updated 09/2010

Dorot CONTROL VALVES

A Miya Group company

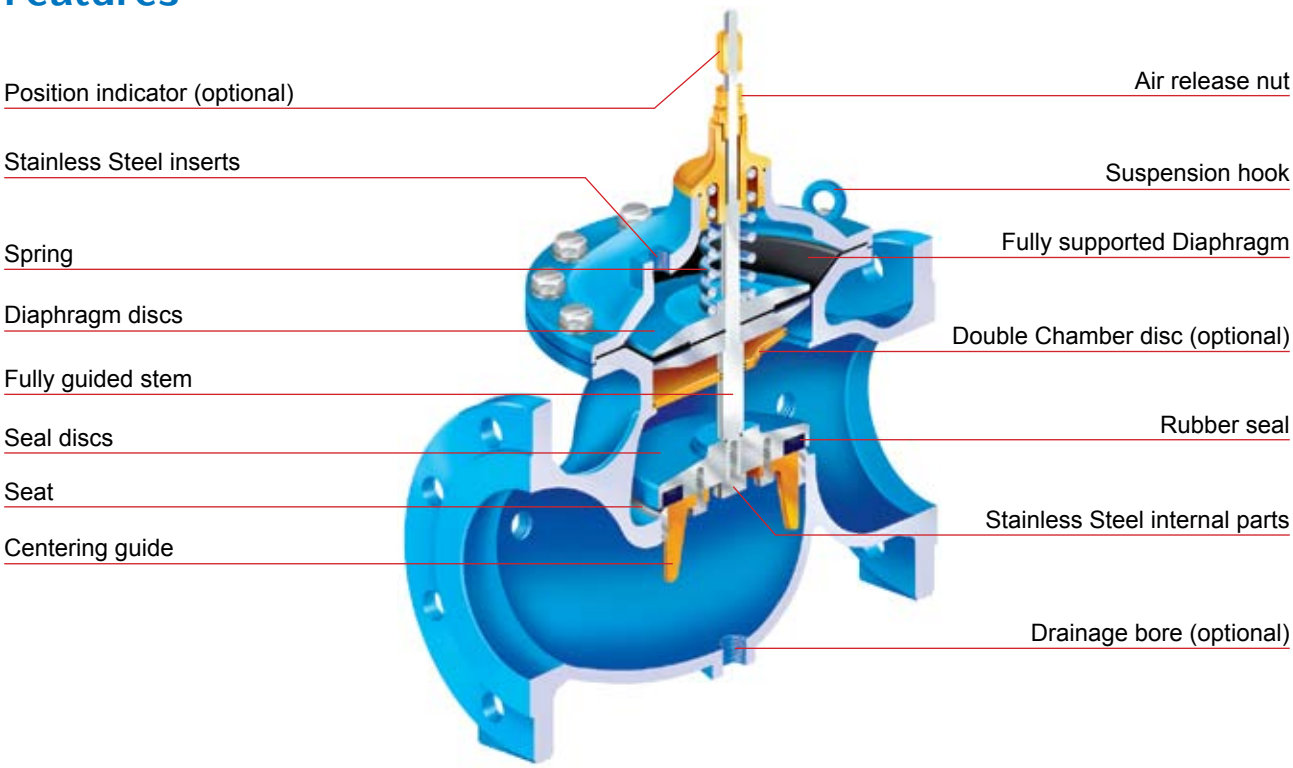
Series 300 Valves

GENERAL INFORMATION

Overview

DOROT'S 300 Series, the latest line of state-of-the-art globe type automatic control valves, is designed to withstand even the most demanding requirements of water system control. The experts at DOROT developed this technically-advanced line with capabilities, far beyond any other valve on the market.
This Engineering Data guide will asist the reader in the selection of the optimal DOROT Series 300 valve.

Features



Features of the 300 Series

- The capability to regulate near zero flow, as standard on all sizes, completely eliminating the need for a special low flow device (throttling plug) or a low flow bypass valve, while ensuring very low head loss in "fully open" position.
- A standard valve model, fit for all control operations. A specific pilot(s) provides the required application.
- The flange (face-to-face) dimensions suit ISO Standards. This allows for quick and easy replacement of old equipment, without the need for additional pipeline modifications.
- The valve has an internal floating shaft, allowing for no friction or leakage, eliminating the need for shaft sealing. The unique design of the shaft provides for easy field maintenance.
- The valve has a resilient seal disc, guided by an almost frictionless centering device.
- The valve's body is made of Ductile Iron, withstanding both high hydraulic and mechanical stresses.
- A standard single-chamber valve, enabling jam-free operation in sensitive regulation conditions. When required, conversion from a single to a double chambered valve is easily accomplished through the insertion of Dorot's innovative separation disc, without the need to remove the valve from the pipeline during the conversion.
- The valve is supplied with a replaceable seat, made of SST, which maintains excellent durability against erosion and ensuring a drip-tight seal.
- During the closing procedure, the pace slows down, preventing any damage that may occur from water slam/surge.
- The series includes, as an optional feature, a valve position indicator, attached by a floating connection (ball & socket), resulting in smooth movement, with no wear or tear on the indicator seal.

Technical Specifications

Parameter	Standard	Optional
Connections	• Flanged ISO 7005 or ANSI B16 • Threaded BSP or NPT	• Flanged AS10, JIS B22, ABNT and others
Pressure range	• Model 30: 0.5 – 16bar 7 – 230 psi • Models 31, 32: 0.5-25 bar 7 – 360 psi	• 0 min. press. with N.O spring assisted opening. • 0.2 bar / 3 psi min. pressure without a spring Note: both options require usage of external higher closing pressure
Max. Water Temperature	• 80ºC / 180ºF	• 95ºC / 200ºF

