



Forged steel valves

Powergeneration / petrochemical industries

Medium & high-pressure valves
in accordance with ASME, API, BS and DIN





Technical benefits

Handwheel

- Ergonomic design and sized for smooth operating with a reduced closing force.

Integral bonnet design

- Eliminates the risk of leakage across body-to-bonnet connections.
- Provides a more rigid construction.
- Eliminates body welds or threading on pressure-containing parts.
- Enables easy in-line maintenance, reducing overall costs.

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Removable backseat

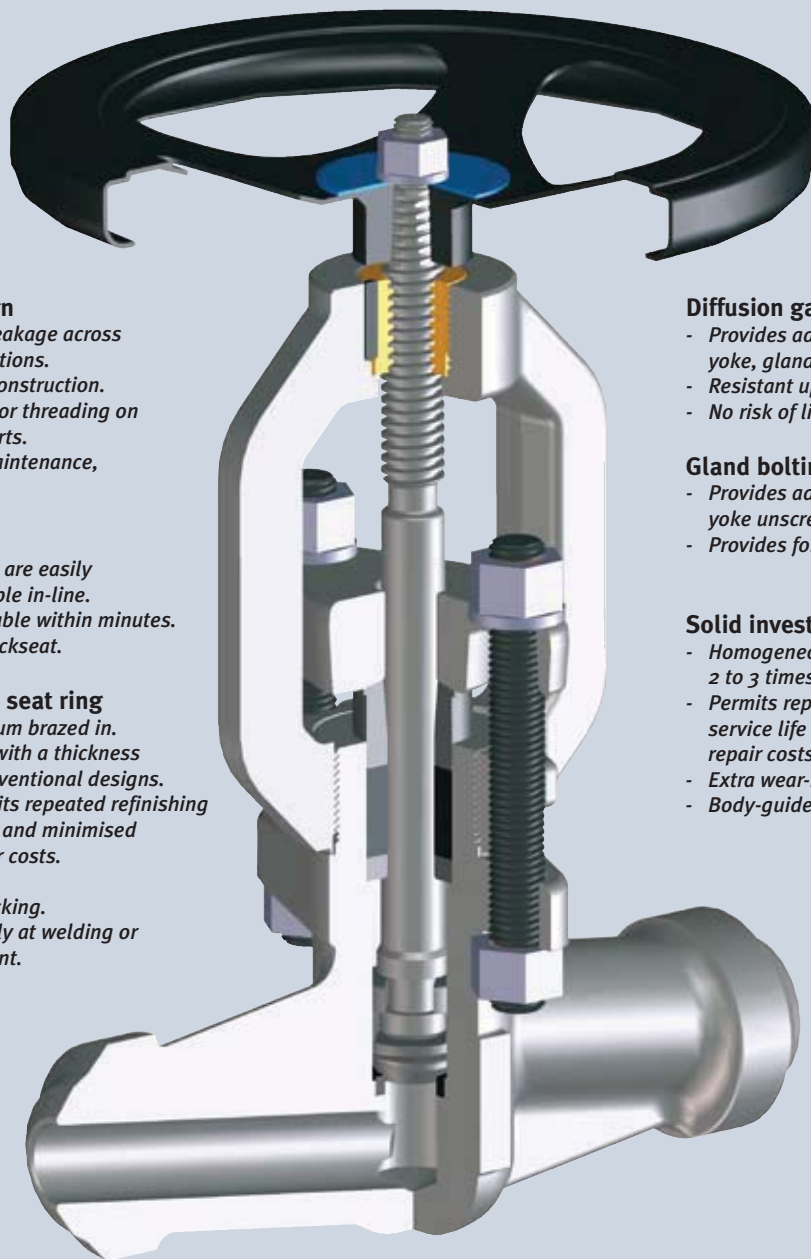
- Stem, disc and packing are easily accessible and removable in-line.
- Repairable and repackable within minutes.
- Optional screwed-in backseat.

Solid investment cast seat ring

- High temperature vacuum brazed in.
- Homogeneous stellite with a thickness 2 to 3 times that of conventional designs.
- Stellite thickness permits repeated refinishing for a longer service life and minimised maintenance and repair costs.
- Extra wear-resistance.
- Eliminates thermal cracking.
- No need for disassembly at welding or post weld heat treatment.

Modular valve design

- Provides optimal interchangeability of valves and spare parts.



Diffusion galvanized upper parts

- Provides additional corrosion resistance for yoke, gland flange and gland bolting.
- Resistant up to 672°C (1240°F).
- No risk of liquid metal embrittlement.

Gland bolting connected to valve-body

- Provides additional protection against the yoke unscrewing.
- Provides for anti-blow out design of stem.

Solid investment cast stellite disc

- Homogeneous stellite with a material reserve 2 to 3 times that of conventional designs.
- Permits repeated refinishing for longer service life and minimised maintenance and repair costs.
- Extra wear-resistance.
- Body-guided over the full stroke.

Forged steel valve body

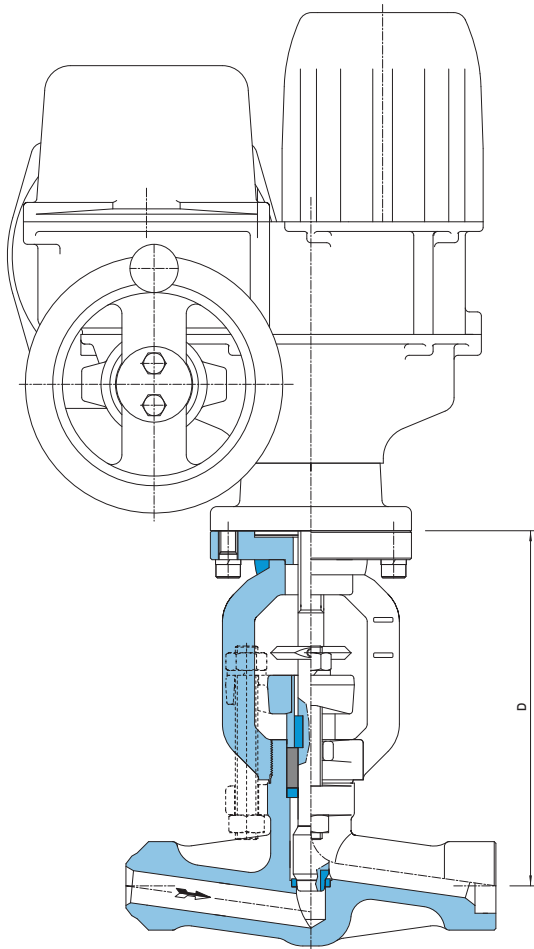
- Sufficient wall thickness for machining integral clampseal connections.

FORGED STEEL MOTOR OPERATED VALVES, BONNETLESS

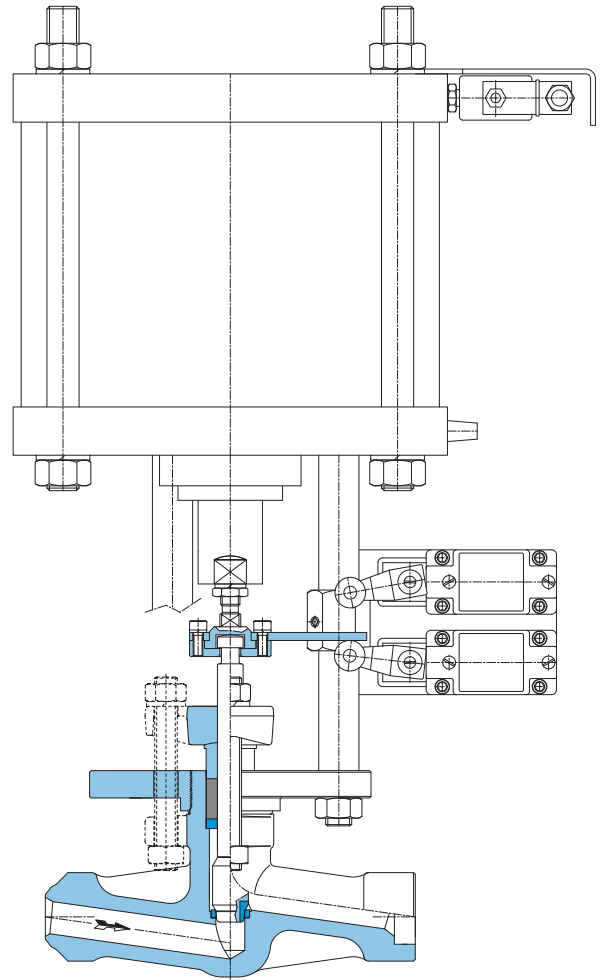
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



ELECTRIC ACTUATOR



PNEUMATIC ACTUATOR



FEATURES

DETAILED FEATURES REGARDING THE VALVE DESIGN AND MATERIALS USED HAVE BEEN INDICATED ON THE VALVE SPECIFIC DATA SHEETS

VALVES CAN BE FITTED WITH ALL TYPES AND MAKES OF ACTUATORS

PNEUMATIC ACTUATORS CAN BE DIAPHRAGM AS WELL AS PISTON TYPE ACTUATORS

ACTUATORS WILL BE ACCURATELY SIZED AND EACH AND EVERY UNIT WILL BE FUNCTIONALLY TESTED BY HP VALVES

BECAUSE OF THE RIGID VALVE CONSTRUCTION, VALVES CAN BE INSTALLED BOTH IN HORIZONTAL AND VERTICAL LINES

MAIN DIMENSIONS IN MM (INCH)

