100	GR-HZ-05001V0
	1/4	1/4 BSP	GR-HA-0501100	GR-HL-0501100	GR-HZ-05011V0
	3/8	3/8 BSP	GR-HA-0502100	GR-HL-0502100	GR-HZ-05021V0
	1/2	1/2 BSP	GR-HA-0503100	GR-HL-0503100	GR-HZ-05031V0
	3/4	3/4 BSP	GR-HA-0504100	GR-HL-0504100	GR-HZ-05041V0
	1	1 BSP	GR-HA-0505100	GR-HL-0505100	GR-HZ-05051V0
	1.1/4	1.1/4 BSP	GR-HA-05061V0	GR-HL-05061V0	GR-HZ-05061V0
	1.1/2	1.1/2 BSP	GR-HA-05071V0	GR-HL-05071V0	GR-HZ-05071V0
	2	2 BSP	GR-HA-05091V0	GR-HL-05091V0	GR-HZ-05091V0

Socket with locking ring	size [inch]	female thread [inch]	code		
			galv. steel*	brass*	AISI 316L
	1/8	1/8 BSP	GR-HA-0500300	GR-HL-0500300	GR-HZ-05003V0
	1/4	1/4 BSP	GR-HA-0501300	GR-HL-0501300	GR-HZ-05013V0
	3/8	3/8 BSP	GR-HA-0502300	GR-HL-0502300	GR-HZ-05023V0
	1/2	1/2 BSP	GR-HA-0503300	GR-HL-0503300	GR-HZ-05033V0
	3/4	3/4 BSP	GR-HA-0504300	GR-HL-0504300	GR-HZ-05043V0
	1	1 BSP	GR-HA-0505300	GR-HL-0505300	GR-HZ-05053V0
	1.1/4	1.1/4 BSP	GR-HA-05063V0	GR-HL-05063V0	GR-HZ-05063V0
	1.1/2	1.1/2 BSP	GR-HA-05073V0	GR-HL-05073V0	GR-HZ-05073V0
	2	2 BSP	GR-HA-05093V0	GR-HL-05093V0	GR-HZ-05093V0

Plug	size [inch]	female thread [inch]	code		
			galv. steel*	brass*	AISI 316L
	1/8	1/8 BSP	GR-HA-0500200	GR-HL-0500200	GR-HZ-05002V0
	1/4	1/4 BSP	GR-HA-0501200	GR-HL-0501200	GR-HZ-05012V0
	3/8	3/8 BSP	GR-HA-0502200	GR-HL-0502200	GR-HZ-05022V0
	1/2	1/2 BSP	GR-HA-0503200	GR-HL-0503200	GR-HZ-05032V0
	3/4	3/4 BSP	GR-HA-0504200	GR-HL-0504200	GR-HZ-05042V0
	1	1 BSP	GR-HA-0505200	GR-HL-0505200	GR-HZ-05052V0
	1.1/4	1.1/4 BSP	GR-HA-05062V0	GR-HL-05062V0	GR-HZ-05062V0
	1.1/2	1.1/2 BSP	GR-HA-05072V0	GR-HL-05072V0	GR-HZ-05072V0
	2	2 BSP	GR-HA-05092V0	GR-HL-05092V0	GR-HZ-05092V0

* - Viton seal only for sizes above 1"

HIGH PRESSURE - quick release couplings

GROMELLE couplings

	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/8	aluminium	GR-HD-0510100	GR-HD-0510200
	1/4		GR-HD-0511100	GR-HD-0511200
	3/8		GR-HD-0512100	GR-HD-0512200
	1/2		GR-HD-0513100	GR-HD-0513200
	3/4		GR-HD-0514100	GR-HD-0514200
	1		GR-HD-0515100	GR-HD-0515200
	1.1/4		GR-HD-0516100	GR-HD-0516200
	1.1/2		GR-HD-0517100	GR-HD-0517200
2	GR-HD-0519100		GR-HD-0519200	

Working parameters

galvanized steel

size [inch]	working pressure [bar] (fluid and gas- group 2)*	working pressure [bar] (fluid and gas- group 1)*	flow rate at $\Delta p = 3$ bar [l/min]	leakage [cm ³]
1/8	1000	1000	10.7	0.4
1/4	700	700	21.5	1
3/8	600	600	30	2
1/2	500	500	49	2.5
3/4	400	400	95	5.5
1	300	300	153	9
1.1/4	200	200	239	23
1.1/2	150	38	365	36
2	100	28	653	70

brass

size [inch]	working pressure [bar] (fluid and gas- group 2)*	working pressure [bar] (fluid and gas- group 1)*	flow rate at $\Delta p = 3$ bar [l/min]	leakage [cm ³]
1/8	300	300	10.7	0.4
1/4	230	230	21.5	1
3/8	175	175	30	2
1/2	150	150	49	2.5
3/4	125	125	95	5.5
1	100	100	153	9
1.1/4	70	70	239	23
1.1/2	50	50	365	36
2	40	28	653	70

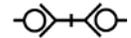
AISI 316L steel

size [inch]	working pressure [bar] (fluid and gas- group 2)*	working pressure [bar] (fluid and gas- group 1)*	flow rate at $\Delta p = 3$ bar [l/min]	leakage [cm ³]
1/8	300	300	10.7	0.4
1/4	230	230	21.5	1
3/8	175	175	30	2
1/2	150	150	49	2.5
3/4	125	125	95	5.5
1	100	100	153	9
1.1/4	100	100	239	23
1.1/2	75	38	365	36
2	40	28	653	70

* - pressure is defined according to Pressure Equipment Directive 97/23 WE (group 1 - hazardous media, group 2 - nonhazardous media).

HIGH PRESSURE - quick release couplings

Screw to connect couplings



DNP PVV3, HQ HS (1/4" ÷ 1.1/4")

Standard: Producer's standard
Applications: Hydraulics (hydraulic oil)
Working press.: Up to 450 bar
Material: Galvanized steel
Seal: NBR (from -25°C up to +100°C)
Advantages: O-ring protecting from unscrewing under pulsating pressure and vibrations

Standard quick release screw to connect couplings equipped with an additional O-ring on the socket body which prevents unscrewing of the coupling exposed to pulsating pressure and vibrations. The coupling can be connected under max. 50 bar (pressure from a socket side or plug side).

