ITALIANA VALVOLE INDUSTRIALI

CATALOGO DI PRODOTTO

OIL & GAS

Catalogo tecnico

Valvole per applicazioni Oil & Gas

44 prodotti / 9 famiglie

Schede tecniche e riferimenti dimensionali

Una gamma. Un’identità.

OIL & GAS

Catalogo tecnico di valvole

Una raccolta organizzata per tipologia di valvola, con dati tecnici, materiali, azionamenti e riferimenti dimensionali del documento fornito. Codici e nomenclature delle schede restano invariati.

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Documentazione tecnica di origine: Euro Flow Control / EAP Global Limited.
Le specifiche sono indicative e da confermare in offerta.

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Consultazione rapida

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BALL VALVE

API Floating Ball Valve

REF **EFC-9**

SPECIFICATIONS

Size	**NPS 2" to NPS 12"**
Pressure	**Class 150, Class 300**
End connection	**Flanged (ASME B16.5)**
Face-to-face	**ASME B16.10**

ACTUATION

- Manual lever

STANDARDS

Design & manufacture	**API 6D, ASME B16.34, API 607**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.11, ASME B16.25**

CERTIFICATIONS

- Firesafe



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	CF8 body / F304 ball / F304 stem	CF8M body / F316 ball / F316 stem	WCB body / F6 or A105+ENP ball / 410 stem	WCB body / F304 or F316 ball / F304 or F316 stem
Body	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Seat	PTFE	PTFE	PTFE	PTFE
Ball	A182 F304	A182 F316	A182 F6	A182 F304
Gasket	GRAPHITE+SS304	GRAPHITE+SS316	GRAPHITE+SS304	GRAPHITE+SS304
Nut	ASTM A194 8	ASTM A194 8	ASTM A194 2H	ASTM A194 2H
Stud	ASTM A193 B8	ASTM A193 B8	ASTM A193 B7	ASTM A193 B7
Bonnet	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Stem	A182 F304	A182 F316	A276 410	A182 F304
Thrust Gasket	PTFE	PTFE	PTFE	PTFE
Packing	Graphite	Graphite	Graphite	Graphite
Sleeve	A182 F304	A182 F316	A182 F6	A182 F6
Press Board	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Orientation Board	A3+Zn	A3+Zn	A3+Zn	A3+Zn
Backstop	65Mn (AISI 1566)	65Mn (AISI 1566)	65Mn (AISI 1566)	65Mn (AISI 1566)
Handle	A216 WCB	A216 WCB	A216 WCB	A216 WCB
Inside Hex Bolt	ASTM A193 B8	ASTM A193 B8	ASTM A193 B7	ASTM A193 B7
Name Plate	SS	SS	SS	SS
Rivet	AL	AL	AL	AL
Spring	304	316	304	304
Steel Ball	304	316	304	304

FEATURES

- Floating ball design
- PTFE seats
- Graphite/PTFE packing
- Firesafe construction conforming to API 607
- Anti-static spring and steel ball
- Stem with thrust gasket

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Floating Ball Valve

SECTION **Dimensions per size** REF **EFC-9**

SIZE	D	D	D1	D2	B	F	N-ØD	L	H
NPS 2" (Class 150)	51	152	120.5	92	16	1.6	4-ø19	178	143
NPS 3" (Class 150)	76	190	152.5	127	19	1.6	4-ø19	203	194
NPS 4" (Class 150)	102	229	190.5	157	24	1.6	8-ø19	229	233
NPS 6" (Class 150)	152	279	241.5	216	26	1.6	8-ø22	394	297
NPS 8" (Class 150)	203	343	298.5	270	29	1.6	8-ø22	457	580
NPS 10" (Class 150)	254	406	362	324	31	1.6	12-ø25	533	625
NPS 12" (Class 150)	305	483	432	381	32	1.6	12-ø25	610	800
NPS 2" (Class 300)	51	165	127	92	23	1.6	8-ø19	216	143
NPS 3" (Class 300)	76	210	168.5	127	29	1.6	8-ø22	283	194
NPS 4" (Class 300)	102	254	200	157	32	1.6	8-ø22	305	233
NPS 6" (Class 300)	152	318	270	216	37	1.6	12-ø22	403	297
NPS 8" (Class 300)	203	381	330	270	42	1.6	12-ø25	502	580
NPS 10" (Class 300)	254	445	387.5	324	48	1.6	16-ø29	568	625

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

Cast Steel Floating Ball Valve

REF **EFC-14**

SPECIFICATIONS

Size	**DN15 to DN200**
Pressure	**Class 150, Class 300, Class 600**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25) / Threaded (ASME B1.20.1) / Socket weld (ASME B16.11)**
Temperature	**-196°C to 540°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, natural gas, methane, ethylene**
Dimensions	**Confirmed at quotation**



ACTUATION

- Manual
- Pneumatic
- Electric
- Gas-hydraulic

STANDARDS

Design & manufacture	**API 6D, ASME B16.34, BS 5351, ISO 17292**
Inspection & test	**API 598, API 6D, BS EN 12266-1**

APPLICATIONS

- Petroleum
- Natural gas
- Chemical
- Petrochemical
- Power station
- Metallurgy
- Papermaking

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, WC6, WC9, WCC, CF8, CF3, CF3M, CF8M**

FEATURES

- Simple structure, easy operation and easy maintenance
- Low fluid resistance and large flow regulation range
- Sealing surface and ball remain in closed state, reducing erosion by medium
- Corrosion resistance
- Full bore and reduced bore options available
- ISO 5211 top-mount actuator pad
- Split body / two-piece construction

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

Cast Steel Trunnion Mounted Ball Valve

REF **EFC-17**

SPECIFICATIONS

Size	**NPS 2" to NPS 48"**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Flanged (ASME B16.5 / ASME B16.47) / Butt weld (ASME B16.25) / Threaded (ASME B1.20.1) / Socket weld (ASME B16.11)**
Temperature	**-196°C to 540°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**petroleum, natural gas, chemical media, petrochemical media, corrosive media, non-corrosive media**
Dimensions	**Confirmed at quotation**



ACTUATION

- Manual
- Pneumatic
- Electric
- Gas-liquid interaction

STANDARDS

Design & manufacture	**API 6D, ASME B16.34, BS 5351, ISO 17292**
Inspection & test	**API 598, API 6D, BS EN 12266-1**

APPLICATIONS

- Petroleum
- Natural gas
- Chemical
- Petrochemical

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

- Power station
- Metallurgy
- Papermaking
- Long-distance pipelines
- General industrial pipelines

MATERIALS

Body	**WCB, WC6, WC9, WCC, CF8, CF3, CF3M, CF8M**

FEATURES

- Spring-loaded seat structure providing low-pressure sealing performance
- Bi-directional sealing with built-in discharge valve for cavity pressure relief
- Anti-blowout stem protection structure
- Low friction coefficient bearings on valve shaft
- Full bore and reduced bore options available
- Trunnion-mounted ball valve with flanged ends
- ISO 5211 top-mounted actuator pad
- Body cavity relief / drain connection at bottom
- Lifting lugs on both flanges
- Split body (3-piece) construction

SUPPLIER REMARKS

- Gas-liquid interaction actuation available etc.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

Fully Welded Ball Valve

REF **EFC-23**

SPECIFICATIONS

Size	**NPS 2" to NPS 48"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Butt weld (ASME B16.25) / Socket weld (ASME B16.11)**
Temperature	**-196°C to 260°C, by material**
A105	**-29°C to 538°C (carbon steel; at cryogenic temperature it does not deform, it shatters)**
F11	**-29°C to 540°C (1.25Cr-0.5Mo alloy steel)**
LF2	**-46°C to 345°C (low-temperature carbon steel; impact-tested, but not to -196 °C)**
F316, F304	**-196°C to 538°C (austenitic stainless steel; the only grades here that reach cryogenic)**
PTFE (carbon-strengthened)	**-196°C to 260°C (the soft seat limits service below the body rating)**
Media	**petroleum, natural gas, chemicals, petrochemicals**
Dimensions	**Confirmed at quotation**



ACTUATION

- Manual
- Pneumatic
- Electric
- Gas-liquid interaction

STANDARDS

Design & manufacture	**API 6D, API 608, ASME B16.34, ISO 17292, BS 5351**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Inspection & test	**API 598, API 6D**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.25, ASME B16.11**

APPLICATIONS

- Petroleum
- Natural gas
- Chemical
- Petrochemical
- Power plant
- Metallurgy
- Papermaking

MATERIALS

Body	**A105, LF2, F316, F11, F304**	Seat	**PTFE (carbon-strengthened)**
Stem	**O-ring sealed (dual O-rings)**		

FEATURES

- Integral welded body formed from seamless steel pipe; suitable for service with impurities and chemicals
- Compact and lightweight construction; extension stem available for insulation and installation convenience
- Dual O-ring stem seal allowing free rotation with tight sealing

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

Female thread hydraulic ball valve

REF **EFC-42**

SPECIFICATIONS

Size	**NPS 1/8" to NPS 2"**
Pressure	**7250 psi**
End connection	**Threaded (NPT) / Threaded (BSPT) / Threaded (BSPP)**
Temperature	**-20°C to 255°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Oil, Gas, Water, Acid liquid**
Dimensions	**Confirmed at quotation**



ACTUATION

- Manual lever
- Hydraulic actuator

CERTIFICATIONS

- ISO 9001

APPLICATIONS

- Shutoff applications
- Hydraulic systems
- Drilling mud medium environments
- Blowout preventer hydraulic control platforms

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**SS304, SS316, A105, 20# steel (AISI 1020), A105 carbon steel**	Ball Seat	**PTFE, RPTFE, FKM, PPL, PEEK**
Ball	**SS201, SS304, SS316**	Stem	**SS201, SS304, SS316**
Thrust Washer	**PTFE**	Stem Packing	**PTFE**
Handle	**Plastic**	Disc	**SS201, SS304, SS316**
Seat	**PTFE, RPTFE, FKM, PPL, PEEK**		

FEATURES

- Floating ball design, quarter-turn operation
- Forged construction
- Reduced port (reduced bore)
- Female threaded end connections (NPT, BSPT, BSPP)
- Maximum working pressure 7250 PSI
- Temperature range -20°C to 255°C
- Multiple seat material options (PTFE, RPTFE, FKM, PPL, PEEK)
- Manual and remote/automatic operation capable
- OEM and ODM customisation available
- High-pressure block-body ball valve
- Model designation: BKH
- Size: DN20 / 3/4 NPT
- Pressure rating: PN320 (320 bar)
- Lever (handle) operated
- Three-piece block body construction
- Female NPT threaded end connections both sides

SUPPLIER REMARKS

• Specified specification available upon request

• Free sample can be sent to test quality before placing an order

• Customised: OEM, ODM

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Floating Ball Valve

REF **EFC-217**

SPECIFICATIONS

Size	**DN15 to DN250**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500**
End connection	**Flanged (ANSI B16.5) / Butt weld (ANSI B16.25)**
Face-to-face	**ANSI B16.10, API 6D, JIS B2002**

ACTUATION

- Manual lever
- Manual handwheel / gear box
- Pneumatic
- Electric
- Hydraulic

STANDARDS

Design & manufacture	**API 608, API 6D, BS 5351**
Inspection & test	**API 598, API 6D, JIS B2003**
Fire safe	**API 607, API 6FA**
Flange & end dimension	**ANSI B16.5 (flanged connection), JIS B2212-2214 (flanged connection), ANSI B16.25 (butt welded end)**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Carbon steel body / 13Cr stem and ball	Carbon steel body / 304 SS stem and ball	Carbon steel body / 316 SS stem and ball	CF8 body / 304 SS stem and ball	CF8M body / 316 SS stem and ball
Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Packing	PTFE	PTFE	PTFE	PTFE	PTFE
Gland Flange	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Stop Collar	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
Lever	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
Thrust Washer	PTFE	PTFE	PTFE	PTFE	PTFE
Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
Ball	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
Seat	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
Body Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Body Bolting	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Closure	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M

FEATURES

- Elastic sealing ring design provides seat seal load proportional to medium pressure
- Fire-safe secondary metal seal prevents internal and external leakage in the event of non-metallic seat seal damage by fire; meets API607 requirement
- Anti-blowout stem assembled from underneath with backseat; sealing force increases with medium pressure
- Lockable lever to prevent wrong operation in fully open or closed position
- Anti-static device available to derive electric charge accumulated on the ball via static channel between ball and stem, or stem and body
- Two-piece bolted bonnet body construction
- Full or reduced bore options available
- Stainless steel ball as standard

SUPPLIER REMARKS

• Noted: the chart above only lists out some common composition of steel ball valve parts, we may provide other different parts material composition according to the customer's request or the actual valve working condition.

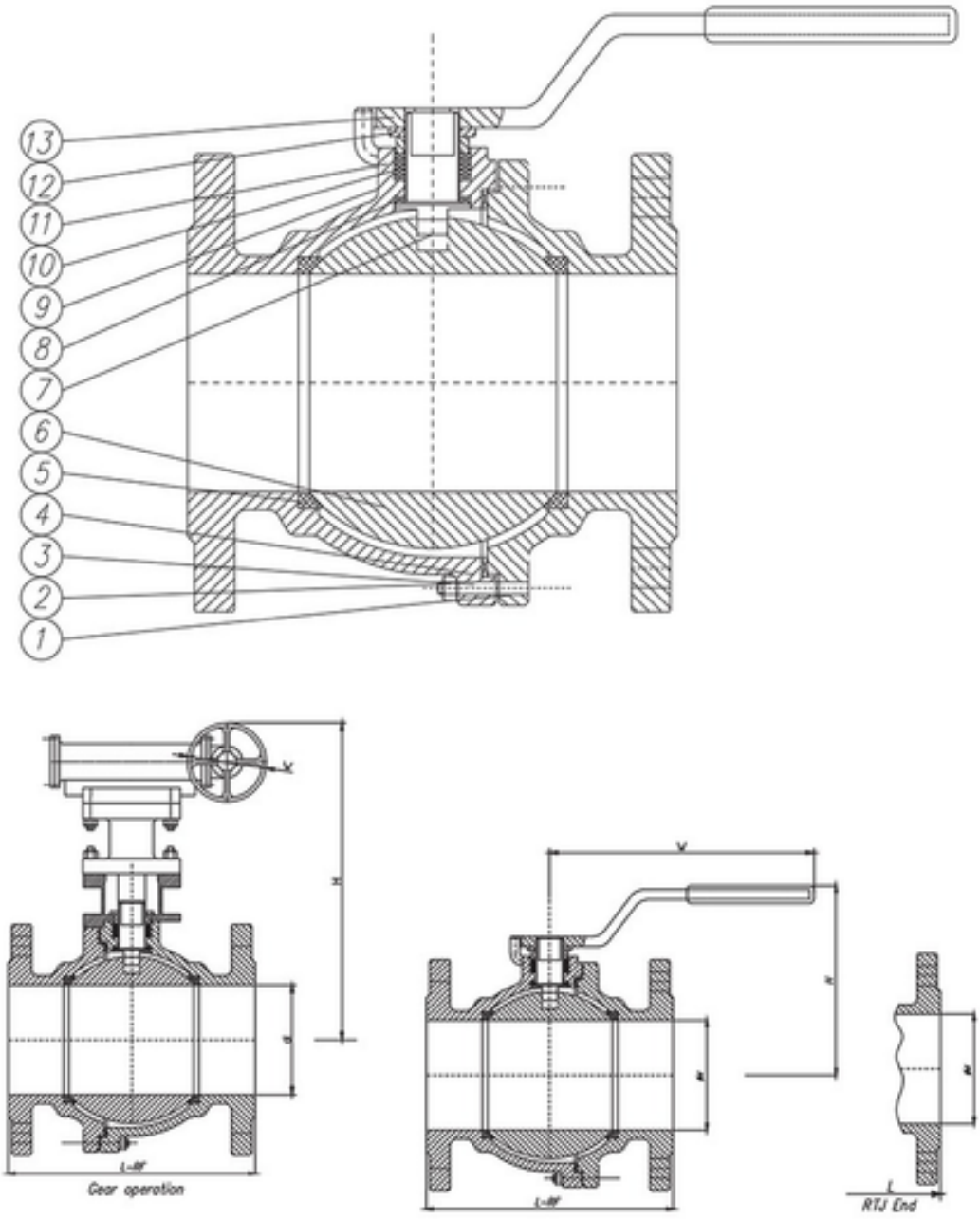
• Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Floating Ball Valve

SECTION **Technical drawing 1** REF **EFC-217**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Floating Ball Valve

SECTION **Dimensions per size** REF **EFC-217**

SIZE	D	L RF	L RTJ	H HAND-WHEEL	W HAND-WHEEL	H GEAR-BOX	W GEAR-BOX	WEIGHT
Class 150 / DN15 (NPS 1/2)	13	108	119	140	85	-	-	handwheel 3 kg
Class 150 / DN20 (NPS 3/4)	19	117	130	140	90	-	-	handwheel 3.2 kg
Class 150 / DN25 (NPS 1)	25	127	140	150	99	-	-	handwheel 3.5 kg
Class 150 / DN32 (NPS 1-1/4)	32	140	153	180	105	-	-	handwheel 5 kg
Class 150 / DN40 (NPS 1-1/2)	38	165	178	300	165	-	-	handwheel 6 kg
Class 150 / DN50 (NPS 2)	49	178	191	350	140	-	-	handwheel 11 kg
Class 150 / DN65 (NPS 2-1/2)	62	190	203	350	180	-	-	handwheel 13.5 kg
Class 150 / DN80 (NPS 3)	75	203	216	500	235	-	-	handwheel 19 kg
Class 150 / DN100 (NPS 4)	100	229	242	500	250	305	380	handwheel 29 kg gearbox 53 kg
Class 150 / DN125 (NPS 5)	127	356	369	800	280	305	405	handwheel 49 kg gearbox 79 kg
Class 150 / DN150 (NPS 6)	150	394	407	800	310	305	460	handwheel 65 kg gearbox 102 kg
Class 150 / DN200 (NPS 8)	201	457	470	1000	350	305	550	handwheel 115 kg gearbox 185 kg
Class 150 / DN250 (NPS 10)	252	533	546	-	-	400	706	handwheel 280 kg
Class 300 / DN15 (NPS 1/2)	13	140	151	140	85	-	-	handwheel 3 kg
Class 300 / DN20 (NPS 3/4)	19	152	165	140	90	-	-	handwheel 5 kg
Class 300 / DN25 (NPS 1)	25	165	178	150	99	-	-	handwheel 6 kg
Class 300 / DN32 (NPS 1-1/4)	32	178	191	180	105	-	-	handwheel 8 kg
Class 300 / DN40 (NPS 1-1/2)	38	190	203	200	126	-	-	handwheel 11 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Class 300 / DN50 (NPS 2)	49	216	232	250	142	-	-	handwheel 16 kg
Class 300 / DN65 (NPS 2-1/2)	62	241	257	300	165	-	-	handwheel 23 kg
Class 300 / DN80 (NPS 3)	74	283	299	350	178	-	-	handwheel 30 kg gearbox 52 kg
Class 300 / DN100 (NPS 4)	100	305	321	500	230	305	330	handwheel 47 kg gearbox 76 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Floating Ball Valve

