

TECNIDRO



PROFILO AZIENDALE

La **TECNIDRO S.R.L.**, fondata nel 1987, è un'azienda italiana specializzata nella progettazione e produzione di apparecchiature idrauliche per la regolazione ed il controllo dei fluidi.

Avvalendosi della lunga esperienza e delle tecnologie produttive più avanzate, TECNIDRO ha esteso la propria gamma di produzione al settore dell'**Antincendio**, realizzando valvole specifiche per impianti di estinzione fissi tipo sprinkler (a umido, a secco, a diluio e preazione), a schiuma, per impianti di raffreddamento, reti a idranti e reti di alimentazione idrica e stoccaggio.

Le valvole automatiche per antincendio TECNIDRO sono impiegate a protezione di:

- raffinerie, depositi di idrocarburi e piattaforme offshore
- industrie chimiche, farmaceutiche e cartarie
- stazioni ferroviarie, aeroporti, ed eliporti
- stazioni di pompaggio e motopompe
- centri commerciali, capannoni industriali e magazzini
- tunnels e miniere
- petroliere, navi mercantili e passeggeri
- basi militari, hangars e depositi di esplosivi

La TECNIDRO opera in regime di Qualità ed Ambientale Integrato, secondo **EN ISO 9001** e **EN ISO 14000**, ed è in possesso della Certificazione per la marcatura "**CE**" in conformità alla Direttiva Europea **97/23/EC (P.E.D.)**.

COMPANY PROFILE

TECNIDRO S.R.L., founded in 1987, is an Italian company specialized designing and producing of hydraulic equipments for fluids regulation and control.

Due to the long experience and the use of advanced production technologies, TECNIDRO has expanded its own product range in the **Firefighting** market, manufacturing specialty valves for fixed extinguishing systems such as sprinkler (wet pipe, dry pipe, deluge and preaction), foam proportioners, cooling loops, hydrant networks and water storage and supply.

TECNIDRO's automatic valves for firefighting systems are prescribed to protect:

- refineries, fuel deposits and off-shore platforms
- chemical, pharmaceutical and paper industries
- railway stations, airports and heliports
- pumping stations and motor pumps
- malls, industrial plants and warehouses
- tunnels and mines
- oil tankers, merchant and passenger ships
- military bases, hangars and explosives storages

TECNIDRO operates following the Quality and Environmental Integrated system **EN ISO 9001** and **EN ISO 14000** and is certificated for "**CE**" marking according to the European Directive **97/23/EC (P.E.D.)**.





GAMMA PRODOTTI



PRODUCT RANGE

Valvole per Sistemi Sprinkler

- a umido
- a secco
- a preallarme
- a diluvio

Sprinkler Systems Valves

- wet pipe
- dry pipe
- preaction
- deluge

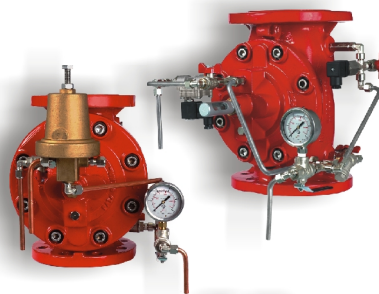


Valvole per Sistemi a Schiuma

- monitori
- generatori di schiuma
- idranti

Foam Systems Valves

- monitors
- foam proportioners
- hydrants

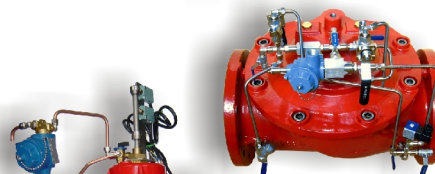


Valvole per Sistemi Speciali

- gallerie ferroviarie
- impianti navali
- piattaforme offshore
- depositi di esplosivi

Special Systems Valves

- railway tunnels
- naval plants
- offshore platforms
- explosives storage



Valvole per Reti Idriche

- controllo livelli serbatoi
- regolazione pressione
- controllo pompa
- sfioro rapido
- drenaggio automatico

Water Supply Valves

- tanks level control
- pressure regulation
- pump control
- pressure relief
- automatic drain