PATTERN	STRAIGHT (FIG 02.1)		SHORT (FIG 02.6)		Y (FIG 02.2)	
	NOM. SIZE	D	VALVE WEIGHT KG	D	VALVE WEIGHT KG	D
10 (3/8")	205 (8.07)	5.0 (11.0 LB)	205 (8.07)	4.6 (10.1 LB)	223 (8.78)	4.6 (10.1 LB)
15 (1/2")	205 (8.07)	4.9 (10.8 LB)	205 (8.07)	4.5 (9.9 LB)	223 (8.78)	4.5 (9.9 LB)
20 (3/4")	220 (8.66)	8.2 (18.1 LB)	220 (8.66)	7.4 (16.3 LB)	235 (9.25)	6.7 (14.8 LB)
25 (1")	220 (8.66)	8.0 (17.6 LB)	220 (8.66)	7.2 (15.9 LB)	235 (9.25)	6.5 (14.3 LB)
32 (1-1/4")	350 (13.78)	30.3 (66.8 LB)	350 (13.78)	27.3 (60.2 LB)	369 (14.53)	28.2 (62.2 LB)
40 (1-1/2")	350 (13.78)	30.3 (66.8 LB)	350 (13.78)	27.3 (60.2 LB)	369 (14.53)	28.2 (62.2 LB)
50 (2")	350 (13.78)	28.8 (63.5 LB)	350 (13.78)	26.0 (57.3 LB)	369 (14.53)	26.9 (59.3 LB)
65 (2-1/2")	-	-	-	-	530 (20.87)	90.0 (198.4 LB)
80 (3")	-	-	-	-	530 (20.87)	87.0 (191.8 LB)
100 (4")	-	-	-	-	530 (20.87)	83.0 (183.0 LB)

FORGED STEEL GLOBE VALVES, BONNETLESS - FIG 01.1

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

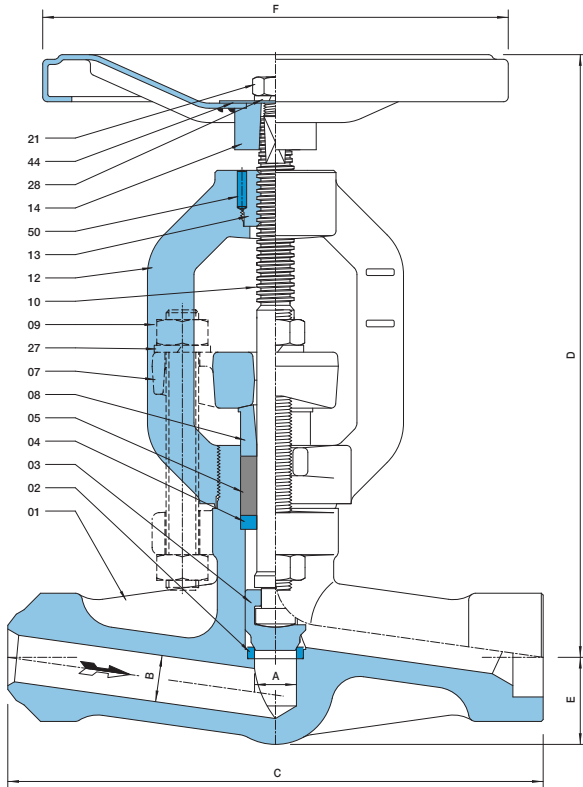


STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	SCREW-DOWN NON-RETURN VALVE AND/OR ANGLE PATTERN WITH 75 MM (≤ 1") / 125 MM (≤ 2") CENTRE-TO-END
	OPERATION	OPTIONAL NON-ROTATING ONE-PIECE STEM/DISC FOR ELECTRIC OR PNEUMATIC ACTUATOR (FIG 02.1)
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR (1.4122) / STELLITE - F316 (1.4401) / STELLITE - 431 (1.4057) (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	210 (8.27)	220 (8.66)	25 (0.98)	150 (5.91)	1.3	3.9 (8.6 LB)
15 (1/2")	11 (0.43)	11 (0.43)	210 (8.27)	220 (8.66)	25 (0.98)	150 (5.91)	2.5	3.8 (8.4 LB)
20 (3/4")	18 (0.71)	16 (0.63)	230 (9.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.2	7.4 (16.3 LB)
25 (1")	18 (0.71)	20 (0.79)	230 (9.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.8	7.2 (15.9 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	23.6	31.0 (68.3 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	23.6	31.0 (68.3 LB)
50 (2")	36 (1.42)	40 (1.57)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	31.0	29.5 (65.0 LB)

FORGED STEEL Y-PATTERN GLOBE VALVES, BONNETLESS - FIG 01.2

ASME CLASS 900 / 1500 / 1700 / 2500 / 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)

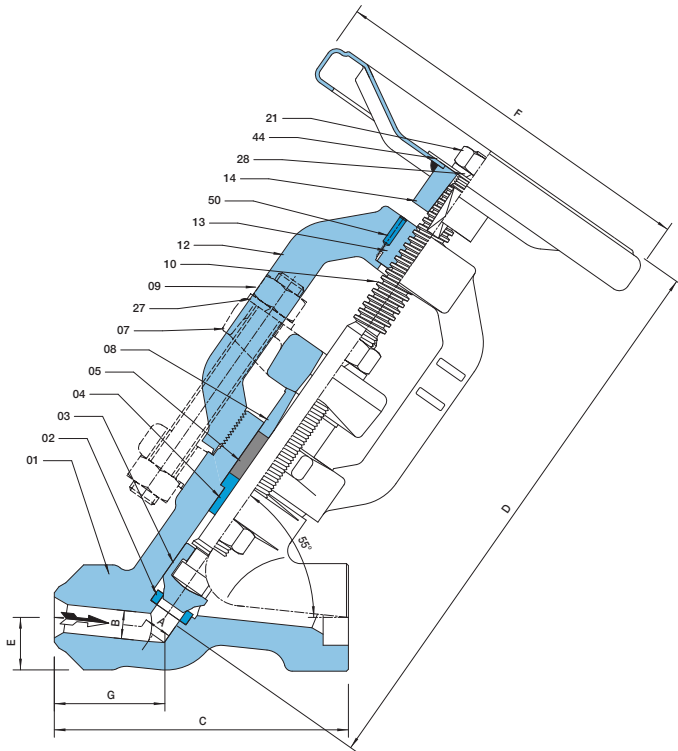


STANDARDS

DESIGN	ASME B16.34 - BS-EN 15761 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN-EN 9692-1 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	ALSO IN SIZES EXCEEDING 2" (FIG 02.2) AND AS SCREW-DOWN NON-RETURN VALVE
	OPERATION	OPTIONAL NON-ROTATING ONE-PIECE STEM/DISC FOR ELECTRIC OR PNEUMATIC ACTUATOR (FIG 02.2)
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	G	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	115 (4.53)	236 (9.29)	21 (0.83)	150 (5.91)	43.3 (1.70)	1.5	3.4 (7.5 LB)
15 (1/2")	11 (0.43)	11 (0.43)	115 (4.53)	236 (9.29)	21 (0.83)	150 (5.91)	43.3 (1.70)	2.7	3.3 (7.3 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	291 (11.46)	29 (1.14)	200 (7.87)	51.5 (2.02)	8.0	5.9 (13.0 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	291 (11.46)	29 (1.14)	200 (7.87)	51.5 (2.02)	8.7	5.7 (12.6 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.4	28.9 (68.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.4	28.9 (68.7 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	44.2	27.6 (60.8 LB)

FORGED STEEL GLOBE VALVES, ANGLE PATTERN, BONNETLESS - FIG 01.3

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

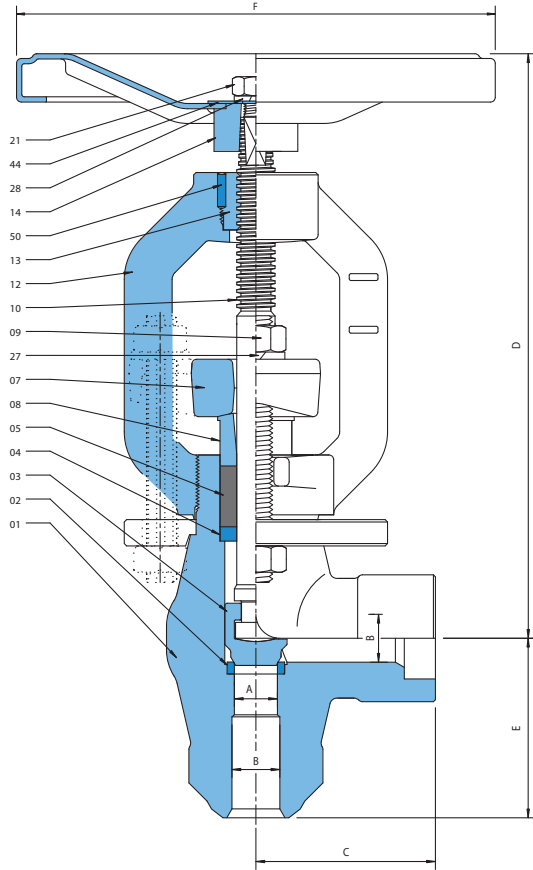


STANDARDS

DESIGN	ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN 2559 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	SCREW-DOWN NON-RETURN VALVE
	OPERATION	OPTIONAL NON-ROTATING ONE-PIECE STEM/DISC FOR ELECTRIC OR PNEUMATIC ACTUATOR (FIG 02.3)
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA182-F316(L) - SA350-LF2 - SA182-F92 - 16Mo3
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.6 (16.8 LB)
20 (3/4")	18 (0.71)	15 (0.59)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.4 (16.3 LB)
25 (1")	18 (0.71)	18 (0.71)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.2 (15.9 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	34.1 (75.2 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)

FORGED STEEL GLOBE VALVES, ANGLE PATTERN, BONNETLESS - FIG 01.3

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

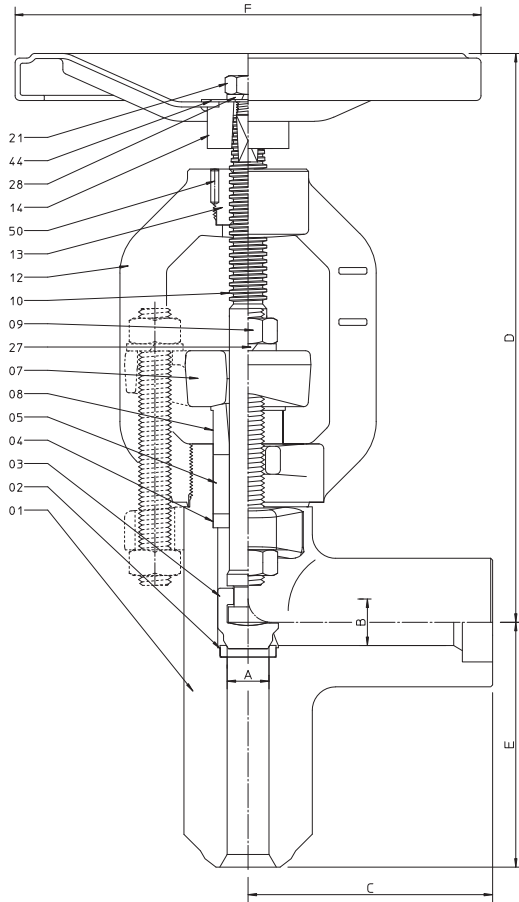


STANDARDS

DESIGN	ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN 2559 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	SCREW-DOWN NON-RETURN VALVE
	OPERATION	OPTIONAL NON-ROTATING ONE-PIECE STEM/DISC FOR ELECTRIC OR PNEUMATIC ACTUATOR (FIG 02.3)
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	8.0 (17.4 LB)
20 (3/4")	18 (0.71)	15 (0.59)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	7.9 (17.2 LB)
25 (1")	18 (0.71)	18 (0.71)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	7.8 (17.0 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	34.1 (75.2 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)