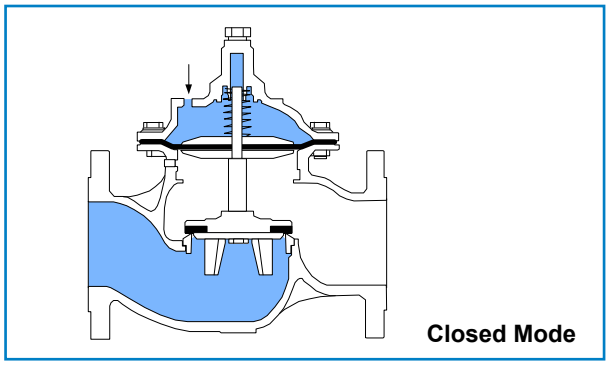
Materials

Part	Standard	Optional
Body & Cover	Ductile Iron GGG50 (ASTM A-536)	Cast Steel A-216 WCB Cast Bronze or Marine Bronze Cast SST CF8M (316) Ni Aluminum Bronze Others
Main Valve Internals	SST, Bronze and Coated Steel	SST 316, HASTELLOY, SMO, DUPLEX
Spring	SST 302	SST 316, INCONNEL
Diaphragm	Nylon fabric reinforced EPDM (WRAS and NSF approved)	NBR
Seals	NBR (Buna-N)	EPDM Viton
Coating	Polyester RAL 5010	FBE RAL 5010 Polyester RAL3000 (fire red) UV protected FBE RAL3000 Rilsan (Nylon) Halar
Control Trim: Fittings and control devices	Brass	SST 304 SST 316
Control Trim: Tubes	Reinforced, heavy-duty Nylon, Polypropylene	Copper SST 316

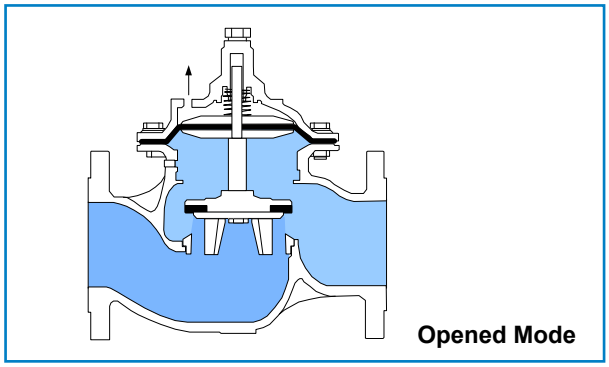
Basic Valve Operating Modes
On-Off Mode

Standard (Single Chamber) Valve

Closed Mode: The control pressure (taken from the pipeline) is applied by the control device to the control chamber (top of the diaphragm). The pipeline pressure pushes the seal to open, and the control chamber pressure forces the diaphragm to close. Since the diaphragm area is larger than the seal area, it has greater hydraulic force so the valve remains in the closed position.


Closed Mode

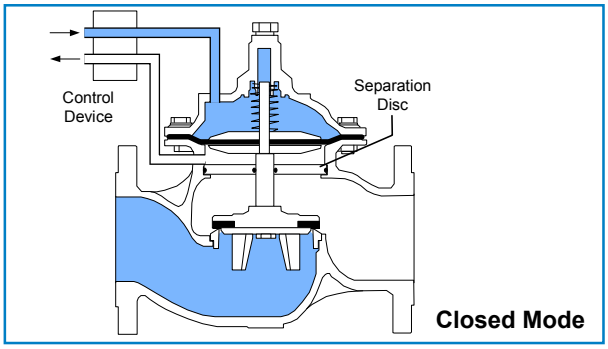
Open Mode: The control device relieves the pressure from the control chamber. The pipeline pressure forces the seal to the “open” position so that the fluid can pass through the valve. While the valve is open, outlet pressure is applied to the lower side of the diaphragm, assisting the opening.


Opened Mode

Double Chamber Valve (Version D)

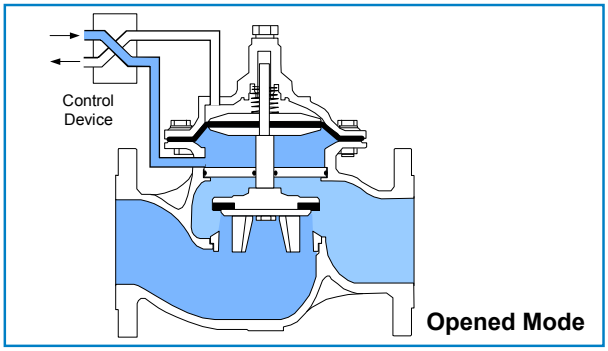
The double chamber version is created by inserting a separation disc between the diaphragm and the seal. This assembly creates a second control chamber below the diaphragm, permitting for the activation of the valve in low-pressure systems and enabling the activation faster valve response. The response to varying conditions is quick, since closure downward movement is not resisted by pressure below the diaphragm. The closure pace of the double chambered valve tends to slow toward the end of the closure procedure. This feature reduce the danger of pressure surges in short pipelines.

Closed Mode: The control pressure (taken from the pipeline or from supplementary pressure source) is applied to the top of the external diaphragm. The bottom control chamber drains. The pipeline pressure pushes the seal to open, but since the diaphragm area is larger than the seal area it creates greater hydraulic force and which forces the valve to close thus the valve closes. At this stage, the bottom chamber should be drained.



Closed Mode

Open Mode: The control device releases the pressure from the top control chamber.
The seal assembly is forced to the “open” position by the pipeline pressure, allowing flow through the valve.