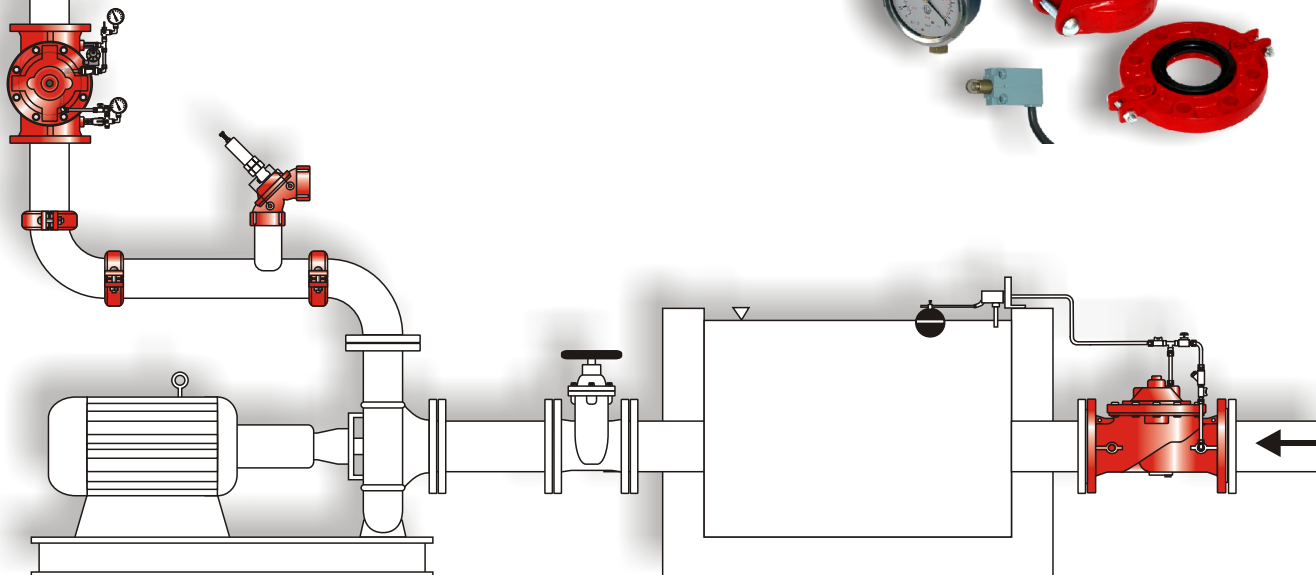


Accessori

- raccordi scanalati
- pressostati
- manometri
- finecorsa

Accessories

- grooved fittings
- pressure switches
- pressure gauges
- limit switches



TECNIDRO

Firefighting Valves

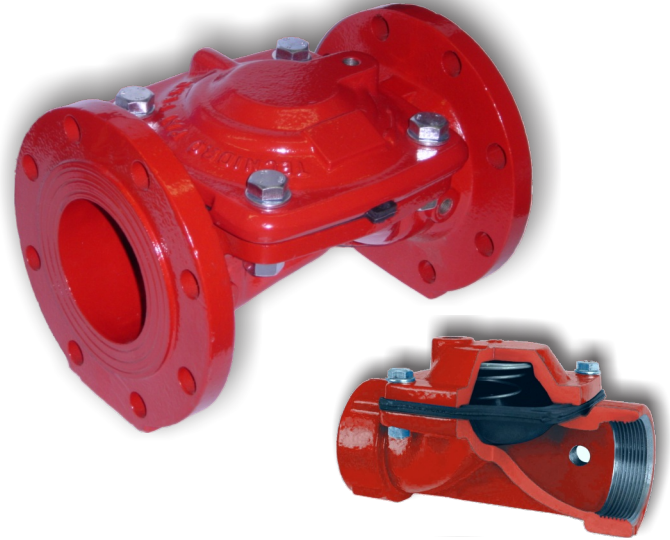
VALVOLA A MEMBRANA Diaphragm Valve

Le valvole TECNIDRO Serie IM-F sono di tipo idraulico automatico a membrana, adatte all'impiego in Sistemi Antincendio.

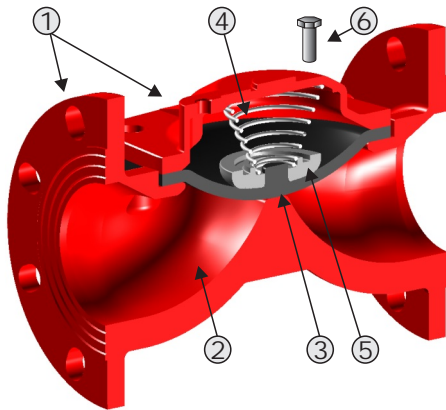
Le valvole base sono disponibili in una gamma completa di esecuzioni e possono essere equipaggiate con svariate opzioni di controllo per soddisfare ogni genere di applicazioni.

The TECNIDRO IM-F Serie are hydraulically operated diaphragm valves, suitable for use in Firefighting Systems.

The basic valves bodies are available in a variety of executions and can be equipped with several control options to satisfy a wide range of applications.



MATERIALI Materials



Pos.	DESCRIZIONE DESCRIPTION	MATERIALE STANDARD STANDARD MATERIAL
1	Corpo e Coperchio Body and Cover	Ductile Iron EN GJS400-15 EN 1563
2	Verniciatura Coating	Fusion bonded Epoxy-polyester Fire Red - Min. 200 micron
3	Membrana Diaphragm	NR Nylon Reinforced
4	Molla Spring	AISI 302 stainless steel
5	Supporto Molla Spring Support	Polypropilene
6	Bulloni Bolts	Stainless Steel

CARATTERISTICHE TECNICHE Technical Features

Pressioni Pressure	Progetto/Esercizio Design/Working	20/16 [bar] - 232/290 [psi]
	Prova Test	1,5 x PS (24,0 [bar] - 348 [psi])
Fluidi Fluid	Tipo Type	Water, Sea Water, Foam
	Temperatura Temperature	Ambient -20°/+90°C -4/+194°F Fluid +0°/+50°C +32/+122 °F
Conessioni Connections	alla Tubazione to the Pipeline	Flange ISO PN16 - ANSI #150/300 BSP - NPT or Grooved
	al Circuito to the Circuit	Ø1/4" / Ø1/2" F BSP