FORGED STEEL GLOBE VALVES, BONNETLESS - FIG 01.6

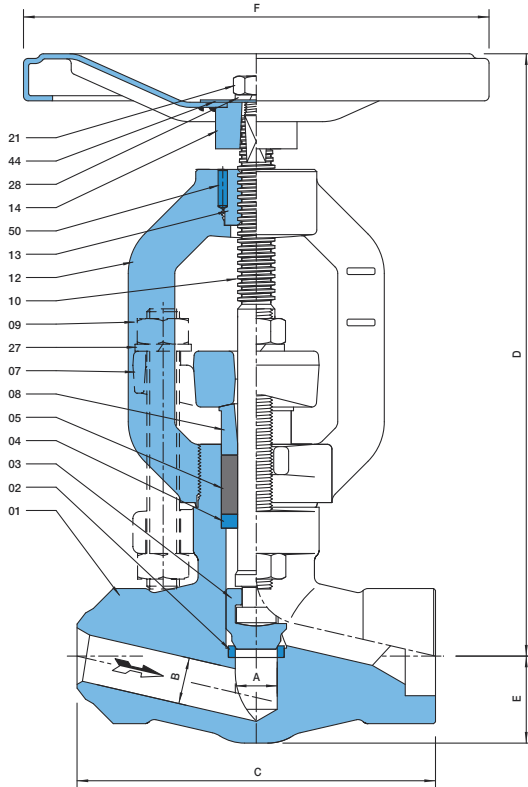
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - (API 600) - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	CARBON STEEL
08	GLAND	AISI 304
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
21	NUT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
28	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM
50	PIN	HARDENED STEEL

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPERATION	OPTIONAL NON-ROTATING ONE-PIECE STEM/DISC FOR ELECTRIC OR PNEUMATIC ACTUATOR (FIG 02.6)
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA350-LF2 - SA182-F12 - SA182-F22 - SA182-F316(L) - SA182-F51 (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE - F51/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	132 (5.20)	220 (8.66)	25 (0.98)	150 (5.91)	1.3	3.5 (7.7 LB)
15 (1/2")	11 (0.43)	11 (0.43)	132 (5.20)	220 (8.66)	25 (0.98)	150 (5.91)	2.2	3.4 (7.5 LB)
20 (3/4")	18 (0.71)	16 (0.63)	137 (5.39)	278 (10.94)	38 (1.50)	200 (7.87)	5.9	6.7 (14.8 LB)
25 (1")	18 (0.71)	20 (0.79)	154 (6.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.7	6.5 (14.3 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	22.3	28.0 (61.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	22.3	28.0 (61.7 LB)
50 (2")	36 (1.42)	40 (1.57)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	26.1	26.7 (58.9 LB)

FORGED STEEL THROTTLE VALVES, BONNETLESS - FIG 02.1

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

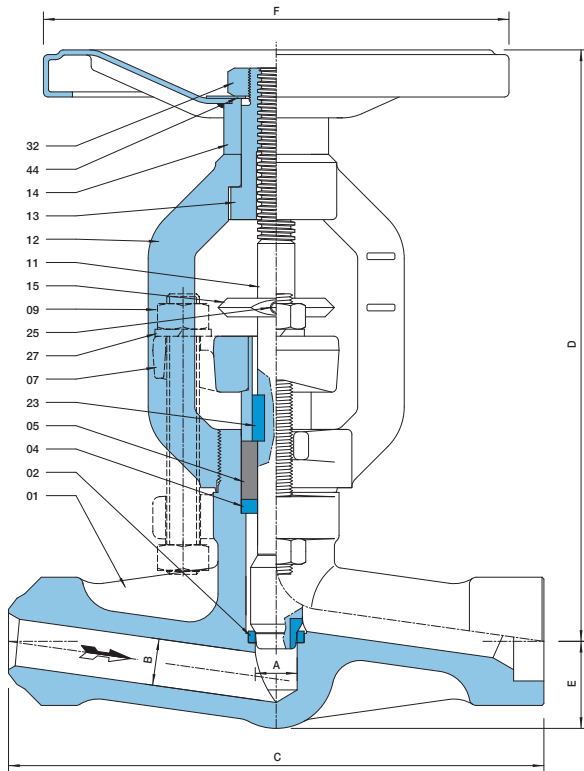


STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND / FLANGE	AISI 304 / CARBON STEEL
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11 STEM / DISC	17 CR / STELLITED (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
15 POSITION INDICATOR	17 CR
23 PARALLEL KEY	STAINLESS STEEL
25 SET SCREW	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
32 THIN NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR (1.4122) / STELLITE - F316 (1.4401) / STELLITE - 431 (1.4057) (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS
	OPTIONS	PARABOLIC DISC AND/OR ANGLE PATTERN WITH 75 MM ($\leq 1"$) / 125 MM ($\leq 2"$) CENTRE-TO-END
	OPERATION	HANDWHEEL - GEARBOX - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	210 (8.27)	215 (8.46)	25 (0.98)	150 (5.91)	1.2	4.0 (8.8 LB)
15 (1/2")	11 (0.43)	11 (0.43)	210 (8.27)	215 (8.46)	25 (0.98)	150 (5.91)	2.5	3.9 (8.6 LB)
20 (3/4")	18 (0.71)	16 (0.63)	230 (9.06)	263 (10.35)	38 (1.50)	200 (7.87)	6.1	7.7 (17.0 LB)
25 (1")	18 (0.71)	20 (0.79)	230 (9.06)	263 (10.35)	38 (1.50)	200 (7.87)	7.1	7.5 (16.5 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	300 (11.81)	426 (16.77)	72 (2.83)	350 (13.78)	23.2	32.0 (70.5 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	300 (11.81)	426 (16.77)	72 (2.83)	350 (13.78)	23.2	32.0 (70.5 LB)
50 (2")	36 (1.42)	40 (1.57)	300 (11.81)	426 (16.77)	72 (2.83)	350 (13.78)	31.5	30.5 (67.2 LB)

FORGED STEEL Y-PATTERN GLOBE VALVES, BONNETLESS - FIG 02.2

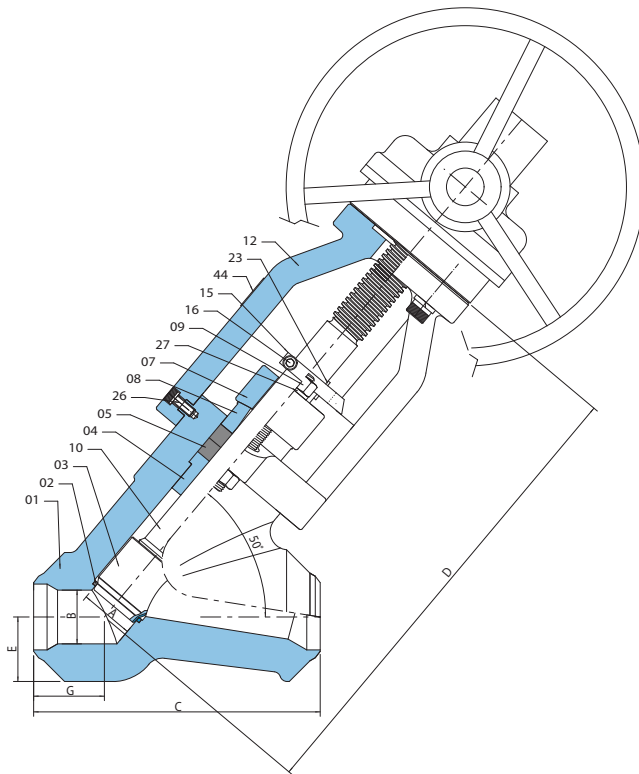
ASME CLASS 900 / 1500 / 1700 / 2500 / 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 EN RATING PN160 - PN500 (760)



STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 OTHER END CONNECTIONS CLAMP CONNECTORS
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	F316 / STELLITED
04	LOOSE BACKSEAT	ASTM-A182-F316
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	42CrMo4
08	GLAND	ASTM-A182-F316
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE / FLANGE	ASTM-A216-WCB
15	POSITION INDICATOR	CARBON STEEL
16	BOLT	STEEL ZINC PLATED
23	PARALLEL KEY	STAINLESS STEEL
26	BOLT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	PARABOLIC DISC
	OPERATION	GEARBOX - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F22 (10CrMo9.10)- SA182-F91 (1.4903) - SA182-F316(L) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	G	Cv	WEIGHT KG
65 (2-1/2")	50 (1.97)	50 (1.97)	320 (12.60)	530 (20.87)	72 (2.83)	79.0 (3.11)	95.9	90 (198 LB)
80 (3")	60 (2.36)	60 (2.36)	320 (12.60)	530 (20.87)	72 (2.83)	79.0 (3.11)	142.4	87 (192 LB)

