



HYDROMINE™ HMP Range of Hydraulic Pipe Couplings

Overview:

The HYDROMINE™ HMP Hydraulic coupling is designed as an easy method of joining plain ended pipes in a vertical shaft. The coupling allows for expansion and contraction. It eliminates the expensive welding process, saves space and drastically reduces installation time.

The HYDROMINE™ HMP Hydraulic coupling can only be installed in a system where each pipe is supported. The top and bottom pipes in the shaft must be properly anchored. The coupling allows for expansion and contraction and no other expansion joints will be required. All pipe ends must be properly prepared for the installation and must be free of scratches, dents or any damage. If the pipe ends are well prepared, and the coupling is installed as per the installation procedure, the chances of leaks are drastically reduced.

Designed Gap:

There should be a gap between the pipes when they are installed in the shaft. This gap will allow for expansion, contraction of the pipe and the centre bolts / pins of the HYDROMINE™ HMP Hydraulic coupling. In most cases the design gap will be 25mm / 0,98". The design gap must be calculated and specified by the engineer, who oversees the design of the entire piping system. Should the design gap be greater than 25mm / 0,98", the face to face of the coupling will be greater than in the specified table below.



Materials Of Construction:

Part Name	Material Specification
Body - #1	Pipe - ASTM A106 Grade B
Body - #2	Hollow bar - ST-52
Body - #3	Casting – BS3100 Grade A2 / A3 / A4 / A5 / A6 or BT2
Flanges - #1	ASTM A105
Flanges - #2	Carbon steel
Centre bolts / pins	316 S/Steel
Dowty washer	304 S/Steel / Nitrile
Seals	Polyurethane
Bolts	Hex Grade 8.8, Hot dipped galvanizing

Dimensions:

Pipe sizes	Inner bolt dimensions				Outer bolt dimensions			
	Face to Face		Outside diameter		Face to Face		Outside diameter	
	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)
DN50 / 2"	180	7.09	145	5.71	180	7.09	180	7.09
DN80 / 3"	190	7.48	175	6.89	190	7.48	190	7.48
DN100 / 4"	200	7.87	200	7.87	200	7.87	230	9.06
DN150 / 6"	200	7.87	260	10.24	200	7.87	274	10.79
DN200 / 8"	220	8.66	305	12.01	220	8.66	355	13.98
DN250 / 10"	220	8.66	360	14.17	220	8.66	410	16.14
DN300 / 12"	250	9.84	420	16.54	250	9.84	465	18.31
DN350 / 14"	250	9.84	450	17.72	250	9.84	480	18.90
DN400 / 16"	250	9.84	500	19.69	250	9.84	575	22.64
DN450 / 18"	250	9.84	565	22.24	250	9.84	645	25.39
DN500 / 20"	300	11.81	630	24.80	300	11.81	740	29.13



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Bolt Dimensions And Torque Settings:

Pipe sizes Unit	Bolts sizes		Bolt torque		Centre bolt sizes	
	(metric)	(imperial)	(Nm)	ft lb		
DN50 / 2"	M12	1/2"	85	62.69	3 x M12	3 x 1/2"
DN80 / 3"	M12	1/2"	85	62.69	3 x M12	3 x 1/2"
DN100 / 4"	M16	5/8"	210	154.89	3 x M12	3 x 1/2"
DN150 / 6"	M16	5/8"	210	154.89	3 x M16	3 x 5/8"
DN200 / 8"	M16	5/8"	210	154.89	3 x M16	3 x 5/8"
DN250 / 10"	M16	5/8"	210	154.89	3 x M16	3 x 5/8"
DN300 / 12"	M20	3/4"	425	313.46	3 x M16	3 x 5/8"
DN350 / 14"	M20	3/4"	425	313.46	4 x M16	4 x 5/8"
DN400 / 16"	M20	3/4"	425	313.46	4 x M20	4 x 3/4"
DN450 / 18"	M24	1"	730	538.42	4 x M20	4 x 3/4"
DN500 / 20"	M24	1"	730	538.42	6 x M20	6 x 3/4"

Design & Manufacturing Standards:

The HYDROMINE™ HMP Hydraulic coupling are designed in accordance with various international standards as set out below:

ASME Boilers and pressure vessels design code

ANSI B16.34

ANSI B16.37

ANSI B31.3

Available sizes: DN50 / 2" to DN500 / 16"

Pressure rating: up to 25MPa / 3 626 psi

