



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.

2

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.

Forged steel valve body

- Sufficient wall thickness for machining integral clampseal connections.

Diffusion galvanized upper parts

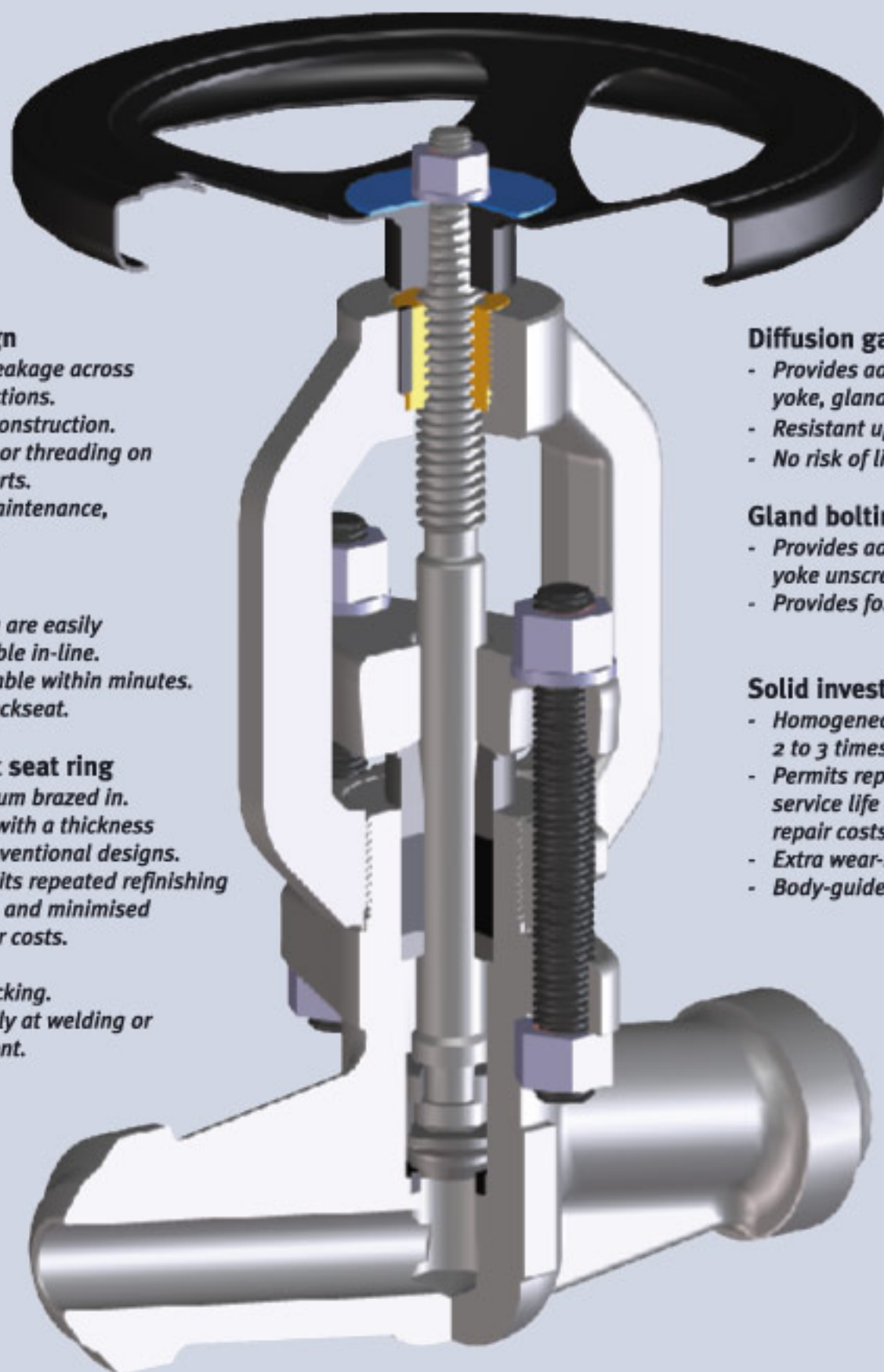
- Provides additional corrosion resistance for yoke, gland flange and gland bolting.
- Resistant up to 672°C (1240°F).
- No risk of liquid metal embrittlement.

