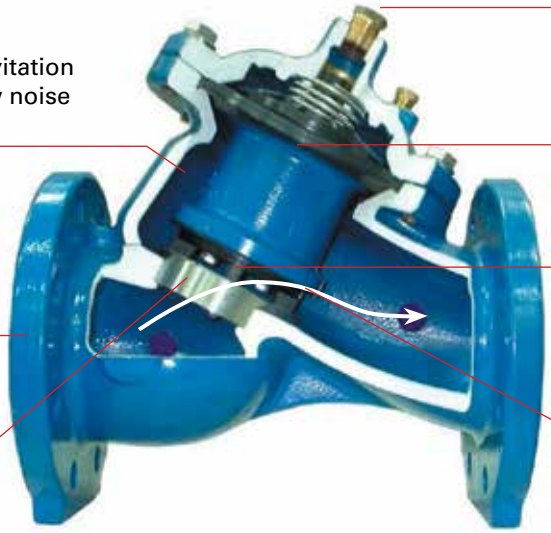
Overview

The Dorot Series 500 is a unique, cost effective control valve for the comercial market. It is designed for superb regulation capabilities, combined with low pressure loss in the fully open position.
The experts at Dorot developed this technically-advanced product line with capabilities far beyond most other valves.
This guide will asist you in the selection of the optimal DOROT Series 500 valve.

Features



Option for SST indicator rod

Wide body shape prevents cavitation damage, and ensures very low noise during operation.

Innovative diaphragm-trim assembly guided by low-friction top & bottom guides

Coating:
UV resistant and certified for use in potable water applications

LTP® (Linear Throttling Plug) for superior low flow regulation

Wear & corrosion resistant SST seat

Special valve design: reduction in head-losses

Features of the 500 Series

- The capability to regulate at “near zero” flow, as a standard feature on all sizes, achieved by the LTP® (“Linear Throttling Plug”) device, completely eliminates the need for a low flow bypass valve, or internal throteling device such as U-port or V-port.
- The unique bottom guide together with the hydrodynamically designed structure enable very low head loss in the ”fully-open” position.
- A standard valve model fits a wide variety of control applications using Dorot pilot valves.
- An especially short face-to-face dimension, ensures maximal saving in installation space.
- An innovative internal trim ensures frictionless operation, easy maintenance and high reliability.
- During closure, the pace slows down to prevent slamming or water hammer / surges.
- The series includes a position indication rod, as an optional feature, attached by a floating connection, enabling smooth movement of the indicator.
- Very quiet and stable operation makes the valves especially suitable for housing and residential applications.
- All materials are WRAS & NSF approved for potable water.

Technical Data

Diameter	40mm (1½")		50mm (2")		65mm (2½")		80mm (3")		100mm (4")		150mm (6")	
	m³/h	GPM	m³/h	GPM	m³/h	GPM	m³/h	GPM	m³/h	GPM	m³/h	GPM
Nominal flow	11	50	20	80	20	80	40	180	75	325	160	705
Max. continuouce flow	25	110	40	175	40	175	100	440	160	705	350	1540
Max. intermittent flow	35	160	55	250	55	250	145	640	225	995	510	2240
Minimal flow	< 1 m³/h / GPM											
Kv [m³/h@1bar]	45		45		45		110		175		400	
Cv [gpm@1psi]	53		53		53		128		204		467	
K [dimensionless]	2		4.9		14.1		5.4		5.2		5	

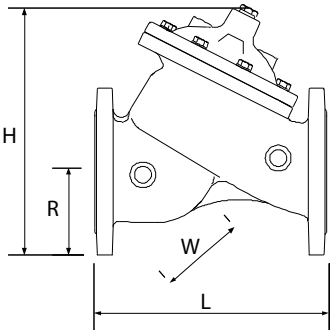
Dimensions and Weights

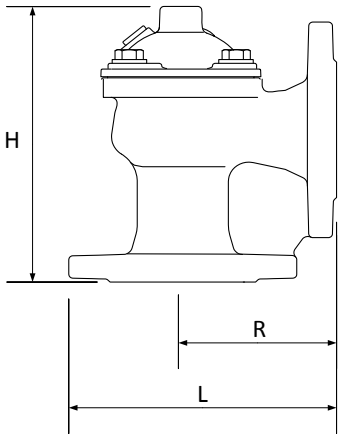
Valve Size	40 Th (1½")		50 Th (2")		50A Th (2")		50A F (2")		50 F (2")		50 V (2")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	202	7 15/16	202	7 15/16	156	6 1/8	193.5	7 5/8	200	7 7/8	210	8 3/16
H	169	6 5/8	169	6 5/8	185	7 1/4	211	8 5/16	214	8 7/16	15	5/8
W	116	4 9/16	116	4 9/16	115	4 1/2	165	6 1/2	165	6 1/8	120	4 11/16
R	38	1 1/2	38	1 1/2	117	4 5/8	111	4 3/8	82.5	3 1/4	35	1 5/16
Weight *	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs
	4.8	10.7	4.6	10.2	5.2	11.5	9.8	21.8	9.5	21.1	7	15.4