Socket	size [inch]	female thread [inch]	M thread [mm]	code	
				DNP PVV3	HQ HS
	1/4	1/4 BSP	M24x2	DP-PVV3-0606112	HQ-HS06-F-04G
	3/8	3/8 BSP	M28x2	DP-PVV3-1010112	HQ-HS10-F-06G
	1/2	1/2 BSP	M36x2	DP-PVV3-1313112	HQ-HS12-F-08G
	3/4	3/4 BSP	M42x2	DP-PVV3-2019112	HQ-HS19-F-12G
	1	1 BSP	M48x3	DP-PVV3-2525112	HQ-HS25-F-16G
	1.1/4	1.1/4 BSP	M70x3	DP-PVV3-3031112	HQ-HS32-F-20G

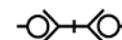
Plug	size [inch]	female thread [inch]	M thread [mm]	code	
				DNP PVV3	HQ HS
	1/4	1/4 BSP	M24x2	DP-PVV3-0606113	HQ-HS06-M-04G
	3/8	3/8 BSP	M28x2	DP-PVV3-1010113	HQ-HS10-M-06G
	1/2	1/2 BSP	M36x2	DP-PVV3-1313113	HQ-HS12-M-08G
	3/4	3/4 BSP	M42x2	DP-PVV3-2019113	HQ-HS19-M-12G
	1	1 BSP	M48x3	DP-PVV3-2525113T	HQ-HS25-M-16G
	1.1/4	1.1/4 BSP	M70x3	DP-PVV3-3031113T	HQ-HS32-M-20G

Socket DIN 2353 light series	size [inch]	male thread [mm]	M thread [mm]	code	
				DNP PVV3	HQ HS
	1/4	M14x1.5 (8L)	M24x2	DP-PVV3-0614302	HQ-HS06-F-08L
	3/8	M16x1.5 (10L)	M28x2	DP-PVV3-1016302	HQ-HS10-F-10L
	1/2	M18x1.5 (12L)	M36x2	DP-PVV3-1318302	HQ-HS12-F-12L
		M22x1.5 (15L)		DP-PVV3-1322302	HQ-HS12-F-15L
	3/4	M26x1.5 (18L)	M42x2	DP-PVV3-2026302	HQ-HS19-F-18L
		M30x2 (22L)		DP-PVV3-2030302	HQ-HS19-F-22L
	1	M36x2 (28L)	M48x3	DP-PVV3-2536302	HQ-HS25-F-28L
	1.1/4	M45x2 (35L)	M70x3	-	HQ-HS32-F-35L

Plug DIN 2353 light series	size [inch]	male thread [mm]	M thread [mm]	code	
				DNP PVV3	HQ HS
	1/4	M14x1.5 (8L)	M24x2	DP-PVV3-0614303	HQ-HS06-M-08L
	3/8	M16x1.5 (10L)	M28x2	DP-PVV3-1016303	HQ-HS10-M-10L
	1/2	M18x1.5 (12L)	M36x2	DP-PVV3-1318303	HQ-HS12-M-12L
		M22x1.5 (15L)		DP-PVV3-1322303	HQ-HS12-M-15L
	3/4	M26x1.5 (18L)	M42x2	DP-PVV3-2026303	HQ-HS19-M-18L
		M30x2 (22L)		DP-PVV3-2030303	HQ-HS19-M-22L
	1	M36x2 (28L)	M48x3	DP-PVV3-2536303T	HQ-HS25-M-28L
	1.1/4	M45x2 (35L)	M70x3	-	HQ-HS32-M-35L

HIGH PRESSURE - quick release couplings

Screw to connect couplings



Socket DIN 2353 heavy series	size [inch]	male thread [mm]	M thread [mm]	code	
				DNP PVV3	HQ HS
	3/8	M16x1.5 (8S)	M28x2	DP-PVV3-1016402	HQ-HS10-F-08S
		M18x1.5 (10S)		DP-PVV3-1018402	HQ-HS10-F-10S
	1/2	M20x1.5 (12S)	M36x2	DP-PVV3-1320402	HQ-HS12-F-12S
		M22x1.5 (14S)		DP-PVV3-1322402	HQ-HS12-F-14S
	3/4	M24x1.5 (16S)	M42x2	DP-PVV3-2024402	HQ-HS19-F-16S
		M30x2 (20S)		DP-PVV3-2030402	HQ-HS19-F-20S
	1	M30x2 (20S)	M48x3	DP-PVV3-2530402	HQ-HS25-F-20S
		M36x2 (25S)		DP-PVV3-2536402	HQ-HS25-F-25S
		M42x2 (30S)		DP-PVV3-2542402	HQ-HS25-F-30S
	1.1/4	M52x2 (38S)	M70x3	DP-PVV3-3052402	HQ-HS32-F-38S

Plug DIN 2353 heavy series	size [inch]	male thread [mm]	M thread [mm]	code	
				DNP PVV3	HQ HS
	3/8	M16x1.5 (8S)	M28x2	DP-PVV3-1016403	HQ-HS10-M-08S
		M18x1.5 (10S)		DP-PVV3-1018403	HQ-HS10-M-10S
	1/2	M20x1.5 (12S)	M36x2	DP-PVV3-1320403	HQ-HS12-M-12S
		M22x1.5 (14S)		DP-PVV3-1322403	HQ-HS12-M-14S
	3/4	M24x1.5 (16S)	M42x2	DP-PVV3-2024403	HQ-HS19-M-16S
		M30x2 (20S)		DP-PVV3-2030403	HQ-HS19-M-20S
	1	M30x2 (20S)	M48x3	DP-PVV3-2530403T	HQ-HS25-M-20S
		M36x2 (25S)		DP-PVV3-2536403T	HQ-HS25-M-25S
		M42x2 (30S)		DP-PVV3-2542403T	HQ-HS25-M-30S
	1.1/4	M52x2 (38S)	M70x3	DP-PVV3-3052403T	HQ-HS32-M-38S

Socket blank plug	size [inch]	material	code	
			DNP	HQ
	1/4	PP	DP-SPVV-06002	HQ-HS06-F-RED
	3/8		DP-SPVV-10002	HQ-HS10-F-RED
	1/2		DP-SPVV-13002	HQ-HS12-F-RED
	3/4		DP-SPVV-20002	HQ-HS19-F-RED
	1		DP-SPVV-25002	HQ-HS25-F-RED
	1.1/4		DP-SPVV-30002	HQ-HS32-F-RED