Opened Mode

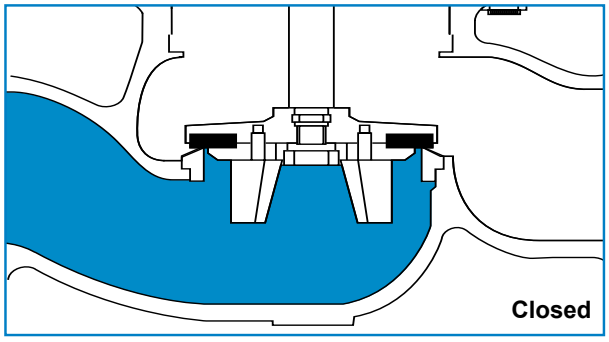
Modulating Mode

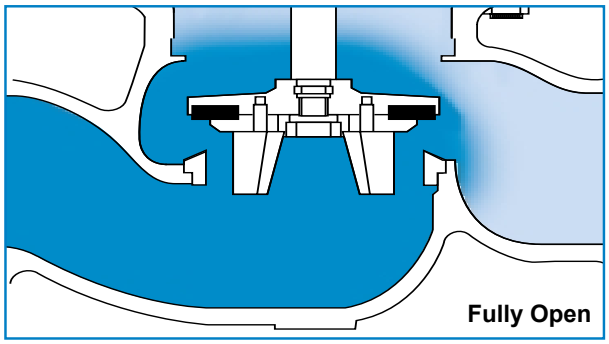
General

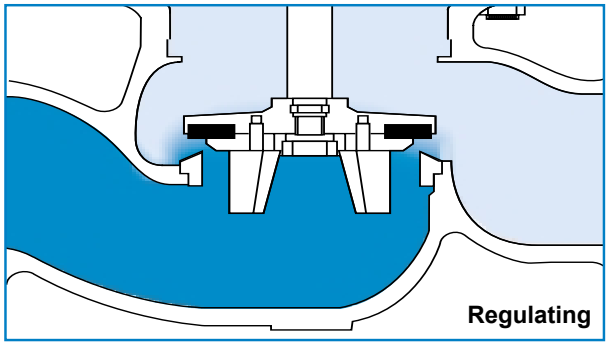
Positioning the seal a short distance (less than 1/4 of the seat diameter) from the seat, creates friction and turbulence, causing energy loss in the fluid passing through the valve. The results are:
- Reduction of pressure and flow rate.
- Increase of inlet pressure.

The position of the seal assembly is dictated by the volume of control fluid in the top control chamber, which is determined by the control device.
The control device is operated by hand (manual control), by electric current (solenoid valve), or by hydraulic pressure (pilot valves, hydraulic relays). All can be used in standard (single chamber) valves as well as in double chamber valves.

Modulating mode in standard (single chamber) valves

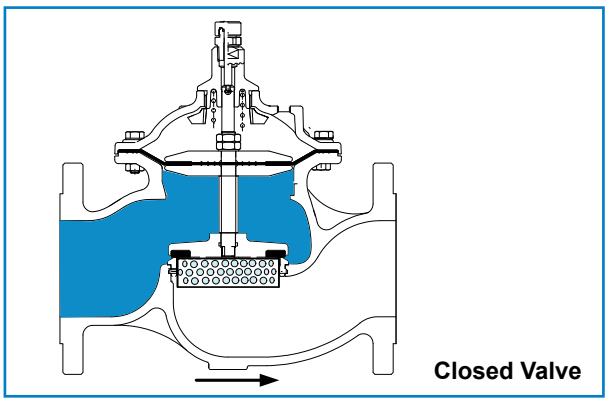


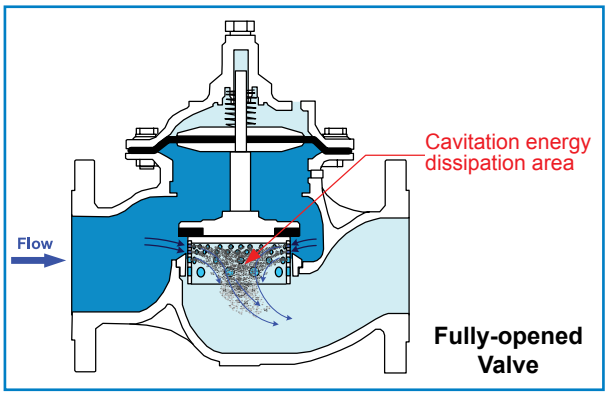




Regulation at high pressures difference

The S-300 has exceptional resistance to damages, caused by cavitation conditions. This feature was certified by extensive tests, carried by an independent laboratories in US and Europe.
The operation limits, as found in these tests, can be calculated for any specific location- using a simple computer program (supplied on request).
For operation conditions that exceed the safe limit- a special Cavitation-Free valve can be supplied. This version, marked by the suffix “F” (example 30F-3 is a cavitation-free, 80mm / 3” valve), can operate at any pressure differential without being ruined by it.
The internal structure includes a Stainless Steel, perforated cylinder, that is connected below the standard seal disc and moving freely inside the seat.
The valve is assembled to generate “over the seat” flow, so the water stream enters the cylinder from its external side and emerges through the internal side. The energy is dissipated by the high-velocity, turbulent flow through the exposed holes above the seat (due to varying trim position).
The pressure recovery, that is the cause of cavitation damage, happens now inside the cylinder and not adjacent to the body wall. As the SST material is highly-resistant to cavitation- it is not damaged.

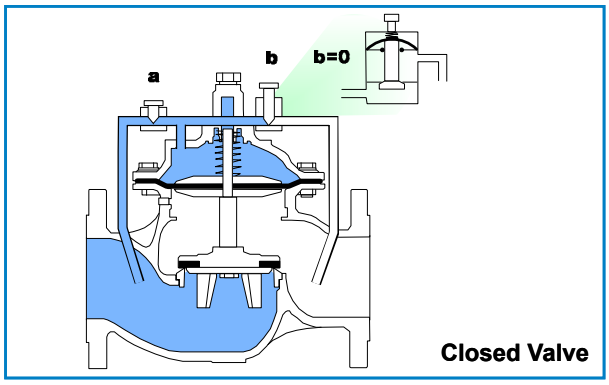




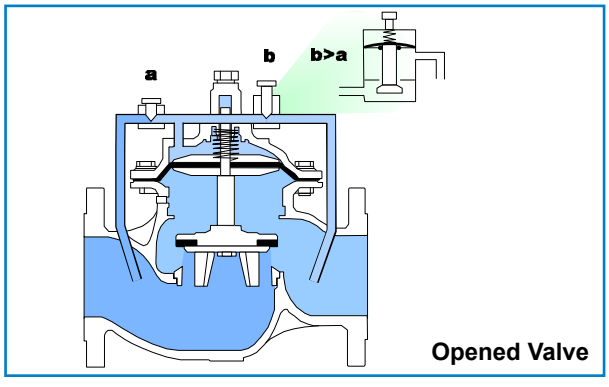
2-Way Control Device

The 2-way control device is assembled on a control circuit, connecting upstream to downstream through the control chamber.
There are two restrictors assembled in this circuit:
(a) A nozzle or a needle valve, at a fixed opening.
(b) A modulating device (pilot), whose passage may vary from complete closure (b=o) to a fully open size (when b>a).
The volume of the control media in the chamber is determined by the relative passages (a) and (b), or, in fact, by the opening of (b), as (a) is fixed.