FORGED Y-PATTERN GLOBE VALVES, PRESSURE SEAL BONNET - FIG 02.2

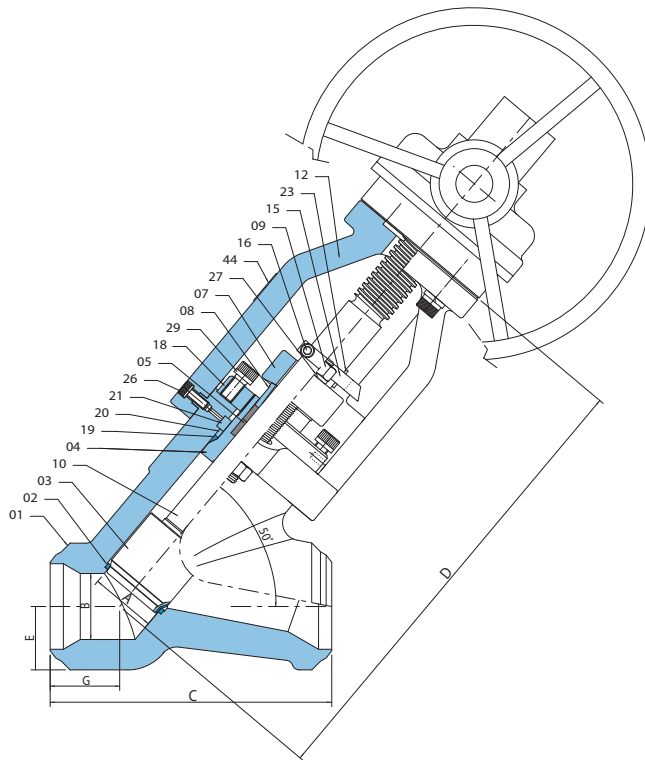
ASME CLASS 900 / 1500 / 1700 / 2500 / 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 EN RATING B160 - B500 (760)



STANDARDS

DESIGN	ASME B16.34 - BS-EN 15761 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN-EN 9692-1 - EN 12627
OTHER END CONNECTIONS	CLAMP CONNECTORS
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD
PRESSURE TESTING	ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS



01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	F316 / STELLITED
04 BONNET	ASTM-A182-F316
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	42CrMo4
08 GLAND	ASTM-A182-F316
09 GLAND BOLT / NUT	ASTM-A193-B7 / A194-2H
10 STEM	17Cr (SEE BELOW)
12 YOKE / FLANGE	ASTM-A216-WCB
15 POSITION INDICATOR	CARBON STEEL
16 BOLT	STEEL ZINC PLATED
18 RETAINING PLATE	ASTM-A105N
19 GASKET	ASTM-A182-F316
20 THRUST RING	ASTM-A182-F316
21 SEGMENTAL RING	ASTM-A182-F316
23 PARALLEL KEY	STAINLESS STEEL
26 BOLT	STEEL ZINC PLATED
27 SPRING WASHER	STEEL ZINC PLATED
29 BOLT	STEEL ZINC PLATED
44 NAMEPLATE	STAINLESS STEEL

FEATURES

DESIGN	CONSTRUCTION	PRESSURE SEALED BONNET WITH INTEGRAL BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	PARABOLIC DISC
	OPERATION	GEARBOX - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	G	Cv	WEIGHT KG
100 (4")	75 (2.95)	75 (2.95)	320 (12.60)	530 (20.87)	72 (2.83)	79.0 (3.11)	239	83 (183 LB)
100 (4")	80 (3.15)	80 (3.15)	320 (12.60)	530 (20.87)	72 (2.83)	79.0 (3.11)	259	78 (172 LB)

FORGED STEEL THROTTLE VALVES, ANGLE PATTERN - FIG 02.3

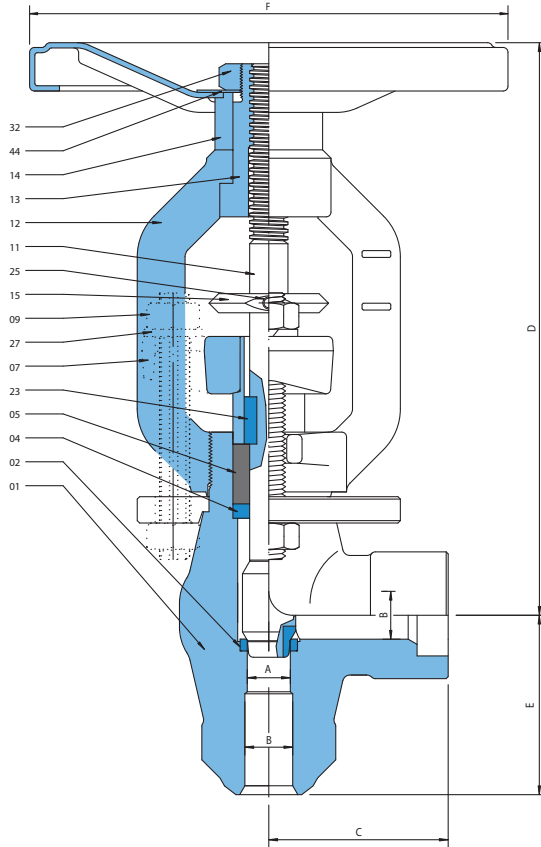
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND / FLANGE	AISI 304 / CARBON STEEL
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11	STEM / DISC	17 CR / STELLITED (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
15	POSITION INDICATOR	17 CR
23	PARALLEL KEY	STAINLESS STEEL
25	SET SCREW	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
32	THIN NUT	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	PARABOLIC DISC OR CONTINUOUS BLOW DOWN VALVE (FIG 09.3)
	OPERATION	HANDWHEEL - GEARBOX - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA182-F316(L) - SA350-LF2 - SA182-F92 - 16Mo3
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	75 (2.95)	239 (9.41)	75 (2.95)	200 (7.87)	-	7.9 (17.4 LB)
20 (3/4")	18 (0.71)	15 (0.59)	75 (2.95)	239 (9.41)	75 (2.95)	200 (7.87)	-	7.7 (17.0 LB)
25 (1")	18 (0.71)	18 (0.71)	75 (2.95)	239 (9.41)	75 (2.95)	200 (7.87)	-	7.5 (16.5 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	35.1 (77.4 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	33.9 (74.7 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	33.9 (74.7 LB)

FORGED STEEL THROTTLE VALVES, ANGLE PATTERN - FIG 02.3

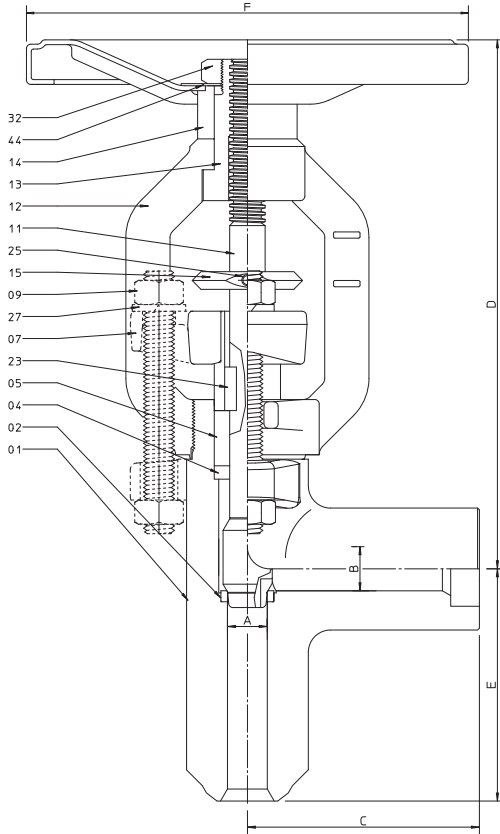
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN	ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN 2559 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND / FLANGE	AISI 304 / CARBON STEEL
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11 STEM / DISC	17 CR / STELLITED (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
15 POSITION INDICATOR	17 CR
23 PARALLEL KEY	STAINLESS STEEL
25 SET SCREW	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
32 THIN NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	PARABOLIC DISC OR CONTINUOUS BLOW DOWN VALVE (FIG 09.3)
	OPERATION	HANDWHEEL - GEARBOX - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	-	8.3 (18.1 LB)
20 (3/4")	18 (0.71)	15 (0.59)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	-	8.2 (17.9 LB)
25 (1")	18 (0.71)	18 (0.71)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	-	8.1 (17.6 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	35.1 (77.4 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	33.9 (74.7 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	-	33.9 (74.7 LB)

FORGED STEEL STOP-CHECK (SDNR), BONNETLESS - FIG 03.1

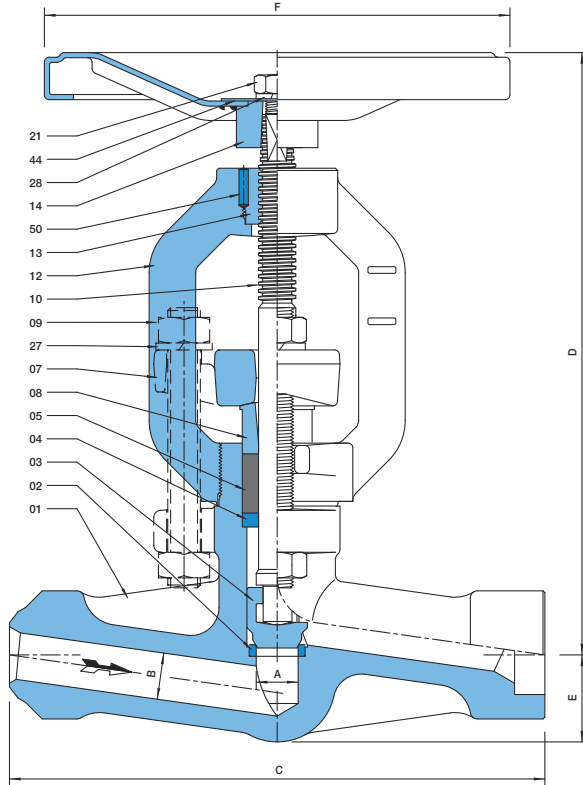
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	CARBON STEEL
08	GLAND	AISI 304
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
21	NUT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
28	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM
50	PIN	HARDENED STEEL

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	ALSO AVAILABLE IN ANGLE PATTERN WITH 75 MM (≤ 1") / 125 MM (≤ 2") CENTRE-TO-END
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo 4.4) - SA182-F22 (10CrMo 9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR (1.4122) / STELLITE - F316 (1.4401) / STELLITE - 431 (1.4057) (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	210 (8.27)	220 (8.66)	25 (0.98)	150 (5.91)	1.3	3.9 (8.6 LB)
15 (1/2")	11 (0.43)	11 (0.43)	210 (8.27)	220 (8.66)	25 (0.98)	150 (5.91)	2.5	3.8 (8.4 LB)
20 (3/4")	18 (0.71)	16 (0.63)	230 (9.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.2	7.4 (16.3 LB)
25 (1")	18 (0.71)	20 (0.79)	230 (9.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.8	7.2 (15.9 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	23.6	31.0 (68.3 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	23.6	31.0 (68.3 LB)
50 (2")	36 (1.42)	40 (1.57)	300 (11.81)	450 (17.72)	72 (2.83)	350 (13.78)	31.0	29.5 (65.0 LB)