Plug blank cap	size [inch]	material	code	
			DNP	HQ
	1/4	PP	DP-SPVV-06003	HQ-HS06-M-RED
	3/8		DP-SPVV-10003	HQ-HS10-M-RED
	1/2		DP-SPVV-13003	HQ-HS12-M-RED
	3/4		DP-SPVV-20003	HQ-HS19-M-RED
	1		DP-SPVV-25003	HQ-HS25-M-RED
	1.1/4		DP-SPVV-30003	HQ-HS32-M-RED

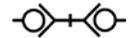
Operating parameters

size [inch]	working / bursting pressure * [bar]		flow rate at $\Delta p = 3$ bar [l/min]	
	DNP PVV3	HQ HS	DNP PVV3	HQ HS
1/4	450 / 2500	450 / 1800	17	10
3/8	400 / 1800	450 / 1600	56	33
1/2	400 / 1400	400 / 1400	88	83
3/4	300 / 1400	400 / 1500	135	162
1	300 / 1400	300 / 1180	218	343
1.1/4	300 / 1000	300 / 1800	537	470

* - the value of bursting pressure is given for a connected quick release coupling.

HIGH PRESSURE - quick release couplings

Screw to connect couplings



GROMELLE (1/4" ÷ 2")

- Standard:** Producer's standard
Applications: Hydraulics (hydraulic oil)
 Industrial (water, steam, fuel and oil gases and chemicals)
Working press.: Up to 1100 bar
Material: Galvanized steel, stainless steel
Seal: NBR (from -20°C up to +100°C) - standard
 Viton (from -20°C up to +200°C) - standard
 EPDM (from -40°C up to +150°C) - option
Advantages: High working pressure

Quick release screw to connect couplings designed to resist heavy mechanical loads. Intended for high working pressure applications (up to 1100 bar). The coupling can be connected under residual pressure. The material of the coupling and seal must be selected according to its application. For pulsating pressure, when the quick release coupling is disconnected, the maximum working pressure must be reduced by 50%.

Socket	size [inch]	female thread [inch]	code	
			galvanized steel (NBR)	AISI 316L (Viton)
	1/4	1/4 BSP	GR-WA-0601700	GR-WV-06017V0
	3/8	3/8 BSP	GR-WA-0602700	GR-WV-06027V0
	1/2	1/2 BSP	GR-WA-0603700	GR-WV-06037V0
	3/4	3/4 BSP	GR-WA-0604700	GR-WV-06047V0
	1	1 BSP	GR-WA-0605700	GR-WV-06057V0
	1.1/4	1.1/4 BSP	GR-WA-0606700	GR-WV-06067V0
	1.1/2	1.1/2 BSP	GR-WA-0607700	GR-WV-06077V0
	2	2 BSP	GR-WA-0609700	GR-WV-06097V0

Plug	size [inch]	female thread [inch]	code	
			galvanized steel (NBR)	AISI 316L (Viton)
	1/4	1/4 BSP	GR-WA-0601400	GR-WV-06014V0
	3/8	3/8 BSP	GR-WA-0602400	GR-WV-06024V0
	1/2	1/2 BSP	GR-WA-0603400	GR-WV-06034V0
	3/4	3/4 BSP	GR-WA-0604400	GR-WV-06044V0
	1	1 BSP	GR-WA-0605400	GR-WV-06054V0
	1.1/4	1.1/4 BSP	GR-WA-0606400	GR-WV-06064V0
	1.1/2	1.1/2 BSP	GR-WA-0607400	GR-WV-06074V0
	2	2 BSP	GR-WA-0609400	GR-WV-06094V0

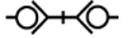
Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	aluminium	GR-WD-0611700	GR-WD-0611400
	3/8		GR-WD-0612700	GR-WD-0612400
	1/2		GR-WD-0613700	GR-WD-0613400
	3/4		GR-WD-0614700	GR-WD-0614400
	1		GR-WD-0615700	GR-WD-0615400
	1.1/4		GR-WD-0616700	GR-WD-0616400
	1.1/2		GR-WD-0617700	GR-WD-0617400
	2		GR-WD-0619700	GR-WD-0619400

Operating parameters

size [inch]	working / bursting pressure [bar]	flow rate at Δp = 3 bar [l/min]
1/4	1100 / 2400	22
3/8	750 / 2250	29
1/2	750 / 1600	48
3/4	650 / 1600	92
1	450 / 1100	154
1.1/4	450 / 1100	238
1.1/2	300 (38*) / 850	365
2	300 (28*) / 750	653

HIGH PRESSURE - quick release couplings

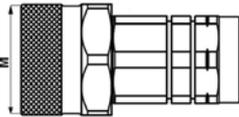
Screw to connect couplings

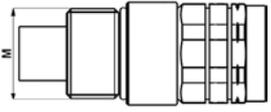


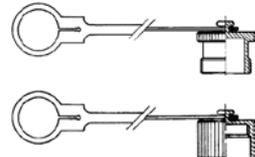
HQ HFT (3/8" ÷ 1")

- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to 550 bar
- Material:** Steel with zinc-nickel coating
- Seal:** NBR (from -40°C up to +106°C)
- Advantages:** Dry-break, screw to connect couplings

Dry-break, screw to connect couplings. Reliably serve all applications where high pressure impulses occur. An additional o-ring on the coupling body prevents untwisting incidents caused by vibration. The coupling can be connected at residual pressure up to 350 bar. The quick release couplings are plated with zinc-nickel coating which provides several times better corrosion resistance than sole zinc-plating.