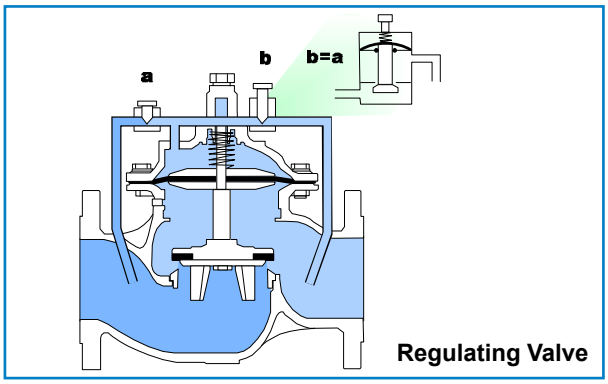
Closed Mode: Pilot (b) senses a downstream pressure higher than the set-point and closes passage (b). Through passage (a) the upstream water flows directly into the upper part of the control chamber, forcing the diaphragm to close the valve.



Open Mode: Pilot (b) senses a downstream pressure lower than the set-point, and fully opens passage (b), larger than (a). All the water from the upstream flows through (a) and (b), directly to the downstream, allowing water from the upper part of the control chamber to partially drain until the pressure in the chamber equals the downstream pressure.
Pressure in the upper part of the control chamber is decreased and the upstream water pressure forces the seal disc to rise (opening the valve).



Regulating Mode: The pilot is set to the required downstream pressure. The pilot senses when the downstream pressure reaches the required value causing passage (b) to equal passage (a) b=a. Now, water that flows through the control loop passes from (a) through (b) and into the downstream. The control media in the upper part of the control chamber is now steady, keeping the diaphragm and seal in a fixed position. Any change in the downstream pressure will change the b=a balance. This change adds or drains water from the control chamber, thus opening or closing the main valve until it reaches the balanced regulating position b=a once again.



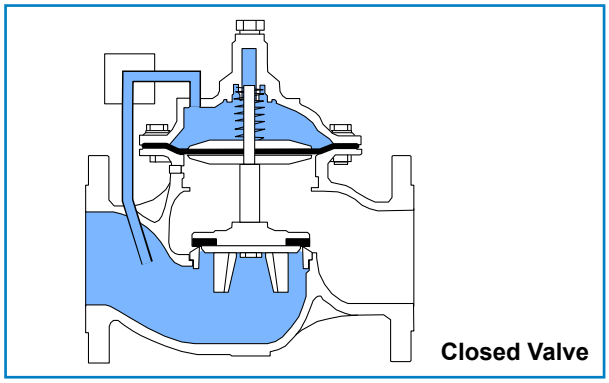
The 2-way control device provides sensitive, accurate, and constant modulating, control of the main valve. The main valve does not fully open, as the control device prevents total draining of the control chamber.
The 2-way control device is standard in most pressure regulating valves.

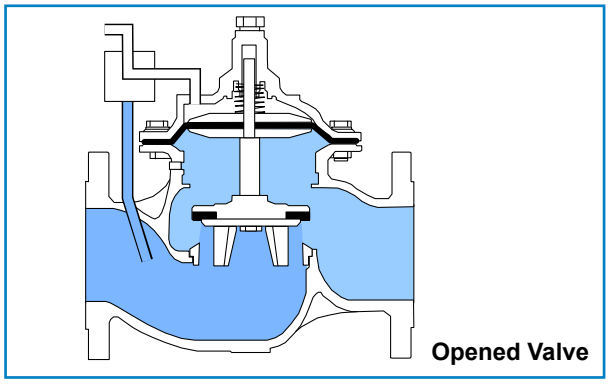
3-Way Control Device

The 3-way control device is a small selector valve which:

1. Permits passage of the control media into the main valve control chamber (initiating the “closing” procedure), or
2. Permits drainage of the control media from the control chamber to the atmosphere (initiating the “opening” procedure).

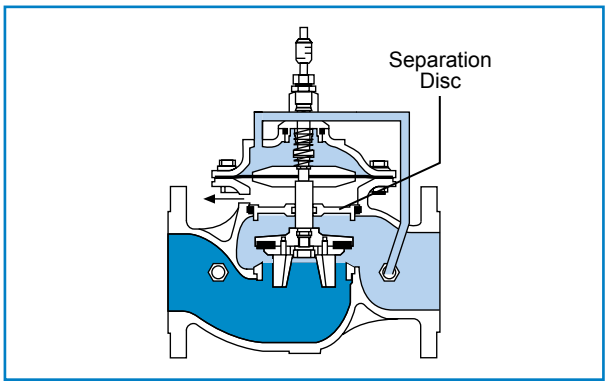
Some of the 3-way control devices have a third mode as well, which prevents inflow or outflow from the control chamber, so that the main valve remains fixed when the device is in this mode.
The 3-way mode is used in on-off valves or when the regulating valve is fully open, in order to obtain specific operating conditions. Once in position, there is no water flow through the control chamber.
The 3-way control circuit may open the main valve entirely, creating minimum head loss.
The 3-way control device must be used when external media (not pipeline water) is used to control the valve, or when the control media is dirty or abrasive.


Closed Valve


Opened Valve

Proportional Pressure Reducer

The proportional pressure reducer is a valve that has a control chamber permanently connected to the downstream.
This valve must be a double chamber [D] type.
The balance of hydraulic forces created between the high pressure on the small seal area, and the lower downstream pressure on the larger diaphragm area, causes a fixed ratio of inlet/outlet pressure of approximately 3:1.
No other control device is needed.



Dimensions & Weights

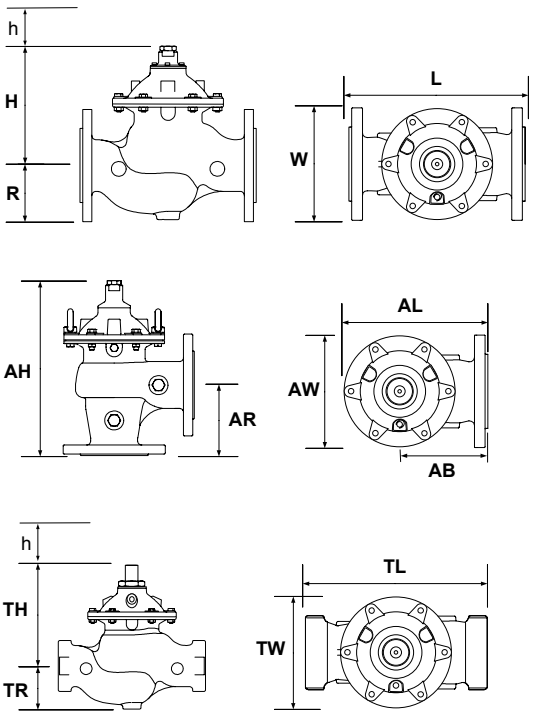
Models 30 (16 bar rated valves) / 31 (25 bar rated valves)