FORGED STEEL Y-PATTERN STOP-CHECK (SDNR) VALVES - FIG 03.2

ASME CLASS 900 / 1500 / 1700 / 2500 / 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)

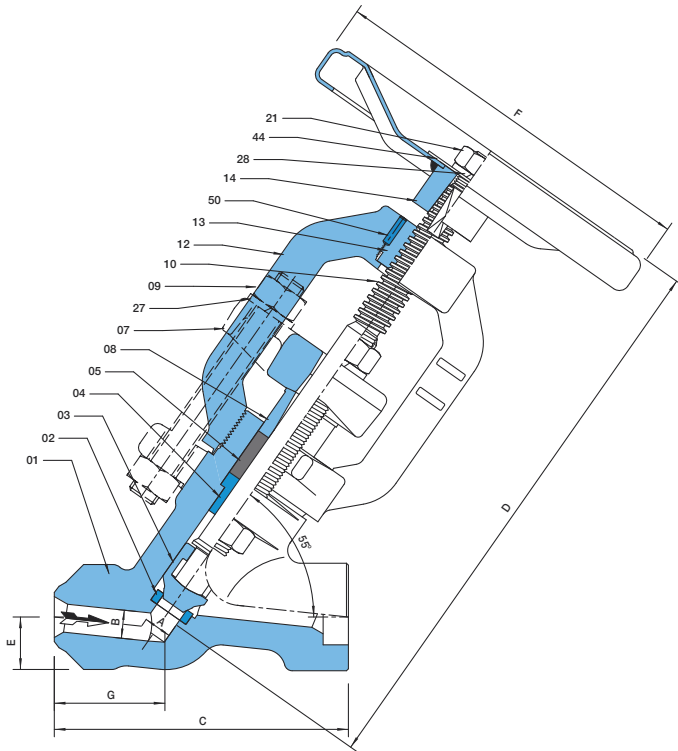


STANDARDS

DESIGN	ASME B16.34 - BS 5352 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN 2559 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	G	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	115 (4.53)	236 (9.29)	21 (0.83)	150 (5.91)	43.3 (1.70)	1.5	3.4 (7.5 LB)
15 (1/2")	11 (0.43)	11 (0.43)	115 (4.53)	236 (9.29)	21 (0.83)	150 (5.91)	43.3 (1.70)	2.7	3.3 (7.3 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	291 (11.46)	29 (1.14)	200 (7.87)	51.5 (2.02)	8.0	5.9 (13.0 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	291 (11.46)	29 (1.14)	200 (7.87)	51.5 (2.02)	8.7	5.7 (12.6 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.4	28.9 (68.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.4	28.9 (68.7 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	469 (18.46)	50 (1.97)	350 (13.78)	85.0 (3.35)	44.2	27.6 (60.8 LB)

FORGED STEEL STOP-CHECK (SDNR) VALVES, ANGLE PATTERN - FIG 03.3

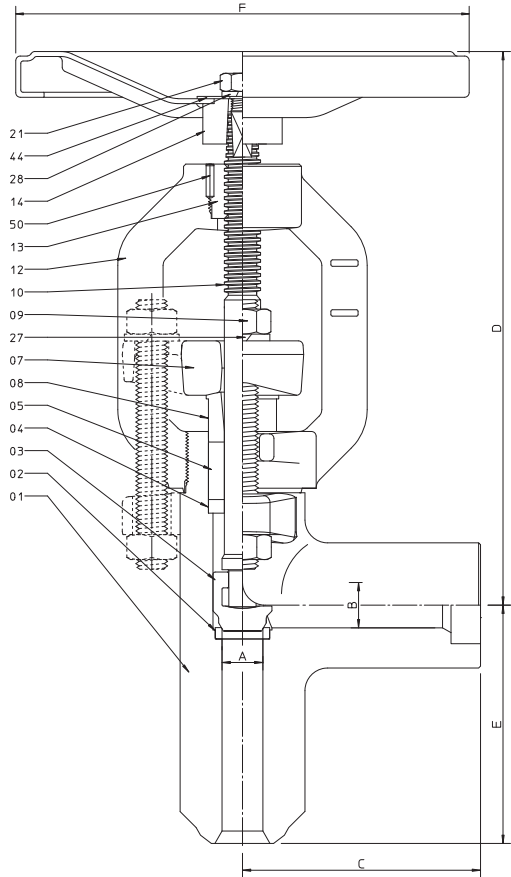
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN	ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN 2559 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	CARBON STEEL
08	GLAND	AISI 304
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
21	NUT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
28	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM
50	PIN	HARDENED STEEL

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	8.0 (17.4 LB)
20 (3/4")	18 (0.71)	15 (0.59)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	7.9 (17.2 LB)
25 (1")	18 (0.71)	18 (0.71)	105 (4.13)	260 (10.24)	105 (4.13)	200 (7.87)	-	7.8 (17.0 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	34.1 (75.2 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)

FORGED STEEL STOP-CHECK (SDNR) VALVES, ANGLE PATTERN - FIG 03.3

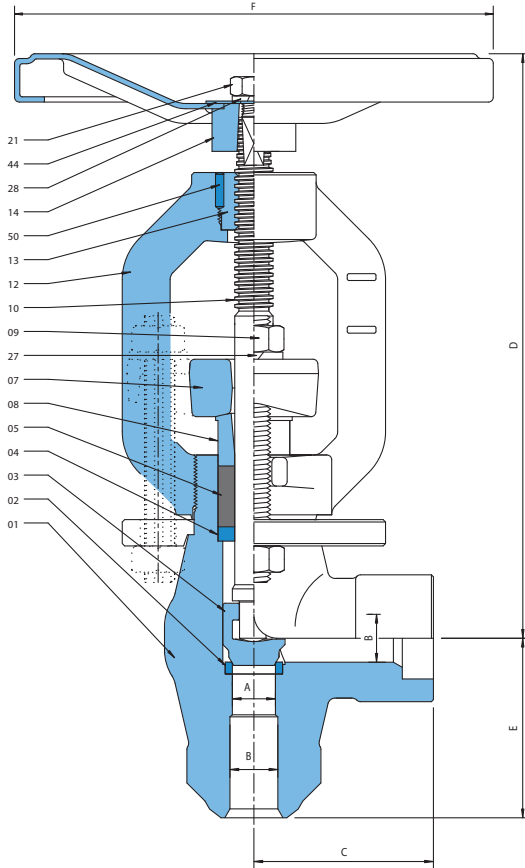
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	CARBON STEEL
08	GLAND	AISI 304
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
21	NUT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
28	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM
50	PIN	HARDENED STEEL

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA182-F316(L) - SA350-LF2 - SA182-F92 - 16Mo3
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
15 (1/2")	18 (0.71)	11 (0.43)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.6 (16.8 LB)
20 (3/4")	18 (0.71)	15 (0.59)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.4 (16.3 LB)
25 (1")	18 (0.71)	18 (0.71)	75 (2.95)	260 (10.24)	75 (2.95)	200 (7.87)	-	7.2 (15.9 LB)
32 (1-1/4")	36 (1.42)	28 (1.10)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	34.1 (75.2 LB)
40 (1-1/2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)
50 (2")	36 (1.42)	36 (1.42)	175 (6.89)	430 (16.93)	175 (6.89)	350 (13.78)	-	32.9 (72.5 LB)

FORGED STEEL STOP-CHECK (SDNR) VALVES, BONNETLESS - FIG 03.6

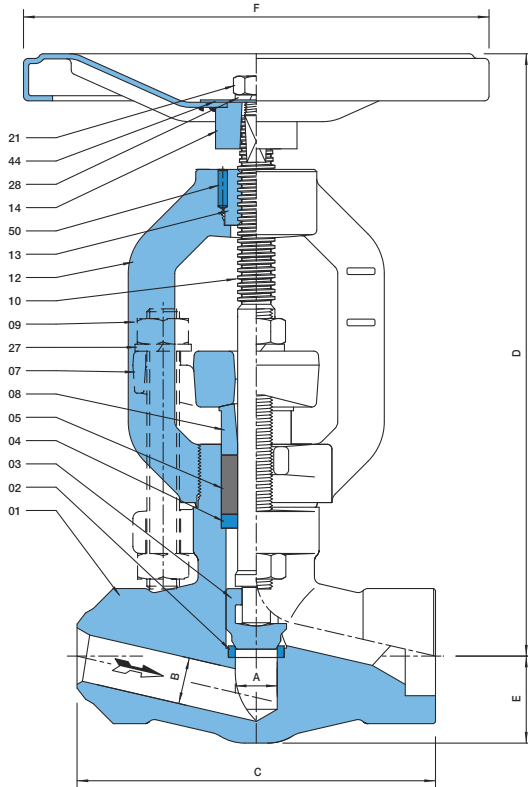
ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - (API 600) - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	DISC	STELLITE
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND FLANGE	CARBON STEEL
08	GLAND	AISI 304
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10	STEM	17 CR (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
21	NUT	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
28	SPRINGWASHER	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM
50	PIN	HARDENED STEEL

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA350-LF2 - SA182-F12 - SA182-F22 - SA182-F316(L) - SA182-F51 (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE - F51/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	132 (5.20)	220 (8.66)	25 (0.98)	150 (5.91)	1.3	3.5 (7.7 LB)
15 (1/2")	11 (0.43)	11 (0.43)	132 (5.20)	220 (8.66)	25 (0.98)	150 (5.91)	2.2	3.4 (7.5 LB)
20 (3/4")	18 (0.71)	16 (0.63)	137 (5.39)	278 (10.94)	38 (1.50)	200 (7.87)	5.9	6.7 (14.8 LB)
25 (1")	18 (0.71)	20 (0.79)	154 (6.06)	278 (10.94)	38 (1.50)	200 (7.87)	6.7	6.5 (14.3 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	22.3	28.0 (61.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	22.3	28.0 (61.7 LB)
50 (2")	36 (1.42)	40 (1.57)	192 (7.56)	450 (17.72)	72 (2.83)	350 (13.78)	26.1	26.7 (58.9 LB)