Dimensions per size (continued) · EFC-217

SIZE	D	L RF	L RTJ	H HAND-WHEEL	W HAND-WHEEL	H GEAR-BOX	W GEAR-BOX	WEIGHT
Class 300 / DN125 (NPS 5)	127	381	397	800	280	305	380	handwheel 74 kg gearbox 124 kg
Class 300 / DN150 (NPS 6)	150	403	419	800	310	305	420	handwheel 107 kg gearbox 163 kg
Class 300 / DN200 (NPS 8)	201	502	518	1000	350	305	480	handwheel 153 kg gearbox 267 kg
Class 600 / DN15 (NPS 1/2)	13	165	164	140	79	-	560	handwheel 5 kg
Class 600 / DN20 (NPS 3/4)	19	190	190	140	83	-	-	handwheel 7 kg
Class 600 / DN25 (NPS 1)	25	216	216	200	114	-	-	handwheel 9 kg
Class 600 / DN32 (NPS 1-1/4)	32	229	229	200	120	-	-	handwheel 13 kg
Class 600 / DN40 (NPS 1-1/2)	38	241	241	250	125	-	-	handwheel 17 kg
Class 600 / DN50 (NPS 2)	49	292	295	300	156	-	-	handwheel 25 kg
Class 600 / DN65 (NPS 2-1/2)	62	330	333	350	172	-	-	handwheel 42 kg
Class 600 / DN80 (NPS 3)	74	356	359	500	220	305	370	handwheel 56 kg gearbox 76 kg
Class 600 / DN100 (NPS 4)	100	432	435	650	250	305	400	handwheel 85 kg gearbox 123 kg
Class 900 / DN15 (NPS 1/2)	13	216	216	150	98	-	-	handwheel 9 kg
Class 900 / DN20 (NPS 3/4)	19	229	229	150	105	-	-	handwheel 13 kg
Class 900 / DN25 (NPS 1)	25	254	254	200	110	-	-	handwheel 16 kg
Class 900 / DN32 (NPS 1-1/4)	32	279	279	250	120	-	-	handwheel 24 kg
Class 900 / DN40 (NPS 1-1/2)	38	305	305	250	125	-	-	handwheel 31 kg
Class 900 / DN50 (NPS 2)	49	368	371	350	160	-	-	handwheel 45 kg
Class 1500 / DN15 (NPS 1/2)	13	216	216	182	98	-	-	handwheel 10 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Class 1500 / DN20 (NPS 3/4)	19	229	229	250	125	-	-	handwheel 14 kg
Class 1500 / DN25 (NPS 1)	25	254	254	250	130	-	-	handwheel 17 kg
Class 1500 / DN32 (NPS 1-1/4)	32	279	279	300	155	-	-	handwheel 25 kg
Class 1500 / DN40 (NPS 1-1/2)	38	305	305	350	180	-	-	handwheel 33 kg
Class 1500 / DN50 (NPS 2)	49	368	371	450	225	-	-	handwheel 48 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Trunnion Ball Valve

REF **EFC-218**

SPECIFICATIONS

Size	**DN100 to DN900**
Pressure	**Class 150, Class 300**
End connection	**Flanged (ANSI B16.5) / Butt weld (ANSI B16.25)**
Face-to-face	**API 6D**



ACTUATION

- Gear handwheel
- Pneumatic
- Electric
- Hydraulic

STANDARDS

Design & manufacture	**API 6D, API 608**
Inspection & test	**API 6D, API 598**
Fire safe	**API 607, API 6FA**
Flange & end dimension	**ANSI B16.5 (flanged connection), ANSI B16.25 (butt welded end)**

CERTIFICATIONS

- Firesafe

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M**	O Ring Item 10	**FKM**
Stem	**ASTM A182 F6a, ASTM A182 F304, ASTM A182 F316**	Gland	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Gear	**Carbon Steel, Gray Iron**	Ball	**ASTM A182 F6a, ASTM A182 F304, ASTM A182 F316**
Seat	**Reinforced PTFE**	O Ring Item 14	**FKM**
Seat Ring	**ASTM A105, ASTM A182 F304, ASTM A182 F316**	Spring	**SS304 or Inconel 750, SS316 or Inconel 750**
Body Bolting	**ASTM A193 B7, ASTM A193 B8**	Body Nut	**ASTM A194 2H, ASTM A194 8**
Cover Item 8	**ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M**	Gasket	**PTFE**
Low Trunnion	**ASTM A105, ASTM A182 F304, ASTM A182 F316**	Cover Item 12	**ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M**

FEATURES

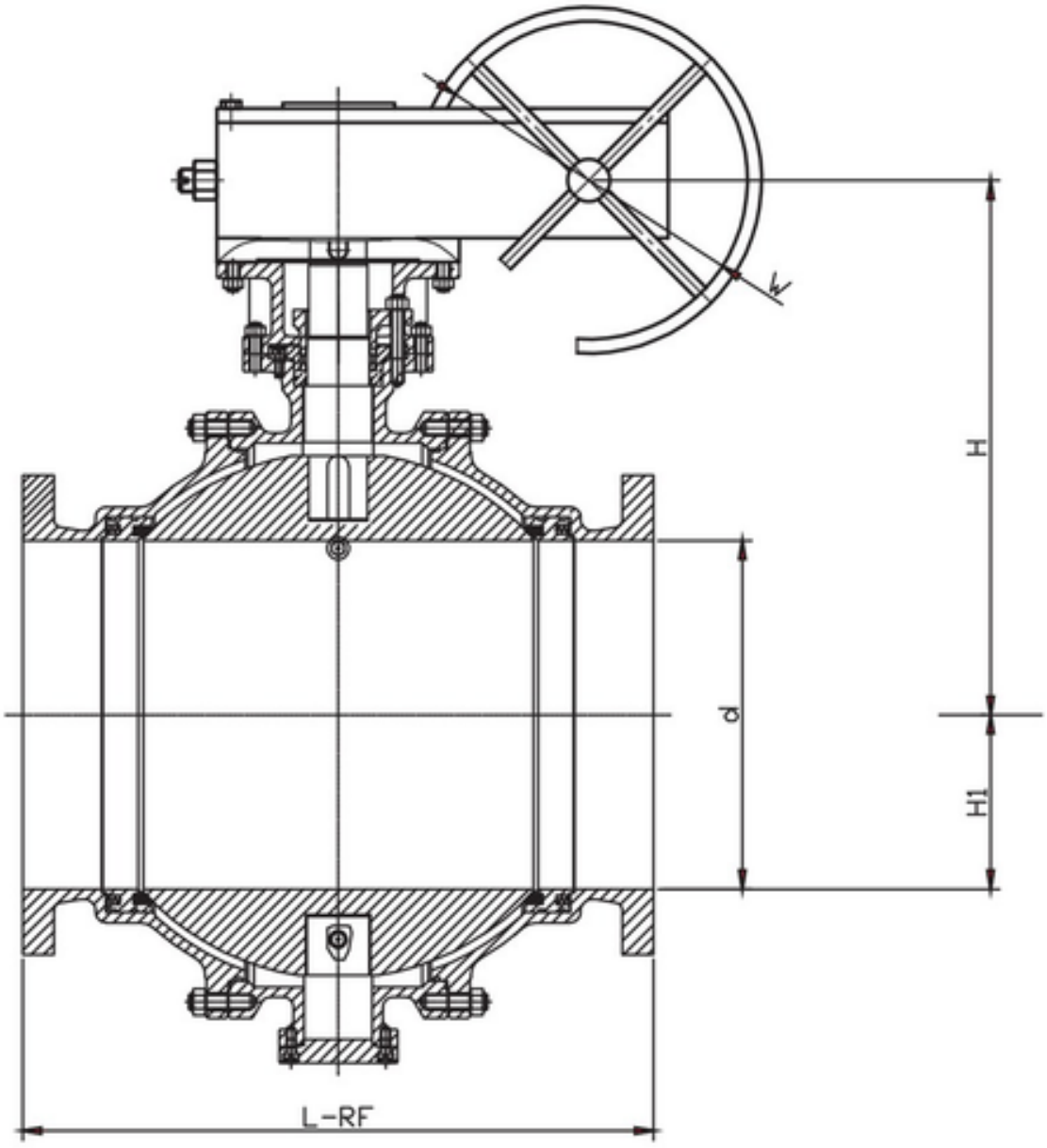
- Bolted cover construction
- Two-piece or three-piece body
- Anti-blowout stem
- Fire-safe design
- Anti-static design
- Trunnion-mounted ball
- Reinforced PTFE seats
- Available in multiple body material configurations including WCB/13Cr, WCB/304, WCB/316, CF8/304, CF8M/316

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Trunnion Ball Valve

SECTION **Technical drawing 1** REF **EFC-218**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

API Trunnion Ball Valve

SECTION **Dimensions per size** REF **EFC-218**

SIZE	L RF	L BW	D	H	H1	W	WEIGHT
Class 150 / DN100 (NPS 4)	229	305	100	250	135	300	60 kg
Class 150 / DN125 (NPS 5)	356	381	127	260	165	300	80 kg
Class 150 / DN150 (NPS 6)	394	457	150	285	193	400	101 kg
Class 150 / DN200 (NPS 8)	457	521	201	325	240	400	166 kg
Class 150 / DN250 (NPS 10)	533	559	252	370	293	500	283 kg
Class 150 / DN300 (NPS 12)	610	635	303	415	340	500	463 kg
Class 150 / DN350 (NPS 14)	686	762	334	455	372	600	622 kg
Class 150 / DN400 (NPS 16)	762	838	385	500	415	600	900 kg
Class 150 / DN450 (NPS 18)	864	914	436	540	462	600	1150 kg
Class 150 / DN500 (NPS 20)	914	991	487	590	511	600	1360 kg
Class 150 / DN600 (NPS 24)	1067	1143	589	680	601	600	2514 kg
Class 150 / DN650 (NPS 26)	1143	1245	633	800	700	600	3200 kg
Class 150 / DN700 (NPS 28)	1245	1346	684	960	780	700	4000 kg
Class 150 / DN750 (NPS 30)	1295	1397	735	1200	830	700	4800 kg
Class 150 / DN800 (NPS 32)	1372	1524	779	1380	870	700	5800 kg
Class 150 / DN900 (NPS 36)	1524	1727	874	1650	970	700	8000 kg
Class 300 / DN100 (NPS 4)	305	305	100	205	140	300	70 kg
Class 300 / DN125 (NPS 5)	381	381	127	260	170	300	95 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Class 300 / DN150 (NPS 6)	403	457	150	285	192	400	128 kg
Class 300 / DN200 (NPS 8)	502	521	201	325	246	400	234 kg
Class 300 / DN250 (NPS 10)	568	559	252	370	303	500	403 kg
Class 300 / DN300 (NPS 12)	648	635	303	415	348	500	602 kg
Class 300 / DN350 (NPS 14)	762	762	334	455	378	600	803 kg
Class 300 / DN400 (NPS 16)	838	838	385	500	429	600	1273 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Trunnion Ball Valve

Dimensions per size (continued) · EFC-218

SIZE	L RF	L BW	D	H	H1	W	WEIGHT
Class 300 / DN450 (NPS 18)	914	914	436	540	518	600	1450 kg
Class 300 / DN500 (NPS 20)	991	991	487	590	540	600	1700 kg
Class 300 / DN600 (NPS 24)	1143	1143	589	690	650	600	3100 kg
Class 300 / DN650 (NPS 26)	1245	1245	633	800	750	700	4500 kg
Class 300 / DN700 (NPS 28)	1346	1346	684	960	800	700	6000 kg
Class 300 / DN750 (NPS 30)	1397	1397	735	1200	860	700	7500 kg
Class 300 / DN800 (NPS 32)	1524	1524	779	1380	900	800	9000 kg
Class 300 / DN900 (NPS 36)	1727	1727	874	1650	1020	800	12000 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

Forged Steel Trunnion Mounted Ball Valve

REF **EFC-522**

SPECIFICATIONS

Size	**DN50 to DN1200**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Flanged / Butt weld / Threaded / Socket weld**
Temperature	**-196°C to 260°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**oil, gas, natural gas, chemical media, petrochemical media**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handwheel
- Pneumatic
- Electric
- Gas-liquid

STANDARDS

Design & manufacture	**API 6D, ASME B16.34, BS 5351**
Inspection & test	**API 598, API 6D, BS EN 12266-1**

APPLICATIONS

- Oil and gas
- Natural gas
- Chemical
- Petrochemical
- Power plant
- Metallurgy
- Papermaking

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Austenitic stainless steel body (F304/F304L), stainless trim	Austenitic stainless steel body (F316/F316L), stainless trim	Carbon steel body (A105), carbon steel or alloy steel trim	Carbon steel body (A105), carbon steel trim	Low temperature carbon steel body (LF2/LF1), cryogenic trim
Body	F304 or F304L	F316 or F316L	A105	A105	LF2 or LF1
Ball	F304+HCr or F304L+HCr	F316+HCr or F316L+HCr	A105+ENP or F6a+ENP	A105+ENP/HCr or F6a+HCr	F304+HCr
Stem	F304 or F304L	F316 or F316L	A105+ENP or 4140+ENP	A105+ENP or A182 F6a	F304
Gland	F304 or F304L	F316 or F316L	A105+ENP	A105+ENP	F304
Stud	A193-B8 / A193-B8M	A193-B8 / A193-B8M	A193-B7M	A193-B7	A320-L7 / A320-L7M
Nut	A194-8 / A194-8M	A194-8 / A194-8M	A194-2HM	A194-2H	A194-7 / A194-7M

These parts are the same for every option above:

Seat	**PTFE, RPTFE, NYLON, PPL, PEEK, EPDM, FKM, acetal**
Gasket	**PTFE, PPL, GRAPHITE**
Packing	**PTFE, PPL, GRAPHITE**

FEATURES

- Suitable for high temperature and high pressure corrosion resistant environments
- Anti-static design ensuring safety and stability
- Ball surface and seat sealing surface tightly connected for effective sealing
- Movable metal seat structure with leaf spring preload for easy operation
- Trunnion mounted design

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

2-PC Ball Valve

REF **EFC-527**

SPECIFICATIONS

Size	**NPS 1" to NPS 60"**
Pressure	**Class 150, Class 300, Class 400, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47) / Butt weld (ASME B16.25)**
Face-to-face	**API 6D**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handle
- Worm wheel
- Electric
- Pneumatic
- Pneumatic-hydraulic
- Electro-hydraulic

STANDARDS

Design & manufacture	**API 6D**
Inspection & test	**API 6D, API 607, API 6FA**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.25**
Materials	**ASME B16.34**
Other standards	**ASME B31.8**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, LCB, WCC, CF8, CF8M, CF3, CF3M, A890 4A**	Seat	**PTFE, RPTFE, NYLON, Acetal, PEEK, PPL, HNBR, FKM, Metal Hard Seal**

FEATURES

- Two-piece body construction
- Metal hard seal
- Floating ball design
- Wall thickness per ASME B16.34
- Fire-tested per API 607 and API 6FA

SUPPLIER REMARKS

• For product beyond the scope of the standard, it shall be manufactured by specifications in BTL standard or user's requirements.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BALL VALVE

2-PC Ball Valve

REF **EFC-529**

SPECIFICATIONS

Size	**NPS 1" to NPS 60"**
Pressure	**Class 150, Class 300, Class 400, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47) / Butt weld (ASME B16.25)**
Face-to-face	**API 6D**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handle
- Worm wheel
- Electric
- Pneumatic
- Pneumatic-hydraulic
- Electro-hydraulic

STANDARDS

Design & manufacture	**API 6D**
Inspection & test	**API 6D, API 607, API 6FA**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.25**
Materials	**ASME B16.34**
Other standards	**ASME B31.8**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, LCB, WCC, CF8, CF8M, CF3, CF3M, A890 4A**	Seat	**PTFE, RPTFE, NYLON, Acetal, PEEK, PPL, HNBR, FKM, Metal Hard Seal**

FEATURES

- Two-piece body construction
- Floating ball design
- Soft seat and metal hard seat options
- Fire-safe tested to API 607 and API 6FA
- Wall thickness designed to ASME B16.34
- Products beyond standard scope manufactured to BTL standard or user requirements

SUPPLIER REMARKS

• For products beyond the scope of the standard, it shall be manufactured by specifications in BTL standard or user requirements.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

REF **EFC-2**

SPECIFICATIONS

Size	**NPS 2" to NPS 48"**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 425°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Water, Steam, Oil**



ACTUATION

- Manual handwheel

STANDARDS

Design & manufacture	**API 600, BS 1414, ASME B16.34**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.11, ASME B16.25**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	CF8 stainless steel body	CF8M stainless steel body	WCB body / 13Cr trim	WCB body / stellite trim
Body	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Bonnet	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Wedge	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB+13CR	ASTM A216 WCB+STL
Seat	ASTM A351 CF8	ASTM A351 CF8M	ASTM A105+13CR	ASTM A105+STL
Stem	ASTM A182 F304	ASTM A182 F316	ASTM A182 F6A	ASTM A182 F6A
Bolts	ASTM A193 B8	ASTM A193 B8	ASTM A193 B7	ASTM A193 B7
Nuts	ASTM A194 8	ASTM A194 8	ASTM A194 2H	ASTM A194 2H
Gasket	GRAPHITE+SS304	GRAPHITE+SS316	GRAPHITE+SS304	GRAPHITE+SS304
Back Seat	ASTM A351 CF8	ASTM A351 CF8M	A182 F6A	A182 F6A
Packing	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
Gland	A182 F304	A182 F316	A182 F6A	A182 F6A
Gland Flange	ASTM A351 CF8	ASTM A351 CF8	ASTM A216 WCB	ASTM A216 WCB
Stem Nut	COPPER ALLOY or D2	COPPER ALLOY or D2	COPPER ALLOY or D2	COPPER ALLOY or D2
Hand Wheel	QT400-18 (EN-GJS-400-18)	QT400-18 (EN-GJS-400-18)	QT400-18 (EN-GJS-400-18)	QT400-18 (EN-GJS-400-18)
Bearing Gland	1035	1035	1035	1035
Pin	SS304	SS304	1025	1025
Grease Nipple	BRASS	BRASS	BRASS	BRASS
Nameplate	SS	SS	SS	SS
Lock Nut	A3 (Q235 / S235JR)	A3 (Q235 / S235JR)	A3 (Q235 / S235JR)	A3 (Q235 / S235JR)
Eye Bolt	ASTM A193 B8	ASTM A193 B8	ASTM A193 B7	ASTM A193 B7

FEATURES

- Back seat provided for stem sealing
- Graphite packing standard; PTFE packing option available for CF8 and CF8M variants
- Wedge gate design
- Rising stem with stem nut in copper alloy or D2 tool steel
- Bolted bonnet construction
- Rising stem gate valve with flanged ends
- Handwheel operated

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

SECTION **Dimensions per size** REF **EFC-2**

SIZE	D	D	D1	D2	B	F	N BOLT HOLE	L	H	W
NPS 2" (150LB)	51	152	120.5	92	16	1.6	4-ø19	178	354	200
NPS 2.5" (150LB)	64	178	139.5	105	18	1.6	4-ø19	190	384	220
NPS 3" (150LB)	76	190	152.5	127	19	1.6	4-ø19	203	440	250
NPS 4" (150LB)	102	229	190.5	157	24	1.6	8-ø19	229	495	280
NPS 5" (150LB)	127	254	216	186	24	1.6	8-ø22	254	550	300
NPS 6" (150LB)	152	279	241.5	216	26	1.6	8-ø22	267	620	300
NPS 8" (150LB)	203	343	298.5	270	29	1.6	8-ø22	292	768	350
NPS 10" (150LB)	254	406	362	324	31	1.6	12-ø25	330	937	400
NPS 12" (150LB)	305	483	432	381	32	1.6	12-ø25	356	1108	450
NPS 14" (150LB)	337	533	476	413	35	1.6	12-ø29	381	1253	500
NPS 16" (150LB)	387	597	540	470	37	1.6	16-ø29	406	1420	600
NPS 18" (150LB)	438	635	578	533	40	1.6	16-ø32	432	1500	680
NPS 20" (150LB)	489	699	635	584	43	1.6	20-ø32	457	1641	720
NPS 24" (150LB)	591	813	749.5	693	48	1.6	20-ø35	508	2048	600
NPS 28" (150LB)	692	927	864	800	72	1.6	28-ø35	610	2450	600
NPS 30" (150LB)	743	985	914.4	858	75	1.6	28-ø35	610	2953	600
NPS 2" (300LB)	51	165	127	92	23	1.6	8-ø19	216	368	220
NPS 2.5" (300LB)	64	190	149	105	26	1.6	8-ø22	241	391	220
NPS 3" (300LB)	76	210	168.5	127	29	1.6	8-ø22	283	442	280
NPS 4" (300LB)	102	254	200	157	32	1.6	8-ø22	305	507	300
NPS 5" (300LB)	127	279	235	186	35	1.6	8-ø22	381	570	300
NPS 6" (300LB)	152	318	270	216	37	1.6	12-ø22	403	653	350