MARCATURA MEMBRANA Diaphragm Marking

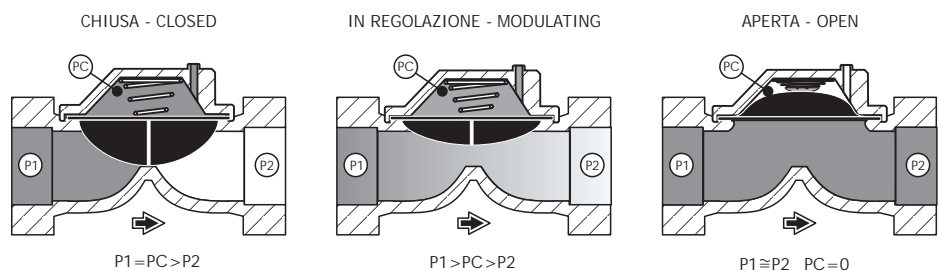


MARCATURA "CE" (P.E.D.) "CE" Marking



FUNZIONAMENTO Operation

P1	Pressione di monte Upstream pressure
P2	Pressione di valle Downstream pressure
PC	Pressione nella camera Chamber pressure
	Direzione del flusso Flow direction




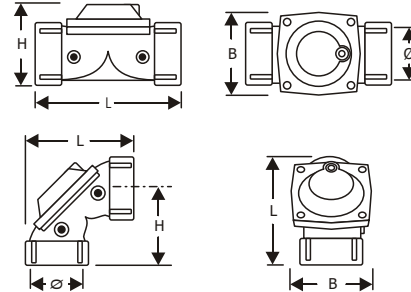
DIMENSIONI, PESI e PORTATE CONSIGLIATE


La tabella sottostante mostra le dimensioni, i pesi e le portate consigliate dei modelli di valvola standard.
Altri modelli o connessioni sono disponibili su richiesta.

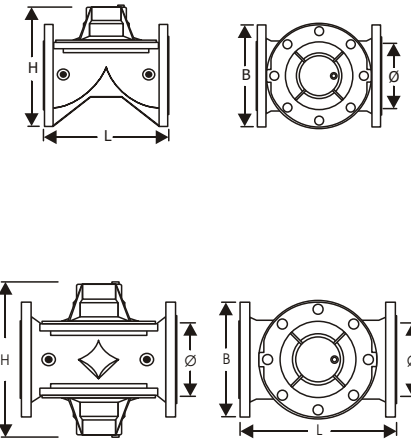
DIMENSIONS, WEIGHTS and RECOMMENDED FLOW RATES


The table below details dimensions, weights and recommended flow rates of standard valve models.
Other models or connections are available upon request.

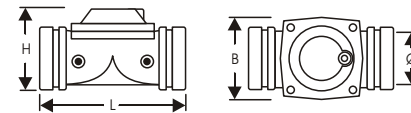
DN-Ø (mm) (Inch)		Mod.	L (mm)	H (mm)	B (mm)	P (Kg)	ON-OFF (m ³ /h)	REG. (m ³ /h)	
		Threaded BSP - NPT	Dimensioni e Pesii Dimensions & Weights				Portate Flow Rates (*)		
Corpo in Linea - Inline Pattern									
25	1"	1"	116	50	70	1.5	12	25	
32	1"1/4	1"1/4	175	100	120	4.1	30	60	
40	1"1/2	1"1/2	175	100	120	3.7	33	65	
50	2"	2"	175	100	120	3.5	40	80	
65	2"1/2	2"1/2	200	115	120	4.5	48	95	
Corpo ad Angolo - Elbow Pattern									
50	2"	2"E	128	90	120	4.0	44	90	
80	3"	3"E	188	139	150	9.0	75	160	



		Flanged ISO PN16/10 ANSI 150	Dimensioni e Pesii Dimensions & Weights				Portate Flow Rates (*)		
Corpo in Linea - Inline Pattern									
50	2"	DN 50	175	165	165	7.5	40	80	
65	2"1/2	DN 65	175	165	165	7.5	48	95	
80	3"	DN 80	280	200	210	18.5	85	170	
100	4"	DN 100	300	220	220	20.5	95	195	
125	5"	DN 125	325	250	250	24.5	110	210	
150	6"	DN 150	350	320	320	46.0	190	375	
200	8"	DN 200	400	340	340	50.0	210	425	
250	10"	DN 250	450	470	405	90.0	350	700	
300	12"	DN 300	500	500	460	135.0	450	900	
350	14"	DN 350	550	520	520	155.0	750	1.600	
400	16"	DN 400	600	580	580	170.0	900	1.800	
500	20"	DN 500	700	680	680	195.0	1.000	2.000	
Corpo ad Angolo - Elbow Pattern									
80	3"	DN 80E	220	120	200	12.0	75	160	
100	4"	DN100E	245	135	220	14.0	100	200	



		Grooved (Victaulic)	Dimensioni e Pesii Dimensions & Weights				Portate Flow Rates (*)		
Corpo in Linea - Inline Pattern									
40	1"1/2	1"1/2V	175	100	120	3.5	33	65	
50	2"	2"V	175	100	120	3.5	40	80	
65	2"1/2	2"1/2V	195	115	120	4.5	48	95	
80	3"	3"CV	230	135	165	8.0	70	150	
80	3"	3"FV	285	170	210	15.0	85	170	
100	4"	4"FV	300	170	210	17.0	95	195	
150	6"	6"V	360	320	320	38.0	190	375	