FORGED STEEL STRAIGHT / Y-PATTERN CHECK VALVES - FIG 04.1 / 04.2

ASME CLASS 900 - 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

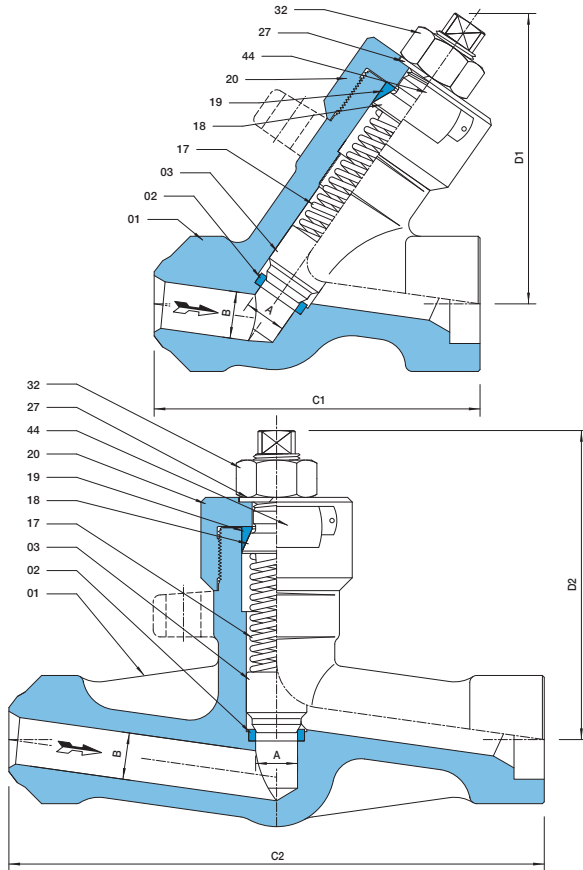


STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
17 SPRING	AISI 302
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	CARBON STEEL
27 SPRINGWASHER	STEEL ZINC PLATED
32 NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM



FEATURES

DESIGN	CONSTRUCTION	PRESSURE SEAL BONNET
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
MATERIALS	Y-PATTERN	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)
	STRAIGHT BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	SPRING ASSISTED STELLITE PISTON (FIG 04) OR STAINLESS STEEL BALL (FIG 05)

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C1	D1	Cv	WEIGHT KG	C2	D2	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	115 (4.53)	98 (3.86)	1.5	2.0 (4.4 LB)	210 (8.27)	108 (4.25)	1.3	2.5 (5.5 LB)
15 (1/2")	11 (0.43)	11 (0.43)	115 (4.53)	98 (3.86)	2.7	1.9 (4.2 LB)	210 (8.27)	108 (4.25)	2.5	2.4 (5.3 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	123 (4.84)	8.0	3.0 (6.6 LB)	230 (9.06)	135 (5.31)	6.2	4.5 (9.9 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	123 (4.84)	8.7	2.8 (6.2 LB)	230 (9.06)	135 (5.31)	6.8	4.3 (9.5 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	34.4	18.9 (41.7 LB)	300 (11.81)	213 (8.39)	23.6	21.0 (46.3 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	34.4	18.9 (41.7 LB)	300 (11.81)	213 (8.39)	23.6	21.0 (46.3 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	198 (7.80)	44.2	17.5 (38.6 LB)	300 (11.81)	213 (8.39)	31.0	19.5 (43.0 LB)
65 (2-1/2")	50 (1.97)	50 (1.97)	320 (12.60)	292 (11.50)	95.9	72.0 (158.7 LB)	-	-	-	-
80 (3")	60 (2.36)	60 (2.36)	320 (12.60)	292 (11.50)	142.4	69.0 (152.1 LB)	-	-	-	-
100 (4")	75 (2.95)	75 (2.95)	320 (12.60)	292 (11.50)	239.2	65.0 (143.3 LB)	-	-	-	-

FORGED STEEL CHECK VALVES - FIG 04.6

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

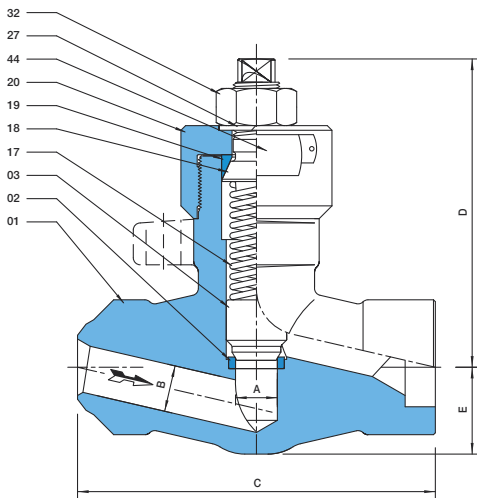


STANDARDS

DESIGN ASME B16.34 - BS 5352 - (API 600) - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 DISC	STELLITE
17 SPRING	AISI 302
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	CARBON STEEL
27 SPRINGWASHER	STEEL ZINC PLATED
32 NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM



FEATURES

DESIGN CONSTRUCTION PRESSURE SEAL BONNET
 SEAT RING HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")

MATERIALS BODY SA105N - SA350-LF2 - SA182-F12 - SA182-F22 - SA182-F316(L) - SA182-F51 (OTHERS ON REQUEST)
 TRIM SPRING ASSISTED STELLITE PISTON (FIG 04.6) OR STAINLESS STEEL BALL (FIG 05.6)

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	ΔP TO OPEN	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	132 (5.20)	108 (4.25)	25 (0.98)	0.5 BAR	1.3	2.1 (4.6 LB)
15 (1/2")	11 (0.43)	11 (0.43)	132 (5.20)	108 (4.25)	25 (0.98)	0.5 BAR	2.2	2.0 (4.4 LB)
20 (3/4")	18 (0.71)	16 (0.63)	137 (5.39)	135 (5.31)	38 (1.50)	0.5 BAR	5.9	3.7 (8.2 LB)
25 (1")	18 (0.71)	20 (0.79)	154 (6.06)	135 (5.31)	38 (1.50)	0.5 BAR	6.7	3.5 (7.7 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	192 (7.56)	213 (8.39)	72 (2.83)	0.5 BAR	22.3	18.0 (39.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	192 (7.56)	213 (8.39)	72 (2.83)	0.5 BAR	22.3	18.0 (39.7 LB)
50 (2")	36 (1.42)	40 (1.57)	192 (7.56)	213 (8.39)	72 (2.83)	0.5 BAR	26.1	16.7 (36.8 LB)

FORGED STEEL Y-PATTERN BALL CHECK VALVES - FIG 05.2

ASME CLASS 900 - 2700 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

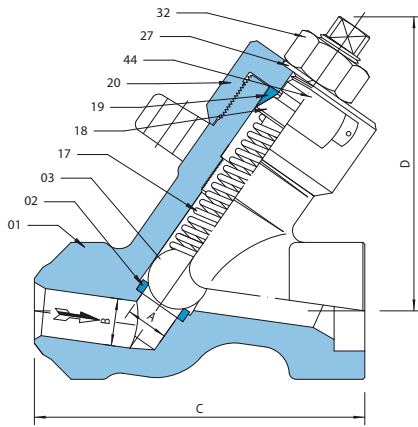


STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 BALL	F316
17 SPRING	AISI 302
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	CARBON STEEL
27 SPRINGWASHER	STEEL ZINC PLATED
32 NUT	STEEL ZINC PLATED
44 NAMEPLATE	STAINLESS STEEL



FEATURES

DESIGN	CONSTRUCTION	PRESSURE SEAL BONNET
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
MATERIALS	BODY	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)
	TRIM	SPRING ASSISTED STAINLESS STEEL BALL (FIG 05) OR STELLITE PISTON (FIG 04)

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	Cv	WEIGHT KG
10 (3/8")	11 (0.43)	7 (0.28)	115 (4.53)	98 (3.86)	1.5	2.0 (4.4 LB)
15 (1/2")	11 (0.43)	11 (0.43)	115 (4.53)	98 (3.86)	2.7	1.9 (4.2 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	123 (4.84)	8.0	3.0 (6.6 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	123 (4.84)	8.7	2.8 (6.2 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	34.4	18.9 (41.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	34.4	18.9 (41.7 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	198 (7.80)	44.2	17.5 (38.6 LB)

FORGED STEEL GATE VALVES, BONNETLESS - FIG 06.6

ASME CLASS 1500 / 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

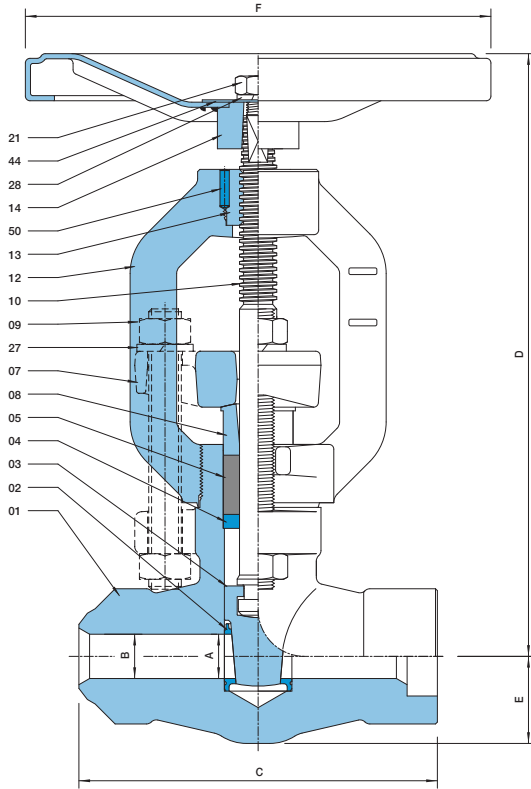


STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE(D)
03 WEDGE	STELLITE
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND FLANGE	CARBON STEEL
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
10 STEM	17 CR (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
21 NUT	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
28 SPRINGWASHER	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
50 PIN	HARDENED STEEL