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Gate Valve

Dimensions per size (continued) · EFC-2

SIZE	D	D	D1	D2	B	F	N BOLT HOLE	L	H	W
NPS 8" (300LB)	203	381	330	270	42	1.6	12-ø25	419	782	400
NPS 10" (300LB)	254	445	387.5	324	48	1.6	16-ø29	457	990	450
NPS 12" (300LB)	305	521	451	381	51	1.6	16-ø32	502	1155	500
NPS 14" (300LB)	337	584	514.5	413	54	1.6	20-ø32	762	1253	460
NPS 16" (300LB)	387	648	571.5	470	58	1.6	20-ø35	838	1420	530
NPS 18" (300LB)	432	711	628.5	533	61	1.6	24-ø35	914	1530	530
NPS 20" (300LB)	483	775	686	584	64	1.6	24-ø35	991	1920	530
NPS 24" (300LB)	584	914	813	693	70	1.6	24-ø41	1143	2010	530
NPS 28" (300LB)	686	1035	940	800	86	1.6	28-ø45	1346	2596	600
NPS 30" (300LB)	737	1092	997	858	92	1.6	28-ø48	1397	2767	600
NPS 36" (300LB)	889	1270	1168	1023	105	1.6	32-ø54	1727	3159	600
NPS 2" (600LB)	51	165	127	92	26	6.4	8-ø19	292	370	220
NPS 2.5" (600LB)	64	190	149	100	29	6.4	8-ø22	330	442	220
NPS 3" (600LB)	76	210	168	127	32	6.4	8-ø22	356	470	280
NPS 4" (600LB)	102	273	216	157	38	6.4	8-ø25	432	557	300
NPS 5" (600LB)	127	330	266.5	186	45	6.4	8-ø29	508	626	350
NPS 6" (600LB)	152	356	292	216	48	6.4	12-ø29	559	732	450
NPS 8" (600LB)	200	419	349	270	56	6.4	12-ø32	660	866	500
NPS 10" (600LB)	248	508	432	324	64	6.4	16-ø35	787	1002	650
NPS 12" (600LB)	298	559	489	381	67	6.4	20-ø35	838	1230	530
NPS 14" (600LB)	327	603	527	413	70	6.4	20-ø38	889	1443	530
NPS 16" (600LB)	385	686	603	470	77	6.4	20-ø41	991	1593	530
NPS 18" (600LB)	419	743	654	533	83	6.4	20-ø44	1092	1652	530
NPS 20" (600LB)	464	813	724	584	89	6.4	24-ø44	1194	1925	600
NPS 24" (600LB)	559	940	838	693	102	6.4	24-ø52	1397	2184	600
NPS 28" (600LB)	670	1073	965.2	800	112	6.4	28-ø54	1549	2548	600
NPS 2" (900LB)	47	216	165	92	38.5	6.4	8-ø26	368	383	280

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Gate Valve

Dimensions per size (continued) · EFC-2

SIZE	D	D	D1	D2	B	F	N BOLT HOLE	L	H	W
NPS 3" (900LB)	73	241	190.5	127	38.5	6.4	8-ø26	381	507	300
NPS 4" (900LB)	98	292	235	157	44.5	6.4	8-ø32	457	603	350
NPS 5" (900LB)	121	349	279.5	186	51	6.4	8-ø35	559	686	450
NPS 6" (900LB)	146	381	317.5	216	56	6.4	12-ø32	610	802	500
NPS 8" (900LB)	190	470	393.5	270	63.5	6.4	12-ø38	737	956	600
NPS 10" (900LB)	238	546	470	324	70	6.4	16-ø38	838	1112	530
NPS 12" (900LB)	282	610	533.5	381	79.5	6.4	20-ø38	965	1370	530

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

Cast Steel Gate Valve

REF **EFC-15**

SPECIFICATIONS

Size	**NPS 2" to NPS 36"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Media	**water, steam, oil, gas**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handwheel
- Worm gear
- Electric actuator
- Pneumatic actuator
- Hydraulic actuator

STANDARDS

Design & manufacture	**API 602, ASME B16.34, BS 5352, BS 6364**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.5**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**ASTM A216 WCB, ASTM A351 CF8**	Disc	**WCB, CF8, CF8M, MONEL**
Stem	**F6, F304, F316, MONEL**	Seat	**13Cr STL, 304 STL, 316 STL, MONEL**

FEATURES

- Compact structure with small envelope dimensions and good rigidity.
- Elastic gate structure that automatically compensates for valve body deformation caused by abnormal load or temperature during operation.
- Rolling bearings fitted in operating device for 150LB manual valves e NPS 10" and 600LB - 2500LB valves e NPS 6" to reduce operating torque.
- Materials, trim, and fasteners can be combined according to user requirements or actual working conditions.
- Replaceable seat for valves d NPS 10".
- DN125 nominal bore
- PN16 pressure class
- Flanged end connections
- Rising stem gate valve
- Bolted bonnet construction

SUPPLIER REMARKS

• The main materials, trim and fasteners can be reasonably combined according to user requirements or actual working conditions.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

Forged Steel Gate Valve

REF **EFC-21**

SPECIFICATIONS

Size	**NPS 3/4" to NPS 2"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Socket weld (ASME B16.11) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 500°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, steam, oil, gas**
Dimensions	**Confirmed at quotation**

STANDARDS

Design & manufacture	**API 602**
Inspection & test	**API 598**
Materials	**NACE MR 0103, NACE MR 0175**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A105, A182 F22, A182 F304(L), A182 F316(L), A182 F51**	Seat	**A276 420, A276 304, A276 304(L), A276 316(L)**
Disc	**A182 F430&410, A182 F304, A182 F304(L), A182 F316(L)**	Stem	**A182 F6, A182 F304, A182 F304(L), A182 F316(L)**
Gland Packing	**A276 410, A182 F304(L), A182 F316(L)**		

FEATURES

- Smooth bore channel with low flow coefficient; sealing surface less susceptible to medium erosion.
- Sealing surface constructed from alloy steel or hard alloy with wear and scratch resistance.
- Flexible graphite filler used for gland packing, providing sealing and ease of operation.
- Bidirectional flow with no flow disturbance or pressure reduction.
- Gland packing can be replaced with the valve isolated and depressurised
- Bolted bonnet construction; handwheel operated

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

Stainless Steel Gate Valve

REF **EFC-28**

SPECIFICATIONS

Size	**NPS 2" to NPS 32"**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Temperature	**max 200°C**
Media	**chemicals, corrosive media, abrasive media, slurries, mixed solids**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handwheel
- Worm gear
- Electric actuator
- Pneumatic actuator
- Hydraulic actuator

STANDARDS

Design & manufacture	**API 602, ASME B16.34, BS 5352, BS 6364**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.5**

APPLICATIONS

- oil and gas
- chemical and pharmaceuticals
- marine
- water and wastewater treatment
- manufacturing

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	304 / CF8 stainless steel build	304L / CF3 stainless steel build	316 / CF8M stainless steel build	316L / CF3M stainless steel build	Carbon steel (WCB) build
Body Cap	OCr18Ni9	OOCr18Ni10	OOCr18Ni9Mo2	OOCr18Ni10Mo2	WCB
Stem	OCr18Ni9	OOCr18Ni10	OOCr18Ni9Mo2	OOCr18Ni10Mo2	1Cr3
Stem Packing	PTFE	PTFE	PTFE	PTFE	Graphite
Gasket	304+PTFE	304L+PTFE	316+PTFE	316L+PTFE	Graphite+304
Gland Flange	OCr18Ni9	OOCr18Ni10	OOCr18Ni9Mo2	OOCr18Ni10Mo2	WCB

These parts are the same for every option above:

Bolt	**Stainless Steel, 34GtMoA**	Nut	**Stainless Steel, 45 (AISI 1045)**
Body	**OCr18Ni9, OOCr18Ni10, OOCr18Ni9Mo2, OOCr18Ni10Mo2, WCB**		

FEATURES

- Gate and seat sealing surfaces produced with cemented carbide overlay welding of differing hardness
- Valve stem tempered and surface nitrided for corrosion resistance, scratch resistance, and wear resistance
- Flexible gate structure with thrust bearings on medium and large diameters to reduce friction
- Compatible with multiple piping flange standards and flange sealing surface forms
- Rising stem with external thread
- Bolted bonnet construction
- Open yoke stem design

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

REF **EFC-214**

SPECIFICATIONS

Size	**NPS 2 to NPS 24**
Pressure	**Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**



ACTUATION

- Handwheel
- Gear operator
- Pneumatic
- Electric
- Hydraulic

FEATURES

- Rising stem design
- Gear operation available for larger sizes
- Three end connection options: RF, RTJ, and BW
- Slab or wedge gate configuration (NPS 6 and larger, NPS 8 and larger variants shown in drawings)
- Available with handwheel or gear operator

SUPPLIER REMARKS

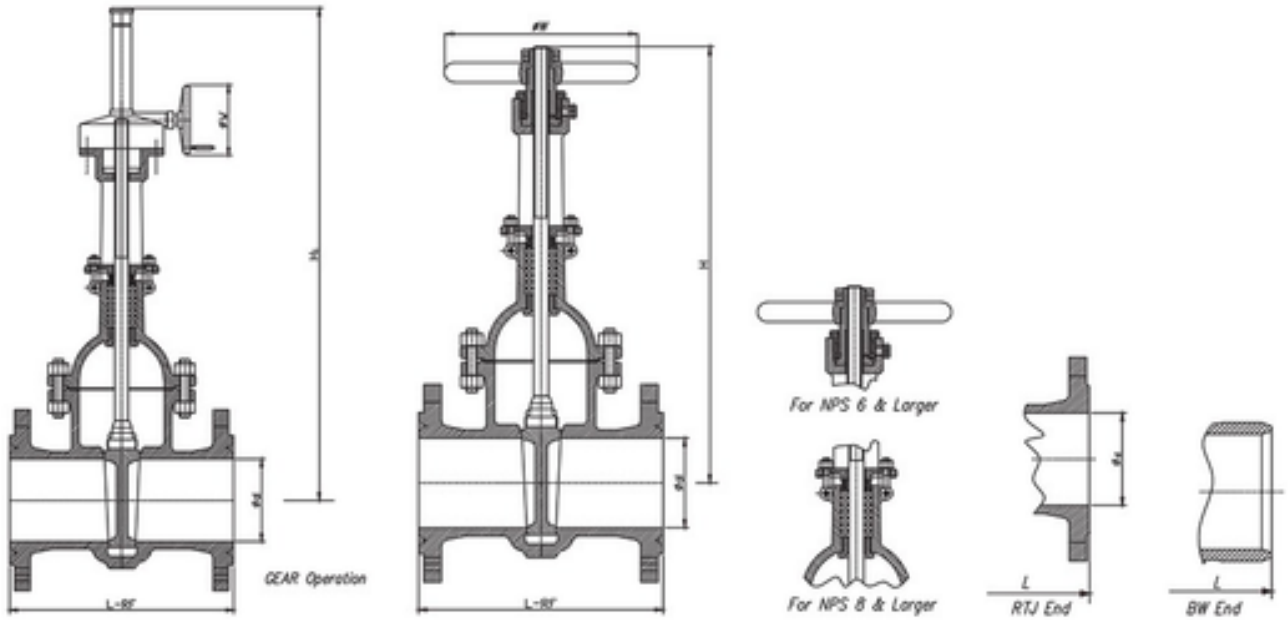
• We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

SECTION **Technical drawing 1** REF **EFC-214**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

SECTION **Dimensions per size** REF **EFC-214**

SIZE	L RF	L RTJ	L BW	D	H	W	H1	W1	WEIGHT
NPS 2 / DN50	292	295	292	50	380	200	-	-	H.W 37 kg
NPS 2 1/2 / DN65	330	333	330	63	420	250	-	-	H.W 50 kg
NPS 3 / DN80	356	359	356	76	500	280	585	310	H.W 82 kg G.O 87 kg
NPS 4 / DN100	432	435	432	100	575	300	695	310	H.W 134 kg G.O 142 kg
NPS 5 / DN125	508	511	508	127	700	350	790	310	H.W 175 kg G.O 227 kg
NPS 6 / DN150	559	562	559	150	750	450	900	460	H.W 245 kg G.O 286 kg
NPS 8 / DN200	660	664	660	199	850	500	1110	460	H.W 423 kg G.O 472 kg
NPS 10 / DN250	787	791	787	247	1005	650	1300	460	H.W 682 kg G.O 657 kg
NPS 12 / DN300	838	841	838	298	1130	700	1650	460	H.W 932 kg G.O 893 kg
NPS 14 / DN350	889	892	889	326	1270	900	1750	530	H.W 1177 kg G.O 1318 kg
NPS 16 / DN400	991	994	991	374	1365	900	1900	530	H.W 1513 kg G.O 1720 kg
NPS 18 / DN450	1092	1095	1092	419	2020	600	-	-	G.O 1980 kg
NPS 20 / DN500	1194	1200	1194	463	2172	600	-	-	G.O 2460 kg
NPS 24 / DN600	1397	1407	1397	558	2650	600	-	-	G.O 3650 kg
NPS 2 / DN50	368	371	368	47	500	280	-	-	H.W 70 kg
NPS 2 1/2 / DN65	419	422	419	57	450	280	-	-	H.W 110 kg
NPS 3 / DN80	381	384	381	72	505	300	-	310	H.W 140 kg G.O 167 kg
NPS 4 / DN100	457	460	457	98	575	350	625	310	H.W 178 kg G.O 227 kg
NPS 5 / DN125	559	562	559	125	630	400	740	310	H.W 258 kg G.O 285 kg
NPS 6 / DN150	610	613	610	146	795	500	900	460	H.W 358 kg G.O 396 kg
NPS 8 / DN200	737	740	737	190	885	650	1000	460	H.W 550 kg G.O 627 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Gate Valve

Dimensions per size (continued) · EFC-214

SIZE	L RF	L RTJ	L BW	D	H	W	H1	W1	WEIGHT
NPS 10 / DN250	838	841	838	238	1035	700	1130	530	H.W 1000 kg G.O 1100 kg
NPS 12 / DN300	965	968	965	282	1180	900	1520	530	H.W 1215 kg G.O 1310 kg
NPS 14 / DN350	1029	1038	1029	311	1350	900	1600	530	H.W 1600 kg G.O 1665 kg
NPS 16 / DN400	1130	1140	1130	355	1890	900	2100	600	H.W 2150 kg G.O 2330 kg
NPS 18 / DN450	1219	-	-	400	2232	800	-	-	G.O 3000 kg
NPS 20 / DN500	1321	-	-	444	2435	800	-	-	G.O 3800 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

REF **EFC-215**

SPECIFICATIONS

Size	**NPS 2 to NPS 16**
Pressure	**Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Butt weld (BW BB) / Butt weld (BW PSB)**
Face-to-face	**ASME B16.10**



ACTUATION

- Handwheel
- Pneumatic
- Electric
- Hydraulic

STANDARDS

Other standards	**API Gate Valve**

FEATURES

- Available in Class 1500 and Class 2500 pressure ratings
- Multiple end connection options: Raised Face (RF), Ring Type Joint (RTJ), Butt Weld Bolted Bonnet (BW BB), and Butt Weld Pressure Seal Bonnet (BW PSB)
- Size range NPS 2 to NPS 16 for Class 1500; NPS 2 to NPS 12 for Class 2500
- Compatible with multiple actuator types including pneumatic, electric, and hydraulic

SUPPLIER REMARKS

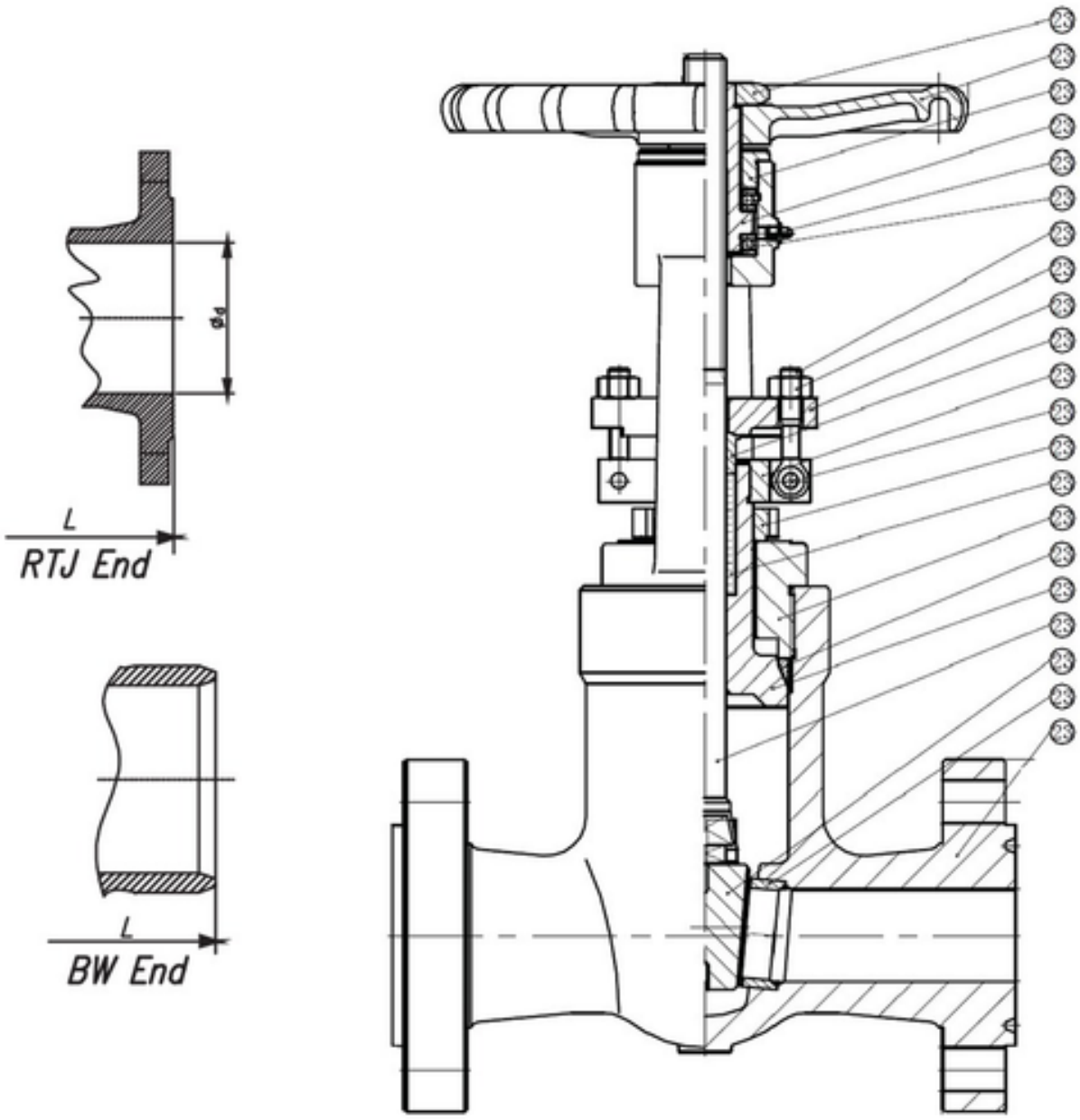
• We may provide other different actuators according to the customer's request, such as pneumatich, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

