HIGH-PRESSURE HYDRAULICS

High-pressure Connections

Quick Connect Products for High-pressure Hydraulik Applications



Low overall cost

CEJN's ultra-high pressure hydraulics range gives you a wide choice of quick connect couplings with cost saving features, such as non-drip valves, dust caps, true "quick-connect" action; plus components made of hardened steel for dependable and repeated cycling, leading to long service life and lower maintenance costs.

CEJN – a partner to count on with high pressure

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Bangalore, India

ISO 9001 certified since 1995.
ISO 14001 certified since 2006.

CEJN is the world leader in quick connect coupling technology for high pressure hydraulics. With more than 50 years of experience in the industry, we have demonstrated our ability to provide solutions for the most demanding applications.

Years of research and development have led to our vast product offering and leading position in non-drip quick couplings technology. Maximum flexibility, safety and reliability are the cornerstones that determine functional design and material selection. The result is a complete range of quick connect couplings especially designed for ultra-high pressure pumps, jacks, clamps, rescue equipment, torque and tensioning tools, diagnostics and other demanding applications.

QUICK CONNECT FEATURES
Although other manufactures may offer couplings under the heading of “quick connect,” the ultra-high product range from CEJN is one of the few lines that include a truly quick to connect design; without threads that may bind or only partially connect. The safe, automatic locking system facilitates faster access, particularly suitable for confined areas.

UNIQUE ADVANTAGES!
Designed with a non-drip interface, CEJN’s series of ultra-high pressure couplings minimize both fluid spillage and air inclusion, saving clean-up costs and our environment, as well as ensuring proper system function.

In order to minimize unexpected downtime and increase reliability, all exposed components are manufactured with hardened steel to provide longer service life in rugged environments. Another advantage of the CEJN ultra-high series is the small envelope size, allowing easy installation and quick access to your fluid lines in confined spaces.

DUST CAPS ARE STANDARD
All CEJN couplings are fitted with dust caps as standard. Because dirt and debris have known adverse affects on hydraulic systems, dust caps should always be used whenever the two halves are separated. Additionally, the two dust cap halves should be connected together whenever the coupling halves are connected; thereby preventing contamination from entering the dust caps. As standard practice, both the coupling and nipple halves should be thoroughly inspected and wiped clean prior to every connection.

HIGH WORKING PRESSURE
With operating pressures as high as 300 MPa, the CEJN product range includes several couplings with a flat-face design, for ease of cleanliness. All coupling halves are designed to withstand the full working pressure while disconnected; however the nipples generally have a lower rated pressure when in the disconnect position.

CEJN’s ultra-high pressure product range also includes accessories, such as hose assemblies, adapters, pressure gages and porting blocks.

QUALITY
Before leaving CEJN’s production facility, every coupling is tested multiple times to ensure functionality and performance. Each part is checked before, during and after assembly. Prior to shipment, each coupling is also function and leak tested to ensure that you receive a reliable, proven product.

OTHER PRODUCTS FROM CEJN
CEJN’s line of hydraulic products also includes quick connect couplings for low and intermediate pressure applications, as well as multi-couplings and auto-couplings. Contact CEJN for additional information and product bulletins.

Considerations with high pressures

1 bar = 0.1 MPa

1 bar = 0.987 atm

1 bar = 14.5 PSI

1 bar = 1.02 kg/cm2

1 MPa = 10 bar

1 MPa = 9.87 atm

1 MPa = 145 PSI

1 MPa = 10.2 kg/cm2

1 atm = 0.101 MPa

1 atm = 1.013 bar

1 atm = 14.7 PSI

1 atm = 1.03 kg/cm2

1 PSI = 0.007 MPa

1 PSI = 0.068 atm

1 PSI = 0.067 bar

1 PSI = 0.07 kg/cm2

1 kg/cm^2 = 0.098 MPa

1 kg/cm^2 = 0.968 atm

1 kg/cm^2 = 98 067 PSI

1 kg/cm^2 = 0.980 bar

SEALING AT ULTRA-HIGH PRESSURES

CEJN recommends the use of metal-to-metal cone seats for ultra-high pressure hydraulic couplings. For pressures of 70 MPa and above, we have developed a unique seal that incorporates a 120° cone. The 120° cone allows for the seal to take place on a relatively small diameter, which minimizes strain on the threads. Additionally, the threads are straight, not tapered, thereby eliminating the risk of cracked threads under over-torque conditions. Because the CEJN connection has very good sealing properties at low tightening torque, the joint can be reassembled many times without damaging the sealing surfaces.

When using tapered threads, such as NPT or R, we recommend the use of a liquid or paste sealant - not thread tape (i.e. PTFE based tape), which may serve more as a lubricant and lead to cracked components. Thread tape may also become dislodged and find its way into hydraulic components, thereby causing damage or system malfunction.
Rubber-metal seals can be used when sealing parallel threads against boss or components with the appropriate sealing face. Rubber-metal seals should be avoided at pressures above 100 MPa.

CONNECTING THE TWO HALVES

When connecting the two halves, always make sure that the locking sleeve moves forward to ensure a positive lock. Ultra-high pressure series couplings are not designed to be connected under pressure, as seal damage may occur.