Socket 	size [inch]	female thread [inch]	thread M [mm]	code
	3/8		3/8 BSP	M33x2
1/2 BSP			HQ-HFT10-F-08G	
1/2		1/2 BSP	M40x3	HQ-HFT12-F-08G
		3/4 BSP		HQ-HFT12-F-12G
3/4		1 BSP	M50x3	HQ-HFT19-F-16G
1		1.1/4 BSP	M58x3	HQ-HFT25-F-20G

Plug 	size [inch]	female thread [inch]	thread M [mm]	code
	3/8		3/8 BSP	M33x2
1/2 BSP			HQ-HFT10-M-08G	
1/2		1/2 BSP	M40x3	HQ-HFT12-M-08G
		3/4 BSP		HQ-HFT12-M-12G
3/4		1 BSP	M50x3	HQ-HFT19-M-16G
1		1.1/4 BSP	M58x3	HQ-HFT25-M-20G

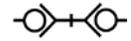
Blank plugs/caps 	size [inch]	material	code	
			socket blank plug	plug blank cap
	3/8	aluminium	HQ-HFT10-F-PLUG	HQ-HFT10-M-CAP
	1/2		HQ-HFT12-F-PLUG	HQ-HFT12-M-CAP
	3/4		HQ-HFT19-F-PLUG	HQ-HFT19-M-CAP
	1		HQ-HFT25-F-PLUG	HQ-HFT25-M-CAP

Operating parameters

size [inch]	working pressure [bar]	bursting pressure [bar] (connected coupling)	flow rate at Δp = 3 bar [l/min]
3/8	550	1400	51
1/2	550	1400	85
3/4	500	1400	186
1	470	1300	294

HIGH PRESSURE - quick release couplings

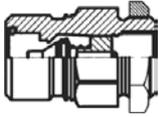
Screw to connect couplings

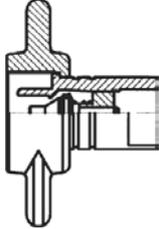


HQ TC (3/4" ÷ 1")

- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
- Working press.:** Up to 650 bar
- Material:** Galvanized steel
- Seal:** NBR (from -40°C up to +106°C)
- Advantages:** Butterfly handles facilitate connection without any special tools

Quick release screw to connect couplings are intended for hydraulic installations of tripper tracks. The socket is equipped with a tightening nut which allows panel mounting. The plug with butterfly handles enables fast and easy connection/disconnection without any special tools. The coupling can be connected under residual pressure (static pressure which remains in the system after drive disconnection).

Socket 	size [inch]	female thread [inch]	code
	3/4	3/4 BSP	HQ-TC19-F-12G
	1	1 BSP	HQ-TC25-F-16G

Plug 	size [inch]	female thread [inch]	code
	3/4	3/4 BSP	HQ-TC19-M-12G
	1	1 BSP	HQ-TC25-M-16G

Socket blank plug 	size [inch]	material	code
	3/4	metal	HQ-TC19-F-PLUG
	1		HQ-TC25-F-PLUG

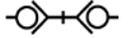
Plug blank cap 	size [inch]	material	code
	3/4	metal	HQ-TC19-M-CUP
	1		HQ-TC25-M-CUP

Operating parameters

size [inch]	working / bursting pressure [bar]	flow rate at $\Delta p = 3$ bar [l/min]
3/4	350 / 1325	124
1	300 / 1325	181

HIGH PRESSURE - quick release couplings

NITTO KOHKI couplings



HSP CUPLA (1/4" ÷ 2")

- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
Industrial
- Working press.:** Up to 206 bar
- Material:** Nickel-plated steel
- Seal:** NBR (from -20°C up to +80°C) - standard
Viton (from -20°C up to +180°C) - option
- Advantages:** Perfect finish, high reliability

Quick release couplings manufactured in Japan of special alloy steel. Highly durable, resistant to vibrations and pulsating pressure. Used in hydraulic installations in foundry equipment where sudden pressure fluctuations occur. Suitable for vacuum pressure. Depending on application, the material of seal must be chosen.

Socket and plug with female thread	size [inch]	female thread [inch]	socket code	plug code
		1/4	1/4 BSPT	NK-2HS
3/8		3/8 BSPT	NK-3HS	NK-3HP
1/2		1/2 BSPT	NK-4HS	NK-4HP
		3/4 BSPT	NK-6HS	NK-6HP
3/4			NK-66HS	NK-66HP
1		1 BSPT	NK-8HS	NK-8HP
1.1/2		1.1/4 BSPT	NK-10HS	NK-10HP
		1.1/2 BSPT	NK-12HS	NK-12HP
2		2 BSPT	NK-16HS	NK-16HP

Socket and plug with male thread	size [inch]	male thread [inch]	socket code	plug code
	<p>BSPT male thread</p> <p>BSP male thread</p>	1/4	1/4 BSPT	NK-2HS-R
1/4 BSP			NK-2HS-GS	NK-2HP-GS
3/8		3/8 BSPT	NK-3HS-R	NK-3HP-R
		3/8 BSP	NK-3HS-GS	NK-3HP-GS
1/2		1/2 BSPT	NK-4HS-R	NK-4HP-R
		1/2 BSP	NK-4HS-GS	NK-4HP-GS
		3/4 BSPT	NK-6HS-R	NK-6HP-R
		3/4 BSP	NK-6HS-GS	NK-6HP-GS

Operating parameters

size [inch]	working pressure [bar]	flow rate at Δp = 3 bar [l/min]
1/4	206	16
3/8	206	32
1/2	206	65
3/4	206	121
1	206	172
1.1/2	180	456
2	140	924

HIGH PRESSURE - quick release couplings

NITTO KOHKI couplings



350 CUPLA (1/4" ÷ 1.1/2")

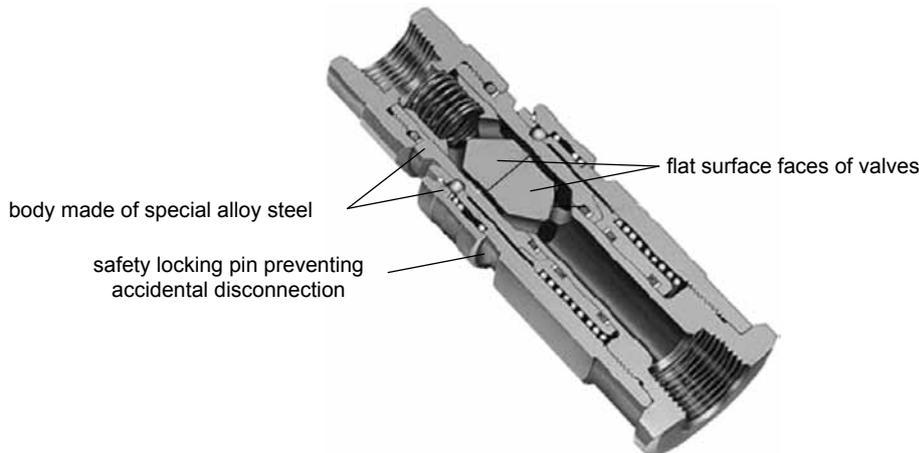
- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
Industrial
- Working press.:** Up to 345 bar
- Material:** Nickel-plated steel
- Seal:** Viton (from -20°C up to +180°C)
- Advantages:** Dry-break, perfect finish, high reliability

Dry-break, quick release couplings of a "flat-face" type manufactured in Japan of special alloy steel. Highly durable, resistant to vibrations and pulsating pressure. Low air inclusion. Used in hydraulic installations in foundry equipment where sudden pressure fluctuations occur. Equipped with a safety locking pin preventing accidental disconnection. For one hand operation. A distinctive feature of the quick release coupling is the working pressure which does not depend on its size.