SECTION **Technical drawing 1** REF **EFC-215**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

API Gate Valve

SECTION **Dimensions per size** REF **EFC-215**

SIZE	L RF	L RTJ	L BW BB	L BW PSB	D	H	W	H1	W1	WEIGHT
Class 1500 NPS 2 / DN50	368	371	368	216	47	430	280	-	-	70 kg
Class 1500 NPS 2 1/2 / DN65	419	422	419	254	57	490	300	-	-	110 kg
Class 1500 NPS 3 / DN80	470	473	470	305	69	540	350	680	310	175 kg
Class 1500 NPS 4 / DN100	546	549	546	406	92	650	400	810	310	270 kg
Class 1500 NPS 5 / DN125	673	676	673	483	125	780	450	920	310	378 kg
Class 1500 NPS 6 / DN150	705	711	705	559	136	835	500	1035	460	520 kg
Class 1500 NPS 8 / DN200	832	841	832	711	177	925	750	1180	530	820 kg
Class 1500 NPS 10 / DN250	991	1000	991	864	222	1230	900	1525	600	1560 kg
Class 1500 NPS 12 / DN300	1130	1146	1130	991	263	-	-	1620	600	2120 kg
Class 1500 NPS 14 / DN350	1257	1276	1257	1067	288	-	-	1905	600	3306 kg
Class 1500 NPS 16 / DN400	1384	1407	1384	1194	330	-	-	2050	600	3450 kg
Class 2500 NPS 2 / DN50	451	454	451	279	38	490	280	580	310	100 kg
Class 2500 NPS 2 1/2 / DN65	508	514	508	330	47	580	300	630	310	150 kg
Class 2500 NPS 3 / DN80	578	584	578	368	57	630	350	765	310	245 kg
Class 2500 NPS 4 / DN100	673	683	673	457	72	725	400	850	310	390 kg
Class 2500 NPS 5 / DN125	794	807	794	533	96	900	500	960	460	550 kg
Class 2500 NPS 6 / DN150	914	927	914	610	111	1040	600	1100	530	780 kg
Class 2500 NPS 8 / DN200	1022	1038	1022	762	146	1150	750	1150	460	1260 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Class 2500 NPS 10 / DN250	1270	1292	1270	914	184	1400	900	1460	600	2380 kg
Class 2500 NPS 12 / DN300	1422	1445	1422	1041	218	-	-	1660	600	3250 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GATE VALVE

High Pressure Gate Valve

REF **EFC-521**

SPECIFICATIONS

Size	**NPS 2" to NPS 18"**
Pressure	**Class 1500, Class 2000, Class 2500, Class 3500**
End connection	**Flanged (ASME B16.5 / ASME B16.47) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Dimensions	**Confirmed at quotation**

ACTUATION

- Handwheel

STANDARDS

Design & manufacture	**API 600**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.25 (butt-weld end preparation)**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Alloy steel WC6 body, WC6 gate and bonnet, 38CrMoALA stem	Alloy steel ZG1Cr5Mo body and gate/bonnet, 38CrMoALA stem	Carbon steel body, CF8 gate and bonnet, CF8 stem	Stainless steel CF8 body and gate/bonnet, F304 stem
Body	WC6	ZG1Cr5Mo (ASTM A217 C5)	WCB	CF8
Stem	38CrMoALA	38CrMoALA	CF8	F304
Packing	Flexible graphite	Flexible graphite	Flexible graphite	Flexible graphite
Body Bonnet Gate	WC6	ZG1Cr5Mo	CF8	CF8

These parts are the same for every option above:

Bonnet	**WCB, WC6, ZG1Cr5Mo (ASTM A217 C5), CF8**	Gate	**CF8, WC6, ZG1Cr5Mo (ASTM A217 C5)**
Sealing Surface	**Stainless steel / hard alloy**		

FEATURES

- Rational structural design with smooth bore and low flow resistance coefficient
- Sealing surfaces manufactured from stainless steel and hard alloy for extended service life
- Flexible graphite packing providing reliable stem sealing with light operating effort
- Covers a broad range of body materials including carbon steel, low-temperature steel, alloy steel and stainless steel

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Check Valve

REF **EFC-6**

SPECIFICATIONS

Size	**NPS 2" to NPS 24"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47) / Butt weld (ASME B16.25) / Socket weld (ASME B16.11)**
Face-to-face	**ASME B16.10**

STANDARDS

Design & manufacture	**API 6D, BS 1868**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.11, ASME B16.25**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	CF8 stainless steel body and internals	CF8M stainless steel body and internals	WCB body / 13CR-coated seat and disc	WCB body / STL-overlay seat
Body	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Seat	ASTM A351 CF8	ASTM A351 CF8M	ASTM A105+13CR	ASTM A105+STL
Disc	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB+13CR	ASTM A216 WCB+13CR
Pin Disc	SS304	SS316	SS304	SS304
Disc Nut	ASTM A194 8	ASTM A194 8M	ASTM A194 2H	ASTM A194 2H
Hinge	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Fork	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Bolt	ASTM A193 B8	ASTM A193 B8M	ASTM A193 B7	ASTM A193 B7
Gasket	GRAPHITE+SS304	GRAPHITE+SS316	GRAPHITE+SS304	GRAPHITE+SS304
Nut	ASTM A194 8	ASTM A194 8	ASTM A194 2H	ASTM A194 2H
Bonnet	ASTM A351 CF8	ASTM A351 CF8M	ASTM A216 WCB	ASTM A216 WCB
Lifting Eye	CARBON STEEL	CARBON STEEL	CARBON STEEL	CARBON STEEL
Nameplate	SS	SS	SS	SS

This part is the same for every option above:

Pin Hinge	**A276 410, A182 F304, A182 F316**

FEATURES

- Swing check valve design
- Cast steel construction
- Multiple trim material options including 13CR and Stellite seat overlays
- Flanged end connections to ASME B16.5 and B16.47
- Butt-weld end connections to ASME B16.25
- Socket weld / threaded ends to ASME B16.11
- Swing check valve with bolted cover/bonnet secured by multiple stud bolts and nuts
- Raised face flanged ends

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Check Valve

SECTION **Dimensions per size** REF **EFC-6**

SIZE	D	D	D1	D2	B	F	N D	L	H
NPS 2" / 150LB	51	152	120.5	92	16	1.6	4-ø19	203	143
NPS 2.5" / 150LB	64	178	139.5	105	18	1.6	4-ø19	216	158
NPS 3" / 150LB	76	190	152.5	127	19	1.6	4-ø19	241	173
NPS 4" / 150LB	102	229	190.5	157	24	1.6	8-ø19	292	211
NPS 6" / 150LB	152	279	241.5	216	26	1.6	8-ø22	356	314
NPS 8" / 150LB	203	343	298.5	270	29	1.6	8-ø22	495	356
NPS 10" / 150LB	254	406	362	324	31	1.6	12-ø25	622	435
NPS 12" / 150LB	305	483	432	381	32	1.6	12-ø25	698	496
NPS 14" / 150LB	337	533	476	413	35	1.6	12-ø29	787	571
NPS 16" / 150LB	387	597	540	470	37	1.6	16-ø29	864	619
NPS 18" / 150LB	438	635	578	533	40	1.6	16-ø32	978	677
NPS 20" / 150LB	489	699	635	584	43	1.6	20-ø32	978	727
NPS 24" / 150LB	591	813	749.5	693	48	1.6	20-ø35	1295	813
NPS 2" / 300LB	51	165	127	92	23	1.6	8-ø19	267	188
NPS 3" / 300LB	76	210	168.5	127	29	1.6	8-ø22	318	215
NPS 4" / 300LB	102	254	200	157	32	1.6	8-ø22	356	233
NPS 6" / 300LB	152	318	270	216	37	1.6	12-ø22	444.5	333
NPS 8" / 300LB	203	381	330	270	42	1.6	12-ø25	533	388
NPS 10" / 300LB	254	445	387.5	324	48	1.6	16-ø29	622	460
NPS 12" / 300LB	305	521	451	381	51	1.6	16-ø32	711	519
NPS 14" / 300LB	337	584	514.5	413	54	1.6	20-ø32	838	585
NPS 16" / 300LB	387	648	571.5	470	58	1.6	20-ø35	864	630
NPS 18" / 300LB	432	711	628.5	533	61	1.6	24-ø35	978	695
NPS 20" / 300LB	483	775	686	584	64	1.6	24-ø35	1016	750

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Check Valve

Dimensions per size (continued) · EFC-6

SIZE	D	D	D1	D2	B	F	N D	L	H
NPS 24" / 300LB	584	914	813	693	70	1.6	24-ø41	1346	840
NPS 2" / 600LB	51	165	127	92	26	6.4	8-ø19	292	215
NPS 3" / 600LB	76	210	168	127	32	6.4	8-ø22	356	265
NPS 4" / 600LB	102	273	216	157	38	6.4	8-ø25	432	310
NPS 6" / 600LB	152	356	292	216	48	6.4	12-ø29	559	369
NPS 8" / 600LB	200	419	349	270	56	6.4	12-ø32	660	446
NPS 10" / 600LB	248	508	432	324	64	6.4	16-ø35	787	554
NPS 12" / 600LB	298	559	489	381	67	6.4	20-ø35	838	580
NPS 14" / 600LB	327	603	527	413	70	6.4	20-ø38	889	630
NPS 16" / 600LB	375	686	603	470	77	6.4	20-ø41	991	690
NPS 18" / 600LB	419	743	654	533	83	6.4	20-ø44	1092	810
NPS 20" / 600LB	464	813	724	584	89	6.4	24-ø44	1194	930
NPS 24" / 600LB	559	940	838	693	102	6.4	24-ø52	1397	1052
NPS 2" / 900LB	47	216	165	92	38.5	6.4	8-ø26	368	285
NPS 3" / 900LB	73	241	190.5	127	38.5	6.4	8-ø26	381	315
NPS 4" / 900LB	98	292	235	157	44.5	6.4	8-ø32	457	354
NPS 6" / 900LB	146	381	317.5	216	56	6.4	12-ø32	610	420
NPS 8" / 900LB	190	470	393.5	270	63.5	6.4	12-ø38	737	485
NPS 10" / 900LB	238	546	470	324	70	6.4	16-ø38	838	560
NPS 12" / 900LB	282	610	533.5	381	79.5	6.4	20-ø38	965	630
NPS 14" / 900LB	311	641	559	413	86	6.4	20-ø41	1029	695
NPS 16" / 900LB	356	705	616	470	89	6.4	20-ø44	1130	758

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

Forged Steel Check Valve

REF **EFC-19**

SPECIFICATIONS

Size	**NPS 1/2" to NPS 2"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Socket weld (ASME B16.11) / Butt weld (ASME B16.25)**
Temperature	**-29°C to 550°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, steam, oil, nitric acid, acetic acid**
Dimensions	**Confirmed at quotation**



APPLICATIONS

- Tap water pipelines
- Food industry pipelines
- Pharmaceutical industry pipelines
- Electric power pipelines
- Petroleum pipelines
- Liquefied gas pipelines
- Steam pipelines

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Alloy steel body, F22 disc, A182 stem	Carbon steel body, 420 disc, F6a stem	Stainless steel 304(L) body and trim	Stainless steel 316(L) body and trim
Body	A182 F22	A105N (forged carbon steel)	A182 F304(L)	A182 F316(L)
Disc	A276 F22	A276 420	A276 304(L)	A276 F316(L)
Stem	A182	A182 F6a	A182 F304(L)	A182 F316(L)
Gasket	316+Flexible graphite	316+Flexible graphite	316+PTFE	316+PTFE
Bonnet	A182 F22	A105N	A182 F304(L)	A182 F316(L)

FEATURES

- Design and manufacture according to API standards
- 600LB and above gate and seat overlaid with Stellite for wear resistance, high temperature resistance, and corrosion resistance
- Valve stem tempered and surface nitrided for corrosion resistance and scratch resistance
- Wedge elastic gate structure with rolling bearings on medium and large diameters
- 1500LB and 2500LB middle cavity uses pressure self-tightening sealing structure
- Inverted seal uses stainless steel threaded connection sealing seat or body overlay welding austenitic stainless steel; packing can be replaced without stopping flow
- Flanged end connections

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

Lug Type Double Plate Check Valve

REF **EFC-26**

SPECIFICATIONS

Size	**NPS 8" to NPS 60"**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Lug (ASME B16.5) / Lug (ASME B16.47)**
Face-to-face	**API 594, API 6D, ASME B16.10**
Media	**water, oil, gas**
Dimensions	**Confirmed at quotation**



STANDARDS

Design & manufacture	**API 594, API 6D, ASME B16.34**
Inspection & test	**API 598, API 6D**

MATERIALS

Body	**WCB, 304, 316, 316L**	O-Ring	**NBR, FKM**
Disc	**304, 316, 316L**	Gland	**304, 316, 316L**
Shaft	**304, 316, 316L**	Forged Body Alternative	**A105, C5, WC6, WC9**

FEATURES

- Short face-to-face dimension facilitates installation, handling, storage and pipeline layout
- Dual-flap design reduces fluid resistance compared to single-disc construction
- Each flap is half the size of a full single disc, halving the rotation radius and reducing travel time to closed position by up to 50%
- Reduced flap weight minimises slamming and water hammer
- Dual-plate (double-disc) lug-type wafer check valve
- Lug-style body with threaded bolt holes for end-of-line installation
- Lifting eye/lug at top of body
- Stainless steel disc plates with centre hinge pin
- Heavy-wall cast body construction

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

Swing Check Valve

REF **EFC-30**

SPECIFICATIONS

Size	**NPS 2" to NPS 24"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**API 594, API 6D, DIN 3202, JB/T 8937**
Temperature	**-196°C to 560°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, steam, oil, gas**
Dimensions	**Confirmed at quotation**



STANDARDS

Design & manufacture	**API 594, API 6D, JB/T 8937, GB/T 12236, JB/T 74**
Inspection & test	**API 598, JB/T 9092**
Flange & end dimension	**ASME B16.34, DIN 2401, GB/T 9124, HG 20604, HG 20625**
Other standards	**SH 3406**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Carbon steel body, 13Cr trim	Carbon steel body, 304 trim	Carbon steel body, 316 trim	Carbon steel body, Monel trim	CF3 body, 304L trim	CF8 body, 304 trim	CF8 body, 316L trim	CF8M body, 316 trim
Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF3	ASTM A351 CF8	ASTM A351 CF8	ASTM A351 CF8M
Disc	WCB	CF8	CF8M	Monel	—	—	—	—
Pin	F6a	F304	F316	Monel	F304L	F304	F316	F316L
Disc Surface	13Cr / STL	304 / STL	316 / STL	Monel / STL	304L / STL	304 / STL	316L / STL	316 / STL
Seat Surface	13Cr / STL	304 / STL	316 / STL	Monel / STL	304L / STL	304 / STL	316L / STL	316 / STL

These parts are the same for every option above:

Stem	**F6a, F304, F316, Monel, F304L, F316L**
Seat	**13Cr, STL, 304, 316, Monel, 304L, 316L**

FEATURES

- Disc closes quickly with low water hammer pressure.
- Suitable for horizontal or vertical pipe installation.
- Smooth flow channel with low fluid resistance.
- Short disc stroke reduces closing impact force.
- Compact overall structure.
- Swing check valve, flanged ends
- Bolted bonnet with top cover plate
- Class 150 pressure rating

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

Wafer Lifting Check Valve

REF **EFC-32**

SPECIFICATIONS

Size	**DN15 to DN1200**
Pressure	**PN16, PN25, PN40, PN63, PN100, Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Wafer (ASME B16.5) / Wafer (GB/T 9113) / Wafer (JB/T 79) / Wafer (HG/T 20592)**
Face-to-face	**API 594, JB/T 8937**
Temperature	**max 350°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, steam, oil**
Dimensions	**Confirmed at quotation**



STANDARDS

Design & manufacture	**API 6D, JB/T 8937, API 594, JB/T 79**
Inspection & test	**API 598, GB/T 13927, JB/T 9092**
Flange & end dimension	**ASME B16.5, GB/T 9113, HG/T 20592**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, WCA, WCC, WC6, WC9, C5, C12, LCB, LCC, CF8, CF8M, CF3, CF3M, CN7M, CF8C**

FEATURES

- Short face-to-face length, compact size and low weight
- Sealing configurable as soft-to-soft or metal-to-metal depending on working conditions
- Suitable for horizontal or vertical pipeline installation
- Rapid disc closure with low water hammer pressure
- Parts material and end face form and size selectable to suit working conditions or user requirements
- Wafer-type single-disc check valve construction
- Spring-loaded central disc with four-spoke carrier

SUPPLIER REMARKS

• Parts material and end face form and size can be reasonably selected according to actual working conditions or user requirements to meet various engineering needs.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Swing Check Valve

REF **EFC-224**

SPECIFICATIONS

Size	**NPS 2 to NPS 36**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47A MSS SP-44) / Flanged (ASME B16.47B API 605) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Dimensions	**Confirmed at quotation**

STANDARDS

Design & manufacture	**BS 1868-1873, ASME B16.34, API 6D**
Inspection & test	**API 598, API 6D**
Flange & end dimension	**ASME B16.5, ASME B16.47A MSS SP-44, ASME B16.47B API 605**
Butt weld end	**ASME B16.25**
Pressure-temperature rating	**ASME B16.34**
Wall thickness	**API 600 and BS 1868**
Materials	**ASTM**
Other standards	**ASME B16.47A, ASME B16.47B**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Material grade

Part	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M
Body	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M
Cover	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M
Disc	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M
Hinge	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M
Bolt	A193 B16	A193 B7	A193 B16	A193 B16	A193 B7	A320 L7	A193 B8	A193 B8	A193 B8	A193 B8
Nut	A194 4	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 8	A194 8	A194 8	A194 8
Disc Nut	410	410	410	410	A194 2H	410	304L	316L	304	316
Yoke	A217 C5	A217 WC1	A217 WC6	A217 WC9	A216 WCB	A352 LCB	A351 CF3	A351 CF3M	A351 CF8	A351 CF8M

Trim

Part	Trim 1	Trim 2	Trim 5	Trim 8	Trim 9	Trim 10	Trim 11
Seat Ring Surface	F6	F304	Stellite	Stellite	Monel	F316	Alloy 20
Disc Surface	F6	F304	Stellite	F6	Monel	F316	Alloy 20
Hinge Pin	F6	F304	F6	F6	Monel	F316	Alloy 20

These parts are the same for every option above:

Gasket	**SS Spiral Wound W, graphite, PTFE, Reinforced PTFE**	Eye Bolt	**Steel**

FEATURES

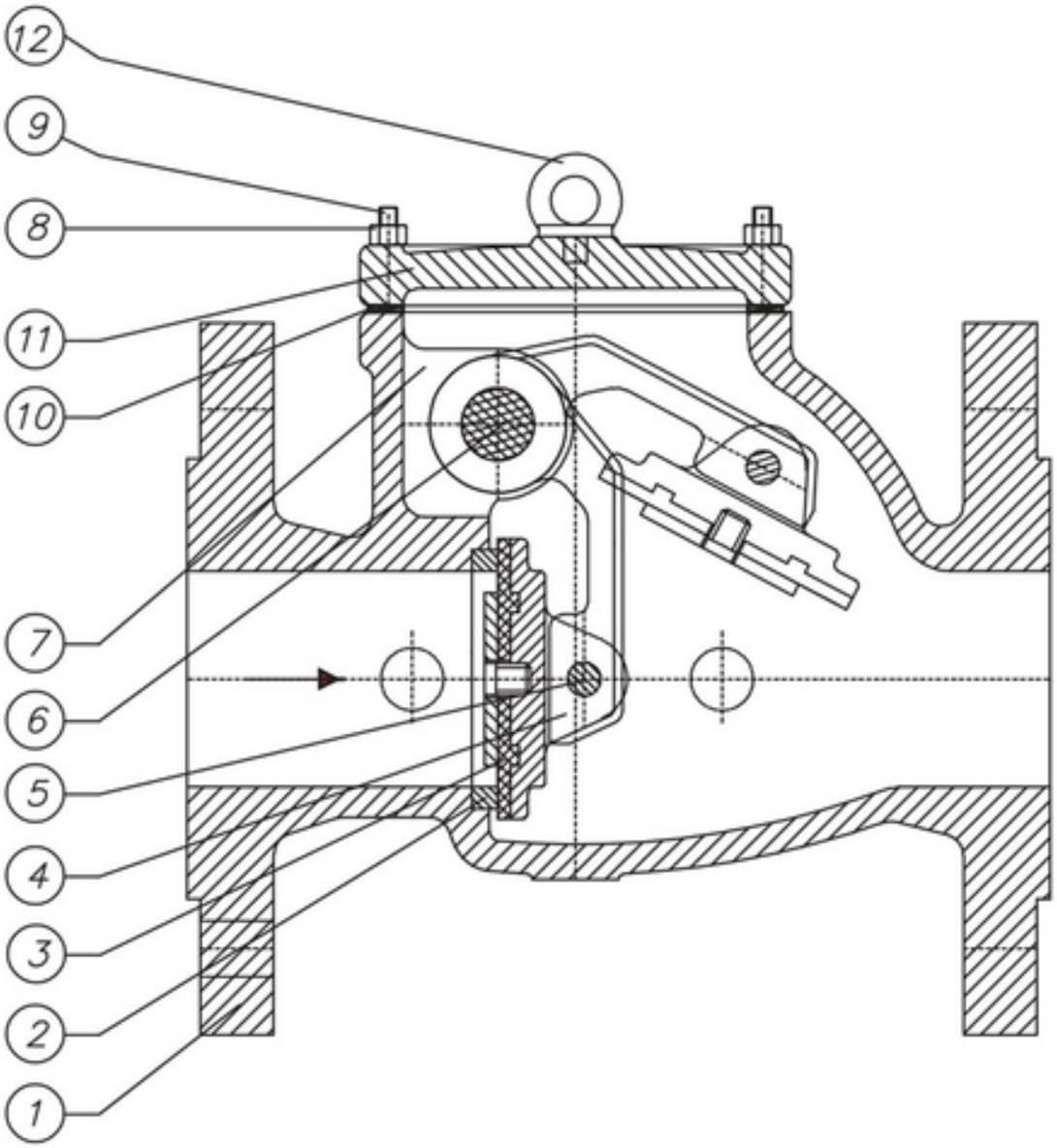
- Swing check mechanism with hinged disc preventing reverse flow
- Eye bolt fitted to cover for maintenance access
- Trim code system for seating surface material selection
- Available in multiple body material grades: carbon steel, alloy steel, stainless steel
- Multiple end connection options: flanged (ASME B16.5, B16.47A, B16.47B) and butt-weld (ASME B16.25)

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Swing Check Valve

SECTION **Technical drawing 1** REF **EFC-224**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Wafer Type Check Valve

REF **EFC-427**

SPECIFICATIONS

Size	**DN50 to DN1200**
Pressure	**Class 150, Class 300**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47 / API 605 / MSS SP-44)**
Face-to-face	**API 6D, DIN 3202**

STANDARDS

Design & manufacture	**API 6D, API 605**
Inspection & test	**API 598, API 6D**
Flange & end dimension	**ASME B16.5, ASME B16.47, MSS SP-44, DIN 2543-2548**
Other standards	**ISO 7005-1**

MATERIALS

Body	**A216 WCB, A352 LCB, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M**	Disc	**A351 CF8, A217 WC6, A217 WC9, A217 C5, A351 CF8M**
Stem	**A182 F6a, A182 F304, A182 F316**	Spring	**Stainless steel, Inconel**

FEATURES

- Short face-to-face dimensions, 1/4 to 1/8 times those of a traditional flanged check valve
- Compact and lightweight, approximately 1/4 to 1/20 of the volume and weight of a traditional flanged check valve
- Disc closes quickly with reduced water hammer pressure
- Suitable for installation on horizontal or vertical pipelines
- Fluent flow passage with low flow resistance
- Sensitive actuation with good sealing effect
- Short disc travel reduces impact force on valve closing
- Integral structure with clean outline
- Long service life with high reliability

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

CHECK VALVE

API Wafer Type Check Valve

SECTION **Dimensions per size** REF **EFC-427**

SIZE	L	D	D2	D3	D1	NUM BOLTS	BOLT D IN	BOLT D MM	L1 RF	L1 RTJ	WEIGHT
NPS 2 / DN50	60	103	51	56	120.5	4	5/8 in	M16	140	155	2 kg
NPS 2 1/2 / DN65	67	122	65	73	139.5	4	5/8 in	M16	150	165	3 kg
NPS 3 / DN80	73	135	80	88	152.5	4	5/8 in	M16	160	175	4 kg
NPS 4 / DN100	73	173	102	108	190.5	8	5/8 in	M16	170	185	6 kg
NPS 5 / DN125	86	195	127	132	216	8	3/4 in	M20	190	205	8 kg
NPS 6 / DN150	98	220	152	160	241.5	8	3/4 in	M20	205	220	13 kg
NPS 8 / DN200	127	277	203	210	298.5	8	3/4 in	M20	240	255	25 kg
NPS 10 / DN250	146	337	254	266	362	12	7/8 in	M24	270	285	39 kg
NPS 12 / DN300	181	407	305	310	432	12	7/8 in	M24	310	325	54 kg
NPS 14 / DN350	184	448	350	355	476	12	1 in	M27	325	340	80 kg
NPS 16 / DN400	191	512	400	405	540	16	1 in	M27	340	355	117 kg
NPS 18 / DN450	203	547	450	455	578	16	1 1/8 in	M30	365	380	138 kg
NPS 20 / DN500	219	604	500	505	635	20	1 1/8 in	M30	385	400	163 kg
NPS 24 / DN600	222	715	600	605	749.5	20	1 1/4 in	M33	405	420	331 kg
NPS 28 / DN700	305	773	700	700	795.5	40	3/4 in	M20	455	-	380 kg
NPS 30 / DN750	305	824	746	750	846	44	3/4 in	M20	455	-	425 kg
NPS 32 / DN800	305	878	796	800	900	48	3/4 in	M20	460	-	560 kg
NPS 36 / DN900	368	983	898	910	1009.5	44	7/8 in	M24	540	-	640 kg
NPS 42 / DN1050	432	1142	1050	1055	1171.5	48	1 in	M27	625	-	960 kg
NPS 48 / DN1200	524	1302	1200	1205	1335	44	1 1/8 in	M30	740	-	1400 kg
NPS 2 / DN50	60	110	51	58	127	8	5/8 in	M16	155	175	3 kg
NPS 2 1/2 / DN65	67	128	65	73	149	8	3/4 in	M20	175	195	4 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Wafer Type Check Valve

Dimensions per size (continued) · EFC-427

SIZE	L	D	D2	D3	D1	NUM BOLTS	BOLT D IN	BOLT D MM	L1 RF	L1 RTJ	WEIGHT
NPS 3 / DN80	73	147	80	88	168.5	8	3/4 in	M20	190	210	6 kg
NPS 4 / DN100	73	179	102	108	200	8	3/4 in	M20	195	215	8 kg
NPS 5 / DN125	86	214	127	132	235	8	3/4 in	M20	215	235	15 kg
NPS 6 / DN150	98	249	152	160	270	12	3/4 in	M20	230	250	18 kg
NPS 8 / DN200	127	305	203	210	330	12	7/8 in	M24	280	300	31 kg
NPS 10 / DN250	146	359	254	266	387.5	16	1 in	M27	315	335	51 kg
NPS 12 / DN300	181	420	305	310	451	16	1 1/8 in	M30	365	385	77 kg
NPS 14 / DN350	222	483	350	355	514.5	20	1 1/8 in	M30	410	430	117 kg
NPS 16 / DN400	232	537	400	405	571.5	20	1 1/4 in	M33	435	455	190 kg
NPS 18 / DN450	264	594	450	455	628.5	24	1 1/4 in	M33	475	495	200 kg
NPS 20 / DN500	292	652	500	505	686	24	1 1/4 in	M33	510	535	265 kg
NPS 24 / DN600	318	772	600	608	813	24	1 1/2 in	M39	560	585	410 kg
NPS 30 / DN750	368	882	735	740	921	36	1 3/8 in	M36	650	-	660 kg
NPS 36 / DN900	483	1044	873	880	1089	32	1 5/8 in	M42	800	-	1020 kg
NPS 42 / DN1050	568	1196	1035	1045	1244.5	36	1 3/4 in	M45	920	-	1540 kg
NPS 48 / DN1200	629	1365	1179	1190	1416	40	1 7/8 in	M48	1010	-	2260 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

High-performance Butterfly Valve

REF **EFC-24**

SPECIFICATIONS

Size	**DN50 to DN1200**
Pressure	**PN10, Class 150, Class 300**
End connection	**Wafer (ANSI B16.1 / BS 4504 / DIN 2501) / Lug (ANSI B16.1 / BS 4504 / DIN 2501) / Flanged (ANSI B16.1 / BS 4504 / DIN 2501)**
Face-to-face	**DIN 3202, BS EN 558-1, DIN 3202 (Face to Face), BS EN 558-1 (Face to Face)**
Temperature	**-196°C to 300°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**petroleum, petrochemical, natural gas, electric power, water**
Dimensions	**Confirmed at quotation**



ACTUATION

- Pneumatic, ISO 5211 mounting
- Electric, ISO 5211 mounting
- Gas-liquid linkage, ISO 5211 mounting

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

STANDARDS

Design & manufacture	**API 609, MSS SP-67, API 622 (Fugitive Emissions), API 622 (fugitive emissions packing)**
Inspection & test	**API 598, API 598 (Pressure Test), ISO 15848 (Fugitive Emissions), ISO 15848 (fugitive emissions packing)**
Flange & end dimension	**ANSI B16.1 Class 125, BS 4504 PN10/PN16, DIN 2501 PN10/PN16**
Mounting	**ISO 5211, ISO 5211 (Top Flange)**

APPLICATIONS

- Petroleum
- Petrochemical
- Natural gas
- Electric power
- Water conservancy

MATERIALS

Body	**WCB, A351 Gr CF8, A351 Gr CF8M, A351 Gr CF3M**	Disc	**Carbon Steel, A351 Gr CF8, A351 Gr CF8M, A351 Gr CF3M**
Retainer	**Carbon Steel, A351 Gr CF8, A351 Gr CF8M, A351 Gr CF3M**	Seat	**PTFE, PTFE+GLASS FIBRE, PTFE+GRAPHITE, RPTFE**
Bushing	**PTFE+316SS**	Stem	**Carbon Steel, A182 F304, A182 F316, A564 Gr.630, A479 Gr.XM-19**
Pin	**Carbon Steel, A240 Gr.316**	Seal	**PTFE**
Gland Packing	**PTFE, PTFE+GRAPHITE, RPTFE**		

FEATURES

- Double eccentric structure design
- Interchangeable PTFE seats compatible with a variety of working conditions
- Anti-blowout stem design
- Low-leakage carbon fibre bowl-type combined packing structure available for fugitive emission service, meeting ISO 15848 and API 622
- Tangential stem pin is half in the disc and half in the stem; tangential positioning transfers squeeze force rather than shear stress to the connection
- ISO 5211 top flange for mounting pneumatic, electric, and gas-liquid linkage actuators
- Double-flanged butterfly valve with worm gear (handwheel) actuator

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Ventilation Butterfly Valve

REF **EFC-31**

SPECIFICATIONS

Size	**DN100 to DN3600**
Pressure	**Class 150, Class 300**
End connection	**Wafer / Lug**
Temperature	**max 425°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, oil, gas, corrosive media**
Dimensions	**Confirmed at quotation**



APPLICATIONS

- Metallurgy
- Electric power
- Petrochemical
- Water supply and drainage
- Municipal construction

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Carbon steel body/disc, 2Cr13 stem, 304+flexible graphite O ring, flexible graphite packing	CF3M/316L stainless body/disc, 316L stem, 304+PTFE O ring, PTFE packing	CF8/304 stainless body/disc, 304 stem, 304+PTFE O ring, PTFE packing
Stem	2Cr13 (AISI 420)	316L	304
O-Ring	304+Flexible graphite	304+PTFE	304+PTFE
Packing	Flexible graphite	PTFE	PTFE
Body And Disc	WCB	CF3M/316L	CF8/304

These parts are the same for every option above:

Body Disc	**WCB, CF8, CF304, CF3M, CF316L**	Seat	**Stellite, Tungsten carbide, Nickel alloys, Monel, Stainless steel**	Body Alternative	**WCB, Stainless steel, Aluminum bronze**
Body	**WCB, CF8, CF304, CF3M, CF316L**	Disc	**WCB, CF8, CF304, CF3M, CF316L**		

FEATURES

- Three eccentric hard seal structure; seat and disc are near wear-free
- Combines metal hard seal and elastic seal; effective across low and high temperature ranges with corrosion resistance
- Valve disc overlaid with hard-facing material for wear resistance and extended service life
- Rotation range 0° - 90°; fully open at 90°
- Double-flanged body construction
- Cross-ribbed disc design for structural reinforcement
- Worm gearbox actuator fitted

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Metal Seated Eccentric Butterfly Valve

REF **EFC-288**

SPECIFICATIONS

Size	**DN50 to DN600**
Pressure	**Class 150**
End connection	**Flanged (ASME B16.5)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 200°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Crude Oil, Natural Gas, steam, gas, slurry**

ACTUATION

- Pneumatic

STANDARDS

Design & manufacture	**API 609**
Inspection & test	**API 6D, API 598**
Flange & end dimension	**MSS SP-55, MSS SP-25**
Materials	**ASME B16.34**

APPLICATIONS

- Power plants
- Petrochemical facilities
- Heavy industrial environments
- High-temperature pipelines
- High-pressure pipelines
- Abrasive media service





Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A216 Gr. WCB, A216 Gr. WCC, A216 Gr. WCA, A352 Gr. LCB, A352 Gr. LCC, A352 Gr. LC1, A217 Gr. WC6, A217 Gr. WC9, A217 Gr. C5, A217 Gr. C12, A217 Gr. C12A, A351 Gr. CF8, A351 Gr. CF8M, A351 Gr. CF3, A351 Gr. CF3M, A351 Gr. CF8C, CN7M alloy 20, CN3M alloy 20 modified, CT15C, A995 Gr. 4A, A995 Gr. 5A, A995 Gr. CE8MN, A995 Gr. CD6MN, A995 Gr. CD3MN, B148 C95500, B148 C95600, B148 C95800, M30C, M35-1, CZ100, CY40 inconel 600, CW2m Hastelloy C4, N12MV Hastelloy B, CW12MW Hastelloy C276, CU5MCuC Incoloy 825, CW6MC Incoloy 625**

FEATURES

- Triple eccentric / offset disc design minimises wear during operation
- Metal-to-metal seating
- Quarter-turn operation
- Multiple body material options including carbon steel, stainless steel, alloy steel, super duplex, aluminium bronze, Monel, Inconel, Hastelloy, and Incoloy
- Corrosion-resistant coating options
- Triple-offset (triple eccentric) disc geometry
- Flanged body with raised-face flanges
- Gearbox (worm gear) actuator fitted as standard shown
- Multi-level seal packing collar on disc/body seating area
- Clamp-retained seat arrangement
- Separate clamp component securing seat packing collar
- Dimension references: L (face-to-face), DN (nominal bore), D1 (bolt circle diameter), n-M (number and size of flange bolts)
- Metal-to-metal seat

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Metal Seated Eccentric Butterfly Valve

SECTION **Dimensions per size** REF **EFC-288**

SIZE	L	D1	N-M
DN50	43	125	4-M16
DN65	46	145	4-M16
DN80	64	160	8-M16
DN100	64	180	8-M16
DN125	70	210	8-M16
DN150	76	240	8-M20
DN200	89	295	12-M20
DN250	114	355	12-M24
DN300	114	410	12-M24
DN350	127	470	16-M24
DN400	140	525	16-M27
DN450	152	585	20-M27
DN500	152	650	20-M30
DN600	154	770	20-M33

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Triple Eccentric Flange Butterfly Valve

REF **EFC-313**

SPECIFICATIONS

Size	**NPS 16 inch**
Pressure	**Class 150**
End connection	**Flanged (ASME B16.5)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 200°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Crude Oil, Natural Gas**
Dimensions	**Confirmed at quotation**



ACTUATION

- Manual
- Pneumatic
- Electric



STANDARDS

Design & manufacture	**API 609**
Inspection & test	**API 6D, API 598**
Flange & end dimension	**ASME B16.5, MSS SP-55**
Mounting	**MSS SP-25**
Materials	**ASME B16.34**

APPLICATIONS

- Power generation
- Chemical processing
- Marine systems

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**CF8M, A216 Gr. WCB, A216 Gr. WCC, A216 Gr. WCA, A352 Gr. LCB, A352 Gr. LCC, A352 Gr. LC1, A217 Gr. WC6, A217 Gr. WC9, A217 Gr. C5, A217 Gr. C12, A217 Gr. C12A, A351 Gr. CF8, A351 Gr. CF8M, A351 Gr. CF3, A351 Gr. CF3M, A351 Gr. CF8C, CN7M alloy 20, CN3M alloy 20 modified, CT15C, A995 Gr. 4A, A995 Gr. 5A, A995 Gr. CE8MN, A995 Gr. CD6MN, A995 Gr. CD3MN, B148 C95500, B148 C95600, B148 C95800, M30C, M35-1, CZ100, CY40 inconel 600, CW2M Hastelloy C4, N12MV Hastelloy B, CW12MW Hastelloy C276, CU5MCuC Incoloy 825, CW6MC Incoloy 625**	Packing Flange	**WCB**
Stud	**CS**	Washers	**CS**
Bolt Body	**CS**	Connecting Support	**WCB**
Packing	**Flexible Graphite**	Stem	**SS410**
Sealing Ring	**SS304+Graphite**	Bolt Disc	**SS304**
Disc	**CF8**	Pin	**SS304**
Disc Flange	**SS304**	Bushing	**Nitriding**

FEATURES

- Triple offset (triple eccentric) disc geometry
- Reduced friction between disc and seat during operation
- Suitable for both throttling and isolation duty
- Flanged end connection for stable installation in large pipeline systems
- Compatible with manual, pneumatic, or electric actuators
- Triple-offset (triple-eccentric) disc geometry
- Flanged end connections (double-flanged body)
- Worm gear actuator fitted as standard on multiple variants
- Gear operator with handwheel operation
- Extended stem/bonnet arrangement available
- Metal-to-metal seat sealing
- Multiple units shown ganged together indicating batch/manifold configurations

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Triple Eccentric Wafer Butterfly Valve

