



LFC™_3B Manual Isolation Valves

Overview:

The LFC™_3B Manual Isolating valves were designed to be simple and easy to operate.

The LFC™_3B Manual isolation valve has been developed to present a robust, simple and cost effective low pressure (up to 2.5 MPa / 363 psi) solution to fluid handling issues in any industrial sector.

Low Operating Torque:

The LFC™_3B Manual isolation valve is hydrostatically balanced to enable easy opening and closing at any pressure and differential conditions. It does not require the use of a gearbox or a by-pass valve to balance pressure between the inlet and outlet. The differential pressures do not affect the operating torque which results in a relatively flat torque curve allowing for the fitment of smaller actuators.

Operating Conditions:

These valves are designed to operate in systems with relatively clean media like water or other liquids with a low percentage of suspended solids and chlorides. The valve's operating pH range is 2 - 14 pH.

Simplicity:

The LFC™_3B Manual isolation valve is designed to minimize wearing parts and in effect only has one moving part called the plug. The plug is a piston that is engineered to be balanced. The balanced plug uses the inline fluid pressure to remove the influence of differential pressure on operating torque. As such, the valve operating torque is the torque required to overcome the sum of the friction forces generated between the valve seals and the sleeve plus the weight of the plug (depending on the installation con figuration). This torque requirement is not affected by inline pressure variants and as such makes the balanced valves extremely good for actuation applications. Removal of gearboxes reduces maintenance requirements and improves troubleshooting times.

Low Maintenance Requirement:

All the moving parts of the LFC™_3B Manual isolation valves are manufactured from stainless steel which increases reliability and durability. The LFC™_3B requires minimal maintenance, the majority of which, can be conducted with the valve remaining in situ.

Robust, Reliable & Efficient:

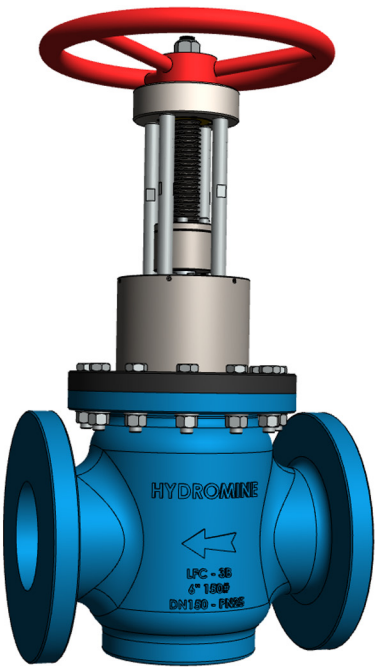
Due to the minimal number of moving parts to affect the fluid control, the number of potential failures are minimized.

Flow Rates:

Flow (ℓ/sec)		5	10	25	35	50	100	150	200	250	300	350	400
Pressure Drop (kPa)	DN50	47	94										
	DN80	17	34	86									
	DN100		23	57	79								
	DN150			26	36	51	102						
	DN200					28	56	84	112				
	DN250						37	55	73	91	112		
	DN300						26	37	50	63	75	90	103
Flow US gallon / min		79.25	158.50	396.26	634.01	792.52	1585.03	2377.55	3170.06	3962.575	4755.09	5547.605	6340.12
Pressure Drop (psi)	2"	6.82	13.63										
	3"	2.47	4.93	12.47									
	4"		3.34	8.27	11.46								
	6"			3.77	5.22	7.4	14.79						
	8"					4.06	8.12	12.18	16.24				
	10"						5.37	7.98	10.59	13.2	16.24		
	12"						3.77	5.37	7.25	9.14	10.88	13.05	14.96

Valve Sizing:

Please contact Hydromine for clarification of correct sizing of your requirement.





LFC™_3B Manual Isolation Valves

Materials Of Construction & Dimensions:

Part Name	Material Specification	Valve size	Face to Face Dimensions	
Body	Costing - Ductile iron	Unit	Face to face #150	
Body seat	431 / 304 S/ Steel		(mm)	(Inch)
Plug	431 / 304 S/ Steel	DN50 / 2"	203	7.99
V-Port	431 / 304 S/ Steel	DN80 / 3"	241	9.49
Shaft	431 / 304 S/ Steel	DN100 / 4"	292	11.5
Plug seat	Polyurethane	DN150 / 6"	356	14.02
Sleeve	431 / 304 S/ Steel	DN200 / 8"	495	19.49
Sleeve Holder	Ductile iron	DN250 / 10"	622	24.49
Spindle	431 S/ Steel	DN300 / 12"	699	27.52
Tripod rods	Carbon steel	DN350 / 14"	787	30.98
Bush holder	Ductile iron / Carbon steel	DN400 / 16"	914	35.98
Driving bush	LG 2			
Bearing box	431 S/ Steel			
Bearings	Thrust bearings			
Seals / O-Rings	Nitrile (Buna)			
Shaft seal	Polyurethane			
Wiper seal	Polyurethane			

Design & Manufacture Standards:

The LFC™_3B manual isolation valve has been designed in accordance with various international standards as set out below:
ASME Boilers and pressure vessels design code
ANSI B16.10ANSI B16.3
ANSI B16.34ANSI B16.37
ANSI B16.5 ANSI N278.1

Available sizes: DN50 / 2" to DN400 / 16"
Face to face dimensions to ANSI B16.10
Pressure rating: up to 2.5 MPa / 363psi

Available end connections: ANSI B16.5, BS4504, BS10, AS/NZS 4331.1 (ISO 7005-1) DIN, all makes of grooved or ring joint couplings and other as per client's requirement.