Socket and plug with female thread	size [inch]	female thread [inch]	coupling code	plug code
	1/4	1/4 BSPT	NK-350-2S	NK-350-2P
		3/8 BSPT	NK-350-3S	NK-350-3P
		3/8 BSP	NK-350-3S-3G	NK-350-3P-3G
	1/2	1/2 BSPT	NK-350-4S	NK-350-4P
		1/2 BSP	NK-350-4S-4G	NK-350-4P-4G
	3/4	3/4 BSPT	NK-350-6S	NK-350-6P
		3/4 BSP	NK-350-6S-6G	NK-350-6P-6G
	1	1 BSPT	NK-350-8S	NK-350-8P
		1 BSP	NK-350-8S-8G	NK-350-8P-8G
	1.1/2	1.1/4 BSPT	NK-350-10S	NK-350-10P
		1.1/2 BSPT	NK-350-12S	NK-350-12P

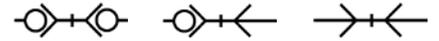
Operating parameters

size [inch]	working pressure [bar]	flow rate at $\Delta p = 3$ bar [l/min]
1/4	345	27
1/2	345	56
3/4	345	100
1	345	180
1.1/2	345	360



HIGH PRESSURE - quick release couplings

SNAP-TITE couplings

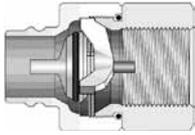


H series (1/4" ÷ 2")

- Standard:** MIL-C-51234
- Applications:** Hydraulics (hydraulic oil), Industrial (water, steam, fuels and oils, gases and chemicals)
- Working press.:** Up to 759 bar (safety factor 2:1)
- Material:** Brass, galvanized steel, stainless steel, anodized aluminium (option)
- Seal:** NBR (from -35°C up to +120°C)
Viton (from -25°C up to +205°C)
EPDM (from -55°C up to +120°C)
- Advantages:** Unique construction of valves allows to obtain laminar flow

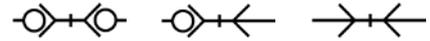
Quick release couplings manufactured in USA. Unique construction of valves allows to obtain laminar flow. Can be used as single shut-off but only from the socket side. The socket is available with a safety locking pin preventing accidental disconnection. Depending on application, the material of quick release coupling and seal must be chosen. On request:

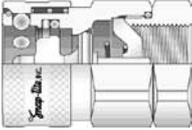
- quick release couplings IH series (socket of zinc plated steel in sizes from 1/4" to 3/4", a special construction valve guarantees excellent resistance to pulsating pressure in pneumatic installations),
- quick release couplings PH series (socket and plug of zinc plated steel in sizes from 3/8" to 1", equipped with a static pressure eliminator - can be connected under residual pressure, max. 210 bar),
- quick release couplings with other connection threads (UNF, NPT).

Plug	size [inch]	female thread [inch]	seal	valve	code		
					brass	galvanized steel	AISI 316
	1/4	1/4 BSP	NBR	yes	SN-BVHN4-4RP	SN-VHN4-4RP	SN-SVHN4-4RP
			Viton	yes	SN-BVHN4-4RPV	-	SN-SVHN4-4RPV
		1/8 BSP	-	no	-	-	SN-SPHN4-2RP
		1/4 BSP	-	no	SN-BPHN4-4RP	SN-PHN4-4RP	SN-SPHN4-4RP
	3/8	3/8 BSP	NBR	yes	SN-BVHN6-6RP	SN-VHN6-6RP	SN-SVHN6-6RP
			Viton	yes	SN-BVHN6-6RPV	SN-VHN6-6RPV	SN-SVHN6-6RPV
			-	no	SN-BPHN6-6RP	SN-PHN6-6RP	SN-SPHN6-6RP
	1/2	1/2 BSP	NBR	yes	SN-BVHN8-8RP	SN-VHN8-8RP	SN-SVHN8-8RP
			Viton	yes	SN-BVHN8-8RPV	SN-VHN8-8RPV	SN-SVHN8-8RPV
			-	no	SN-BPHN8-8RP	SN-PHN8-8RP	SN-SPHN8-8RP
	3/4	3/4 BSP	NBR	yes	SN-BVHN12-12RP	SN-VHN12-12RP	SN-SVHN12-12RP
			EPDM	yes	-	-	SN-SVHN12-12RPE
			Viton	yes	SN-BVHN12-12RPV	-	SN-SVHN12-12RPV
			-	no	SN-BPHN12-12RP	SN-PHN12-12RP	SN-SPHN12-12RP
	1	1 BSP	NBR	yes	-	SN-VHN16-16RP	SN-SVHN16-16RP
			EPDM	yes	-	-	SN-SVHN16-16RPE
			Viton	yes	SN-BVHN16-16RPV	-	SN-SVHN16-16RPV
			-	no	SN-BPHN16-16RP	SN-PHN16-16RP	SN-SPHN16-16RP
	1.1/4	1.1/4 BSP	NBR	yes	-	SN-VHN20-20RP	SN-SVHN20-20RP
			Viton	yes	SN-BVHN20-20RPV	SN-VHN20-20RPV	SN-SVHN20-20RPV
	1.1/2	1.1/2 BSP	NBR	yes	SN-BVHN24-24RP	SN-VHN24-24RP	SN-SVHN24-24RP
			EPDM	yes	-	-	SN-SVHN24-24RPE
			Viton	yes	SN-BVHN24-24RPV	-	SN-SVHN24-24RPV
			-	no	-	SN-PHN24-24RP	SN-SPHN24-24RP
2	2 BSP	NBR	yes	SN-BVHN32-32RP	-	-	
		Viton	yes	-	-	SN-SVHN32-32RPV	
		-	no	-	SN-PHN32-32RP	-	