REF **EFC-315**

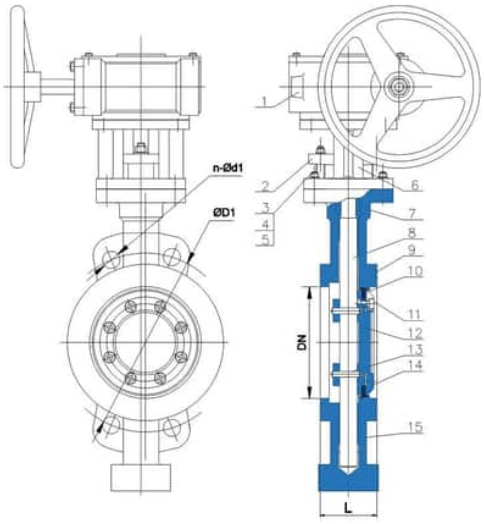
SPECIFICATIONS

Size	**NPS 16**
Pressure	**Class 150**
End connection	**Wafer (ASME B16.5)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 200°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Crude Oil, Natural Gas**
Dimensions	**Confirmed at quotation**



ACTUATION

- Pneumatic
- Manual



STANDARDS

Design & manufacture	**API 609, EN 593**
Inspection & test	**API 6D, API 598**
Flange & end dimension	**MSS SP-55, MSS SP-25, ASME B16.5**
Materials	**ASME B16.34**

APPLICATIONS

- Oil and gas
- Chemical processing
- Energy

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A216 Gr. WCB, A216 Gr. WCC, A216 Gr. WCA, A352 Gr. LCB, A352 Gr. LCC, A352 Gr. LC1, A217 Gr. WC6, A217 Gr. WC9, A217 Gr. C5, A217 Gr. C12, A217 Gr. C12A, A351 Gr. CF8, A351 Gr. CF8M, A351 Gr. CF3, A351 Gr. CF3M, A351 Gr. CF8C, CN7M alloy 20, CN3M alloy 20 modified, CT15C, A995 Gr. 4A, A995 Gr. 5A, A995 Gr. CE8MN, A995 Gr. CD6MN, A995 Gr. CD3MN, B148 C95500, B148 C95600, B148 C95800, M30C, M35-1, CZ100, CY40 inconel 600, CW2M Hastelloy C4, N12MV Hastelloy B, CW12MW Hastelloy C276, CU5MCuC Incoloy 825, CW6MC Incoloy 625**

FEATURES

- Triple offset (triple eccentric) design
- Metal-to-metal sealing
- Reduced seat wear during operation
- Minimal friction during opening and closing
- Wafer-type body for installation between pipeline flanges
- Triple-offset / high-performance butterfly valve body
- Wafer/lug body style with bolt-hole drilling pattern for PN10, PN16 and ANSI 150 flanges
- Gear operator (worm gearbox) actuator fitted as standard in diagram
- Pneumatic actuator with manual override handwheel
- Dimension references: L (face-to-face), D1 (bolt-circle diameter), n-d1 (number and diameter of bolt holes)

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Wafer Butterfly Valve

REF **EFC-459**

SPECIFICATIONS

Size	**NPS 3" to NPS 12"**
Pressure	**200 PSI**
End connection	**Wafer**
Media	**Acetic acid, Brine, Carbon dioxide (wet), Diesel fuel, Cement (dry), Cement (slurry), Drilling mud, Gel water, Hydrofluoric acid, Hydrochloric acid, Sea mud, Xylene**



ACTUATION

- Manual lever
- Pneumatic actuator, ISO 5211 mounting
- Electric actuator, ISO 5211 mounting

STANDARDS

Design & manufacture	**ISO 5211**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**Ductile Iron**	Disc	**Ductile Iron (Nickel Plated), Ductile Iron (Nylon Coated), Aluminium Bronze, SS316, Hastelloy C**
Seat	**EPDM, NBR, CSM, PTFE, FKM**	Stem	**410 SS**
O-Ring	**NBR, FKM**	Retainer Ring	**Steel**

PARTS LIST

Ref	Component	Material	Qty
1	Body	Ductile Iron	**1**
2	Disc	Ductile Iron (Nickel Plated), Ductile Iron (Nylon Coated), Aluminium Bronze, SS316, Hastelloy C	**1**
3	Seat	NBR, EPDM, CSM, PTFE, FKM	**1**
4	Upper Stem	410 Stainless Steel	**1**
5	Lower Stem	410 Stainless Steel	**1**
6	O-Ring	NBR, FKM	**2**
7	Retainer Ring	Steel	**2**

FEATURES

- Ten-position lever handle for precise throttling
- One-piece phenolic-backed controlled-torque elastomer seat for tight shut-off
- Split-stem design self-centres the disc around the seat
- External grease fitting for long-term effortless operation
- Gear, pneumatic or electric actuation available
- Disc and seat grades are selected per medium: see the material selection table, since suitability varies by grade
- Maximum working pressure 200 psi across the size range

ACTUATION TORQUE

Size	200 PSI (13.8 bar) N·m	200 PSI (13.8 bar) in·lb	50 PSI (3.4 bar) N·m	50 PSI (3.4 bar) in·lb
NPS 3" / DN80	**34**	300	**22**	195
NPS 4" / DN100	**51**	450	**31**	270
NPS 6" / DN150	**102**	900	**62**	550
NPS 8" / DN200	**169**	1500	**113**	1000
NPS 10" / DN250	**301**	2660	**203**	1800
NPS 12" / DN300	**508**	4500	**395**	3500

Wet opening torque, indicative. Size the actuator with margin and confirm at quotation. Source values in in·lb shown for reference.

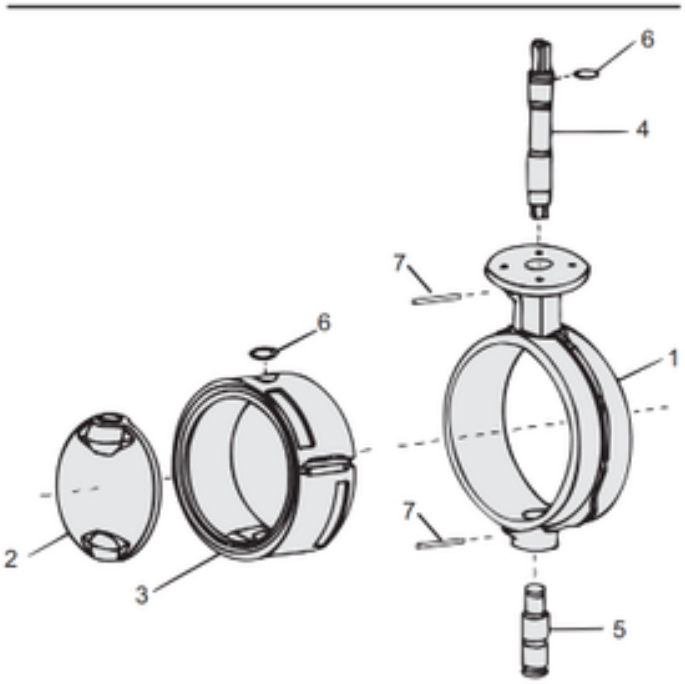
Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Wafer Butterfly Valve

SECTION **Technical drawing 1 of 2** REF **EFC-459**

REF. NO.	COMPONENT DESCRIPTION	MATERIALS AVAILABLE	NO. REQ.
1	Body	Ductile Iron	1
2	Disc	Aluminum Bronze Ductile Iron, Nylon Coated, Stainless Steel, Hastalloy C	1
3	Seat	Buna N, EPDM, Hypalon, Teflon, Viton	1
4	Upper Stem	410 Stainless Steel	1
5	Lower Stem	410 Stainless Steel	1
6	O-Ring	Buna N, Viton	2
7	Retainer Ring	Steel	2

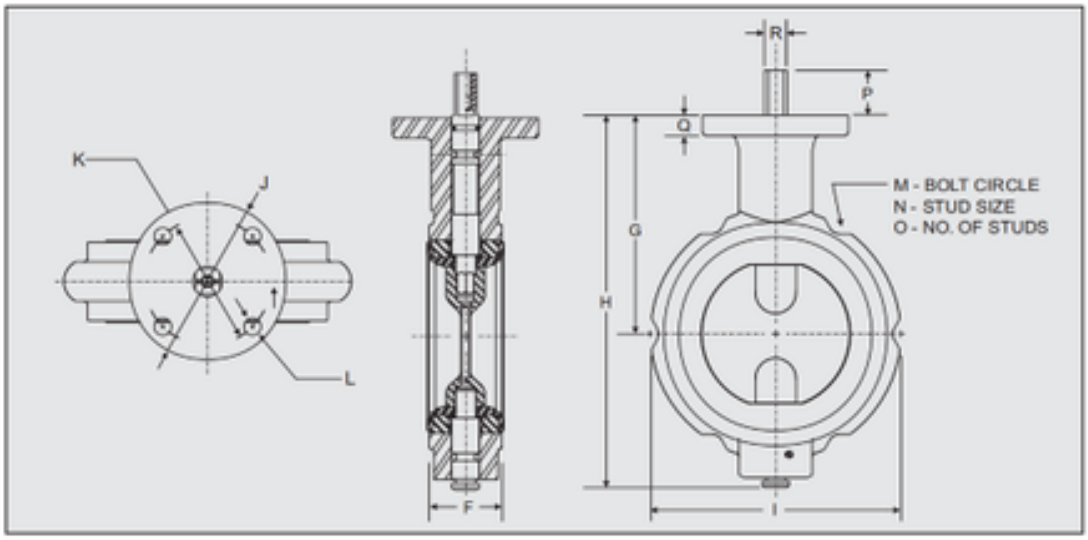


Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

BUTTERFLY VALVE

Wafer Butterfly Valve

SECTION **Technical drawing 2 of 2** REF **EFC-459**



DIMENSIONS (Dimensions in Inches)

VALVE SIZE	F	G	H	I	J	K	L	M	N	O	P	Q	R
3"	1.86	4.88	8.19	5.38	4.00	3.25	0.408	4.91	3/8	6.00	1.00	0.44	0.51
4"	2.11	6.00	9.88	6.88	4.00	3.25	0.408	7.03	1/2	6.00	1.00	0.44	0.63
5"	2.14	6.00	11.10	8.10	4.00	3.25	0.408	8.44	1/2	8.00	1.00	0.55	0.62
6"	2.20	6.50	11.75	8.75	4.00	3.25	0.408	9.16	1/2	8.00	1.25	0.44	0.75
8"	2.40	8.20	14.50	11.00	6.00	5.00	0.533	11.72	5/8	8.00	1.70	0.65	0.87
10"	2.65	9.97	18.00	13.38	6.00	5.00	0.533	13.72	5/8	8.00	1.80	0.56	1.14
12"	3.24	10.91	20.41	16.12	6.00	5.00	0.533	16.62	1/2	12.00	1.38	0.56	1.26

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Wafer Butterfly Valve

Dimensions per size · EFC-459

Dimension	NPS 3" / DN80	NPS 4" / DN100	NPS 5" / DN125	NPS 6" / DN150	NPS 8" / DN200	NPS 10" / DN250	NPS 12" / DN300
Face-to-face (inch)	1.86	2.11	2.14	2.2	2.4	2.65	3.24
Centreline to mounting face (inch)	4.88	6	6	6.5	8.2	9.97	10.91
Overall height (inch)	8.19	9.88	11.1	11.75	14.5	18	20.41
Body diameter/width (inch)	5.38	6.88	8.1	8.75	11	13.38	16.12
Top mounting PCD (inch)	4	4	4	4	6	6	6
Top mounting bolt centres (inch)	3.25	3.25	3.25	3.25	5	5	5
Mounting hole diameter (inch)	0.408	0.408	0.408	0.408	0.533	0.533	0.533
Flange bolt circle (inch)	4.91	7.03	8.44	9.16	11.72	13.72	16.62
Stud size (inch)	3/8	1/2	1/2	1/2	5/8	5/8	1/2
Number of studs	6	6	8	8	8	8	12
Mounting flange thickness (inch)	1	1	1	1.25	1.7	1.8	1.38
Stem projection (inch)	0.44	0.44	0.55	0.44	0.65	0.56	0.56
Stem diameter (inch)	0.51	0.63	0.62	0.75	0.87	1.14	1.26

Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

Wafer Butterfly Valve

Material selection · EFC-459

DISC MATERIAL SELECTION

Medium	Ductile Iron (Nickel Plated)	Ductile Iron (Nylon Coated)	Aluminium Bronze	SS316	Hastelloy C
Acetic Acid	N	G	N	E	E
Brine (Liquid)	N	E	G	E	N
Carbon Dioxide (Wet)	N	E	N	E	N
Diesel Fuel	E	E	E	E	E
Cement (Dry)	N	N	E	N	N
Cement (Slurry)	N	N	E	N	N
Drilling Mud	N	N	E	N	N
Gel Water	N	N	E	N	N
Hydrofluoric Acid	N	G	N	N	E
Hydrochloric Acid	N	G	N	N	E
Sea Mud	N	N	E	N	N
Xylene	G	E	E	E	E

E = Excellent · G = Good · N = Not recommended

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

SEAT MATERIAL SELECTION

Medium	EPDM	NBR	FKM	PTFE
Acetic Acid	N	N	N	E
Brine (Liquid)	E	E	E	E
Carbon Dioxide (Wet)	E	G	E	E
Diesel Fuel	N	E	E	E
Cement (Dry)	G	G	G	N
Cement (Slurry)	G	G	G	N
Drilling Mud	N	G	G	N
Gel Water	N	N	E	N
Hydrofluoric Acid	G	N	G	E
Hydrochloric Acid	E	N	G	E
Sea Mud	N	N	G	N
Xylene	E	E	E	E

E = Excellent · G = Good · N = Not recommended

Indicative material suitability. Confirm final selection for the service medium at quotation.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Forged Steel Gate Valve

REF **EFC-424**

SPECIFICATIONS

Size	**DN15 to DN50**
Pressure	**Class 800, Class 900, Class 1500, Class 2500**
End connection	**Threaded (ASME B1.20.1) / Socket weld (ASME B16.11)**
Face-to-face	**ASME B16.11, ASME B1.20.1**



STANDARDS

Design & manufacture	**API 602**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.34**

MATERIALS

Body	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Stem	**ASTM A182 F6, ASTM A182 F304, ASTM A182 F316**
Gland Flange	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Handwheel	**ASTM A197**
Disc	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Bonnet	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Stem Nut	**ASTM A276 Gr.410**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Forged Steel Gate Valve

SECTION **Dimensions per size** REF **EFC-424**

SIZE	NPS	L	D	H	W	NPT	WEIGHT
DN15	1/2"	79	13	153	100	1/2"	2 kg
DN20	3/4"	92	13	153	100	3/4"	2.2 kg
DN25	1"	111	18	185	125	1"	3.6 kg
DN32	1 1/4"	120	29	222	160	1 1/4"	6.2 kg
DN40	1 1/2"	120	29	240	160	1 1/2"	6.2 kg
DN50	2"	140	36.5	279	180	2"	9.7 kg
DN15	1/2"	92	13	181	125	1/2"	3.5 kg
DN20	3/4"	111	13	181	125	3/4"	4 kg
DN25	1"	120	18	218	160	1"	6 kg
DN32	1 1/4"	120	24	237	160	1 1/4"	7 kg
DN40	1 1/2"	140	29	274	180	1 1/2"	10.8 kg
DN50	2"	160	36.8	319	200	2"	15.5 kg
DN15	1/2"	150	14	284	160	1/2"	10 kg
DN20	3/4"	150	14	284	160	3/4"	12.8 kg
DN25	1"	170	19	327	200	1"	22.5 kg
DN32	1 1/4"	200	25	374	250	1 1/4"	31.7 kg
DN40	1 1/2"	200	28	377	250	1 1/2"	33 kg
DN50	2"	250	35	434	300	2"	38 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Liftcheck Valve

REF **EFC-425**

SPECIFICATIONS

Size	**NPS 1/2 DN15 to NPS 12 DN300**
Pressure	**Class 150, Class 300, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**



MATERIALS

Body	**A216 WCB**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Liftcheck Valve

SECTION **Dimensions per size** REF **EFC-425**

SIZE	L RF	L RTJ	L BW	D	H	WEIGHT
NPS 1/2 DN15	108	119	108	13	76	3 kg
NPS 3/4 DN20	117	130	117	19	76	4 kg
NPS 1 DN25	127	140	127	25	98	5 kg
NPS 1 1/4 DN32	140	153	140	32	102	7 kg
NPS 1 1/2 DN40	165	178	165	38	115	8 kg
NPS 2 DN50	203	216	203	51	140	15 kg
NPS 2 1/2 DN65	216	229	216	64	162	22 kg
NPS 3 DN80	241	254	241	76	168	28 kg
NPS 4 DN100	292	305	292	102	194	42 kg
NPS 5 DN125	356	368	356	127	210	60 kg
NPS 6 DN150	406	419	406	152	226	75 kg
NPS 8 DN200	495	508	495	203	250	118 kg
NPS 10 DN250	622	635	622	254	275	194 kg
NPS 12 DN300	699	711	699	305	332	320 kg
NPS 1/2 DN15	152	162	152	13	78	5 kg
NPS 3/4 DN20	178	191	178	19	82	6 kg
NPS 1 DN25	203	216	203	25	102	8 kg
NPS 1 1/4 DN32	216	229	216	32	106	11 kg
NPS 1 1/2 DN40	229	242	229	38	118	13 kg
NPS 2 DN50	267	283	267	51	140	26 kg
NPS 2 1/2 DN65	292	308	292	64	164	33 kg
NPS 3 DN80	318	333	318	76	178	50 kg
NPS 4 DN100	356	371	356	102	195	86 kg
NPS 5 DN125	400	416	400	127	223	120 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Liftcheck Valve

Dimensions per size (continued) · EFC-425

SIZE	L RF	L RTJ	L BW	D	H	WEIGHT
NPS 6 DN150	445	460	445	152	245	180 kg
NPS 8 DN200	533	549	533	203	280	220 kg
NPS 10 DN250	622	638	622	254	336	310 kg
NPS 12 DN300	711	727	711	305	380	510 kg
NPS 2 DN50	292	295	292	51	152	32 kg
NPS 2 1/2 DN65	330	333	330	64	167	45 kg
NPS 3 DN80	356	359	356	76	178	68 kg
NPS 4 DN100	432	435	432	102	215	98 kg
NPS 5 DN125	508	511	508	125	240	155 kg
NPS 6 DN150	559	562	559	152	279	230 kg
NPS 8 DN200	660	664	660	200	328	300 kg
NPS 2 DN50	368	371	368	48	180	50 kg
NPS 2 1/2 DN65	419	422	419	57	200	65 kg
NPS 3 DN80	381	384	381	73	235	88 kg
NPS 4 DN100	457	460	457	98	270	140 kg
NPS 5 DN125	559	562	559	125	300	210 kg
NPS 6 DN150	610	613	610	146	350	300 kg
NPS 8 DN200	737	740	737	190	400	390 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Forged Steel Check Valve

REF **EFC-426**

SPECIFICATIONS

Size	**DN15 to DN50**
Pressure	**Class 800, Class 900, Class 1500, Class 2500**
End connection	**Threaded (ASME B1.20.1) / Socket weld (ASME B16.11)**

STANDARDS

Design & manufacture	**API 602**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.11, ASME B1.20.1, ASME B16.34**

MATERIALS

Body	**ASTM A105, ASTM A182 F304, ASTM A182 F316**	Disc	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Gasket	**Graphite+SS304, Graphite+SS316**	Bonnet	**ASTM A105, ASTM A182 F304, ASTM A182 F316**
Bolt	**A193 B7, A193 B8**	Nut	**A194 2H, A194 8**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Forged Steel Check Valve