Globe Flanged Type

Valve Size	40 (1½")		50 (2")		65 (2½")		80 (3")		100 (4")		150 (6")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	230	9 1/16	230	9 1/16	292	12 1/2	310	12 3/16	350	13 3/4	480	18 7/8
H	185	7 5/16	185	7 5/16	185	7 5/16	230	9 1/16	240	9 7/16	330	13
h**	140	5 1/2	140	5 1/2	140	5 1/2	170	6 11/16	180	7	230	9
W	153	6	170	6 11/16	170	6 11/16	200	7 7/8	235	9 1/4	330	13
R	82.5	3 1/4	82.5	3 1/4	92.5	3 5/8	100	3 15/16	110	4 5/16	142.5	5 5/8
Weight Kg/lbs*	12 / 26		12 / 26		13 / 29		22 / 49		37 / 82		80 / 176	
Vol.control chamber lit/gal	0.1 / 0.02		0.1 / 0.02		0.1 / 0.02		0.3 / 0.08		0.7 / 0.2		1.5 / 0.4	

Valve Size	200 (8")		250 (10")		300 (12")		350 (14")		400 (16")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	600	23 1/16	730	28 3/4	850	33 7/16	980	38 9/16	1100	43 5/16
H	390	15 3/8	520	20 1/2	635	25	635	25	855	33 5/8
h**	300	11 13/16	390	15 1/4	450	17 11/16	450	17 11/16	590	23 1/4
W	415	16 5/16	525	20 11/16	610	24	610	24	850	33 7/16
R	172.5	6 3/4	205	8 1/16	230	9	272	10 11/16	290	11 7/16
Weight Kg/lbs*	157 / 346		245 / 540		405 / 893		510 / 1124		822 / 1812	
Vol.control chamber lit/gal	4.3 / 1.1		9.7 / 2.6		18.6 / 4.9		18.6 / 4.9		50 / 13.2	

Valve Size	450 (18")		500 (20")		600 (24")		700 (28")		800 (32")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	1200	47 1/4	1250	49 3/16	1450	57 1/16	1650	64 15/16	1850	72 7/8
H	855	33 5/8	855	33 5/8	1574	61 15/16	1675	65 15/16	1675	65 15/16
h**	600	23 5/8	600	23 5/8	740	29 1/8	860	33 7/8	860	33 7/8
W	850	33 7/16	850	33 7/16	1100	43 5/16	1100	43 5/16	1090	42 15/16
R	310	12 3/16	357.5	14 1/16	490	19 5/16	498	19 5/8	603	23 3/4
Weight Kg/lbs*	945 / 2083		980 / 2160		1950 / 4299		2070 / 4560		2600 / 5730	
Vol.control chamber lit/gal	50 / 13.2		50 / 13.2		84 / 22.2		84 / 22.2		84 / 22.2	



Angle Type

Valve Size	50 (2")		80 (3")		100 (4")		150 (6")		200 (8")		250 (10")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
AL	208	8 3/16	250	9 13/16	295	11 1/16	405	16	505	19 7/8	585	23
AH	240	9 7/16	415	16 5/16	445	17 1/2	570	22 7/16	635	25	832	32 3/4
AW	170	6 11/16	200	7 7/8	235	9 1/4	330	13	415	16 5/16	495	19 1/2
AR	107	4 3/16	138	5 7/16	147	5 13/16	180	7 1/16	302	11 7/8	338	13 5/16
AB	125	4 15/16	150	5 7/8	173	6 13/16	240	9 7/16	300	11 13/16	338	13 5/16
Weight kg/lbs*	12 / 26		20 / 44		37 / 81		76 / 167		150 / 330		515 / 234	

* Approximate shipping Weight (PN 25) ** h = Minimal required maintenance space

Globe Threaded Type

Valve Size	40 (1½") TH		50 (2") TH	
	mm	inch	mm	inch
TL	215	8 7/16	215	8 7/16
TH	185	7 5/16	185	7 5/16
h	140	5 1/2	140	5 1/2
TW	129	5	129	5
TR	62	2 3/8	62	2 3/8
Weight kg/lbs*	7 / 15		7 / 15	

End Connections (for PN16 or PN25)
ISO 2084, 2441, 5752 ANSI B16, AS2129, JIS B22

Size Selection Table

Valve Size		40 (1½")	50 (2")	65 (2½")	80 (3")	100 (4")	150 (6")	200 (8")	250 (10")	300 (12")	350 (14")	400 (16")	450 (18")	500 (20")	600 (24")	700 (28")	800 (32")
Max. recommended flow rate for continuous operation (m^3/h)		25	40	40	90	160	350	620	970	1400	1900	2500	3100	3600	5600	7600	8135
Max. recommended flow rate for continuous operation (Gpm)		110	180	180	400	700	1600	2800	4300	6200	8400	11000	13660	15800	24700	33500	35840
Min. recommended flow rate		<1m^3/h (<5 gpm)															
Globe Type																	
Flow Rate Factor:	Kv (Metric)	43	43	43	103	167	407	676	1160	1600	1600	3000	3150	3300	7000	7000	7000
	Cv (US)	50	50	50	120	195	475	790	1360	1900	1900	3500	3700	3860	8200	8200	8200
Head Loss Factor K (dimensionless)		2.2	5.4	15.4	6.7	5.6	4.8	5.5	4.5	5	9	3.8	6	5.9	4.2	7.8	13.4
Angle Type																	
Flow Rate Factor:	Kv (Metric)	60	60		140	190	460	770	1310								
	Cv (US)	70	70		164	222	537	900	1533								
Head Loss Factor K (dimensionless)		1.3	2.8		3.3	4.3	4.3	4.2	3.6								

For head Loss of fully open valves use the following equations:

$H\ (Bar) = \left(\frac{Q\ [m^3/h]}{Kv}\right)^2$ | $H\ (Psi) = \left(\frac{Q\ [gpm]}{Cv}\right)^2$ | $H = K\ \frac{V^2}{2g}$