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.

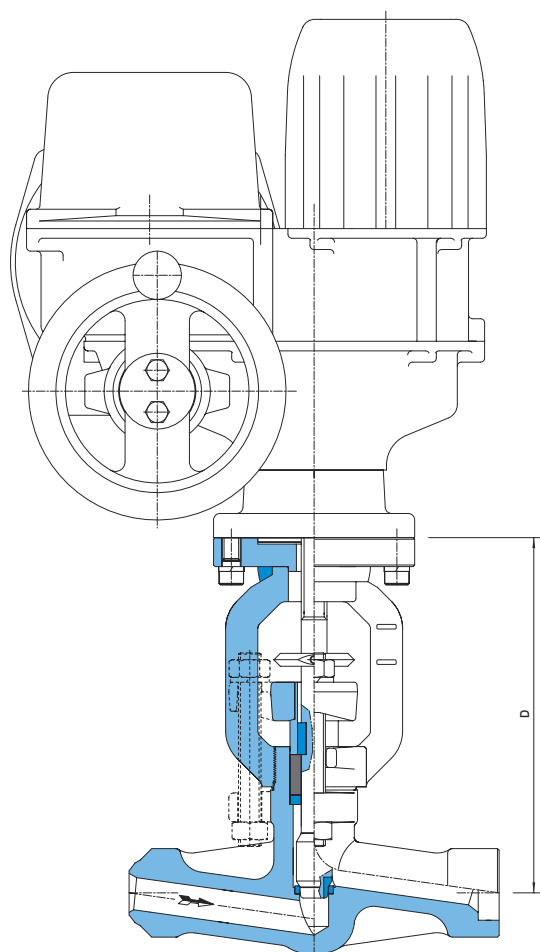


FORGED STEEL MOTOR OPERATED VALVES, BONNETLESS

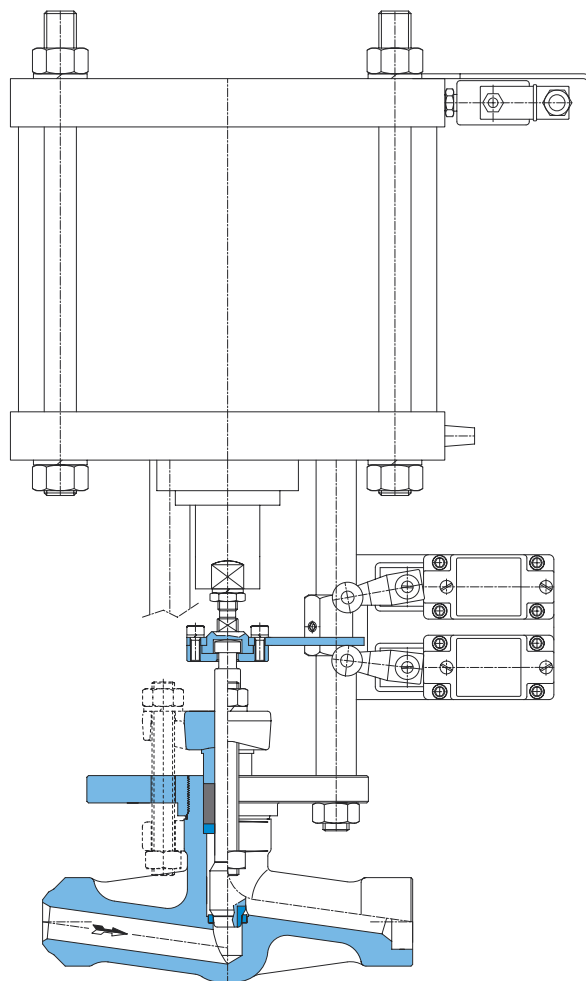
ASME CLASS 1500 / 2500 (4500)
API CLASS 6.000 PSI (10.000 PSI)
DIN CLASS PN 160 - PN 640