(*): le portate consigliate corrispondono alle seguenti perdite di carico:
(*)): the recommended flow rates correspond to the following head loss:
Q ON-OFF : 0,2 bar
Q REG.: 0,8 bar

NOTA: I dati tecnici sono solo indicativi e possono essere modificati senza preavviso.
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TECNIDRO

IDROMEMBRANA® Basic Valves

VALVOLA A GLOBO

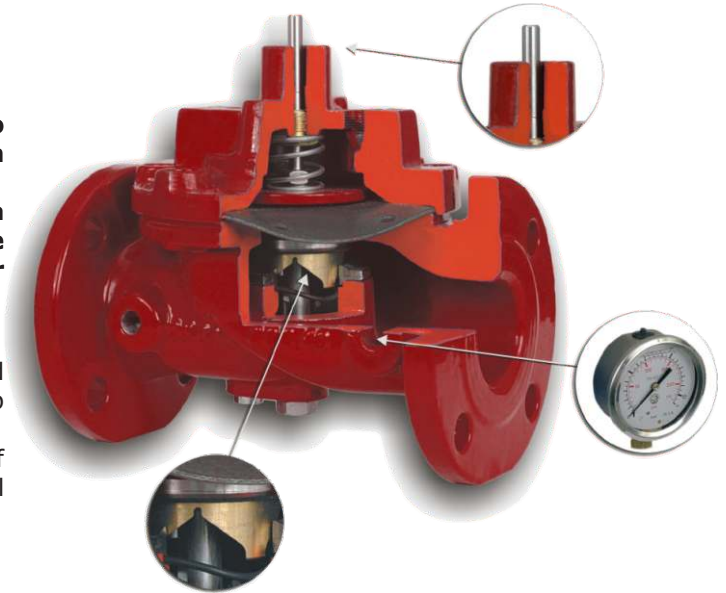
Globe Valve

Le valvole TECNIDRO Serie HM-F sono di tipo idraulico automatico a globo, adatte all'impiego in Sistemi Antincendio fino a 25/40 [bar].

Le valvole base sono disponibili in una gamma completa di esecuzioni e possono essere equipaggiate con svariate opzioni di controllo per soddisfare ogni genere di applicazioni.

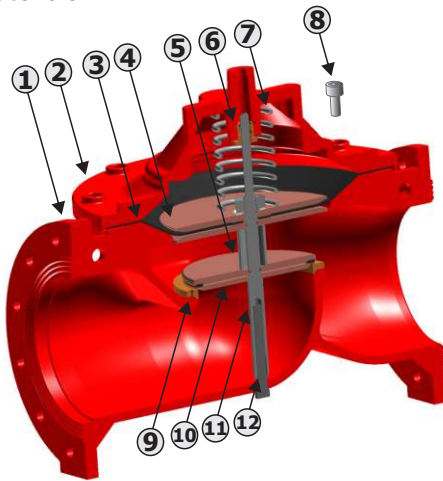
The TECNIDRO HM-F Serie are hydraulically operated globe valves, suitable for use in Firefighting Systems up to 25/40 [bar].

The basic valves bodies are available in a variety of executions and can be equipped with several control options to satisfy a wide range of applications.



MATERIALI

Materials



Pos.	DESCRIZIONE DESCRIPTION	MATERIALE STANDARD STANDARD MATERIAL	OPZIONI OPTIONS
1	Corpo e Coperchio Body and Cover	GS400-15 Ductile Iron EN 1563:2009	GS500 / AISI316 / Bronze
2	Verniciatura Coating	Epoxy-polyester Min. 150 micron	Sea Water Epoxy / Enamel
3	Membrana Diaphragm	NBR Nylon Reinforced	NR / EPDM / Viton®
4	Piattello Superiore Upper Disc	Epoxy coated steel or GS	AISI 304 / AISI 316
5	Distanziale Spacer	Epoxy coated GS	AISI 304 / AISI 316
6	Guida Superiore Upper Guide	Brass	AISI 304 / AISI 316 / Bronze
7	Molla Spring	AISI 304	AISI 302 / AISI 316
8	Bulloni Bolts	A2 Class Stainless Steel	
9	Seggio Seat	AISI 304	AISI 316 / Bronze
10	Otturatore Retainer	AISI 304 / Epoxy coated GS	AISI 316 / Bronze
11	Albero Stem	AISI 304	AISI 316
12	Guida Inferiore Lower Guide	AISI304	AISI 316

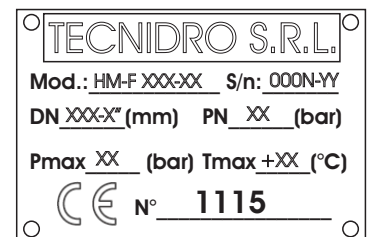
CARATTERISTICHE TECNICHE

Technical Features

Pressioni Pressure	Esercizio Working	0,5 [bar] (7,0 psi) ÷ 40 [bar] (580 psi)
	Prova Test	1,5 x PN (EN1074-5:2002)
Fluidi Fluid	Tipo Type	Water, Sea Water, Foam, Gasoil
	Temperatura Temperature	+0,5 ÷ +70,0 °C 33,0 ÷ 158,0 °F
Conessioni Connections	alla Tubazione to the Pipeline	Flange ISO PN10/16/25/40 ANSI #150RF
	al Circuito to the Circuit	1/4"÷2" F BSP

MARCATURA "CE" (P.E.D.)

