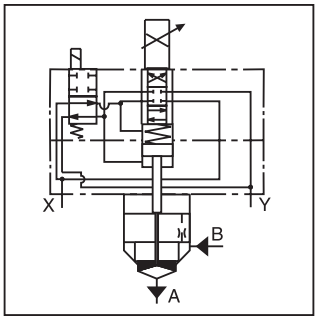
General Description

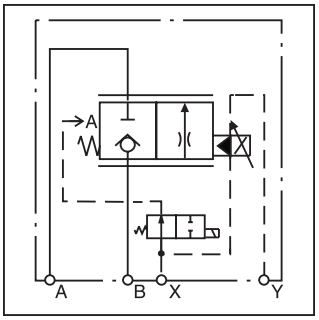
Series TEA accumulator discharge valves are preferably used in hydraulic systems where high flow rates are discharged from hydraulic accumulators over a short operating period (in the range of milliseconds).

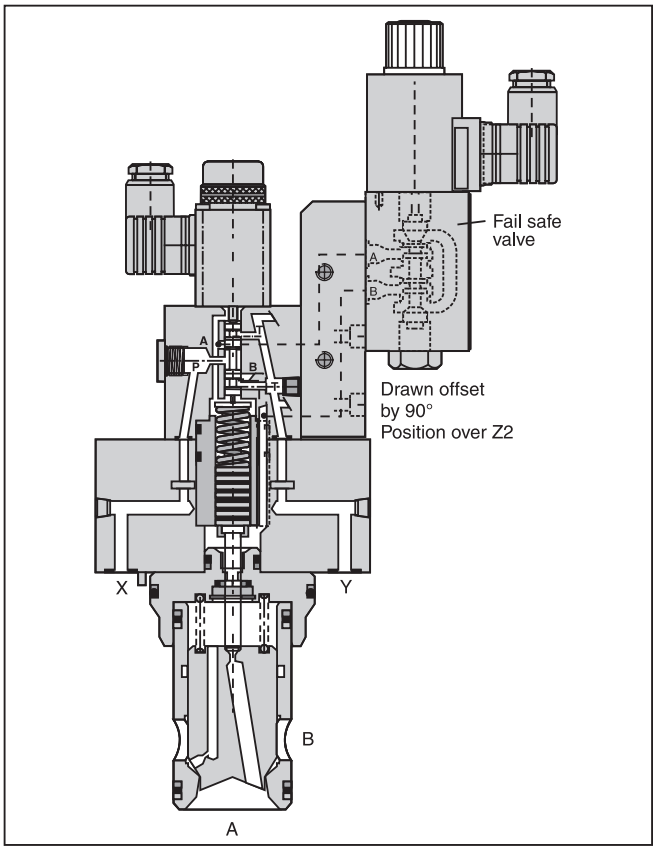
Typical applications are injection molding and die casting machines as well as hydraulic presses.

Basically the function of an accumulator discharge valve corresponds to the function of a TDA throttle valve. In addition a directional valve is integrated in the pilot circuit to meet the relevant safety regulations.

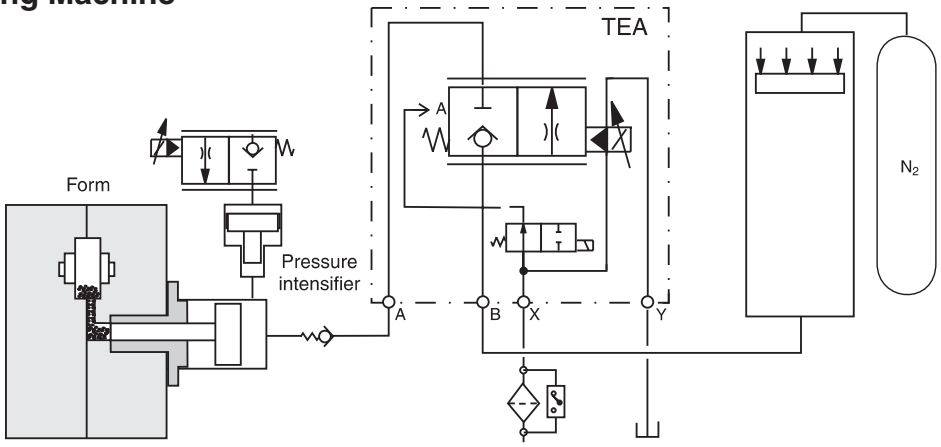
The directional valve provides the safety function. When the solenoid is deenergized and the spring is in the end position, pilot pressure from X presses the control piston into lower end position and, the main poppet is closed. As a result the flow from B to A or from the reservoir system to the machine is blocked.