HIGH PRESSURE - quick release couplings

SNAP-TITE couplings



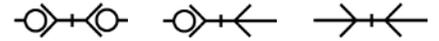
Socket	size [inch]	female thread [inch]	seal	valve	code		
					brass	galvanized steel	AISI 316
	1/4	1/4 BSP	NBR	yes	SN-BVHC4-4RP	SN-VHC4-4RP	SN-SVHC4-4RP
			NBR	yes	-	-	SN-SVHC4-4RPSL*
			Viton	yes	SN-BVHC4-4RPV	-	SN-SVHC4-4RPV
			NBR	no	-	-	SN-SPHC4-4RP
			NBR	no	-	-	SN-SPHC4-4RPSL
			Viton	no	SN-BPHC4-4RPV	-	SN-SPHC4-4RPV
			Viton	no	-	-	SN-SPHC4-4RPVSL*
	3/8	3/8 BSP	NBR	yes	SN-BVHC6-6RP	SN-VHC6-6RP	SN-SVHC6-6RP
			Viton	yes	SN-BVHC6-6RPV	-	SN-SVHC6-6RPV
			NBR	no	SN-BPHC6-6RP	SN-PHC6-6RP	SN-SPHC6-6RP
			NBR	no	-	-	SN-SPHC6-6RPSL*
			Viton	no	SN-BPHC6-6RPV	-	SN-SPHC6-6RPV
	1/2	1/2 BSP	NBR	yes	SN-BVHC8-8RP	SN-VHC8-8RP	SN-SVHC8-8RP
			Viton	yes	SN-BVHC8-8RPV	-	SN-SVHC8-8RPV
			NBR	no	-	SN-PHC8-8RP	SN-SPHC8-8RP
			NBR	no	-	-	SN-SPHC8-8RPSL*
			Viton	no	SN-BPHC8-8RPV	-	SN-SPHC8-8RPV
	3/4	3/4 BSP	NBR	yes	SN-BVHC12-12RP	SN-VHC12-12RP	SN-SVHC12-12RP
			EPDM	yes	-	-	SN-SVHC12-12RPE
			Viton	yes	SN-BVHC12-12RPV	-	SN-SVHC12-12RPV
			NBR	no	SN-BPHC12-12RP	SN-PHC12-12RP	SN-SPHC12-12RP
			Viton	no	SN-BPHC12-12RPV	-	SN-SPHC12-12RPV
	1	1 BSP	NBR	yes	SN-BVHC16-16RP	SN-VHC16-16RP	SN-SVHC16-16RP
			Viton	yes	SN-BVHC16-16RPV	-	SN-SVHC16-16RPV
			Viton	yes	-	-	SN-SVHC16-16RPVSL*
			NBR	no	-	SN-PHC16-16RP	SN-SPHC16-16RP
	1.1/4	1.1/4 BSP	NBR	yes	SN-BVHC20-20RP	SN-VHC20-20RP	-
			Viton	yes	SN-BVHC20-20RPV	-	SN-SVHC20-20RPV
	1.1/2	1.1/2 BSP	NBR	yes	SN-BVHC24-24RP	SN-VHC24-24RP	-
			EPDM	yes	-	-	SN-SVHC24-24RPE
			NBR	yes	-	SN-VHC24-24RPSL*	SN-SVHC24-24RPSL*
			Viton	yes	SN-BVHC24-24RPV	-	SN-SVHC24-24RPV
Viton			yes	-	-	SN-SVHC24-24RPVSL*	
2	2 BSP	NBR	no	-	-	SN-SPHC24-24RP	
		NBR	yes	SN-BVHC32-32RP	-	-	
			Viton	yes	-	-	SN-SVHC32-32RPV

* - socket with a safety locking pin preventing accidental disconnection

Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	aluminium	SN-AMPH-4	SN-ADCH-4
	3/8		SN-AMPH-6	SN-ADCH-6
	1/2		SN-AMPH-8	SN-ADCH-8
	3/4		SN-AMPH-12	SN-ADCH-12
	1		SN-AMPH-16	SN-ADCH-16
	1.1/4		SN-AMPH-20	SN-ADCH-20
	1.1/2		SN-AMPH-24	SN-ADCH-24
	2		SN-AMPH-32	SN-ADCH-32

HIGH PRESSURE - quick release couplings

SNAP-TITE couplings



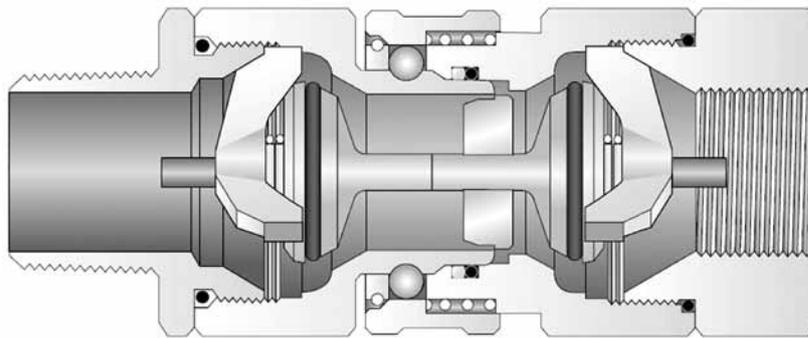
Operating parameters - working pressure

size [inch]	working pressure [bar]							
	Single, double shut-off				free flow			
	brass	steel	AISI 316	aluminium	brass	galv. steel	AISI 316	aluminium
1/4	155	448	345	155	276	759	690	276
3/8	155	310	276	155	276	759	552	276
1/2	138	276	259	121	276	759	552	276
3/4	138	241	138	121	241	621	483	241
1	121	138	138	103	207	414	276	207
1.1/4	24	121	103	26	69	345	207	69
1.1/2	24	103	103	26	69	345	207	69
2	28	103	34	21	52	276	69	52

Operating parameters - flow

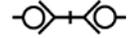
size [inch]	flow rate at $\Delta p = 3$ bar [l/min]	
	double shut-off	single shut-off
1/4	21	22
3/8	28	42
1/2	73	75
3/4	135	151
1	196	227
1.1/4	308	401
1.1/2	420	632
2	1040	1296

Cross-section of connected quick release coupling



HIGH PRESSURE - quick release couplings

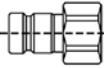
SNAP-TITE couplings



71 series (1/8" ÷ 2")

- Standard:** Producer's standard
- Applications:** Hydraulics (hydraulic oil)
Industrial (water, steam, fuels and oils, gases, chemicals)
- Working press.:** Up to 689 bar
- Material:** Galvanized steel, stainless steel
- Seal:** NBR (from -35°C up to +120°C)
Viton (from -25°C up to +205°C)
EPDM (from -55°C up to +120°C)
- Advantages:** Dry-break, high working press. of quick release couplings made of special stainless steel

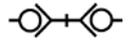
Dry-break quick release couplings manufactured in USA, designed for heavy duty operation. Characterized by the highest working pressure of all "flat-face" type quick release couplings (high pressure stainless steel version). The socket is available with a safety locking pin preventing accidental disconnection. One hand operation. Depending on application, the material of quick release coupling and seal must be chosen. For pulsating pressure, the maximum working pressure must be reduced by 40%. Quick release couplings with other connection threads (UNF) are also available.

