

General Description

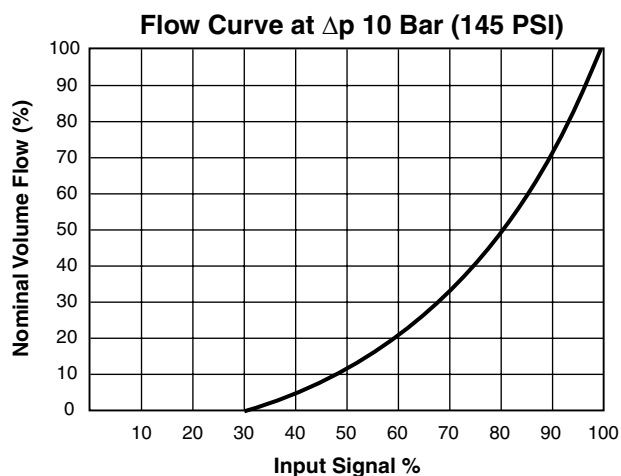
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The TDA series cartridge valves are high performance three stage seated proportional throttle valve units, and conform to the DIN 24342 standard for manifold installed cartridge valves.

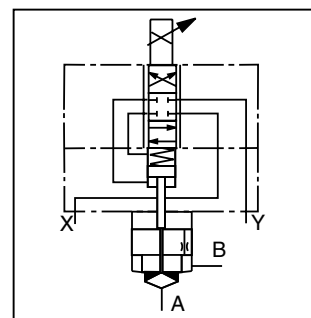
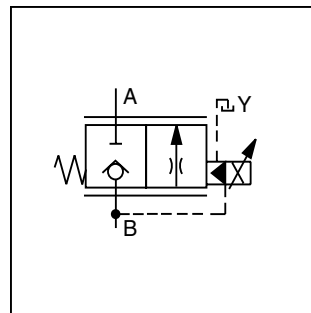
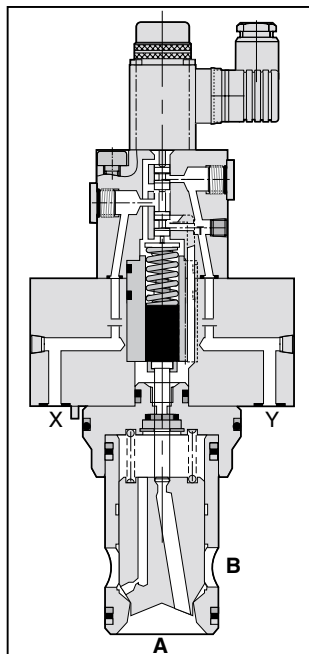
The poppet metering “V” notches provide very precise flow control in nominal flow ranges up to 9500 LPM (2500 GPM).

Valves are driven by the ET series proportional driver cards found in the [electronics section](#) of this catalog.

Performance Curve



$$\Delta p_{\text{actual}} = \left[\frac{Q_{\text{actual}}}{Q_{\text{nom.}}} \right]^2 \cdot \Delta p_{\text{nom.}}$$



Specifications

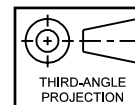
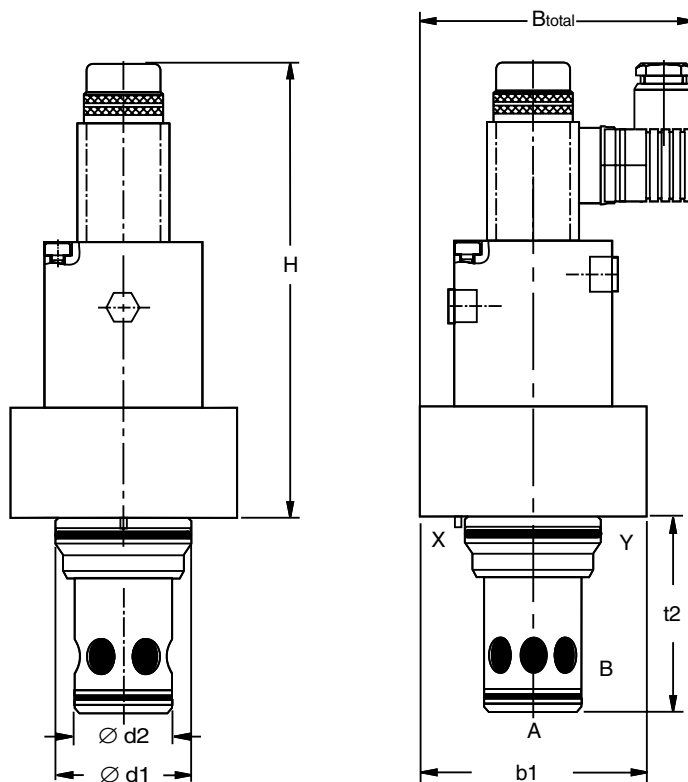
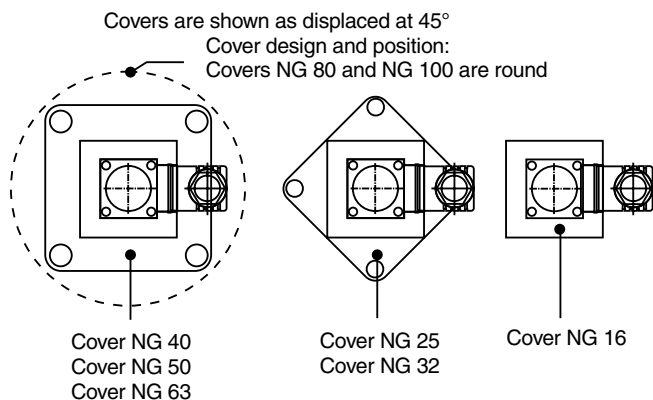
Nominal Size	16	25	32	40	50	63	80	100
Nominal Volume Flow Q^* LPM (GPM)	220 (58)	500 (132)	950 (251)	1400 (370)	2300 (609)	4000 (1058)	6000 (1587)	9500 (2513)
Maximum Operating Pressure	350 Bar (5075 PSI)							
Pilot Pressure	Maximum: 350 Bar (5075 PSI) Minimum: 25% of system pressure, but not less than 3 Bar (45 PSI)							
Step Response (ms) 0...100% at Pilot Pressure of ≥ 50 Bar (725 PSI)	20	25	30	35	45	55	65	80
Repeatability	< 1%							
Hysteresis	< 3%							
Mounting Dimension	according to DIN 24342							
Mounting Position	any position							