Example: Accumulator System in a Die Casting Machine



⚠ **WARNING:** This product can expose you to chemicals including Lead, Nickel (Metallic), or 1,3-Butadiene which are known to the State of California to cause cancer, and Lead or 1,3-Butadiene which is known to the State of California to cause birth defects and other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Cat3200_02.indd, ddp, 04/19

Ordering Information

TEA	[ ]	E	W	0	9	[ ]	2	[ ]	[ ]	W	[ ]	[ ]
Proportional Throttle Valve with Shut-off Function	Nominal Size	Cartridge Valve ISO 7368	Design	Spool Form	Flow Code	Flow Direction	Pilot Oil Guide	Seals	Proportional Solenoid Voltage	Plug Socket without Plug	Solenoid Voltage	Design Series

NOTE: Not required when ordering.

Code	Description
032	NG32
040	NG40
050	NG50
063	NG63
080	NG80
100	NG100

Code	Description
A	A to B
B	B to A

Code	Description
N	Nitrile
V	Fluorocarbon

Code	Description
L	6 VDC
X	16 VDC

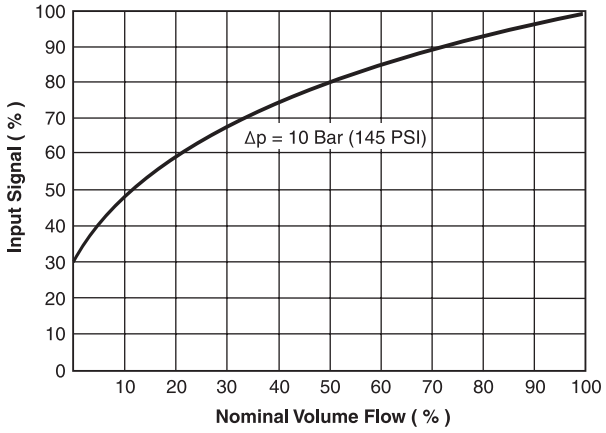
Code	Description
J	24V= / 1.25A
U	98V= / 0.31A *
G	205V= / 0.15A *

* For 110V / 50 Hz or 220V / 50 Hz use plug with rectifier

Weight:

TEA032	9 kg (19.8 lbs.)
TEA040	13 kg (28.7 (lbs.)
TEA050	22 kg (48.5 lbs.)
TEA063	38 kg (83.8 lbs.)
TEA080	62 kg (136.7 lbs.)
TEA100	85 kg (187.4 lbs.)