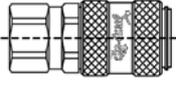
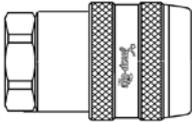
Plug	size [inch]	female thread ** [inch]	seal	code		
				galvanized steel	AISI 316	high pressure stainless steel
 (1/8" size)	1/8	1/4 BSP	NBR	SN-71N2-4RP	-	-
			Viton	SN-71N2-4RPV	-	-
	1/4	1/4 BSP	NBR	SN-71N4-4RP	SN-S71N4-4RP	SN-SH71N4-4RP
			Viton	SN-71N4-4RPV	SN-S71N4-4RPV	SN-SH71N4-4RPV
		1/4 NPTF (1/4 NPSF)	NBR	SN-71N4-4F	SN-S71N4-4F	SN-SH71N4-4F
			EPDM	SN-71N4-4FE	SN-S71N4-4FE	SN-SH71N4-4FE
 (1/4" ÷ 1" size)	3/8	1/4 BSP	NBR	SN-71N6-4RP	-	-
			Viton	SN-71N6-4RPV	SN-S71N6-4RPV	SN-SH71N6-4RPV
	3/8	3/8 BSP	NBR	SN-71N6-6RP	SN-S71N6-6RP	SN-SH71N6-6RP
			Viton	-	SN-S71N6-6RPV	SN-SH71N6-6RPV
		1/2 BSP	NBR	SN-71N6-8RP	-	-
			Viton	SN-71N6-8RPV	SN-S71N6-8RPV	SN-SH71N6-8RPV
1/2	3/8 NPTF (3/8 NPSF)	NBR	SN-71N6-6F	SN-S71N6-6F	SN-SH71N6-6F	
		EPDM	SN-71N6-6FE	SN-S71N6-6FE	-	
	1/2 BSP	NBR	SN-71N8-8RP	SN-S71N8-8RP	SN-SH71N8-8RP	
		Viton	-	SN-S71N8-8RPV	SN-SH71N8-8RPV	
 (2" size)	3/4	3/4 BSP	NBR	SN-71N12-12RP	SN-S71N12-12RP	SN-SH71N12-12RP
			Viton	-	SN-S71N12-12RPV	-
	1	3/4 NPTF (3/4 NPSF)	NBR	SN-71N12-12F	SN-S71N12-12F	SN-SH71N12-12F
			EPDM	SN-71N12-12FE	SN-S71N12-12FE	-
		1 BSP	NBR	SN-71N12-12FV	SN-S71N12-12FV	SN-SH71N12-12FV
			Viton	SN-71N12-12FV	SN-S71N12-12FV	SN-SH71N12-12FV
2	1 BSP	NBR	SN-71N16-16RP	SN-S71N16-16RP	-	
		EPDM	-	SN-S71N16-16RPE	-	
	1 NPTF (1 NPSF)	NBR	-	SN-S71N16-16RPV	-	
		Viton	-	SN-S71N16-16RPV	-	
		NBR	SN-71N16-16F	SN-S71N16-16F	SN-SH71N16-16F	
		EPDM	SN-71N16-16FE	SN-S71N16-16FE	SN-SH71N16-16FE	
2	1.1/2 BSP	NBR	SN-71N16-16FV	SN-S71N16-16FV	SN-SH71N16-16FV	
		Viton	SN-71N16-16FV	SN-S71N16-16FV	SN-SH71N16-16FV	
	2 BSP	NBR	SN-71N32-24RP	-	-	
		Viton	SN-71N32-24RPV	-	-	
2 NPT	NBR	SN-71N32-32RP	-	-		
	Viton	SN-71N32-32RPV	-	-		