* at 10 Bar (145 PSI) Δp

TDAcv.p65, dd, an

Inch equivalents for millimeter dimensions are shown in (**)

Dimensional drawing corresponds to cartridge valve of series: TDA - NG 16 to NG 63

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Nominal Size	16	25	32	40	50	63	80	100
H	168 (6.61)	173 (6.81)	178 (7.01)	262 (10.31)	198 (7.80)	287 (11.30)	327 (12.87)	342 (13.46)
b1	65 (2.56)	85 (3.35)	102 (4.02)	125 (4.92)	140 (5.51)	180 (7.09)	Ø250 (9.84)	Ø300 (11.81)
d1 H7	32 (1.26)	45 (1.77)	60 (2.36)	75 (2.95)	90 (3.54)	120 (4.72)	145 (5.71)	180 (7.09)
d2 H7	25 (0.98)	34 (1.34)	45 (1.77)	55 (2.17)	68 (2.68)	90 (3.54)	110 (4.33)	135 (5.31)
t2 +0.1	56 (2.20)	72 (2.83)	85 (3.35)	105 (4.13)	122 (4.80)	155 (6.10)	205 (8.07)	245 (9.65)
B total	85 (3.35)	95 (3.74)	102 (4.02)	125 (4.92)	140 (5.57)	180 (7.09)	250 (9.84)	300 (11.81)

TDAcv.p65, dd, an

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	TDA			10		7	E			A	F
Seals	Proportional Throttle Valve	Serial Letter*	Flow Direction	Design Series*	Flow Range	Proportional Piloting	Insert Cartridge Valve	Nominal Size	Solenoid	Proportional Solenoid	Plug

Code	Description
Omit	Nitrile
V	Fluorocarbon

Code	Description
9	Nominal flow for all sizes
6**	Half nominal flow

** only for NG 16 and NG 25

Code	Size
16	16
25	25
32	32
40	40
50	50
63	63
80	80
100 ¹⁾	100

1) Use 1 1/4-7 x 5.5 Mounting bolts (BK90)

Code	Description
F	With plug DIN 43650 design type AF/PG11

Code	Voltage
L**	16V
M***	6V

** Use ET**10* driver cards
 *** Use ET**154 driver card (recommended for new applications)

*Valves already in the market may contain a different serial letter. As far as dimensions and technical aspects are concerned, they are identical and can be interchanged. Please keep this in mind when identifying the products.

Weight

Nominal Size	16	25	32	40	50	63	80	100
Weight kgs (lbs)	3.1 (6.8)	4.3 (9.5)	5.8 (12.8)	9.2 (20.3)	15.0 (33.1)	32.2 (71.0)	63.0 (138.9)	95 (209.5)

Accessories

Seal Kits

Nominal Size	Compound: Buna N	Compound: Fluorocarbon
16	SK-TDAD10-E16	SK-TDAD10-E16V
25	SK-TDAD10-E25	SK-TDAD10-E25V
32	SK-TDAD10-E32	SK-TDAD10-E32V
40	SK-TDAD10-E40	SK-TDAD10-E40V
50	SK-TDAE10-E50	SK-TDAE10-E50V
63	SK-TDAE10-E63	SK-TDAE10-E63V
80	SK-TDAE10-E80	SK-TDAE10-E80V
100	SK-TDAE10-E100	SK-TDAE10-E100V

Bolt Kits

Nominal Size	Bolt Dimensions	Part Number	Torque Nm
16	(4) M8 x 40	BK414	33 Nm
	(4) 5/16-18 x 1.5	BK84	24 ft-lbs
25	(4) M12 x 50	BK391	115 Nm
	(4) 1/2-13 x 2.0	BK77	84 ft-lbs
32	(4) M16 x 55	BK415	281 Nm
	(4) 5/8-11 x 2.25	BK85	207 ft-lbs
40	(4) M20 x 70	BK416	553 Nm
	(4) 3/4-10 x 2.75	BK87	408 ft-lbs
50	(4) M20 x 75	BK417	553 Nm
	(4) 3/4-10 x 3	BK87	408 ft-lbs
63	(4) M30 x 100	BK418	1910 Nm
	(4) 1 1/4-7 x 4.0	BK88	1408 ft-lbs
80	(8) M24 x 120	BK409	935 Nm
	(8) 1-8 x 5	BK135	690 ft-lbs.
100	(8) M30 x 140	BK420	1910 Nm
	(8) 1 1/4-7 x 5.5	BK90	1408 ft-lbs

Driver Cards

Refer to the [Electronics Section](#) for driver cards and support electronics.