

# F.P.T. VALVES AND AUXILIARY COMPONENTS







## For an always reliable control

F.P.T. valves are designed and produced to guarantee maximum reliability and performance for customer needs. They can be mounted directly on the hydraulic pump or in line, manually or electric driven, with multiple configurations giving the maximum flexibility for the operator.

A wide range of components and accessories is available to complete your own hydraulic system. Complete series of pressure gauges, flexible hoses, quick couplings, manifolds, fittings and oil for optimal operation and durability of your equipment.



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Series **V**

## Complementary valves for flow and pressure control.



MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING		
VM - 5A VM - 5B	NEEDLE VALVE 1000 BAR		Inline needle valve used to exclude or hold parts of the hydraulic circuit under pressure (female-female).  Inline needle valve used to exclude or hold parts of the hydraulic circuit under pressure (male-female).	 VM-5A VM-5B		
MODEL	A	B	C	D	E	F
VM - 5A VM - 5B	68	32	94	84	19	3/8" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING				
RFUA	UNIDIRECTIONAL FLOW CONTROL VALVE 700 BAR		Unidirectional flow control valve, allows the lowering of the load in a controlled manner. The built-in relief valve protects the circuit against overpressure.	 RFUA				
MODEL	A	B	C	D	E	F	G	H
RFUA	70	35	100	110	84	27	18	3/8" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING
VRL - A38 VRL - B14	VALVE OF RETURN 700 BAR		Inline unidirectional check valve. It blocks the flow in one direction while allowing it to move in the opposite direction.	 VRL - A38 VRL - B14
MODEL	A	B	C	
VRL - A38 VRL - B14	66 56	30 25	3/8" NPT 1/4" NPT	

Other models of 3-way valves also available

Dimensions in mm

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING	
VRPL - A	PILOT OPERATED CHECK VALVE 700 BAR		Inline pilot-operate check valve: blocks the flow in one direction allowing it to move in the opposite direction. The circuit is unblocked thanks to a pilot pressure 4 times lower than the circuit pressure.	 VRPL - A	
MODEL	A	B	C	D	E
VRPL - A	122	41	3/8" NPT	30	1/4" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING				
VMPL - A	PRESSURE RELIEF VALVE 700 BAR		Pressure relief valve; the knob is used to regulate the pressure in the circuit. For inline mounting.	 VMPL - A				
MODEL	A	B	C	D	E	F	P	T
VMPL - A	125	50	40	5,5	22	35	3/8" NPT	3/8" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING				
VMPP - A	PRESSURE RELIEF VALVE 700 BAR		Pressure relief valve; the knob is used to regulate the pressure in the circuit. Panel mounted.	 VMPP - A				
MODEL	A	B	C	D	E	F	P	T
VMPP - A	120	63	15	M25x1,5	29	32	1/4" NPT	1/8" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING				
VMX/TS	PRESSURE RELIEF VALVE 700 BAR		Pressure relief valve; the knob is used to regulate the pressure in the circuit. Panel mounted. Very accurate metering.	 VMX/TS				
MODEL	A	B	C	D	E	F	P	T
VMX/TS	183	43	128	15	M30x1,5	45	3/8" NPT	1/8" NPT

MODEL	TYPE OF VALVE	HYDRAULIC DIAGRAM	DESCRIPTION	TECHNICAL DRAWING				
VMX/TSL	PRESSURE RELIEF VALVE 700 BAR		Pressure relief valve; the knob is used to regulate the pressure in the circuit. Panel mounted.	 VMX/TSL				
MODEL	A	B	C	D	E	F	P	T
VMX/TSL	183	43	128	15	M30x1,5	45	3/8" NPT	1/8" NPT

Other models of 3-way valves also available

Dimensions in mm

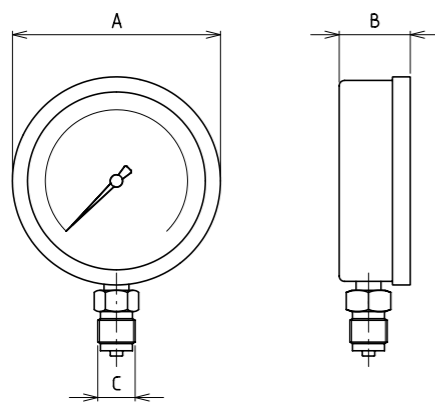
Series **MD** Pressure gauges



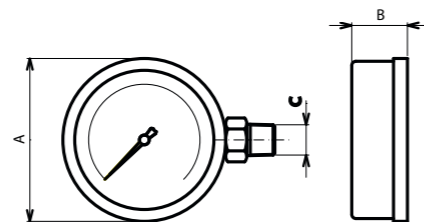
• Excellent precision and readability, easy to assemble.