"CE" Marking

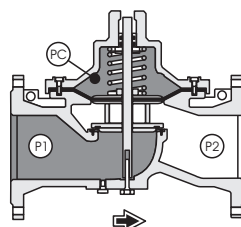


FUNZIONAMENTO

Operation

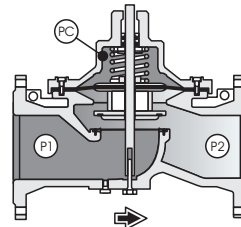
P1	Pressione di monte Upstream pressure
P2	Pressione di valle Downstream pressure
PC	Pressione nella camera Chamber pressure
	Direzione del flusso Flow direction

CHIUSA - CLOSED



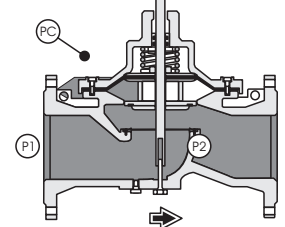
$P1 = PC > P2$

IN REGOLAZIONE - MODULATING



$P1 > PC > P2$

APERTA - OPEN




$P1 \approx P2 \quad PC = 0$

DIMENSIONI, PESI e PORTATE CONSIGLIATE

La tabella sottostante mostra le dimensioni, i pesi e le portate consigliate dei modelli di valvola standard.
Altri modelli o connessioni sono disponibili su richiesta.

DIMENSIONS, WEIGHTS and RECOMMENDED FLOW RATES

The table below details dimensions, weights and recommended flow rates of standard valve models.
Other models or connections are available upon request.

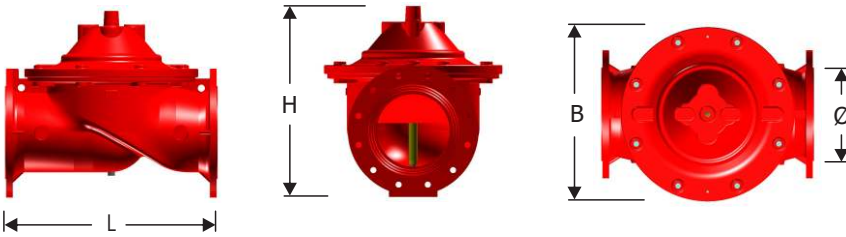
 Flanged ISO PN16/10 ANSI 150		Dimensioni e Pesì Dimensions & Weights					Portate Flow Rates (*)	
DN-Ø (mm) (Inch)	Mod.	L (mm)	H (mm)	B (mm)	P (Kg)	ON-OFF (m³/h)	REG. (m³/h)	
50	2"	DN 50	230	220	165	17	22	44
65	2"1/2	DN 65	290	230	185	20	26	52
80	3"	DN 80	310	290	200	26	54	110
100	4"	DN 100	350	310	235	35	88	182
125	5"	DN 125	400	340	270	48	104	205
150	6"	DN 150	480	440	300	85	200	402
200	8"	DN 200	600	535	360	115	394	795
250	10"	DN 250	730	560	425	140	516	1080
300	12"	DN 300	850	660	485	420	800	1740
350	14"	DN 350	980	695	555	530	900	1810
400	16"	DN 400	1100	985	620	800	1680	3170
500	20"	DN 500	1250	1040	730	950	2090	4200
600	24"	DN 600	1450	1095	845	1350	2300	4670
700	28"	DN 700	1650	1305	910	2600	4400	9000
800	32"	DN 800	1850	1360	1025	3000	5200	10500

NOTA (*):