ELECTRIC ACTUATOR



PNEUMATIC ACTUATOR



FEATURES

DETAILED FEATURES REGARDING THE VALVE DESIGN AND MATERIALS USED HAVE BEEN INDICATED ON THE NEXT 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	VALVE WEIGHT KG
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)

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Website: www.hpvalves.com



FORGED STEEL GLOBE VALVES, BONNETLESS - FIG 01.1

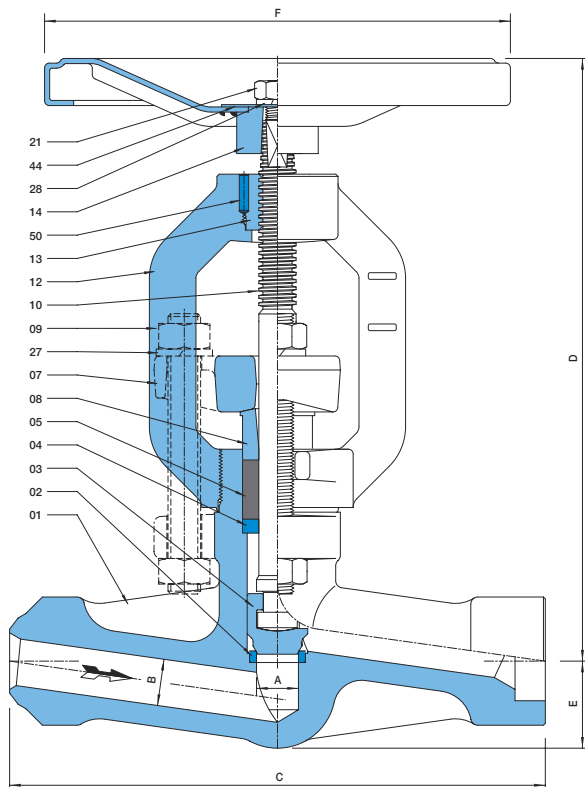
ASME CLASS 1500 / 2500 (4500)
API CLASS 6.000 PSI (10.000 PSI)
DIN CLASS PN 160 - PN 640



STANDARDS

DESIGN ASME B16.34 - BS 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 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 (C22.8) - SA182-F12 (13CRMO4.4) - 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)

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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)

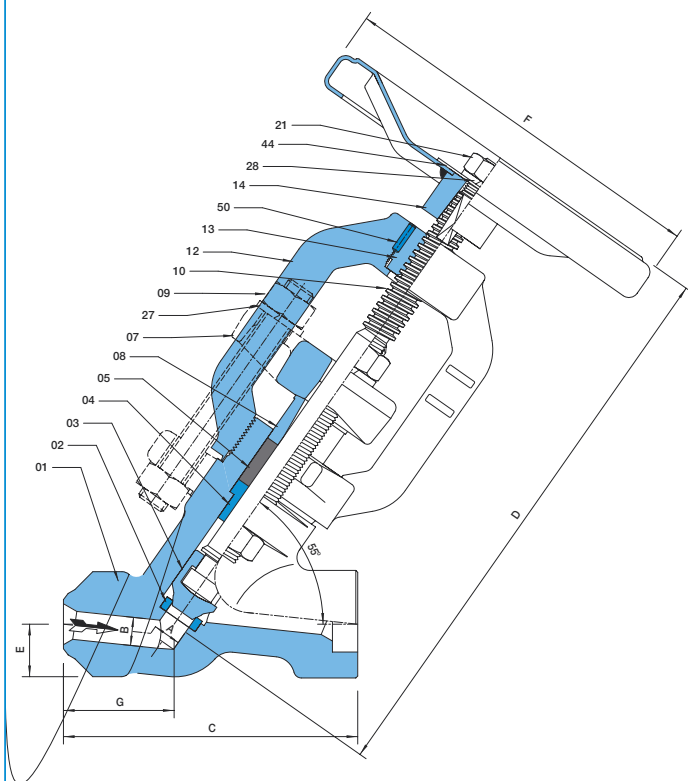


STANDARDS

DESIGN	ASME B16.34 - BS 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")
	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)