DUST CAPS

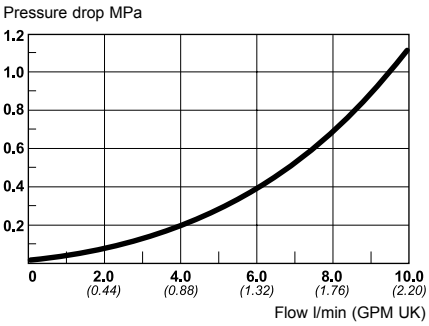
Extend product life by using dust caps. Dust or dirt on the coupling/nipple can easily enter the hydraulic system and in doing so impair the oil quality and system performance and in the worse possible scenario result in production downtime.

CEJN's dust caps can, as an extra safety precaution, be connected together to prevent dust from becoming attached to them when the nipple and coupling are connected.

Despite these precautions, you should still wipe off the coupling and nipple before connection.

Series 115. 100 MPa.

Series 115 is available in both standard and Flat-face designs (see page 9). The series is a CEJN original with extremely small outside dimensions. Non-drip connection and disconnection are standard on the CEJN high pressure range. All exposed components are made of zinc plated steel. The coupling is also available in a design with a safety ring for the locking sleeve to prevent accidental disconnection. Plastic dust caps are standard on both coupling and nipple (dust caps of aluminum can be ordered separately). The nipple is also available in a design with a hose rupture valve, part no. 10 115 6272. In the event of a ruptured hose the nipple closes and prevents the system from being drained of oil, which could have critical consequences for production and the environment. The hose rupture valve closes when the flow exceeds 13.0 liters/minute (2.86 GPM UK).



Technical data

Material: Hardened, zinc chromate plated steel
Max. working pressure: 100 MPa
Min. bursting pressure: 260 MPa
Nominal flow diameter: 2.5 mm (3/32")
Temperature range: - 30°C - + 100°C (-20°F - + 210°F)
Flow capacity at pressure drop 0.4 MPa: 6.0 l/min (1.32 GPM UK)

The nipple should not be loaded while disconnected, see also page 26.

		Part No.	Connection	Length	Diameter	Hexagon	Con. stroke	Weight (g)	Rec. torque (Nm)	Rec. Sealing method
COUPLINGS	Female thread	10 115 1102	Rc 1/4”	59,3	28,0	24	18,3	170	50-60	-
		10 115 1104	Rc 3/8”	60,8	28,0	24	18,3	165	70-80	-
		10 115 1201	G 1/8”	53,8	28,0	24	18,3	155	40-50	T
		10 115 1202	G 1/4”	61,3	28,0	24	18,3	165	40-50	CMS
		10 115 1204	G 3/8”	63,3	28,0	24	18,3	170	70-80	T
		10 115 1222 safety lock	G 1/4”	61,3	28,0	24	18,3	170	40-50	CMS
		10 115 1401	NPT 1/8”	53,8	28,0	24	18,3	155	40-50	-
		10 115 1402	NPT 1/4”	58,3	28,0	24	18,3	165	50-60	-
		10 115 1404	NPT 3/8”	60,3	28,0	24	18,3	165	70-80	-
		10 115 1422 safety lock	NPT 1/4”	58,3	28,0	24	18,3	170	50-60	-
	Male thread	10 115 1252	G 1/4”	61,3	28,0	24	18,3	151	40-50	T
		10 115 1254	G 3/8”	60,8	28,0	24	18,3	155	70-80	T
		10 115 1452	NPT 1/4”	61,8	28,0	24	18,3	150	50-60	-
		10 115 1454	NPT 3/8”	62,3	28,0	24	18,3	155	70-80	-
NIPPLES	Female thread	10 115 6102	Rc 1/4"	36,7	25,4	22	-	60	30-40	-
		10 115 6104	Rc 3/8”	38,0	27,7	24	-	60	40-50	-
		10 115 6201	G 1/8”	33,3	19,6	17	-	40	40-50	T
		10 115 6202	G 1/4”	38,0	25,4	22	-	60	40-50	CMS
		10 115 6204	G 3/8”	39,5	27,7	24	-	65	70-80	T
		10 115 6401	NPT 1/8”	33,3	19,6	17	-	40	30-40	-
		10 115 6402	NPT 1/4”	35,7	25,4	22	-	55	30-40	-
		10 115 6404	NPT 3/8”	37,0	27,7	24	-	65	40-50	-
	Male thread	10 115 6152	R 1/4”	62,5	25,4	22	-	110	50-60	-
		10 115 6154	R 3/8”	63,0	25,4	22	-	115	70-80	-
		10 115 6212	G 1/4”	50,0	25,4	22	-	80	40-50	T
		10 115 6272 hose rupture valve	G 1/4”	52,0	25,4	22	-	85	40-50	T
		10 115 6452	NPT 1/4”	61,5	25,4	22	-	105	50-60	-
		10 115 6454	NPT 3/8”	62,1	25,4	22	-	115	70-80	-

Plastic dust cap for couplings

Part number 09 115 1002

Plastic dust cap for nipples

Part number 09 115 1053

Thread connections are listed according to ISO Standards (see Page 23 for more information). All measurements are in mm (Dimension key, see page 25). Pressure conversion table, see page 24. Check with your local retailer for availability and prices.