SECTION **Dimensions per size** REF **EFC-426**

SIZE	PISTON L	PISTON D	PISTON HPISTON NPT	SWING L	SWING D	SWING H SWING NPT
DN15	79	10	54.5	1/2"	79	13	54.5	1/2"
DN20	92	13	54.5	3/4"	92	13	54.5	3/4"
DN25	111	17.5	72	1"	111	18	72	1"
DN32	120	23	81	1 1/4"	120	24	81	1 1/4"
DN40	152	28.5	94	1 1/2"	120	29	94	1 1/2"
DN50	172	35	112	2"	140	36.8	112	2"
DN15	92	10	73	1/2"	92	13	73	1/2"
DN20	111	13	73	3/4"	111	13	73	3/4"
DN25	120	17.5	84	1"	120	18	84	1"
DN32	152	23	97	1 1/4"	120	24	97	1 1/4"
DN40	172	28.5	115	1 1/2"	140	29	115	1 1/2"
DN50	220	35	132	2"	160	36.8	132	2"
DN15	150	11	102	1/2"	-	-	-	-
DN20	150	14	102	3/4"	-	-	-	-
DN25	170	19	107	1"	-	-	-	-
DN32	200	25	128	1 1/4"	-	-	-	-
DN40	200	28	128	1 1/2"	-	-	-	-
DN50	250	35	143	2"	-	-	-	-

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Y Pattern Strainer

REF **EFC-428**

SPECIFICATIONS

Size	**DN15 to DN500**
Pressure	**Class 150, Class 300, Class 600**
End connection	**Flanged (ASME B16.5)**

MATERIALS

Body	**ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M**	Screen	**ASTM A182 F304, ASTM A182 F316**
Bonnet	**ASTM A216 WCB, ASTM A351 CF8, ASTM A351 CF8M**	Bonnet Bolt	**ASTM A193 B7, ASTM A193 B8**
Bonnet Nut	**ASTM A194 2H, ASTM A194 8**	Gasket	**Graphite + SS304, Graphite + SS316**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Y Pattern Strainer

SECTION **Dimensions per size** REF **EFC-428**

SIZE	L	H	H1	WEIGHT
DN15	108	67	92	2 kg
DN20	117	73	105	2 kg
DN25	127	87	117	3 kg
DN32	140	100	138	4 kg
DN40	165	120	155	5 kg
DN50	203	145	185	13 kg
DN65	216	170	220	15 kg
DN80	241	190	250	18 kg
DN100	292	245	340	22 kg
DN125	356	290	400	42 kg
DN150	406	325	450	50 kg
DN200	495	370	500	91 kg
DN250	622	455	635	205 kg
DN300	699	525	735	297 kg
DN350	787	610	885	394 kg
DN400	914	800	1160	570 kg
DN450	978	965	1365	680 kg
DN500	978	1100	1550	830 kg
DN15	152	70	95	3 kg
DN20	178	80	110	4 kg
DN25	203	115	135	5 kg
DN32	216	105	142	7 kg
DN40	229	128	155	9 kg
DN50	267	152	184	16 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Y Pattern Strainer

Dimensions per size (continued) · EFC-428

SIZE	L	H	H1	WEIGHT
DN65	292	185	236	20 kg
DN80	318	204	266	24 kg
DN100	356	265	335	30 kg
DN125	400	280	386	50 kg
DN150	444	335	460	70 kg
DN200	559	420	595	115 kg
DN250	622	500	710	270 kg
DN300	711	575	781	380 kg
DN350	838	650	938	520 kg
DN400	914	740	1055	608 kg
DN50	292	210	350	19 kg
DN65	330	-	-	-
DN80	356	260	430	40 kg
DN100	432	-	-	-
DN125	508	310	510	51 kg
DN150	559	385	520	161 kg
DN200	660	455	620	243 kg
DN250	787	505	635	463 kg
DN300	838	660	780	765 kg
DN350	889	720	990	998 kg
DN400	991	840	1120	1230 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Triple Offset Lug Butterfly Valve

REF **EFC-429**

SPECIFICATIONS

Size	**NPS 2 to NPS 48**
Pressure	**Class 150, Class 300**
End connection	**Lug**

ACTUATION

- Pneumatic
- Electric
- Hydraulic



FEATURES

- Available with pneumatic, electric or hydraulic actuators according to customer request and actual valve working condition

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API VALVE

API Triple Offset Lug Butterfly Valve

SECTION **Dimensions per size** REF **EFC-429**

SIZE	L	H1	H2	D	WEIGHT
NPS 2 (DN50)	43	305	105	160	14 kg
NPS 2 1/2 (DN65)	46	315	115	160	15 kg
NPS 3 (DN80)	48	330	125	160	17 kg
NPS 4 (DN100)	54	360	150	160	20 kg
NPS 5 (DN125)	57	450	160	280	27 kg
NPS 6 (DN150)	57	475	185	280	31 kg
NPS 8 (DN200)	64	525	245	280	45 kg
NPS 10 (DN250)	71	540	275	280	86 kg
NPS 12 (DN300)	81	660	315	320	105 kg
NPS 14 (DN350)	92	470	330	350	135 kg
NPS 16 (DN400)	102	730	365	350	150 kg
NPS 18 (DN450)	114	810	390	350	218 kg
NPS 20 (DN500)	127	885	430	400	289 kg
NPS 24 (DN600)	154	940	470	400	407 kg
NPS 26 (DN650)	165	955	490	400	445 kg
NPS 28 (DN700)	165	1050	505	400	470 kg
NPS 30 (DN750)	190	1050	525	450	590 kg
NPS 32 (DN800)	190	1185	580	450	680 kg
NPS 36 (DN900)	203	1205	625	450	900 kg
NPS 40 (DN1000)	216	1260	685	500	1000 kg
NPS 48 (DN1200)	254	1395	790	500	1550 kg
NPS 2 (DN50)	43	315	115	160	19 kg
NPS 2 1/2 (DN65)	46	325	125	160	22 kg
NPS 3 (DN80)	48	340	140	160	35 kg

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

API Triple Offset Lug Butterfly Valve

Dimensions per size (continued) · EFC-429

SIZE	L	H1	H2	D	WEIGHT
NPS 4 (DN100)	54	440	150	280	30 kg
NPS 5 (DN125)	57	480	180	280	41 kg
NPS 6 (DN150)	59	515	220	280	47 kg
NPS 8 (DN200)	73	530	250	280	68 kg
NPS 10 (DN250)	83	640	300	350	130 kg
NPS 12 (DN300)	92	685	335	350	158 kg
NPS 14 (DN350)	117	780	375	350	216 kg
NPS 16 (DN400)	133	830	380	400	225 kg
NPS 18 (DN450)	149	915	420	400	327 kg
NPS 20 (DN500)	159	985	475	400	434 kg
NPS 24 (DN600)	181	1085	540	450	610 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GLOBE VALVE

Bellows Sealed Globe Valve

REF **EFC-13**

SPECIFICATIONS

Size	**DN15 to DN400**
Pressure	**PN16, PN25, PN40, PN64**
End connection	**Flanged (DIN 2543-2545)**
Face-to-face	**DIN 3202**
Temperature	**-29°C to 425°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**Water, Oil, Gas**
Dimensions	**Confirmed at quotation**



STANDARDS

Inspection & test	**DIN 3230**
Flange & end dimension	**DIN 2543-2545**

APPLICATIONS

- Municipal construction
- Power
- Medicine
- Petroleum industry

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Carbon steel body, 13Cr stem, 2Cr13 disc/seat	CF3 body, 316 stem, 304L disc/seat	CF3M body, 316 stem, 316L disc/seat	CF8 body, 304 stem, 304 disc/seat	CF8M body, 316 stem, 316 disc/seat
Body	WCB	CF3	CF3M	CF8	CF8M
Bonnet	WCB	CF3	CF3M	CF8	CF8M
Stem	13Cr	316	316	304	316
Disc	2Cr13 (AISI 420)	304L	316L	304	316
Seat	2Cr13 (AISI 420) / STL	304L / STL	316L / STL	304 / STL	316 / STL
Packing	Flexible graphite	Flexible graphite / PTFE	Flexible graphite / PTFE	Flexible graphite / PTFE	Flexible graphite / PTFE

FEATURES

- Simple structure
- Stem nut surface nitriding to improve surface hardness
- Medium flange bolts made of high-strength alloy steel with resistance to high temperatures
- Bellows located in inner cavity of valve bonnet to avoid direct media contact, extending bellows service life
- Bellows uses 2-4 layer overlap construction to prevent leakage from single-layer bellows damage and extend service life
- Flanged end connections
- Handwheel operated
- Rising stem with external thread
- Bolted bonnet construction

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GLOBE VALVE

Forged Steel Globe Valve

REF **EFC-22**

SPECIFICATIONS

Size	**NPS 3/4" to NPS 2"**
Pressure	**Class 150, Class 300, Class 600, Class 900, Class 1500, Class 2500**
End connection	**Flanged (ASME B16.5) / Socket weld (ASME B16.11) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10**
Temperature	**-29°C to 500°C**
	Range across the material options offered. The limit of a given build follows its grade.
Media	**water, steam, oil, gas**
Dimensions	**Confirmed at quotation**

STANDARDS

Design & manufacture	**API 602**
Inspection & test	**API 598**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A105, A182 F22, A182 F304(L), A182 F316(L)**	Seat	**A276 420, A276 304, A276 304(L), A276 316(L)**
Disc	**A182 F430&410, A182 F304, A182 F304(L), A182 F316(L)**	Stem	**A182 F6, A182 F304, A182 F304(L), A182 F316(L)**
Gland Packing	**A276 410, A182 F304(L), A182 F316(L)**		

FEATURES

- Smooth flow channel with low flow coefficient; sealing surface resistant to medium erosion and abrasion.
- Sealing surface constructed from alloy steel or hard alloy for wear and scratch resistance.
- Flexible graphite packing used for stem sealing.
- Gland packing can be replaced with the valve isolated and depressurised
- Flanged end connections
- Handwheel operator
- Bolted bonnet construction
- Gland packing assembly with gland followers and nuts
- Globe valve body pattern

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GLOBE VALVE

API Forged Steel Globe Valve

REF **EFC-223**

SPECIFICATIONS

Size	**NPS 1/2" to NPS 3"**
Pressure	**Class 150, Class 300, Class 600, Class 800, Class 900, Class 1500, Class 2500**
End connection	**Socket weld (ASME B16.11) / Threaded (ASME B1.20.1)**

ACTUATION

- Manual handwheel

STANDARDS

Design & manufacture	**API 602**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.11, ASME B1.20.1, ASME B16.34**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**ASTM A105, ASTM A182F304, ASTM A182F316**	Disc	**ASTM A105, ASTM A182F304, ASTM A182F316**
Stem	**ASTM A182F6, ASTM A182F304, ASTM A182F316**	Bonnet	**ASTM A105, ASTM A182F304, ASTM A182F316**
Gland Flange	**ASTM A105, ASTM A182F304, ASTM A182F316**	Stem Nut	**ASTM A276410**
Handwheel	**ASTM A197**		

FEATURES

- Available in welded bonnet and bolted bonnet configurations
- Socket-welding and threaded end connection options
- Three material options: carbon steel (A105), F304 stainless steel, F316 stainless steel

PRESSURE-TEMPERATURE RATING

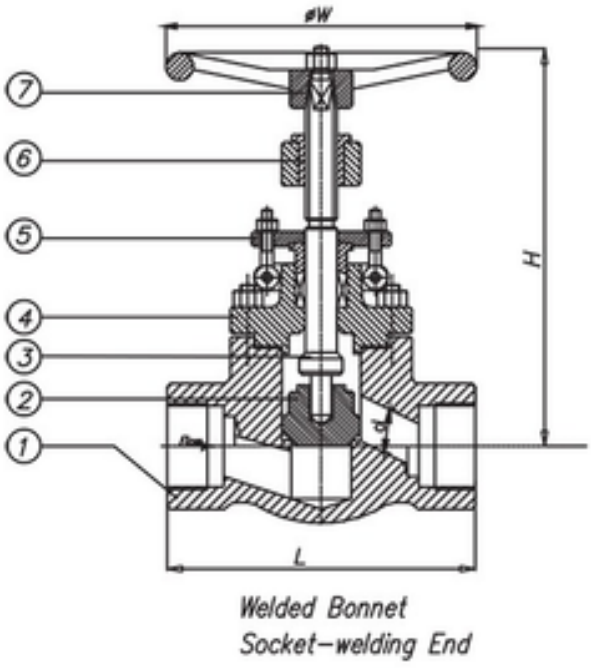
CLASS	TEMPERATURE	MAX PRESSURE
Class 150	°C	bar
Class 900	°C	bar
Class 1500	°C	bar
Class 2500	°C	bar

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

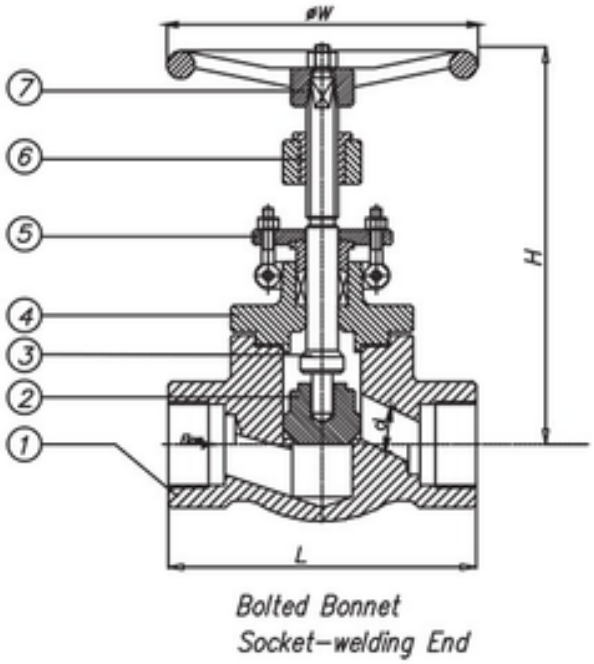
GLOBE VALVE

API Forged Steel Globe Valve

SECTION **Technical drawing 1** REF **EFC-223**



Welded Bonnet
Socket–welding End



Bolted Bonnet
Socket–welding End

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

GLOBE VALVE

API Forged Steel Globe Valve

SECTION **Dimensions per size** REF **EFC-223**

SIZE	L	D	H	W	WEIGHT
NPS 1/2" (DN15) Class 150-800	79	10	158	100	2.0 kg
NPS 3/4" (DN20) Class 150-800	92	13	158	100	2.2 kg
NPS 1" (DN25) Class 150-800	111	17.5	192	125	2.5 kg
NPS 1 1/4" (DN32) Class 150-800	120	23	227	160	5.5 kg
NPS 1 1/2" (DN40) Class 150-800	152	28.5	240	160	7.0 kg
NPS 2" (DN50) Class 150-800	172	35	279	180	11.5 kg
NPS 1/2" (DN15) Class 900-1500	92	10	187	125	3.5 kg
NPS 3/4" (DN20) Class 900-1500	111	13	187	125	4.0 kg
NPS 1" (DN25) Class 900-1500	120	17.5	227	160	6.3 kg
NPS 1 1/4" (DN32) Class 900-1500	152	23	242	160	8.0 kg
NPS 1 1/2" (DN40) Class 900-1500	172	28.5	278	180	12.5 kg
NPS 2" (DN50) Class 900-1500	220	35	325	200	19.5 kg
NPS 1/2" (DN15) Class 2500	150	11	293	160	10.8 kg
NPS 3/4" (DN20) Class 2500	150	11	293	160	12.0 kg
NPS 1" (DN25) Class 2500	170	14	344	200	13.5 kg
NPS 1 1/4" (DN32) Class 2500	200	16	383	250	18.5 kg
NPS 1 1/2" (DN40) Class 2500	200	25	383	250	22.0 kg
NPS 2" (DN50) Class 2500	250	28	442	300	37.0 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

KNIFE GATE VALVE

KNIFE GATE VALVE

REF **EFC-25**

SPECIFICATIONS

Size	**DN50 to DN800**
Pressure	**PN10, PN16**
End connection	**Wafer / Flanged**
Media	**cement slurry, pulp, wood pulp, slag, cinder, slime, tailings, dust, fibre, chemically treated sewage, sedimentation tank media, asphalt, silo outlet media, fruit, grain, slaughterhouse wastewater, oil, water, steam**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handwheel
- Electric
- Pneumatic

APPLICATIONS

- coal preparation
- slag discharge
- urban sewage treatment
- food processing
- papermaking
- pharmaceutical
- petroleum
- chemical
- mining power plants

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Carbon steel body build	Stainless steel body build (SS304 stem)	Stainless steel body build (ZG1Cr18Ni9Ti stem)
Body	WCB	SS304	SS304
Stem	WCB	SS304	ZG1Cr18Ni9Ti
Sealing	2Cr13 (AISI 420)	0Cr18Ni9 (304)	0Cr18Ni9 (304)
Packing	V-shape PTFE	—	—

This part is the same for every option above:

Seat	**PTFE**

FEATURES

- Low fluid resistance; sealing surface subject to minimal medium erosion
- Gate incorporates shear function to scrape sticky matter from sealing surfaces and remove debris
- Stainless steel gate prevents seal leakage caused by corrosion
- Flow direction not restricted; no pressure disturbance or reduction
- Short structural length
- Simple form
- Rising stem with exposed leadscrew
- Gear handwheel operator
- Twin stainless steel guide columns/tie rods
- Lug-type body (through-bolt holes around flange perimeter)

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

KNIFE GATE VALVE

Knife Gate Valve

REF **EFC-335**

SPECIFICATIONS

Size	**DN50 to DN3000**
Pressure	**PN10, PN16**
End connection	**Wafer (BS) / Wafer (DIN) / Lug (DIN) / Flanged (DIN) / Wafer (ASME) / Wafer (JIS)**
Media	**coal, slag, sewage, paper pulp, pharmaceutical media, petroleum, chemicals, water, oil, steam, grout, gold powder, ores, coal, wood pulp, tailings, fibres, dust, asphalt, fruit juices, cereals, slaughter plant waste**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handwheel
- Gear box
- Electric actuator
- Pneumatic actuator
- Hydraulic actuator
- Sprocket
- Electrohydraulic actuator
- Gear

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

STANDARDS

Design & manufacture	**MSS SP-81**
Inspection & test	**API-598**
Flange & end dimension	**DIN PN10, DIN PN16, JIS 10K**
Other standards	**BS PN10/PN16, 150LB, TABLE E/D**

APPLICATIONS

- Power plant coal handling
- Slag discharge
- Sewage treatment
- Food processing
- Paper making
- Pharmaceutical industry
- Petroleum and chemical industry
- Water supply
- Oil pipelines
- Steam service
- Grout cutting and connecting
- Mining (gold powder, ores, tailings)
- Pulp and wood pulp handling
- Dust handling
- Sedimentation tanks
- Asphalt handling
- Grain and cereal handling
- Slaughter plant waste

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIAL VARIANTS

Each option is a coherent material set: selecting one fixes the grade of every part below. Confirm the exact set with your enquiry.