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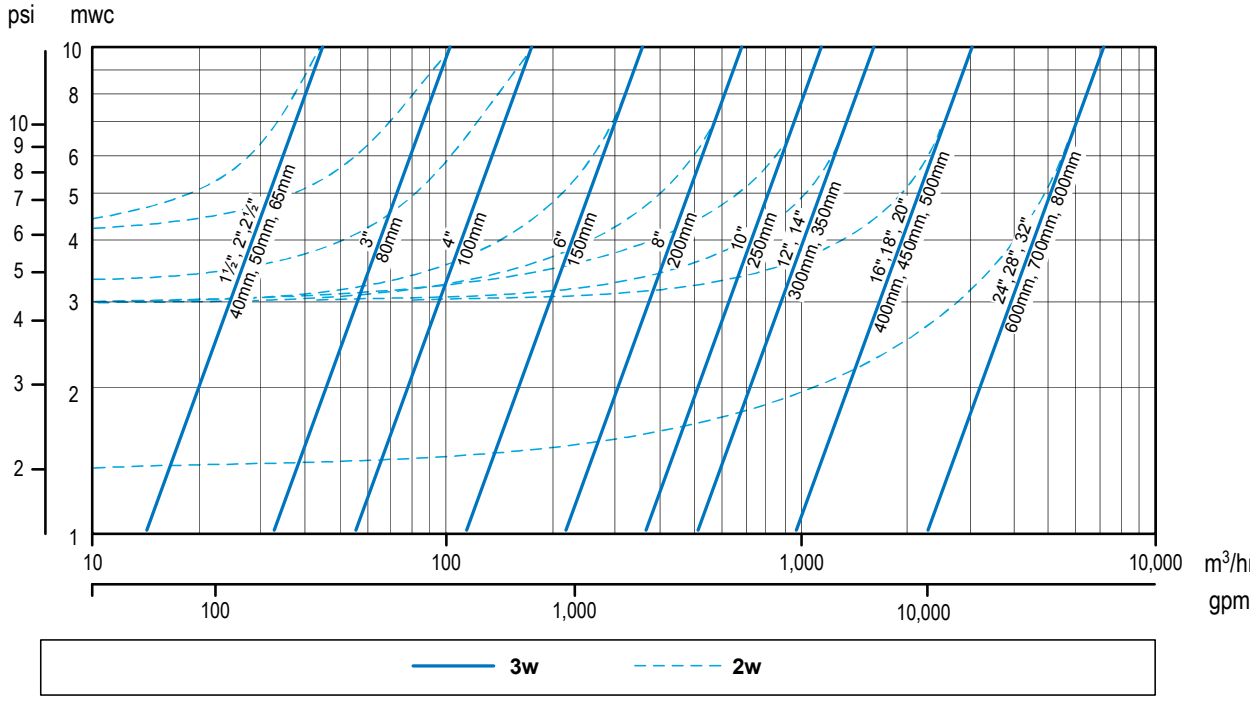
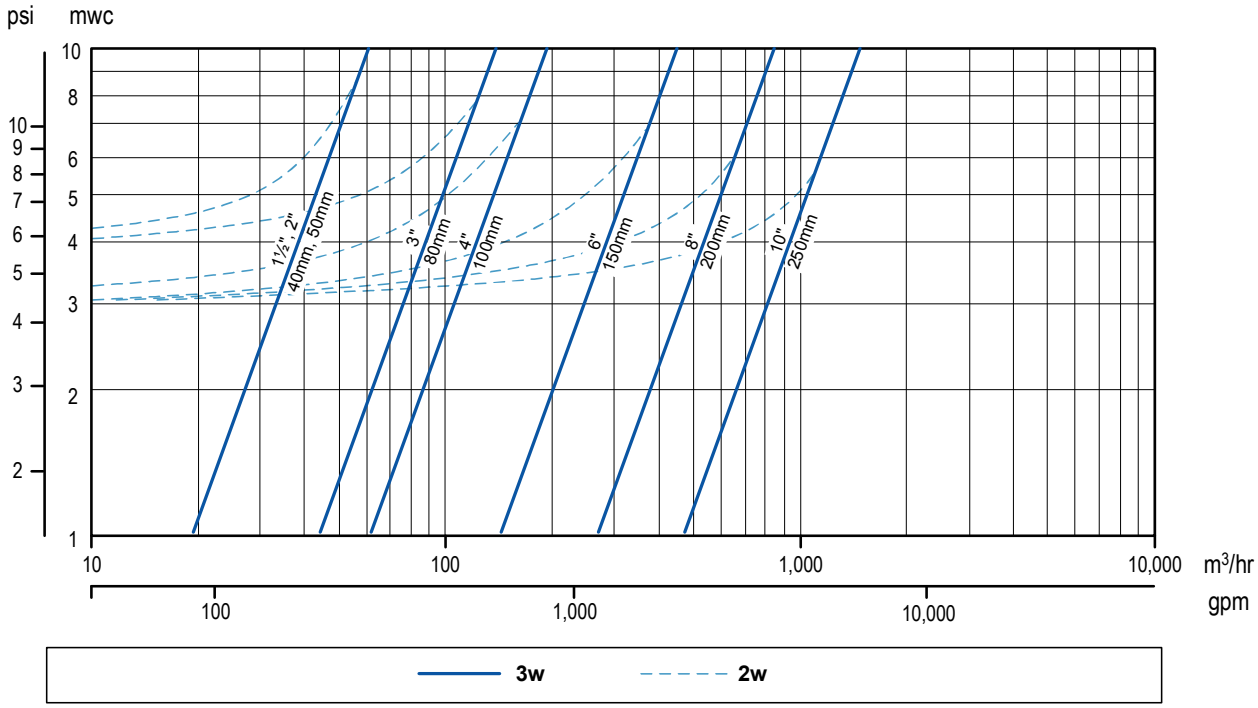
Headloss Charts

Models 30/31 (Globe Pattern) Pressure Loss Chart



Models 30A/31A (Angle Pattern) Pressure Loss Chart



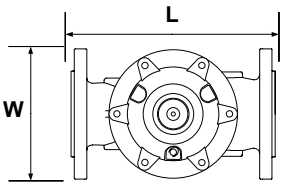
Dimensions & Weights

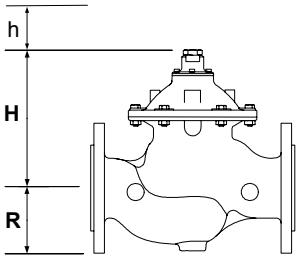
Model 32 (25 bar rated valves)