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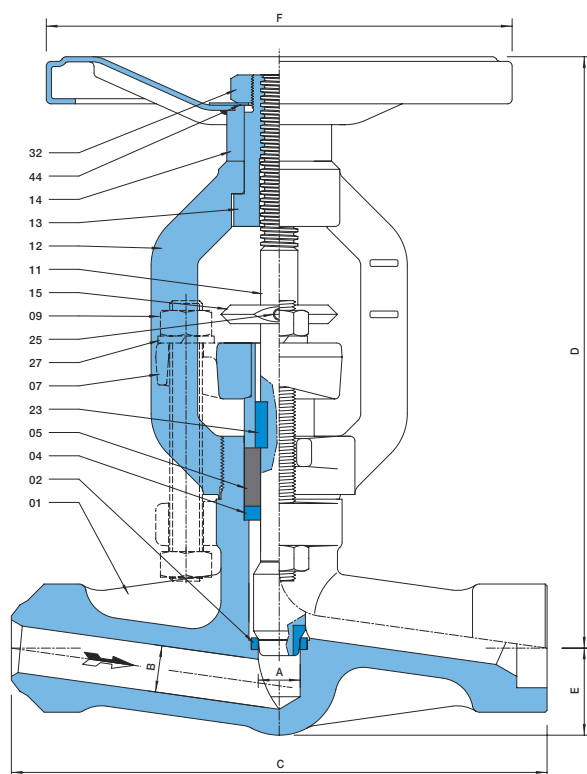
FORGED STEEL THROTTLE VALVES, BONNETLESS - FIG 02.1

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 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 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)
MATERIALS	BODY	SA105N (C22.8) - SA182-F12 (13CRMO4.4) - 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)	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)

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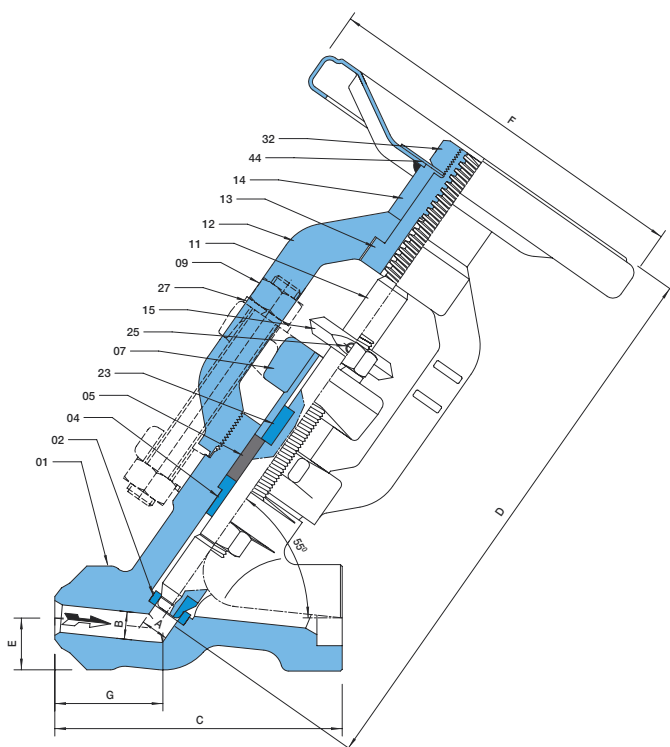