• Digital or dual pressure reading scale (bar - ton).

MD PRESSURE GAUGES



MD-60G/H3



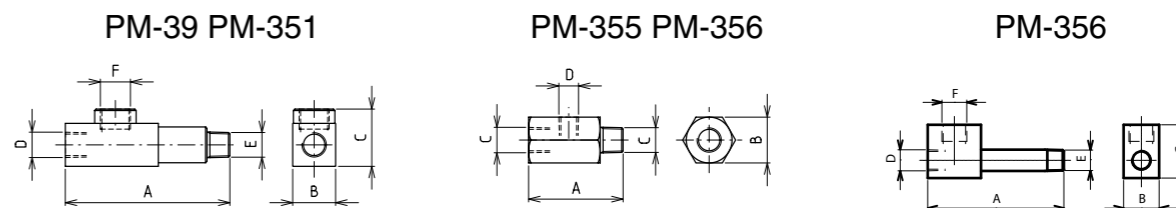
MODEL	PRESSURE RANGE		PRECISION CLASS	Ø FACE	TYPE	DIMENSIONS in mm		
	Bar	Psi				A	B	C
MD 60G/H3	0 - 1000	0 - 14000	1,6	60	IN GLYCERINE BATH	68	28	1/4" NPT
MD 60G	0 - 1000	0 - 14000	1,6	60	IN GLYCERINE BATH	68	28	1/4" NPT
MD 100G	0 - 1000	0 - 14000	1,0	100	IN GLYCERINE BATH	110	36	G 1/2"
MD 160G	0 - 1600	0 - 23000	1,0	100	IN GLYCERINE BATH	110	47	G 1/2"
MD 200G	0 - 2000	0 - 30000	1,0	100	IN GLYCERINE BATH	110	50	G 1/2"
MD 300G	0 - 3000	0 - 45000	1,0	100	IN GLYCERINE BATH	110	50	M16x1,5*
MD 400G	0 - 4000	0 - 60000	1,0	100	IN GLYCERINE BATH	110	50	M16x1,5*

\* Female

Series **VM - PM** Pressure gauge accessories

PRESSURE GAUGE ADAPTORS

The FPT system can be used to mount the pressure gauge directly on the pump head. The pressure gauge adaptors are required on pumps and valves when the pressure gauge is not directly installed.

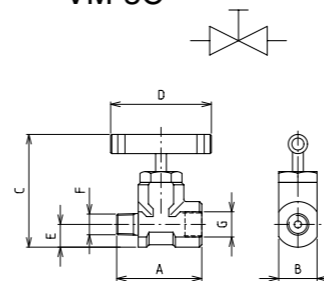


	MODEL	DIMENSIONS in mm					
		A	B	C	D	E	F
	PM - 346	115	30	45	3/8" NPT	3/8" NPT	G 1/2"
	PM - 351	115	30	40	3/8" NPT	1/4" NPT	G 1/2"
	PM - 355	68	27	1/4" NPT	1/4" NPT	-	-
	PM - 356	68	32	3/8" NPT	1/4" NPT	-	-

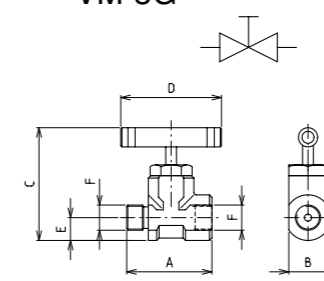
PRESSURE GAUGE SHUT-OFF VALVES

The pressure gauge shut-off valves cut off the pressure to the gauge so that it can be excluded when readings are not required.

VM-5C



VM-5G



	MODEL	MALE END	FEMALE END	DIMENSIONS in mm				
		F	G	A	B	C	D	E
	VM - 5C	3/8" NPT	G 1/2"	68	32	94	84	19
	VM - 5G	G 1/2"	G 1/2"	68	32	94	84	19



**FLEX HOSES**

Max working pressure  
1.000 to 4.000 bar

Series  
**TFG - TFR** Flex Hoses



**High pressure Hoses**

The 1000 bar thermoplastic flex hoses standard 1/4 version with internal Ø 6.3 mm are suitable for demanding applications and have a safety factor of 2.8: 1. On request, also available hoses with custom sizes and fittings, flexible hoses with internal Ø of 9.7 mm for applications with high flow rates as well.