Globe Flanged Type

Valve Size	80 (3")		100 (4")		150 (6")		200 (8")		250 (10")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	310	12 3/16	350	13 3/4	480	18 7/8	600	23 5/8	730	28 3/4
H	185	7 1/4	232	9 3/16	250	10	334	13 1/8	395	15 1/2
h**	107	4 1/4	156	6 1/8	170	6 3/4	220	8 11/16	275	10 13/16
W	200	7 7/8	235	9 1/4	300	11 3/4	360	14 3/16	425	16 3/4
R	100	3 15/16	120	4 11/16	150	5 7/8	182	6 3/16	215	8 7/16
Weight Kg/lbs*	15 / 33		27 / 60		51 / 112		92 / 202		171 / 377	
Vol.control chamber lit/gal	0.1 / 0.02		0.3 / 0.08		0.7 / 0.2		1.5 / 0.37		4.3 / 1.1	

Valve Size	300 (12")		350 (14")		400 (16")		450 (18")		500 (20")		600 (24")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	850	33 7/16	980	38 9/16	1100	43 5/16	1200	47 1/4	1250	49 3/16	1259	49 9/16
H	545	21 1/2	635	25	635	25	855	33 5/8	855	33 5/8	1311	51 5/8
h**	400	15 3/4	480	18 7/8	480	18 7/8	600	23 5/8	600	23 5/8	245	9 5/8
W	489	19 1/4	610	24	628	24 3/4	850	33 7/16	850	33 7/16	881	34 11/16
R	245	9 3/8	260	10 3/16	314	12 3/8	310	12 3/16	357.5	14 1/16	459	18 1/16
Weight Kg/lbs*	330 / 726		510 / 1124		544 / 1197		945 / 2083		980 / 2160		1030 / 2266	
Vol.control chamber lit/gal	9.7 / 2.6		18.6 / 4.9		18.6 / 4.9		50 / 13.2		50 / 13.2		50 / 13.2	



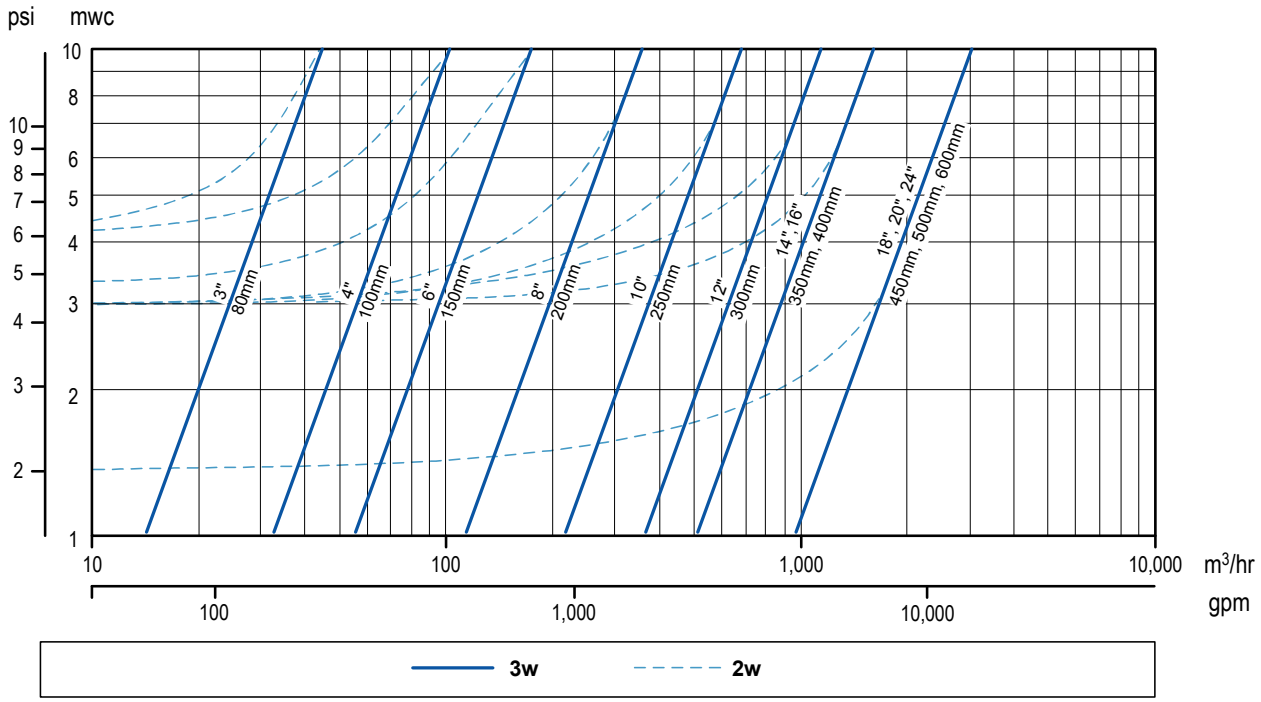


h* = minimal required maintenance space
End Connections (for PN16 or PN25)
ISO 2084, 2441, 5752 ANSI B16, AS2129, JIS B22.

Size Selection Table

Valve Size		80 (3")	100 (4")	150 (6")	200 (8")	250 (10")	300 (12")	350 (14")	400 (16")	450 (18")	500 (20")	600 (24")
Max. recommended flow rate for continuous operation (m^3/h)		60	145	225	510	970	905	1900	2030	3100	3600	3600
Max. recommended flow rate for continuous operation (Gpm)		265	640	990	2250	3990	6200	8400	8940	13660	15860	15860
Min. recommended flow rate		>1 m^3/h (>5 GPM)										
Flow rate factor	Kv	43	115	165	345	663	1160	1600	1600	3000	3000	3000
	Cv	50	133	192	400	770	1360	1900	1900	3500	3500	3500

Model 32 (Globe Pattern) Pressure Loss Chart



Electronic and Remote control functions

EL Electrically- activated valve
Controlled by an electric solenoid valve, that initiates opening or closure of the main valve. The electric control can be added to most other control applications.

EC Electronically- controlled valve
Activated by the versatile DOROT "ConDor" controller, that enables all control functions, or combination of functions, at extreme accuracy. Can be controlled by any pulse- activating controller.