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT
	SEAT	HIGH TEMPERATURE VACUUM BRAZED IN STELLITE SEAT OR WELDED IN STELLITED SEAT RINGS
	OPERATION	OPTIONAL NON-ROTATING STEM FOR ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA350-LF2 - SA182-F12 - SA182-F22 - SA182-F316(L) - SA182-F51 - SA182-F91
	TRIM	17CR/STELLITE - F316/STELLITE - F51/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	F	Cv	WEIGHT KG
10 (3/8")	-	7 (0.28)	132 (5.20)	225 (8.86)	25 (0.98)	150 (5.91)	2.2	3.5 (7.7 LB)
15 (1/2")	-	11 (0.43)	132 (5.20)	225 (8.86)	25 (0.98)	150 (5.91)	6.0	3.4 (7.5 LB)
20 (3/4")	-	15 (0.59)	137 (5.39)	282 (11.10)	38 (1.50)	200 (7.87)	11.2	6.7 (14.8 LB)
25 (1")	-	19 (0.75)	154 (6.06)	282 (11.10)	38 (1.50)	200 (7.87)	21.5	6.5 (14.3 LB)
32 (1-1/4")	28.5 (1.12)	30 (1.18)	192 (7.56)	455 (17.91)	72 (2.83)	350 (13.78)	42.9	30.0 (66.1 LB)
40 (1-1/2")	28.5 (1.12)	30 (1.18)	192 (7.56)	455 (17.91)	72 (2.83)	350 (13.78)	42.9	30.0 (66.1 LB)
50 (2")	38 (1.50)	40 (1.57)	192 (7.56)	455 (17.91)	72 (2.83)	350 (13.78)	77.8	28.0 (61.7 LB)

FORGED STEEL GATE VALVES, PRESSURE SEAL BONNET – FIG 06.6

ASME CLASS 1500 / 2500 (4500)
EN RATING PN160 - PN500 (B760)



STANDARDS

DESIGN	ASME B16.34 - EN 12516 - (BS-EN 10434) - API 600
BUTTWELDING ENDS	ASME B16.25 - EN 12627 - DIN-EN 9692-1
END-TO-END DIMENSIONS	ASME B16.10 - EN 12982 / EN 558-2 - MANUFACTURERS STANDARD
PRESSURE TESTING	ASME B16.34 - EN 12266 - API 598

MATERIALS



01 BODY	(S)A105N (SEE BELOW)
02 SEAT RING	A106 + STELLITE #12
03 PARALLEL DISC	STELLITE #6
04 BONNET	ASTM - A105
05 STEM PACKING	GRAPHITE/316 (GNHD)
06 SPRING	INCONEL 750
07 GLAND FLANGE	42CrMo4
08 GLAND	AISI 304
09 GLAND BOLT / NUT	ASTM-A193-B7 / A194-2H
10 STEM	17Cr / 1.4122
11 TOPFLANGE	CARBON STEEL
12 YOKE BAR	17Cr / 1.4122
13 YOKE SLEEVE	ALU-BRONZE
14 HANDWHEEL	CARBON STEEL
15 GUIDING-PLATE	CARBON STEEL
16 DISC HOLDER	ASTM-A182-F316
18 RETAINING PLATE	C22.8
19 GASKET	GRAPHITE / 316
20 THRUST RING	ASTM-A182-F316
21 SEGMENTAL RING	1.4923
24 PARALLEL KEY	STAINLESS STEEL
26 NEEDLE BEARING	-
27 SPRING WASHER	STEEL ZINC PLATED
28 BOLT	STEEL ZINC PLATED
29 BOLT	STEEL ZINC PLATED
32 THIN NUT	STEEL ZINC PLATED
44 NAME PLATE	STAINLESS STEEL

FEATURES

DESIGN	CONSTRUCTION	PRESSURE SEAL BONNET AND INTEGRAL BACKSEAT
	OPTIONS	AUXILIARY CONNECTIONS AND/OR PROTECTION AGAINST FLUID THERMAL EXPANSION
	OPERATION	HANDWHEEL - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - POSITION INDICATOR - STEM COVER (OTHERS ON REQUEST)
MATERIALS	BODY / BONNET	(S)A105N (1.0460) - (S)A182-F22 (10CrMo9.10) - (S)A182-F91 (1.4903) - (S)A182-F92 - (S)A182-F316(L) (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	CLASS	A	B	C	D	E	F	Cv	WEIGHT KG
2-1/2" (65)	1500LBS	52 (2.05)	55 (2.17)	305 (12)	575 (22.6)	93 (3.7)	350 (13.8)	228	82 (181 LB)
3" (80)	1500LBS	62 (2.44)	65 (2.56)	305 (12)	568 (22.3)	93 (3.7)	350 (13.8)	325	76 (168 LB)
4" (100)	1500LBS	80 (3.15)	85 (3.35)	406 (16)	645 (25.4)	109 (4.3)	350 (13.8)	545	115 (254 LB)
2-1/2" (65)	2500LBS	52 (2.05)	55 (2.17)	305 (12)	575 (22.6)	93 (3.7)	350 (13.8)	228	82 (181 LB)
3" (80)	2500LBS	52 (2.05)	55 (2.17)	305 (12)	563 (22.2)	93 (3.7)	350 (13.8)	228	82 (181 LB)
4" (100)	2500LBS	70 (2.76)	75 (2.95)	406 (16)	640 (25.2)	109 (4.3)	350 (13.8)	412	122 (269 LB)

FORGED STEEL Y-PATTERN STRAINERS - FIG 08.2

ASME CLASS	900 - 2700 (4500)
API CLASS	6.000 PSI (10.000 PSI)
DIN CLASS	PN 160 - PN 640

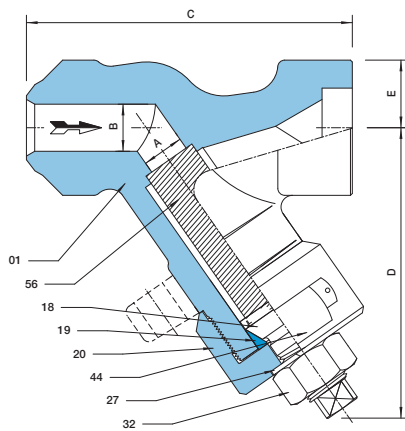


STANDARDS

DESIGN	ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN-EN 9692-1 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	API OR NPT FEMALE THREADS / CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	AISI 304 (>2" CS)
27 SPRINGWASHER	STEEL ZINC PLATED
32 NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM
56 SCREEN	ASTM-A182-F316L



FEATURES

DESIGN	CONSTRUCTION	PRESSURE SEAL BONNET
	SCREEN	SLOTTED TUBE (0.1, 0.2, 0.3 OR 0.5 MM PERFORATION), DESIGNED FOR MAXIMUM DIFFERENTIAL PRESSURE
	OPTIONS	BONNET WITH 3/8" BUTTWELDING DRAIN CONNECTION
MATERIALS	BODY	SA105N - SA182-F22 - SA182-F91 - SA182-F316(L) (OTHERS ON REQUEST)

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	A	B	C	D	E	WEIGHT KG
10 (3/8")	18 (0.71)	7 (0.28)	140 (5.51)	123 (4.84)	29 (1.14)	3.3 (7.3 LB)
15 (1/2")	18 (0.71)	11 (0.43)	140 (5.51)	123 (4.84)	29 (1.14)	3.2 (7.1 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	123 (4.84)	29 (1.14)	3.0 (6.6 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	123 (4.84)	29 (1.14)	2.8 (6.2 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	50 (1.97)	18.9 (41.7 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	198 (7.80)	50 (1.97)	18.9 (41.7 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	198 (7.80)	50 (1.97)	17.5 (38.6 LB)
65 (2-1/2")	50 (1.97)	50 (1.97)	320 (12.60)	292 (11.50)	72 (2.83)	70.0 (154.3 LB)
80 (3")	60 (2.36)	60 (2.36)	320 (12.60)	292 (11.50)	72 (2.83)	67.0 (147.7 LB)
100 (4")	75 (2.95)	75 (2.95)	320 (12.60)	292 (11.50)	72 (2.83)	63.0 (138.9 LB)

FORGED STEEL CONT. BLOW DOWN VALVES, BONNETLESS - FIG 09.3

ASME CLASS 900 - 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640

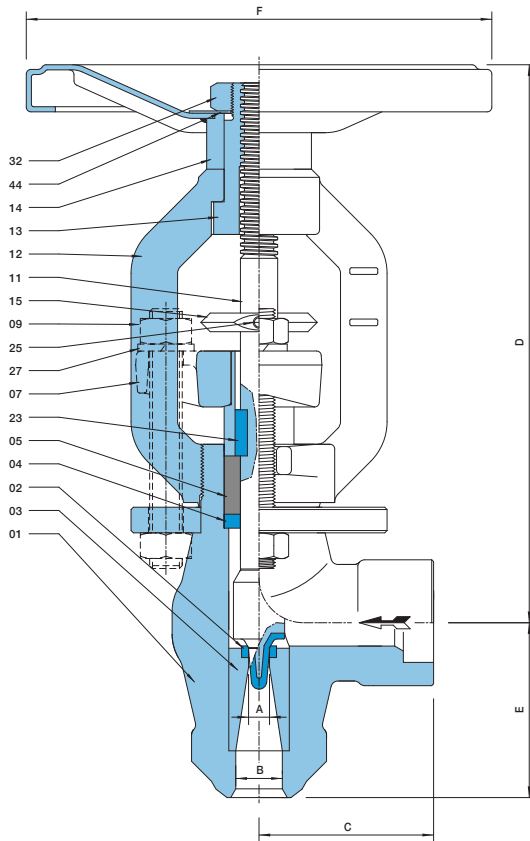


STANDARDS

DESIGN	ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
BUTTWELDING ENDS	ASME B16.25 - DIN-EN 9692-1 - EN 12627
SOCKET WELDING ENDS	ASME B16.11 - EN 12760
OTHER END CONNECTIONS	CLAMP CONNECTORS / FLANGED RTJ OR RF
END-TO-END DIMENSIONS	MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
PRESSURE TESTING	ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS