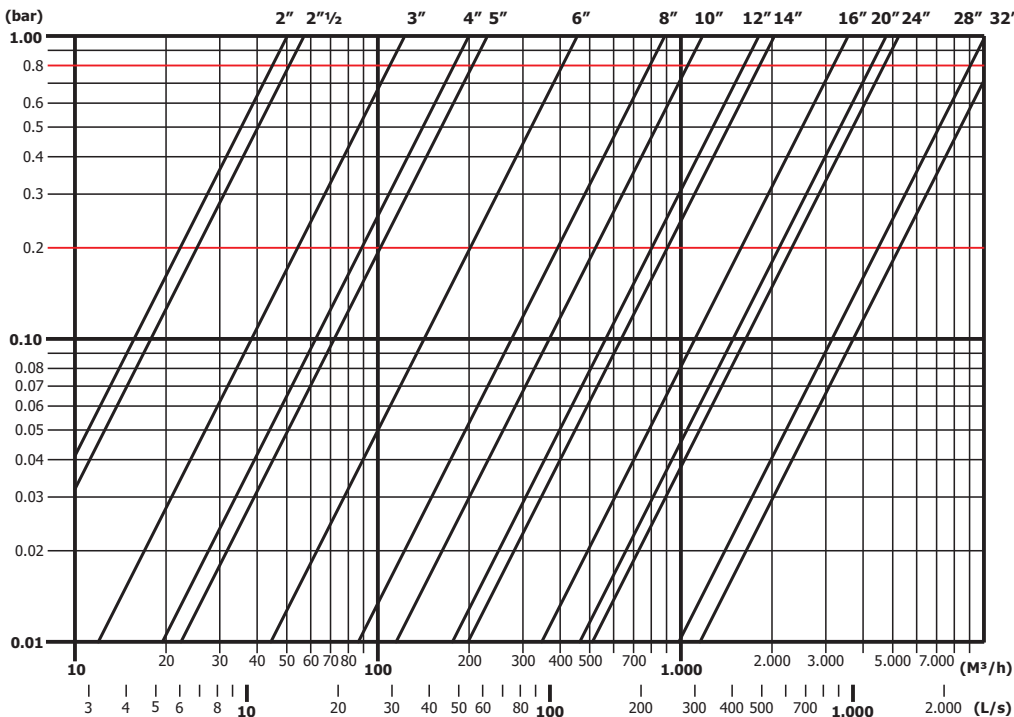
Le portate consigliate corrispondono alle seguenti perdite di carico:
Q ON-OFF : 0,2 bar
Q REG.: 0,8 bar

NOTE (*):

The recommended flow rates correspond to the following head loss:
Q ON-OFF : 0,2 bar
Q REG.: 0,8 bar



PERDITE DI CARICO / HEAD PRESSURE LOSS



$$K_v = Q_1 \sqrt{\frac{m_1}{p}}$$

Q_1 = flow rate [m³/h]
 m_1 = volumic weight [kg/dm³]
 p = pressure loss [bar].

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VALVOLA A PISTONE

Piston Valve

Le valvole TECNIDRO Serie HD-F sono di tipo idraulico automatico a pistone, adatte all'impiego in Sistemi Antincendio con pressioni elevate fino a 25/40 [bar].

Le valvole base sono disponibili in una gamma completa di esecuzioni e possono essere equipaggiate con svariate opzioni di controllo per soddisfare ogni genere di applicazioni.

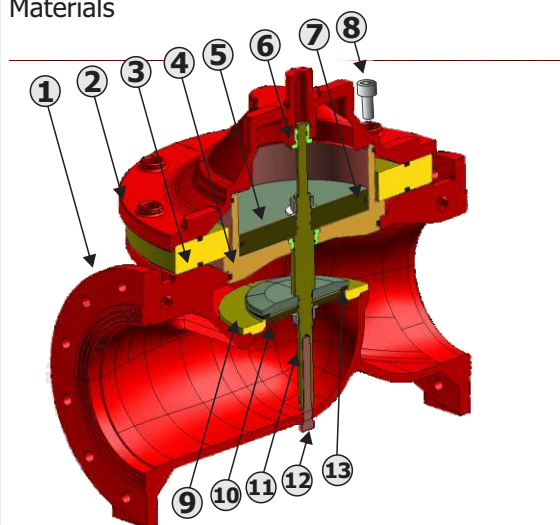
The TECNIDRO HD-F Serie are hydraulically operated piston valves, suitable for use in high pressure Firefighting Systems up to 25/40 [bar].

The basic valves bodies are available in a variety of executions and can be equipped with several control options to satisfy a wide range of applications.



MATERIALI

Materials



Pos.	DESCRIZIONE DESCRIPTION	MATERIALE STANDARD STANDARD MATERIAL	OPZIONI OPTIONS
1	Corpo e Coperchio Body and Cover	GS400-15 Ductile Iron EN 1563:2009	GS500 / AISI316 / Bronze
2	Verniciatura Coating	Epoxy-polyester Min. 150 micron	Sea Water Epoxy / Enamel
3	Distanziale Spacer	Epoxy coated steel or GS	AISI 304 / AISI 316
4	Cilindro Cylinder	AISI 304	AISI 316
5	Pistone Piston	Brass	AISI 304 / AISI 316 / Bronze
6	Guida Superiore Upper Guide	Brass	AISI 304 / AISI 316 / Bronze
7	Guarnizione Joint	Lubroseal®	
8	Bulloni Bolts	A2 Class Stainless Steel	
9	Seggio Seat	AISI 304	AISI 316 / Bronze
10	Otturatore Retainer	AISI 304	AISI 316 / Bronze
11	Albero Stem	AISI 304	AISI 316
12	Guida Inferiore Lower Guide	AISI304	AISI 316
13	Tenuta Seal	NBR Nylon Reinforced	NR / EPDM / Viton®

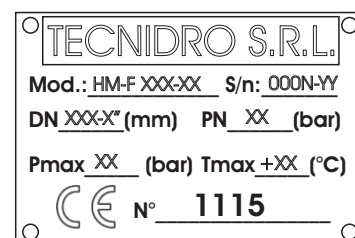
CARATTERISTICHE TECNICHE

Technical Features

Pressioni Pressure	Esercizio Working	0,5 [bar] (7,0 psi) ÷ 40 [bar] (580 psi)
	Prova Test	1,5 x PN (EN1074-5:2002)
Fluidi Fluid	Tipo Type	Water, Sea Water, Foam, Gasoil
	Temperatura Temperature	+0,5 ÷ +70,0 °C 33,0 ÷ 158,0 °F
Conessioni Connections	alla Tubazione to the Pipeline	Flange ISO PN10/16/25/40 ANSI #150RF
	al Circuito to the Circuit	1/4"÷2" F BSP

MARCATURA "CE" (P.E.D.)