Valve Size	65 F (2½")		80 F (3")		80 V (3")		100 F (4")		100 V (4")		150 F (6")	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
L	210	8 1/4	285	11 1/4	344	13 1/2	305	12	368	14 1/2	390	15 3/8
H	224	8 13/16	293	11 9/16	26.5	1	330	13	30	1 1/8	450	17 3/4
W	185	7 1/4	200	7 7/8	175	6 7/8	220	8 11/16	220	8 5/8	285	11 1/4
R	92.5	3 5/8	100	3 15/16	52	2	110	4 5/16	75	2 7/8	142.5	5 5/8
Weight *	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs
	12	26.6	21	46.6	15	33	26	57.7	22	48.5	60	133.2

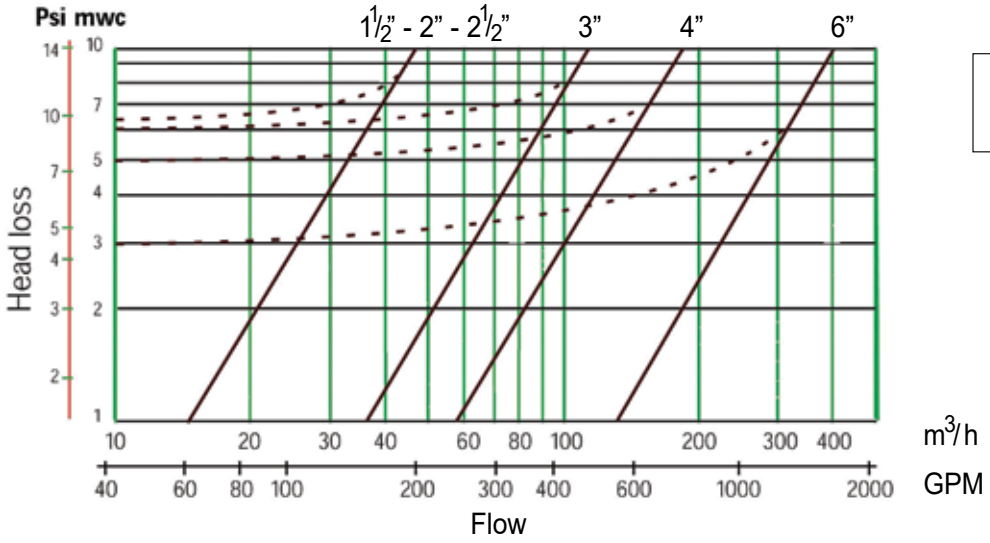
* Approximate Shipping Weight

F - Flanged
Th - Threaded
A - Angle
V - Victaulic





Flow chart



Technical specifications

Available sizes	40 to 150 mm (1½" to 6")
Operating pressure	0.5 to 16 bar (7 to 250 psi)
Temperature range	60°C (140°F)
End connections	Valves diameters 50-150 mm (2" - 6") supplied in the following international flange standards: ISO 7005; ANSI B16; AS10; JIS B22. Other standards are available upon request. Valves diameters 40-50 mm (1½" - 2") supplied also in the following thread standards: F-BSP; F-NPT
Coating	Electrostatically applied, oven baked Fusion Bonded Epoxy

Materials

Component No.	Description	Materials
1	Body	Ductile Iron
2	Trim: LTP, Guides and top diaphragm retainer	Composite Materials (WRAS & NSF approved GRP)
3	Trim bolts	SST
4	Trim cylinder	40-65mm/1½"-2½"- SST
		80-150mm/3"-6"- Ductile Iron
5	Cover	Ductile Iron
6	Spring	SST
7	Cover bolts	SST
8	Washer	SST
9	Diaphragm	Reinforced EPDM Rubber
10	Plug seal	NBR Rubber
11	Seat	SST

GRP: Glass Reinforced polyamide
SST: Stainless Steel

* Coating: Complying with European coating standard EN 14901-2014

Components