FORGED STEEL Y-PATTERN THROTTLE VALVES, BONNETLESS**FIG 02.2**

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
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 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)
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)	232 (9.13)	21 (0.83)	150 (5.91)	43.3 (1.70)	1.4	3.6 (7.9 LB)
15 (1/2")	11 (0.43)	11 (0.43)	115 (4.53)	232 (9.13)	21 (0.83)	150 (5.91)	43.3 (1.70)	2.6	3.5 (7.7 LB)
20 (3/4")	18 (0.71)	16 (0.63)	140 (5.51)	278 (10.94)	29 (1.14)	200 (7.87)	51.5 (2.03)	7.9	6.2 (13.7 LB)
25 (1")	18 (0.71)	20 (0.79)	140 (5.51)	278 (10.94)	29 (1.14)	200 (7.87)	51.5 (2.03)	9.0	6.0 (13.2 LB)
32 (1-1/4")	36 (1.42)	30 (1.18)	245 (9.65)	444 (17.48)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.0	29.9 (65.9 LB)
40 (1-1/2")	36 (1.42)	30 (1.18)	245 (9.65)	444 (17.48)	50 (1.97)	350 (13.78)	85.0 (3.35)	34.0	29.9 (65.9 LB)
50 (2")	36 (1.42)	40 (1.57)	245 (9.65)	444 (17.48)	50 (1.97)	350 (13.78)	85.0 (3.35)	44.7	28.6 (63.1 LB)
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	90.0 (198.4 LB)
80 (3")	60 (2.36)	60 (2.36)	320 (12.60)	530 (20.87)	72 (2.83)	-	79.0 (3.11)	142.4	87.0 (191.8 LB)
100 (4")	75 (2.95)	75 (2.95)	320 (12.60)	530 (20.87)	72 (2.83)	-	79.0 (3.11)	239.2	83.0 (183.0 LB)

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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

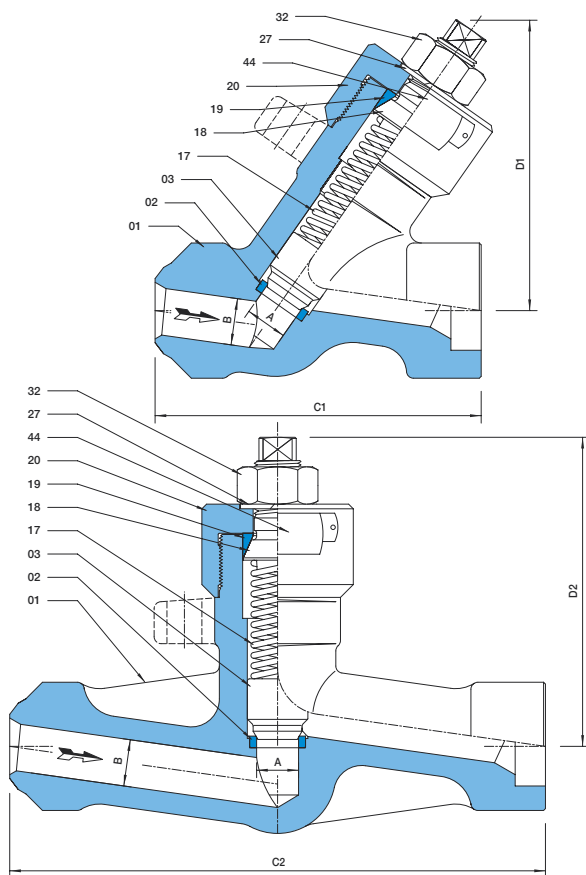


STANDARDS

DESIGN	ASME B16.34 - BS 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
17 SPRING	AISI 302
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	AISI 304
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 (C22.8) - SA182-F12 (13CRMO4.4) - 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)	-	-	-	-

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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

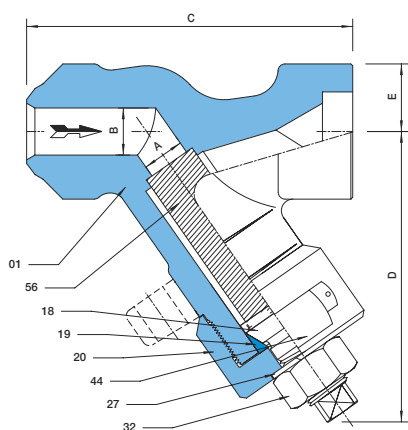


STANDARDS

DESIGN	ASME B16.34 - BS 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)
18 BONNET	ASTM-A182-F316
19 GASKET	ASTM-A182-F316
20 CAP	AISI 304
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)