01 BODY	VARIOUS (SEE BELOW)
02 SEAT	STELLITE
03 VENTURI	ASTM-A182-F316
04 LOOSE BACKSEAT	AISI 304
05 STEM PACKING	GRAPHITE
07 GLAND / FLANGE	AISI 304 / CARBON STEEL
09 GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11 STEM / DISC	17 CR / STELLITED (SEE BELOW)
12 YOKE	CARBON STEEL
13 YOKE SLEEVE	ALUMINIUM-BRONZE
14 HANDWHEEL	CARBON STEEL
15 POSITION INDICATOR	17 CR
23 PARALLEL KEY	STAINLESS STEEL
25 SET SCREW	STEEL ZINC PLATED
27 SPRINGWASHER	STEEL ZINC PLATED
32 THIN NUT	STEEL ZINC PLATED
44 NAMEPLATE	ALUMINIUM



FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	STANDARD PLUG OR THROTTLE TYPE DISC AND/OR TANDEM BLOW DOWN
	OPERATION	HANDWHEEL - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA182-F316(L) - SA350-LF2 - SA182-F92 - 16Mo3
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	SEATBORE-A	B	C	D	E	F	WEIGHT KG
20 (3/4")	3-16 (0.12 - 0.63)	16 (0.63)	75 (2.95)	239 (9.41)	75 (2.95)	200 (7.87)	7.7 (17.0 LB)
25 (1")	3-18 (0.12 - 0.71)	20 (0.79)	75 (2.95)	239 (9.41)	75 (2.95)	200 (7.87)	7.5 (16.5 LB)
32 (1-1/4")	3-18 (0.12 - 0.71)	20 (0.79)	125 (4.92)	239 (9.41)	125 (4.92)	200 (7.87)	11.3 (25.1 LB)
32 (1-1/4")	19-28 (0.75 - 1.10)	28 (1.10)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	35.1 (78.0 LB)
40 (1-1/2")	3-18 (0.12 - 0.71)	20 (0.79)	125 (4.92)	239 (9.41)	125 (4.92)	200 (7.87)	9.6 (25.1 LB)
40 (1-1/2")	19-36 (0.75 - 1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	33.9 (75.3 LB)
50 (2")	3-18 (0.12 - 0.71)	20 (0.79)	125 (4.92)	239 (9.41)	125 (4.92)	200 (7.87)	11.7 (26.0 LB)
50 (2")	19-36 (0.75 - 1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	33.9 (75.3 LB)

FORGED STEEL CONT. BLOW DOWN VALVES, BONNETLESS - FIG 09.3

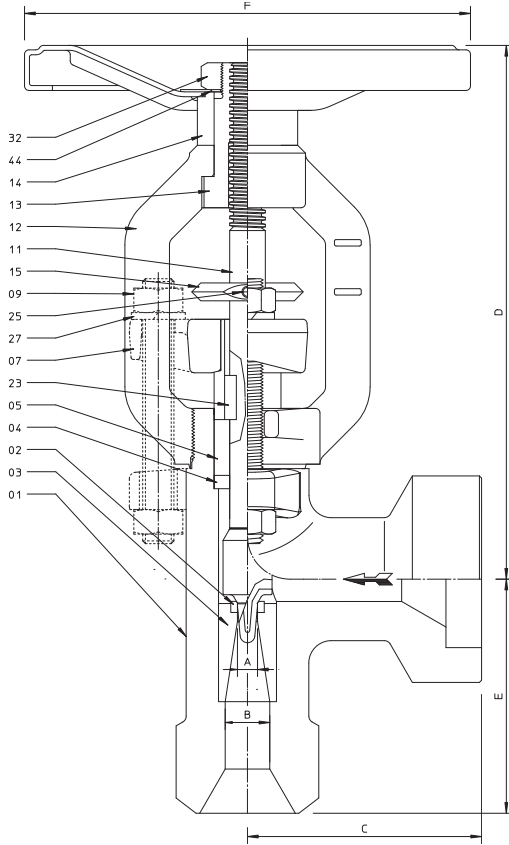
ASME CLASS 900 - 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS-EN 15761 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN-EN 9692-1 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	SEAT	STELLITE
03	VENTURI	ASTM-A182-F316
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND / FLANGE	AISI 304 / CARBON STEEL
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11	STEM / DISC	17 CR / STELLITED (SEE BELOW)
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
15	POSITION INDICATOR	17 CR
23	PARALLEL KEY	STAINLESS STEEL
25	SET SCREW	STEEL ZINC PLATED
27	SPRINGWASHER	STEEL ZINC PLATED
32	THIN NUT	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN SEAT RING WITH THICKNESS > 5 MM (1/5")
	OPTIONS	STANDARD PLUG OR THROTTLE TYPE DISC AND/OR TANDEM BLOW DOWN
	OPERATION	HANDWHEEL - ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N (1.0460) - SA182-F12 (13CrMo4.5) - SA182-F22 (10CrMo9.10) - SA182-F91 (1.4903) (OTHERS ON REQUEST)
	TRIM	17CR/STELLITE - F316/STELLITE (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	SEATBORE-A	B	C	D	E	F	WEIGHT KG
20 (3/4")	3-16 (0.12 - 0.63)	16 (0.63)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	8.2 (17.9 LB)
25 (1")	3-18 (0.12 - 0.71)	20 (0.79)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	8.1 (17.6 LB)
32 (1-1/4")	3-18 (0.12 - 0.71)	20 (0.79)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	10.4 (22.7 LB)
32 (1-1/4")	19-28 (0.75 - 1.10)	28 (1.10)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	35.1 (77.4 LB)
40 (1-1/2")	3-18 (0.12 - 0.71)	20 (0.79)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	10.4 (22.7 LB)
40 (1-1/2")	19-36 (0.75 - 1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	33.9 (74.7 LB)
50 (2")	3-18 (0.12 - 0.71)	20 (0.79)	105 (4.13)	239 (9.41)	105 (4.13)	200 (7.87)	10.4 (22.8 LB)
50 (2")	19-36 (0.75 - 1.42)	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	33.9 (74.7 LB)

FORGED STEEL 3-STAGE BLOW DOWN VALVES, BONNETLESS - FIG 09.3.9

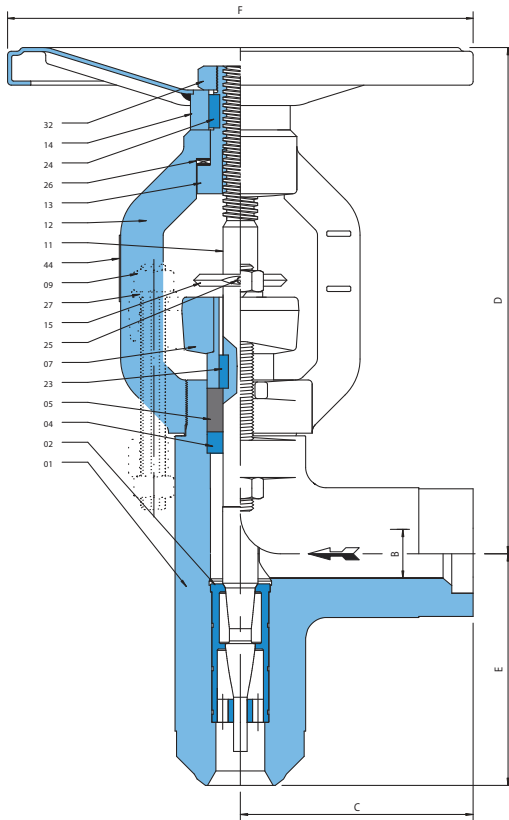
ASME CLASS 900 - 2500 (4500)
 API CLASS 6.000 PSI (10.000 PSI)
 DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 5352 - DIN 3840 - EN 12516
 BUTTWELDING ENDS ASME B16.25 - DIN 2559 - EN 12627
 SOCKET WELDING ENDS ASME B16.11 - EN 12760
 OTHER END CONNECTIONS CLAMP CONNECTORS / FLANGED RTJ OR RF
 END-TO-END DIMENSIONS MANUFACTURER'S STANDARD (FLANGED VALVES ACC. THE RELEVANT STANDARD)
 PRESSURE TESTING ASME B16.34 - BS 6755 - API 598 - DIN 3230 - EN 12266

MATERIALS



01	BODY	VARIOUS (SEE BELOW)
02	3-STAGE SEAT	1.4923 / STELLITED
04	LOOSE BACKSEAT	AISI 304
05	STEM PACKING	GRAPHITE
07	GLAND / FLANGE	AISI 304 / CARBON STEEL
09	GLAND BOLT / NUT	ASTM-A193-B7 / ASTM-A194-2H
11	STEM / DISC	1.4923 / HARDENED
12	YOKE	CARBON STEEL
13	YOKE SLEEVE	ALUMINIUM-BRONZE
14	HANDWHEEL	CARBON STEEL
15	POSITION INDICATOR	17 CR
23	PARALLEL KEY	STAINLESS STEEL
24	PARALLEL KEY	STAINLESS STEEL
25	SET SCREW	STEEL ZINC PLATED
26	BEARING	-
27	SPRINGWASHER	STEEL ZINC PLATED
32	THIN NUT	STEEL ZINC PLATED
44	NAMEPLATE	ALUMINIUM

FEATURES

DESIGN	CONSTRUCTION	INTEGRAL BONNET (BONNETLESS) AND LOOSE BACKSEAT (FIXED BACKSEAT OPTIONAL)
	SEAT RING	HIGH TEMPERATURE VACUUM BRAZED IN FULL STELLITE 3-STAGE SEAT
	OPERATION	HANDWHEEL ELECTRIC OR PNEUMATIC ACTUATOR
	ACCESSORIES	LIMIT SWITCHES - LOCKING DEVICE - LIVE LOADED GLAND (OTHERS ON REQUEST)
MATERIALS	BODY	SA105N - SA182-F12 - SA182-F22 - SA182-F91 (OTHERS ON REQUEST)
	STEM PACKING	GRAPHITE WITH INTEGRAL OR STAINLESS STEEL REINFORCED ANTI EXTRUSION RINGS

MAIN DIMENSIONS IN MM (INCH)

NOM. SIZE	FLOW-AREA	B	C	D	E	F	WEIGHT KG
25 (1")	132 mm ²	20 (0.79)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	36.6 (80.7 LB)
32 (1-1/4")	132 mm ²	25 (0.98)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	36.2 (79.8 LB)
40 (1-1/2")	405 mm ²	30 (1.18)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	34.2 (75.4 LB)
50 (2")	405 mm ²	36 (1.42)	175 (6.89)	379 (14.92)	175 (6.89)	350 (13.78)	33.8 (74.5 LB)



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