Pressure Regulating functions

PR Pressure Reducing valve
Reduces high upstream pressure to a steady, lower downstream pressure, regardless of fluctuations in the values of upstream-pressure or rate of flow. Should downstream pressure exceed the required set point (due to stoppage of the flow in the pipeline), the valve closes drip tight.
Dorot PR valve is also UL listed, for use in fire fighting systems.
Optional Pressure Reducing applications:

- **PRM(T2)** Dual Set-Point, Timer-modulated pressure reducing valve
- **PRM(FM)** Electronically-Controlled, Flow-Modulated PRV
- **PRM(HyMod)** Hydraulically-Controlled, Flow-Modulated PRV
- **PR(D)** Differential Pressure Reducing valve

PS Pressure Sustaining valve
Assembled in the pipeline and modulates to maintain a steady pressure in the network upstream of its location.
Dorot PS valve is UL listed for use in fire-fighting systems.
Optional Pressure Sustaining applications:

- **PS(R)** Pressure Sustaining\Relief valve
- **DI** Differential- sustaining valve

Rate of Flow Regulating functions

FR Flow-rate control valve
Maintains preset, stabilized flow rate in the network regardless of pressure variations and flow demand.

FE Rupture- protection valve
Normally- open in-line valve. Should the flow Rate exceed a preset point, due to pipe rupture, the valve closes automatically.

WATERWORKS CONTROL APPLICATION

Water Level Control

FL Water-level control valve- modulating type
Mounted on the tank / reservoir inlet, below or above the water level. Closes when the water level rises to the float location, preventing overflow, and opens when the water level drops.

FL

FLDI1 and FLDI2 Water-level control valve- differential type
Mounted on the tank / reservoir inlet, below or above the water level. It closes when the water rises to the requested maximal level, and opens when the water level drops to a preset minimal point. The levels difference is adjustable.

FLDI

AL Altitude control valve
Mounted on the inlet of the tank / reservoir, below the water level .
The valve is activated by the hydrostatic pressure of the water level. It closes when the water rise to the requested maximal level, and opens fully when the water level drops to the preset minimal point. The differential between the water levels is adjustable.

FLEL Electrically- activated level control valve
Mounted on the tank / reservoir inlet, below or above the requested water level.
Activated by An Electric Float pilot located in the tank / reservoir. It closes when the water rise to the requested maximal level, and opens fully when the water level drops to the preset minimal point. The differential between the water levels is adjustable.

FLEL

AL / PR, FLDI1 / PR, FLDI2 / PR Combination of water level and flow rate control
Mounted on the tank / reservoir inlet. It limits the flow into the tank, and maintain the preset maximal and minimal water levels.

AL / PS, FLDI1 / PS, FLDI2 / PS Combination of water level and back-pressure control
Mounted on the tank / reservoir inlet. It maintains the pressure in the supply network and the preset maximal and minimal water levels.

AL

Pumping Systems Control and Water Hammer / Surge Protection

CV Check valve
The valve is in “open” position when inlet pressure is higher than outlet pressure.
The valve closes, preventing returning flow, on inverted flow direction.


NS

NS Two-Stages, cushioned closure check valve
Developed to eliminate pressure slam of check valves, frequently found in roof-tank filling pumps of high-rise buildings. It opens on pump start, and closes at controlled pace when the pump stops.


BC

BC Pump control valve
Installed on the pump discharge. Eliminating pressure surges caused by rapid change of the pipe velocity. Opens slowly on the pump startup, and closes at adjustable pace before shut-off. The pump motor is then switched-off by an electric interlink with the valve.
Optional Pump Control valve applications:

- **BC/PS** Pump control and Back-pressure sustaining valve
- **BC/CD** Pump control valve with extended closure, for long pipelines
- **BC/DI** Booster pump control, maintains constant flow at varying suction conditions


DW

DW Deep well control valve
Mounted on a tee junction, on the discharge head of deep well, upstream of the Check valve. Eliminating pressure surges caused by sudden change of the pipe velocity through start-up and shut-off.

QR Quick-Relief Safety valve
Mounted on a tee junction in the pipeline, releasing the water out of the network.
When upstream pressure exceed the safe value- the valve opens instantly, releasing the pressure surge.


QR

RE Surge-anticipating valve, Hydraulic activation
Mounted on a Tee junction, in a discharge pipe of a pumping station. Protecting the pumping and the network systems from water hammer, generated by power failure, by releasing the returning wave from the system. The valve is activated by the initial low-pressure wave.

RE/EL Surge-anticipating valve, Electric activation
Mounted on a Tee junction, in a discharge pipe of a pumping station. Protecting the pumping and the network systems from water hammer, generated by power failure, by releasing the returning wave from the system. The valve is activated electrically by the power failure event.


RE

SP Surge-preventing closure
A unique DOROT control module, that can be added to any automatic valve. It prevents water hammer, that is generated by the valve closure, when it is located at the end of a long pipeline.

FIRE FIGHTING APPLICATIONS

The Dorot 300 series valves are UL-listed to be used in Fire Protection Systems at various ranges of applications.

Deluge Valves

The Dorot UL Deluge Valves are suitable for systems that include Electric, Hydraulic or Pneumatic detections. The Dorot 300 series Deluge Valves are activated by each signal or by combinations thereof. All applications are equipped with a manual emergency actuation valve and approved for use in Fire Protection Systems as Automatic Reset or Manual Reset Valves.

DE/EL

Monitor Valves

The Dorot 300 Series Monitor Valves are designed to open immediately as a response to Electric, Hydraulic, Pneumatic or manual activation. The valves use the line pressure to develop maximum power and do not need any external source of power.
The Dorot 300 Series Monitor Valves are designed to be activated locally or remotely.

U-DE/EL

Pressure Reducing Valves

The Dorot 300 Series UL Pressure Reducing Valves are hydraulically self-operating Diaphragm Valves that reduce High upstream pressure to Lower downstream pressure regardless of the upstream pressure fluctuation or unstable flow demand.
The Dorot 300 Series UL Pressure Reducing Valves are designed to maintain constant downstream pressure at all flow conditions.

PR/UL

Pressure Relief Valves

The Dorot 300 Series UL Pressure Relief Valves are designed to maintain constant pressure in the fire Protection System and prevent over pressure by relieving excess pressure back to the reservoir or vent to the atmosphere.

PS/UL

Additional information about the Dorot 300 series Fire Protection applications can be found in the Dorot Fire Protection catalogue.