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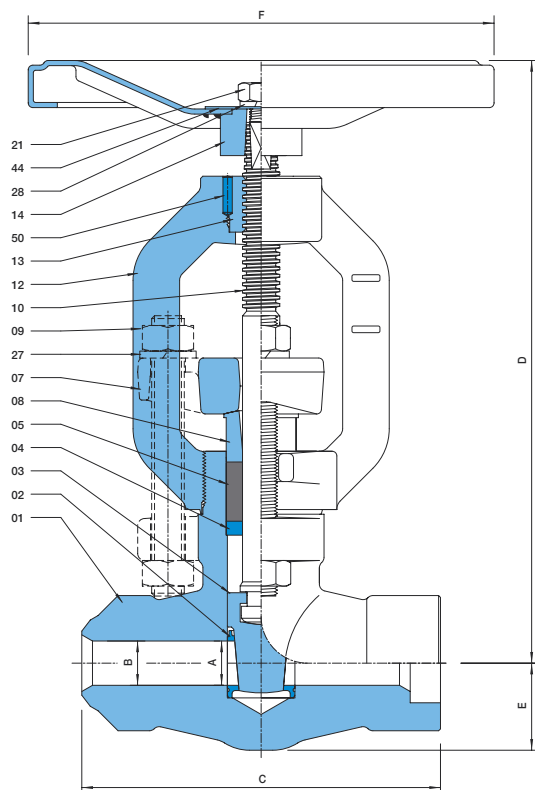
FORGED STEEL GATE VALVES, BONNETLESS - FIG 06.6

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 5352 - BS 1414 - 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(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)

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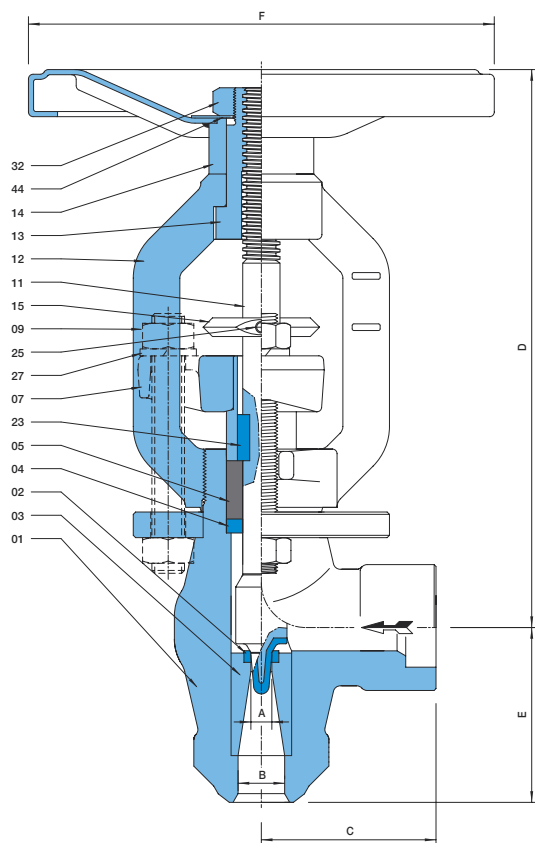


FORGED STEEL CONT. BLOW DOWN VALVES, BONNETLESS - FIG 09.3

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 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 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 - SA182-F12 - SA182-F22 - 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	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)	9.6 (21.2 LB)
32 (1-1/4")	19-28 (0.75 - 1.10)	28 (1.10)	125 (4.92)	379 (14.92)	125 (4.92)	350 (13.78)	30.7 (67.7 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 (21.2 LB)
40 (1-1/2")	19-36 (0.75 - 1.42)	36 (1.42)	125 (4.92)	379 (14.92)	125 (4.92)	350 (13.78)	29.5 (65.0 LB)
50 (2")	3-18 (0.12 - 0.71)	20 (0.79)	125 (4.92)	239 (9.41)	125 (4.92)	200 (7.87)	10.0 (22.0 LB)
50 (2")	19-36 (0.75 - 1.42)	36 (1.42)	125 (4.92)	379 (14.92)	125 (4.92)	350 (13.78)	29.5 (65.0 LB)

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