For very high pressure applications, thermoplastic hoses available in a range from 1.800 to 4.000 bar to cover all market needs.

MAX W.P.	1000 BAR							
	TFR #		TFRR #		TFG #		TFGG #	
LENGHT [m]	END 1	END 2	END 1	END 2	END 1	END 2	END 1	END 2
0,6	3/8" NPT		1/4" NPT		3/8" NPT	GR-6M	GR-6M	
1								
2								
3								
4								
5								
6								
10								

MAX W.P.	1800 BAR		2500 BAR		3000 BAR		3000 BAR		4000 BAR		4000 BAR	
	TFR # / 1800		TFR # / 2500		TFR # / 3000-M16D		TFR # / 3000-M16G		TFR # / 4000-M16D		TFR # / 4000-M16H	
LENGHT [m]	END 1	END 2	END 1	END 2	END 1	END 2	END 1	END 2	END 1	END 2	END 1	END 2
1	1/4" GAS M - 120°		1/4" GAS M - 120°		M16x1,5	1/4" GAS F - 60°	M16x1,5	M16x1,5	1/4" HP	M16x1,5		
1,5												
2												
3												
4												
5												
6												

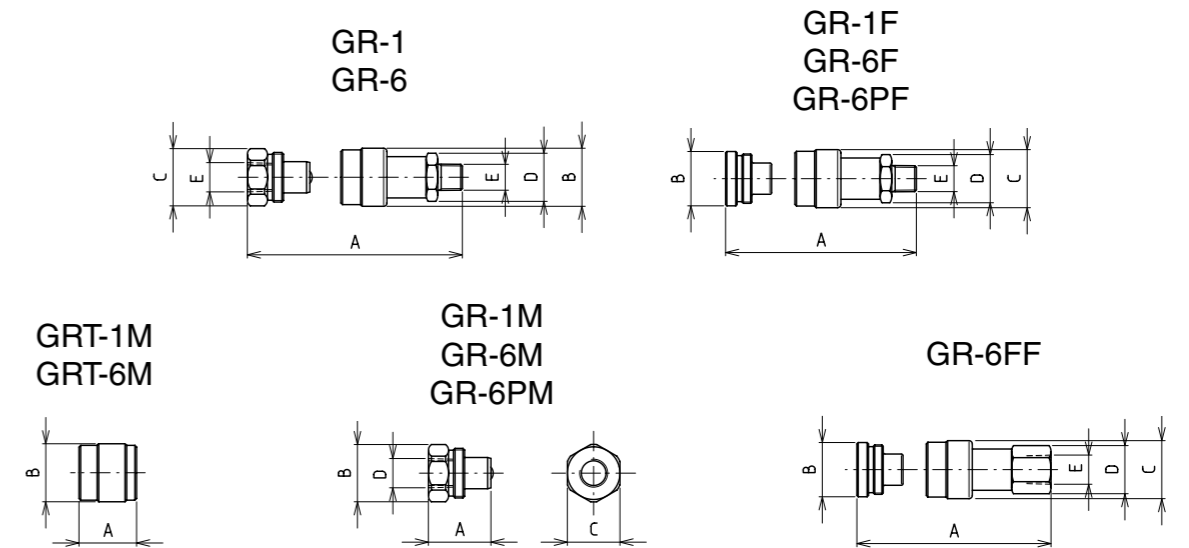
# insert length of the hose expressed in meters

Series  
**GR** Quick couplers



**For quick and safe connection of the hydraulic circuits**

700 bar couplings available in standard or high flow version. Female quick couplers are equipped with dust caps. For very high pressures, quick couplings are available up to 4,000 bar depending on specific needs.