"CE" Marking

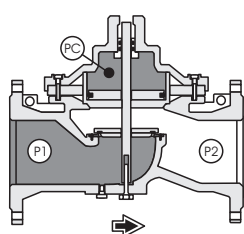


FUNZIONAMENTO

Operation

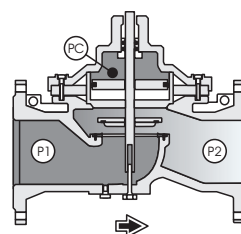
P1	Pressione di monte Upstream pressure
P2	Pressione di valle Downstream pressure
PC	Pressione nella camera Chamber pressure
	Direzione del flusso Flow direction

CHIUSA - CLOSED



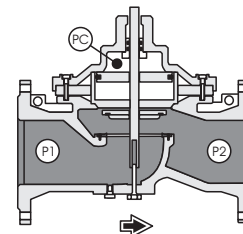
$P1 = PC > P2$

IN REGOLAZIONE - MODULATING



$P1 > PC > P2$

APERTA - OPEN




$P1 \approx P2 \quad PC = 0$

DIMENSIONI, PESI e PORTATE CONSIGLIATE

La tabella sottostante mostra le dimensioni, i pesi e le portate consigliate dei modelli di valvola standard.
Altri modelli o connessioni sono disponibili su richiesta.

DIMENSIONS, WEIGHTS and RECOMMENDED FLOW RATES

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Other models or connections are available upon request.

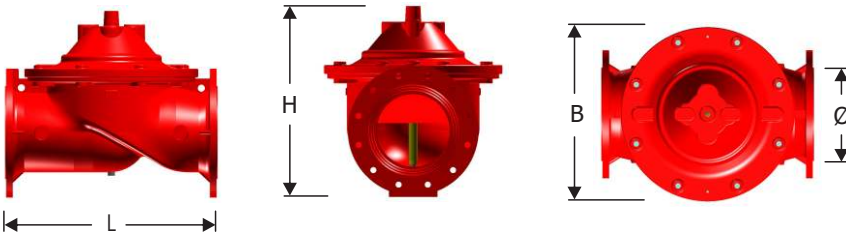
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DN-Ø (mm) (Inch)	Mod.	L (mm)	H (mm)	B (mm)	P (Kg)	ON-OFF (m³/h)	REG. (m³/h)	
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65	2"1/2	DN 65	290	230	185	20	26	52
80	3"	DN 80	310	290	200	26	54	110
100	4"	DN 100	350	310	235	35	88	182
125	5"	DN 125	400	340	270	48	104	205
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350	14"	DN 350	980	695	555	530	900	1810
400	16"	DN 400	1100	985	620	800	1680	3170
500	20"	DN 500	1250	1040	730	950	2090	4200
600	24"	DN 600	1450	1095	845	1350	2300	4670
700	28"	DN 700	1650	1305	910	2600	4400	9000
800	32"	DN 800	1850	1360	1025	3000	5200	10500

NOTA (*):

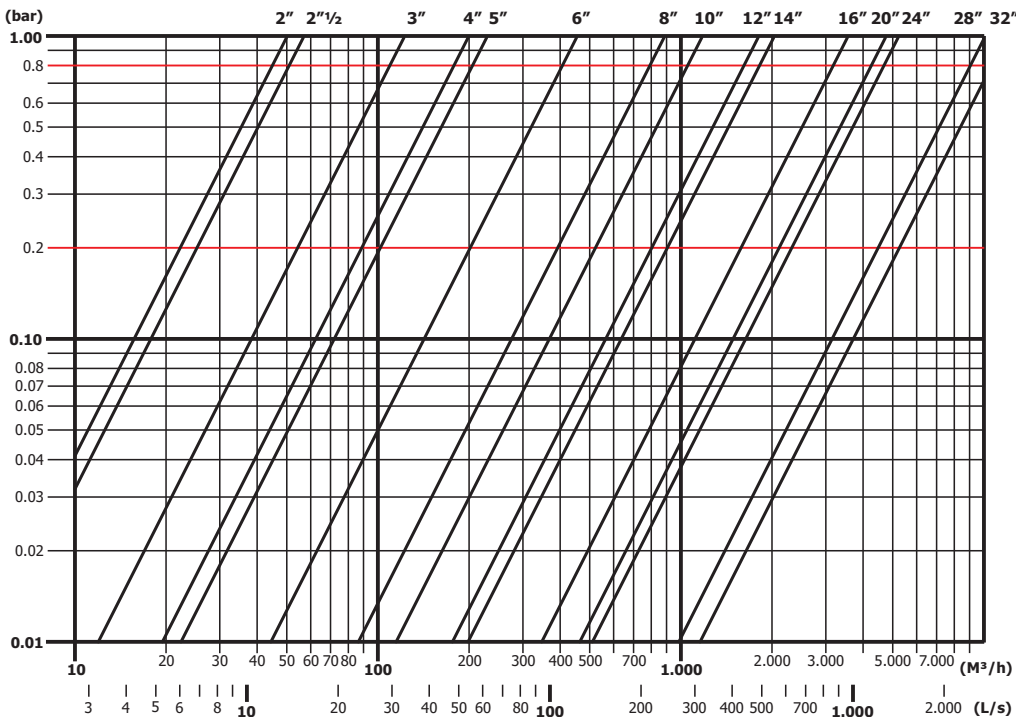
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Q ON-OFF : 0,2 bar
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NOTE (*):