** - threads of stainless steel plugs are given in brackets.

HIGH PRESSURE - quick release couplings

SNAP-TITE couplings



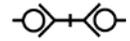
Socket	size [inch]	female thread ** [inch]	seal	code				
				galvanized steel	AISI 316	high pressure stainless steel		
 <p>(1/8" size)</p>	1/8	1/8 NPTF	NBR	SN-71C2-2F	-	-		
			EPDM	SN-71C2-2FE	-	-		
			Viton	SN-71C2-2FV	-	-		
	 <p>(1/4" ÷ 1" size)</p>	1/4	1/4 BSP	NBR	SN-71C4-4RP	-	SN-SH71C4-4RP	
				NBR	-	-	SN-SH71C4-4RPSL*	
				Viton	SN-71C4-4RPV	SN-S71C4-4RPV	-	
		<td rowspan="9">3/8</td> <td rowspan="3">1/4 NPTF (1/4 NPSF)</td> <td>NBR</td> <td>SN-71C4-4F</td> <td>SN-S71C4-4F</td> <td>SN-SH71C4-4F</td>	3/8	1/4 NPTF (1/4 NPSF)	NBR	SN-71C4-4F	SN-S71C4-4F	SN-SH71C4-4F
					EPDM	SN-71C4-4FE	SN-S71C4-4FE	-
					EPDM	-	-	SN-SH71C4-4FESL*
				NBR	SN-71C4-4FSL*	SN-S71C4-4FSL*	-	
				Viton	SN-71C4-4FV	SN-S71C4-4FV	SN-SH71C4-4FV	
				Viton	SN-71C4-4FVSL*	SN-S71C4-4FVSL*	-	
				3/8 NPTF (3/8 NPSF)	NBR	SN-71C6-4RP	-	-
					NBR	SN-71C6-6RP	-	SN-SH71C6-6RP
					NBR	SN-71C6-6RPSL*	-	SN-SH71C6-6RPSL*
		Viton	-		SN-S71C6-6RPV	-		
		NBR	SN-71C6-8RP		-	-		
		NBR	SN-71C6-6F		SN-S71C6-6F	SN-SH71C6-6F		
<td rowspan="6">1/2</td> <td rowspan="3">1/2 BSP</td> <td>EPDM</td> <td>SN-71C6-6FE</td> <td>SN-S71C6-6FE</td> <td>-</td>	1/2	1/2 BSP	EPDM	SN-71C6-6FE	SN-S71C6-6FE	-		
			EPDM	SN-71C6-6FESL*	-	-		
			NBR	SN-71C6-6FSL	-	-		
		Viton	SN-71C6-6FV	SN-S71C6-6FV	SN-SH71C6-6FV			
		Viton	SN-71C6-6FVSL*	SN-S71C6-6FVSL*	-			
		NBR	SN-71C8-8RP	SN-S71C8-8RP	SN-SH71C8-8RP			
	1/2 NPTF (1/2 NPSF)	NBR	SN-71C8-8RPSL*	-	SN-SH71C8-8RPSL*			
		Viton	-	SN-S71C8-8RPV	SN-SH71C8-8RPV			
		NBR	SN-71C8-8F	SN-S71C8-8F	SN-SH71C8-8F			
		EPDM	SN-71C8-8FE	SN-S71C8-8FE	-			
		EPDM	SN-71C8-8FESL*	SN-S71C8-8FESL*	SN-SH71C8-8FESL*			
		NBR	SN-71C8-8FSL*	SN-S71C8-8FSL*	SN-SH71C8-8FSL*			
<td rowspan="6">3/4</td> <td rowspan="3">3/4 BSP</td> <td>Viton</td> <td>SN-71C8-8FV</td> <td>SN-S71C8-8FV</td> <td>SN-SH71C8-8FV</td>	3/4	3/4 BSP	Viton	SN-71C8-8FV	SN-S71C8-8FV	SN-SH71C8-8FV		
			Viton	SN-71C8-8FVSL*	SN-S71C8-8FVSL*	-		
			NBR	SN-71C12-12RP	SN-S71C12-12RP	-		
		NBR	SN-71C12-12RPSL*	-	-			
		Viton	SN-71C12-12RPV	SN-S71C12-12RPV	-			
		Viton	SN-71C12-12RPVSL*	-	-			
	3/4 NPTF (3/4 NPSF)	NBR	SN-71C12-12F	SN-S71C12-12F	SN-SH71C12-12F			
		EPDM	SN-71C12-12FE	SN-S71C12-12FE	-			
		NBR	SN-71C12-12FSL*	SN-S71C12-12FSL*	SN-SH71C12-12FSL*			
		Viton	SN-71C12-12FV	SN-S71C12-12FV	SN-SH71C12-12FV			
		Viton	SN-71C12-12FVSL*	SN-S71C12-12FVSL*	-			
		NBR	SN-71C16-16RP	-	-			
<td rowspan="6">1</td> <td rowspan="3">1 BSP</td> <td>EPDM</td> <td>-</td> <td>SN-S71C16-16RPE</td> <td>-</td>	1	1 BSP	EPDM	-	SN-S71C16-16RPE	-		
			NBR	SN-71C16-16RPSL*	-	-		
			Viton	-	SN-S71C16-16RPV	-		
		NBR	SN-71C16-20RP	SN-S71C16-20RP	-			
		NBR	SN-71C16-20RPSL*	-	-			
		Viton	SN-71C16-16F	SN-S71C16-16F	SN-SH71C16-16F			
	1 NPTF (1 NPSF)	EPDM	SN-71C16-16FE	SN-S71C16-16FE	-			
		EPDM	-	SN-S71C16-16FESL*	SN-SH71C16-16FESL*			
		NBR	SN-71C16-16FSL*	SN-S71C16-16FSL*	-			
		Viton	SN-71C16-16FV	SN-S71C16-16FV	-			
		Viton	SN-71C16-16FVSL*	SN-S71C16-16FVSL*	-			
		NBR	SN-71C32-24RPSL*	-	-			
<td rowspan="3">2</td> <td rowspan="3">2 BSP</td> <td>NBR</td> <td>SN-71C32-32F</td> <td>-</td> <td>-</td>	2	2 BSP	NBR	SN-71C32-32F	-	-		
			NBR	SN-71C32-32FSL*	-	-		
			Viton	SN-71C32-32FV	-	-		
	2 NPT	NBR	SN-71C32-32FSL*	-	-			
		Viton	SN-71C32-32FV	-	-			
		Viton	SN-71C32-32FVSL*	-	-			

* - socket with a safety locking pin preventing accidental disconnection

** - threads of stainless steel sockets are given in brackets

HIGH PRESSURE - quick release couplings

SNAP-TITE couplings



Blank plugs/caps	size [inch]	material	code	
			socket blank plug	plug blank cap
	1/4	plastic	SN-71PCC-4	SN-71PNC-4
	3/8		SN-71PCC-6	SN-71PNC-6
	1/2		SN-71PCC-8	SN-71PNC-8
	3/4		SN-71PCC-12	SN-71PNC-12
	1		SN-71PCC-16	SN-71PNC-16

Operating parameters - working / bursting pressure

size [inch]	working / bursting pressure [bar]		
	galvanized steel	AISI 316	high pressure stainless steel
1/8	689 / 1517	-	-
1/4	689 / 1379	344 / 862	689 / 1379
3/8	689 / 1379	344 / 862	689 / 1379
1/2	689 / 1379	344 / 862	689 / 1379
3/4	517 / 1034	344 / 862	517 / 1034
1	517 / 1034	275 / 689	517 / 1034
2	344 / 689	206 / 413	344 / 689

Operating parameters - flow, air inclusion, leakage

size [inch]	flow rate at $\Delta p = 3$ bar [l/min]	air inclusion [cm ³]	leakage [cm ³]
1/8	2.5	0.02	0.12
1/4	21	0.01	0.02
3/8	53	0.02	0.02
1/2	86	0.03	0.03
3/4	169	0.04	0.06
1	247	0.06	0.1
2	957	30.5	5.25

Cross-section of connected quick release coupling (size from 1/4" to 1")