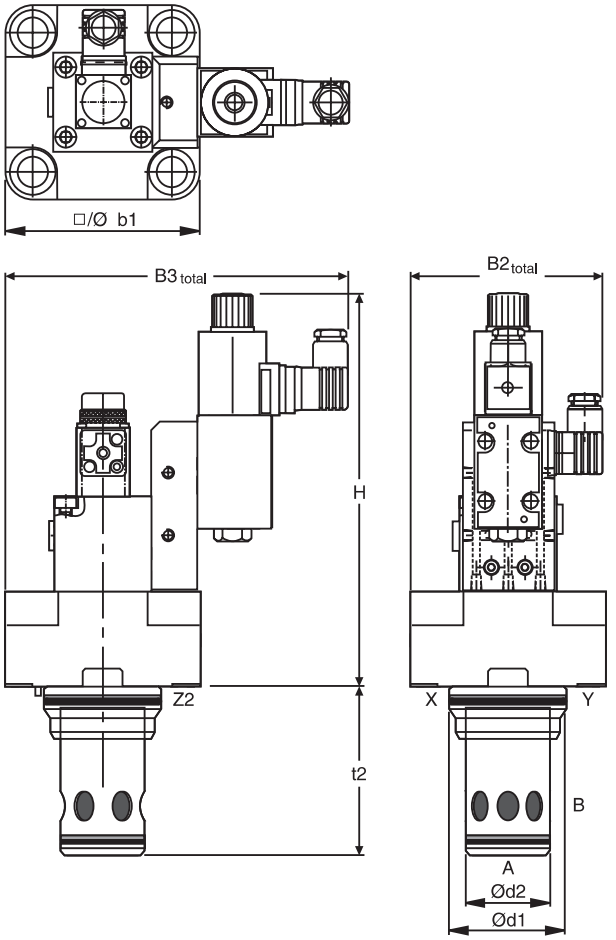
Performance Curve



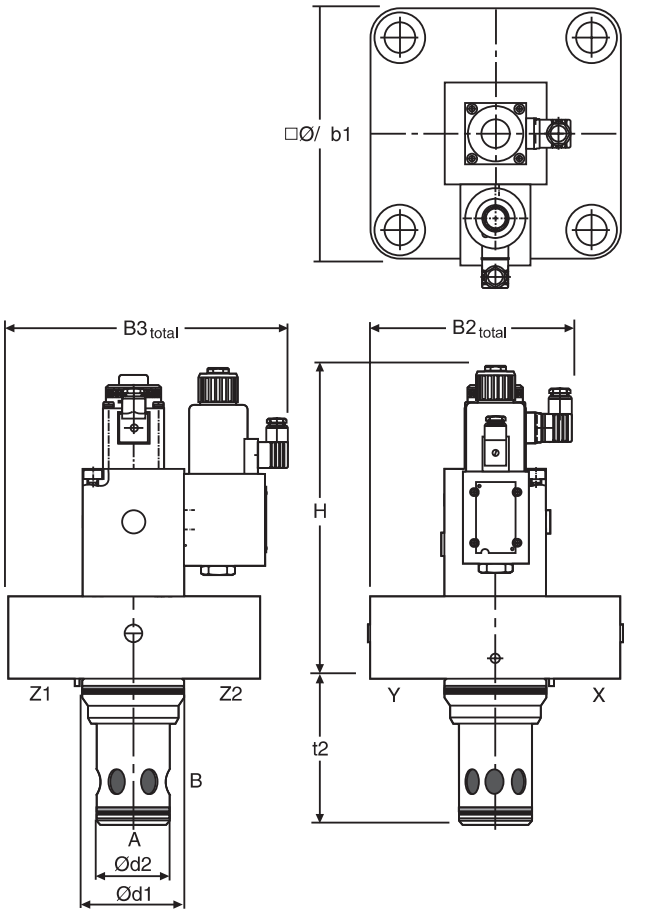
General						
Size	**NG32**	**NG40**	**NG50**	**NG63**	**NG80**	**NG100**
Interface	Slip-in cartridge according to ISO 7368					
Mounting Position	Unrestricted					
Ambient Temperature	-20 to +80°C (-4 to +176°F)					
Hydraulic						
Maximum Operating Pressure	Ports A, B and X: 350 Bar (5075 PSI), Port Y: 10 Bar (145 PSI) maximum					
Nominal Flow Δp **= 10 Bar (145 PSI)**	950 LPM (251) GPM	1400 LPM (370) GPM	2300 LPM (609) GPM	4000 LPM (1058) GPM	6000 LPM (1587 GPM	9500 LPM (2513) GPM
Fluid	Hydraulic oil according to DIN 51524 ... 525					
Viscosity Recommended	30 to 80 cSt (mm^2/s)					
Viscosity Permitted	20 to 380 cSt (mm^2/s)					
Fluid Temperature	0 to +60°C (+32°F to +140°F)					
Filtration	ISO 4406 (1999); 18/16/13 (meet NAS 1638:7)					
Minimum Pilot Pressure	> 25% of system pressure					
Minimum Operating Pressure	Port A to B at 10 Bar (145 PSI), B to A at 15 Bar (208 PSI)					
Pilot Oil Supply	Depending on flow direction A or B using X or external X					
Pilot Oil at p = 100 Bar (1450 PSI)	Port X to Y < 1.5 LPM (0.4 GPM)					
Opening Point	At 30% of nominal current					
Manufacturing Tolerance	±5% of Qnom					
Static / Dynamic						
Hysteresis	< 3%					
Repeatability	< 1%					
Response Time **px = 50 Bar (725 PSI)**	30 ms	35 ms	45 ms	55 ms	65 ms	80 ms
Electrical (Proportional Solenoid)						
Duty Ratio	100% ED					
Protection Class	IP65 in accordance with EN 60529 (plugged and mounted)					
Solenoid Code	**L**			**X**		
Size	**NG16-50**		**NG63-100**	**NG16-50**		**NG63-100**
Solenoid Voltage **Nominal Current (100% ED)**	6 VDC 2.6 amps			16 VDC 1.05 amps		
Nominal Resistance	2.2 Ohm		2.5 Ohm	11.3 Ohm		14 Ohm
Power Amplifier Recommended	PCD00A-400					
Solenoid Connection	Connector as per EN 175301-803					
Pilot Valve	4/2 flow control valve, See Catalog HY14-2500/US Type D1VW			4/2 flow control valve, See Catalog HY14-2500/US Type D3W		