MAX WP	MODEL	Description	Connection
700 bar	GR-6F	Female quick coupler, male threaded	3/8" NPT Male
	GR-6M	Male quick coupler, female threaded	3/8" NPT Female
	GR-6FF	Female quick coupler, female threaded	3/8" NPT Female
	GR-6	Complete quick coupler (GR-6F + GR-6M)	3/8" NP
	GRT-6M	Dust cap for GR-6M	-
	GR-1F	Female quick coupler, male threaded	1/4" NPT Male
	GR-1M	Male quick coupler, female threaded	1/4" NPT Female
	GR-1	Complete quick coupler (GR-1F + GR-1M)	1/4" NPT
	GRT-1M	Dust cap for GR-1M	-
700 bar - high flow	GR-6PF	Female coupler, male threaded, poppet sealing system	3/8" NPT Male
	GR-6PM	Male coupler, female threaded, poppet sealing system	3/8" NPT Female
1500 bar	GR-15F	Female quick coupler, female threaded	1/4" G
	GR-15M	Male quick coupler, female threaded	
2000 bar	GR-20F	Female quick coupler, female threaded	
	GR-20M	Male quick coupler, female threaded	
2500 bar	GR-25F	Female quick coupler, female threaded	M16x1,5
	GR-25M	Male quick coupler, female threaded	
3000 bar	GR-30F	Female quick coupler, female threaded	M16x1,5
	GR-30M	Male quick coupler, female threaded	
4000 bar	GR-40F-M16	Female quick coupler, female threaded	M16x1,5
	GR-40M-M16	Male quick coupler, female threaded	

Series  
**MR - MA - ML**

**Manifolds - fittings and hydraulic oil**

- Used to connect multiple lines to one inlet.
- Available in 11 standard models and in custom versions for high pressure jobs.
- Built with radial or linear outlet. The linear models are supplied with a pressure gauge installation hole.
- 1000 bar

	MODEL	NUMBER OF USES	DIMENSIONS in mm								
			A	B	C	D	E	F	G	H	
	MR - 3V	3	70	26	3/8" NPT						
	MR - 5V	5	70	26	3/8" NPT						
	MR - 11V	11	148	35	3/8" NPT						
	MR - 17V	17	230	35	3/8" NPT						
	MA - 5	5	118	40	30	16	55	3/8" NPT	45	G 1/2"	
	MA - 7	7	173	40	30	16	55	3/8" NPT	100	G 1/2"	
	MA - 9	9	228	40	30	16	55	3/8" NPT	100	G 1/2"	
	ML - 5	5	200	45	50	3/8" NPT	G 1/2"	186	31	6,5	
	ML - 7	7	300	45	50	3/8" NPT	G 1/2"	286	31	6,5	
	ML - 9	9	400	45	50	3/8" NPT	G 1/2"	386	31	6,5	
	ML - 11	11	500	45	50	3/8" NPT	G 1/2"	486	31	6,5	

	MODEL	NUMBER OF USES	DIMENSIONS in mm			
	VM5A/2	3				
	VM5A/4	5				

**FITTINGS**

TYPE	MODEL	DIMENSIONS in mm				
		A	B	C	D	
ELBOW	G - 241	38	35	50	3/8" NPT	
	GF - 242	38	35	3/8" NPT	-	
T FITTING	T - 342	38	66	53	3/8" NPT	
CROSS FITTING	C - 442	38	66	3/8" NPT	-	
REDUCTION	R - 313	40	CH 27	1/4" NPT	3/8" NPT	
	R - 314	40	CH 27	3/8" NPT	1/4" NPT	
	R - 316	45	CH 32	G 1/2"	1/4" NPT	
	R - 352	45	CH 32	G 1/2"	3/8" NPT	
HEX COUPLING	ME - 349	37	CH 27	3/8" NPT	3/8" NPT	
	ME - 357	37	CH 27	1/4" NPT	3/8" NPT	
NIPPLE	N - 341	39	CH 17	1/4" NPT	1/4" NPT	
	N - 343	41	CH 19	1/4" NPT	3/8" NPT	
	N - 344	41	CH 19	3/8" NPT	3/8" NPT	
LONG NIPPLE	NL - 345	55	3/8" NPT		-	
	NL - 346	80	3/8" NPT		-	
	NL - 347	150	3/8" NPT		-	

	MODEL	LITRES
	OIL - 1	1
OIL - 5	5	
OIL - 10	10	
BIO-OIL-1	1	
BIO-OIL-5	5	
BIO-OIL-10	10	

**MINERAL HYDRAULIC OIL ISO VG 32**  
Available different oil for custom applications.

**BIO OIL - Eco-friendly oil**  
Eco-friendly oil. High-performance, fully synthetic, biodegradable, non-toxic hydraulic fluid, saturated esters made.