The recommended flow rates correspond to the following head loss:
Q ON-OFF : 0,2 bar
Q REG.: 0,8 bar



PERDITE DI CARICO / HEAD PRESSURE LOSS



$$K_v = Q_1 \sqrt{\frac{m_1}{p}}$$

Q₁ = flow rate [m³/h]
m₁ = volumic weight [kg/dm³]
p = pressure loss [bar].

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NOTE: Technical datas are indicative only and could be modified without prior notice.



TECNIDRO S.r.l.

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COMPANY PROFILE AND REFERENCES

TECNIDRO S.R.L., founded in 1987, is an Italian company specialized in designing and producing of hydraulic equipments for fluids regulation and control.

Due to the long experience and the use of advanced production technologies, TECNIDRO has expanded its own product range in the firefighting market, making valves specified for fixed extinguishing systems such as sprinkler, foam, wet pipe, dry pipe, cooling, hydrant networks and water storage and supply.

TECNIDRO's hydraulic automatic valves for firefighting systems are prescribed to protect:

- refineries, fuel deposits and off-shore platforms
- chemical, pharmaceutical and paper industries
- railway stations, airports and heliports
- pumping stations and motor pumps
- malls, industrial plants and warehouses
- tunnels and mines
- oil tankers, merchant and passenger ships
- military bases, hangars and explosives storages

TECNIDRO operates following the Quality and Environmental Integrated system EN ISO 9001 and EN ISO 14000 and is certificated for "CE" marking according to the European Directive 97/23/EC (P.E.D.).

Here below a short list of most representative references:

- SYSTEM INTEGRATORS: Kidde Group, Sanco Spa, Silvani Spa, Tecnicas Reunidas SA, etc...
- TAMOIL – Oil tanks protection – (Trecate – Novara - Italy)
- SIGEMI - SHELL Group – Oil tanks protection - (San Quirico – Genova - Italy)
- VISCOLUBE SPA - ENI Group – Refinery protection – (Pieve Fissiraga – Milano - Italy)
- ENEL - National energy company – Conveyor belt protection - Centrale di Tutturano (Brindisi - Italy)
- BP GROUP – Biodiesel Refinery – (Aveiro – Portugal)
- AERONAUTICA MILITARE – Military base of Montebelluna (Treviso - Italy)
- FERROVIE DELLO STATO – National railway company - Underground station - (Genova - Italy)
- ILVA - Steel manufacturer - Protection and cooling of coil production plant - (Taranto - Italy)
- DOW CHEMICALS – Foam systems – (Mozzanica – Bergamo - Italy)
- SIGEMI - SHELL Group – Gas and oil tanks protection - (Arquata Scrivia – Genova - Italy)
- SITRASB - Gran San Bernardo road tunnel - Smoke cooling - (Italy-Switzerland)
- EXXON MOBIL - Alkyl Benzene Plant protection - (Ras Laffan – Qatar)
- SIGEMI SHELL Group – Oil truck loading - (Lacchiarella – Milano - Italy)
- SAUDI PIPE SYSTEMS CO – Jeddah's Port fire protection system (Saudi Arabia)
- GRIMALDI LINES – Naval firefighting systems (Italy-Spain)
- 3M S.P.A. – Chemical plant protection (Cengio – Savona - Italy)
- DALMINE S.P.A. – Steel manufacturer - Sprinkler fire protection (Bergamo - Italy)
- ANSALDO S.P.A. – Geothermic plant of Gununk Salak - (Indonesia)
- API – Oil refinery – Falconara Marittima - (Ancona - Italy)
- MOBY LINES – Naval firefighting systems (Italy)
- ENEA – National Agency of Energy - Fixed exthinguishing system – (Roma - Italy)
- UNIVERSITA DI ROMA – University of Rome - Bulding protection plant - (Roma - Italy)
- ITALMATCH CHEMICALS – Chemical plant - Foam extinguishing system – (Spoleto - Perugia - Italy)
- OXON – Chemical plant - Foam extinguishing system – (Mezzana Bigli – Pavia - Italy)
- ALITRANS – Logistic warehouse protection – (San Martino in Strada – Lodi - Italy)



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Organizzazione con
Sistema di Gestione per la Qualità
Certificato UNI EN ISO 9001:2008



ILVA - Italy



BP GROUP - Portugal



SITRASB - Switzerland



ITALMATCH - Italy



TAMOIL - Italy



SIGEMI-SHELL - Italy



3M - Italy



SIGEMI-SHELL - Italy



BP GROUP - Portugal



A.M. - Italy



EXXON MOBIL - Qatar



SIGEMI-SHELL - Italy