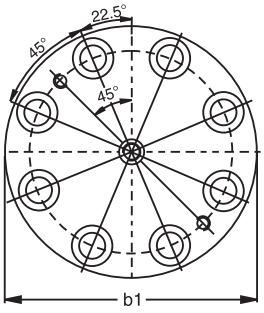
Inch equivalents for millimeter dimensions are shown in (**)

NG32 to NG50



NG63 to NG100





Size	32	40	50	63	80	100
H	250.0 (98.4)	260.0 (10.24)	270.0 (10.63)	312.0 (12.28)	337.0 (13.27)	352.0 (13.86)
b1	102.0 (4.02)	125.0 (4.92)	140.0 (5.51)	180.0 (7.09)	Ø250.0 (9.84)	Ø300.0 (11.81)
$d1^{H7}$	60.0 (2.36)	75.0 (2.95)	90.0 (3.54)	120.0 (4.72)	145.0 (5.71)	180.0 (7.09)
$d2^{H7}$	45.0 (1.77)	55.0 (2.17)	68.0 (2.68)	90.0 (3.54)	110.0 (4.33)	135.0 (5.31)
$t2^{+0.1}$	85.0 (3.35)	105.0 (4.13)	122.0 (4.80)	155.0 (6.10)	205.0 (8.07)	245.0 (9.65)
$B2_{total}$	106.0 (4.17)	118.0 (4.65)	125.0 (4.92)	158.0 (6.22)	193.0 (7.60)	218.0 (8.58)
$B3_{total}$	205.0 (8.07)	216.0 (8.50)	224.0 (8.82)	255.0 (10.04)	290.0 (11.42)	315.0 (12.40)

NG	Bolt Kit -		Kit	
			Nitrile	Fluorocarbon
32	BK415 (BK85)	281 Nm (207.2 lb.-ft.)	SK-TEAN10E32	SK-TEAN10E32V
40	BK416 (BK86)	553 Nm (407.8 lb.-ft.)	SK-TEAN10E40	SK-TEAN10E40V
50	BK417 (BK87)	553 Nm (407.8 lb.-ft.)	SK-TEAN10E50	SK-TEAN10E50V
63	BK418 (BK88)	1910 Nm (1408.6 lb.-ft.)	SK-TEAN10E63	SK-TEAN10E63V
80	BK419 (BK135)	935 Nm (689.6 lb.-ft.)	SK-TEAN10E80	SK-TEAN10E80V
100	BK420 (BK90)	1910 Nm (1408.6 lb.-ft.)	SK-TEAN10E100	SK-TEAN10E100V