Part	Bi-directional seal	Unidirectional seal
Body Bi Directional	GGG40	—
Wedge Bi Directional	SS316L / SS304	—
Seal	EPDM	EPDM / NBR / FKM
Packing	Aramid fiber / High-water-based rubber packing / Graphite wheel	High-water-based rubber packing / Graphite wheel
Body Unidirectional	—	F55 / F53 / 2205 / SS310 / CF3M / CF3 / CF8M / CF8 / WCB / GGG40
Knife Unidirectional	—	F55 / F53 / 2205 / SS310 / SS316L / SS316 / SS304

FEATURES

- Bi-directional seal variant available
- Unidirectional seal variant available
- 1PC body design (bi-directional variant)
- Full port design (bi-directional variant)
- Reduced fluid retention in valve body (bi-directional variant)
- 2PC strong yoke design (bi-directional variant)
- Mixed variety of packing materials
- Additional bonnet design (unidirectional variant)
- High-pressure rating available on request (unidirectional variant)
- Gate isolated from environment to prevent corrosion (unidirectional variant)
- U-shaped flexible seal without grooves prevents sediment retention (bi-directional variant)
- Sealing by knife edge pressing wedge block combined with seat seal (unidirectional variant)

SUPPLIER REMARKS

• High pressure as request (unidirectional variant)

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PRESSURE-TEMPERATURE RATING

CLASS	TEMPERATURE	MAX PRESSURE
—		16bar
—		14bar
—		12bar
—		10bar
—		8bar
—		5bar
—		4bar
—		3bar
—		2bar
—		10bar
—		16bar
—		8bar
—		6bar
—		5bar
—		3bar
—		2bar
—		10bar

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Sleeve Type Soft Sealing Plug Valve

REF **EFC-233**

SPECIFICATIONS

Size	**NPS 1/2 to NPS 14**
Pressure	**Class 150, Class 300**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10, API 6D**

ACTUATION

- Worm gear (handwheel)

STANDARDS

Design & manufacture	**API 599, API 6D**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.25, ASME B16.5**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A216 WCB, A352 LCB, A217 WCI, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M**	Sleeve	**PTFE**
Plug	**A182 F6a, A182 F304, A182 F316, A182 F304L, A182 F316L**	Bonnet	**A216 WCB, A352 LCB, A217 WCI, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M**
Gasket	**Flexible Graphite+SS, PTFE**	Adjusting Gasket	**A182 F6a, A182 F304, A182 F316, A182 F304L, A182 F316L**
Adjusting Bolt	**A193 B7, A320 L7, A193 B16, A193 B8**	Bolt	**A193 B7, A320 L7, A193 B16, A193 B8**
Nut	**A194 2H, A194 4, A194 8**	Yoke	**A216 WCB, A351 CF8**
Worm	**Cast iron or Carbon Steel**		

FEATURES

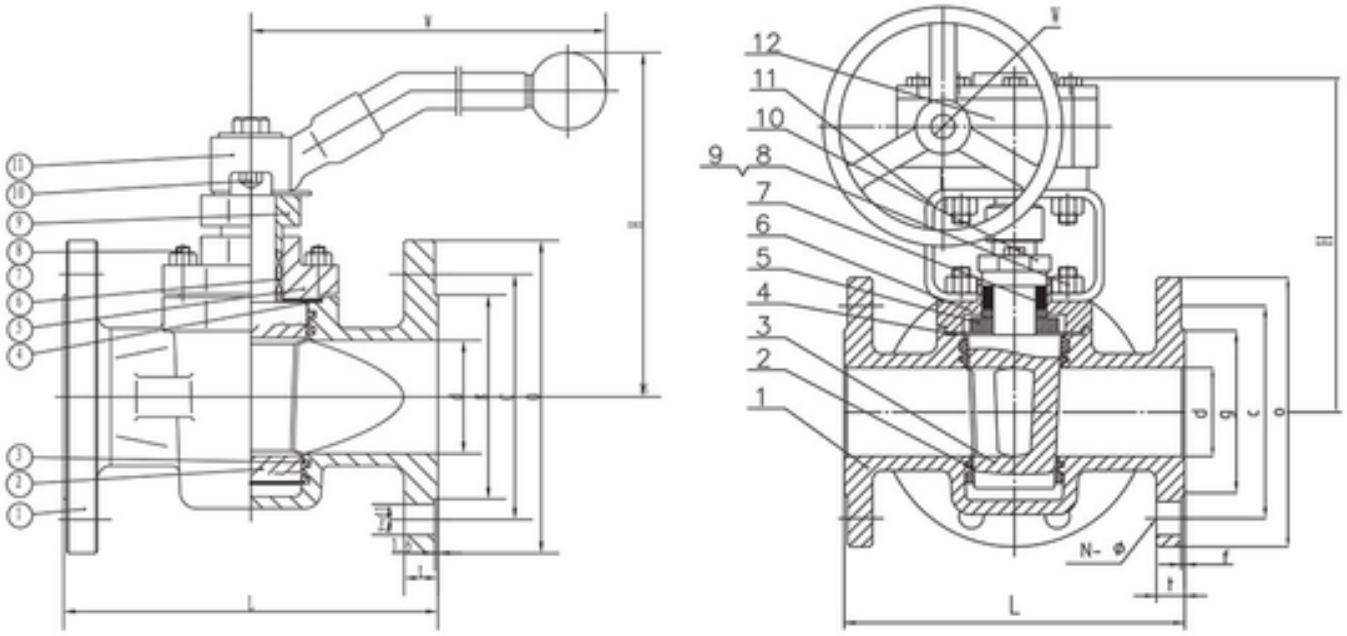
- PTFE sleeve provides soft sealing for the plug
- Adjustable gland arrangement with adjusting gasket and adjusting bolt
- Worm gear operator with yoke for larger sizes
- Available in carbon steel, alloy steel, and stainless steel material configurations
- Flexible graphite + SS or PTFE gasket options
- Flanged and butt-welding end connection options

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Sleeve Type Soft Sealing Plug Valve

SECTION **Technical drawing 1** REF **EFC-233**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Sleeve Type Soft Sealing Plug Valve

SECTION **Dimensions per size** REF **EFC-233**

SIZE	L C150	D C150	H C150	DO C150	L C300	D C300	H C300	DO C300	C300 KG	WEIGHT
NPS 1/2 (DN15)	108	13	110	175	140	13	110	175	9.5 kg	8.5 kg
NPS 3/4 (DN20)	117	19	115	175	152	19	115	175	10.5 kg	9.5 kg
NPS 1 (DN25)	127	25	115	175	165	25	115	175	12 kg	10.5 kg
NPS 1 1/4 (DN32)	140	32	135	220	178	32	135	220	14 kg	12 kg
NPS 1 1/2 (DN40)	165	38	140	280	190	38	140	280	16 kg	14 kg
NPS 2 (DN50)	178	49	150	305	216	49	150	305	20 kg	18 kg
NPS 2 1/2 (DN65)	190	62	165	350	241	62	165	350	24 kg	22 kg
NPS 3 (DN80)	203	74	180	405	283	74	180	405	29 kg	26 kg
NPS 4 (DN100)	229	100	380	300	305	100	380	300	53 kg	40 kg
NPS 5 (DN125)	254	127	460	300	381	127	460	300	75 kg	60 kg
NPS 6 (DN150)	267	150	520	320	403	150	520	320	85 kg	70 kg
NPS 8 (DN200)	292	201	580	320	419	201	580	320	185 kg	130 kg
NPS 10 (DN250)	330	252	620	350	457	252	620	350	230 kg	219 kg
NPS 12 (DN300)	356	303	680	380	502	303	680	380	390 kg	381 kg
NPS 14 (DN350)	381	334	760	450	762	334	760	450	550 kg	570 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Lubricated Plug Valve

REF **EFC-234**

SPECIFICATIONS

Size	**NPS 1/2 to NPS 14**
Pressure	**Class 150, Class 300**
End connection	**Flanged (ASME B16.5) / Butt weld (ASME B16.25)**
Face-to-face	**ASME B16.10, API 6D**

ACTUATION

- Manual handwheel
- Gear operator

STANDARDS

Design & manufacture	**API 599, API 6D**
Inspection & test	**API 598**
Flange & end dimension	**ASME B16.25 (butt welding end), ASME B16.5**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**A216 WCB, A352 LCB, A217 WCI, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M**	Cover	**A216 WCB, A352 LCB, A217 WCI, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M**
Gasket	**Flexible Graphite+SS, PTFE**	Plug	**A182 F6a, A182 F304, A182 F316, A182 F304L, A182 F316L**
Stem	**A182 F6a, A182 F304, A182 F316, A182 F304L, A182 F316L**	O-Ring	**NBR, FKM**
Packing	**Flexible Graphite+SS, PTFE**	Gland	**A216 WCB, A352 LCB, A217 WCI, A217 WC6, A217 WC9, A217 C5, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M**
Bolt	**A193 B7, A320 L7, A193 B16, A193 B8**	Nut	**A194 2H, A194 4, A194 8**
Check Valve	**SS**	Nozzle	**SS**
Wrench	**Ductile Iron, Carbon Steel**		

FEATURES

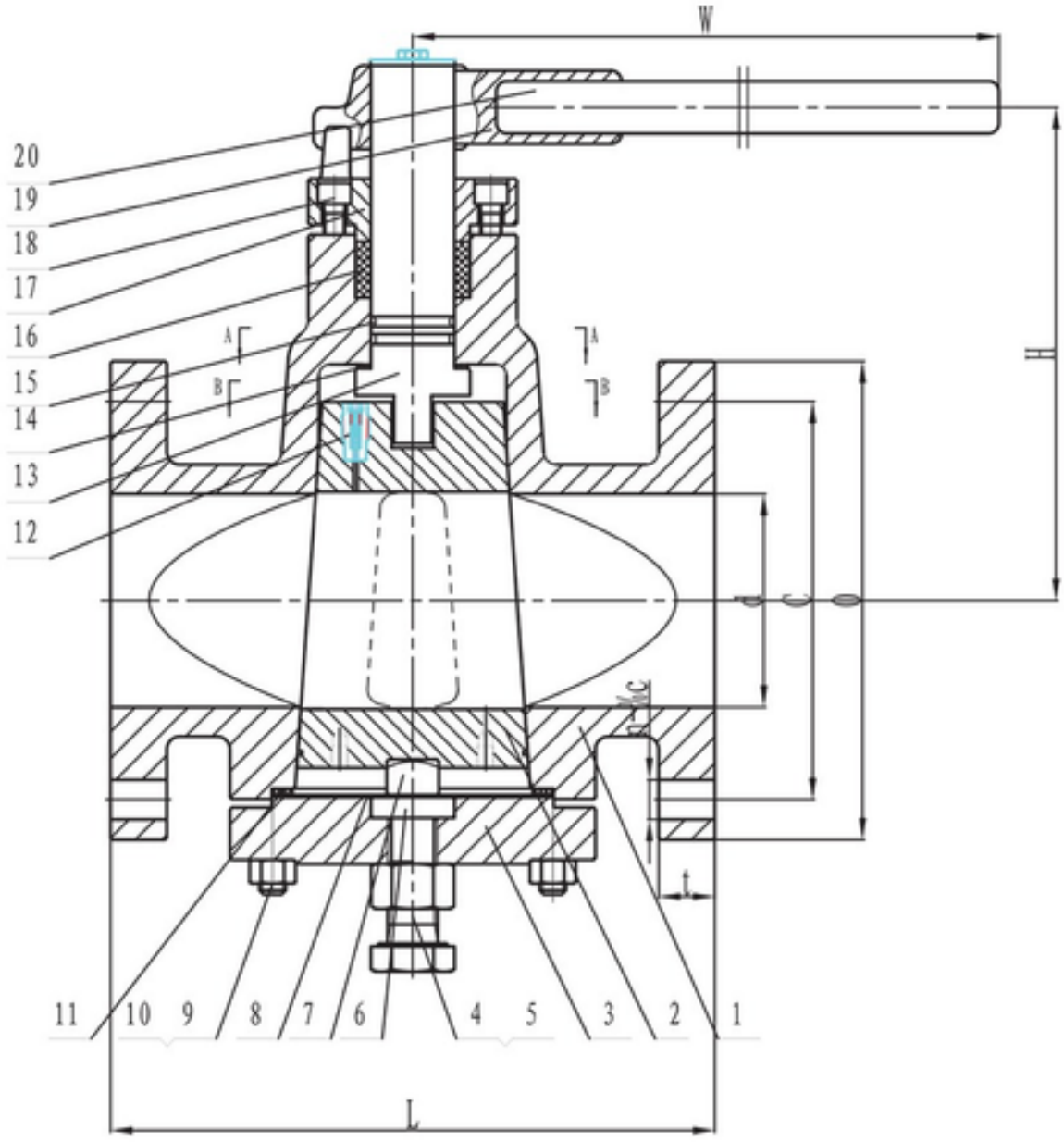
- Inverted pressure-balance construction
- Lubricated plug design
- Tapered plug element
- Check valve incorporated for lubrication retention
- Available in carbon steel, alloy steel, and stainless steel material configurations

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Lubricated Plug Valve

SECTION **Technical drawing 1** REF **EFC-234**



Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

PLUG VALVE

API Lubricated Plug Valve

SECTION **Dimensions per size** REF **EFC-234**

SIZE	L C150	D C150	H C150	W C150	L C300	D C300	H C300	W C300	C300 KG	WEIGHT
NPS 1/2 (DN15)	108	13	180	400	140	13	180	400	12 kg	10 kg
NPS 3/4 (DN20)	117	19	180	400	152	19	180	400	14 kg	12 kg
NPS 1 (DN25)	127	25	185	500	165	25	185	500	16 kg	14 kg
NPS 1 1/4 (DN32)	140	32	200	500	178	32	200	600	19 kg	17 kg
NPS 1 1/2 (DN40)	165	38	214	600	190	38	210	600	21 kg	19 kg
NPS 2 (DN50)	178	49	215	600	216	49	215	820	24 kg	21 kg
NPS 2 1/2 (DN65)	190	62	250	820	241	62	250	1000	31 kg	29 kg
NPS 3 (DN80)	203	74	270	820	283	74	270	1000	36 kg	33 kg
NPS 4 (DN100)	229	100	300	300	305	100	300	300	61 kg	48 kg
NPS 5 (DN125)	254	127	340	300	381	127	340	300	86 kg	75 kg
NPS 6 (DN150)	267	150	365	320	403	150	365	320	130 kg	98 kg
NPS 8 (DN200)	292	201	400	320	419	201	400	320	190 kg	125 kg
NPS 10 (DN250)	330	252	450	350	457	252	450	350	255 kg	171 kg
NPS 12 (DN300)	356	303	510	380	502	303	510	380	380 kg	230 kg
NPS 14 (DN350)	381	334	590	380	762	334	590	380	560 kg	370 kg

Dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

TRUNNION MOUNTED BALL VALVE

2-PC Trunnion Ball Valve

REF **EFC-528**

SPECIFICATIONS

Size	**NPS 1" to NPS 60"**
Pressure	**Class 150, Class 300, Class 400, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47) / Butt weld (ASME B16.25)**
Face-to-face	**API 6D**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handle
- Worm gear
- Electric
- Pneumatic
- Pneumatic-hydraulic
- Electro-hydraulic

STANDARDS

Design & manufacture	**API 6D**
Inspection & test	**API 6D, API 607, API 6FA**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.25**
Materials	**ASME B16.34**
Other standards	**ASME B31.8**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, LCB, WCC, CF8, CF8M, CF3, CF3M, A890 4A**	Seat	**PTFE, RPTFE, NYLON, Acetal, PEEK, PPL, HNBR, FKM, Metal Hard Seal**

FEATURES

- Two-piece body construction
- Trunnion-mounted ball for reduced operating torque on larger sizes
- Soft seat or metal hard seat options
- Fire-safe design tested to API 607 and API 6FA
- Wall thickness to ASME B16.34
- Structure length to API 6D; non-standard lengths to BTL or customer specification

SUPPLIER REMARKS

• For products beyond the scope of the standard, manufactured to BTL standard or user requirements.

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

TRUNNION MOUNTED BALL VALVE

2-PC Trunnion Ball Valve

REF **EFC-530**

SPECIFICATIONS

Size	**NPS 1" to NPS 60"**
Pressure	**Class 150, Class 300, Class 400, Class 600, Class 900**
End connection	**Flanged (ASME B16.5) / Flanged (ASME B16.47) / Butt weld (ASME B16.25)**
Face-to-face	**API 6D**
Dimensions	**Confirmed at quotation**



ACTUATION

- Handle
- Worm gear
- Electric
- Pneumatic
- Pneumatic-hydraulic
- Electro-hydraulic



STANDARDS

Design & manufacture	**API 6D**
Inspection & test	**API 6D, API 607, API 6FA**
Flange & end dimension	**ASME B16.5, ASME B16.47, ASME B16.25**
Materials	**ASME B16.34**
Other standards	**ASME B31.8**

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

MATERIALS

Body	**WCB, LCB, WCC, CF8, CF8M, CF3, CF3M, A890 4A**	Seat	**PTFE, RPTFE, NYLON, Acetal, PEEK, PPL, HNBR, FKM, Metal Hard Seal**

FEATURES

- Two-piece body construction
- Trunnion-mounted ball design
- Soft seat and metal hard seat options
- Fire-safe design tested to API 607 and API 6FA
- Wall thickness per ASME B16.34
- Pressure and temperature rating per ASME B16.34
- Products beyond standard scope manufactured to BTL standard or user requirements

Install, operate and maintain in accordance with the manufacturer's manual supplied with the product.

REFERENCE

Standards, certification & terms

OUR RANGE

This catalogue shows a representative selection of the range. Valves are configurable: size, pressure rating, materials and end connections can be specified to your project. Items not shown can be supplied to specification on request.

STANDARDS & CERTIFICATION

Products are manufactured to the standards listed against each item. Material and test certificates (EN 10204 3.1) are provided as standard. Approvals such as PED, ATEX, fire-safe (API 607 / 6FA) or marine classification are confirmed at quotation and supplied to project requirements.

TERMS

Specifications shown are indicative and confirmed at quotation. Dimensions, materials and ratings are subject to confirmation against the supplier datasheet for the configured item, and subject to change without notice. This catalogue does not constitute an offer.

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NEXT STEP

How to enquire

Submit your requirement in whichever format is convenient. Each enquiry is reviewed and answered with a quotation.

1 **Submit a product specification or valve schedule**
Email a product specification, drawing, valve schedule or any combination of these (PDF, Word or Excel); each line is matched to the range.

2 **Describe your requirement**
Provide the duty, size, pressure and material, together with any supporting documents.

3 **Enquire online**
Submit a request at euroflowcontrol.com/en/applications/oil-gas.

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We acknowledge every enquiry within one business day.

Indice per codice

Riferimenti prodotto originali

EFC-2	API Gate Valve	**36**
EFC-6	API Check Valve	**57**
EFC-9	API Floating Ball Valve	**6**
EFC-13	Bellows Sealed Globe Valve	**105**
EFC-14	Cast Steel Floating Ball Valve	**9**
EFC-15	Cast Steel Gate Valve	**41**
EFC-17	Cast Steel Trunnion Mounted Ball Valve	**11**
EFC-19	Forged Steel Check Valve	**61**
EFC-21	Forged Steel Gate Valve	**43**
EFC-22	Forged Steel Globe Valve	**107**
EFC-23	Fully Welded Ball Valve	**13**
EFC-24	High-performance Butterfly Valve	**74**
EFC-25	KNIFE GATE VALVE	**113**
EFC-26	Lug Type Double Plate Check Valve	**63**
EFC-28	Stainless Steel Gate Valve	**45**
EFC-30	Swing Check Valve	**64**
EFC-31	Ventilation Butterfly Valve	**76**
EFC-32	Wafer Lifting Check Valve	**66**
EFC-42	Female thread hydraulic ball valve	**15**
EFC-214	API Gate Valve	**47**
EFC-215	API Gate Valve	**51**
EFC-217	API Floating Ball Valve	**17**

Indice per codice

Riferimenti prodotto originali

EFC-218	API Trunnion Ball Valve	**24**
EFC-223	API Forged Steel Globe Valve	**109**
EFC-224	API Swing Check Valve	**68**
EFC-233	API Sleeve Type Soft Sealing Plug Valve	**119**
EFC-234	API Lubricated Plug Valve	**123**
EFC-288	Metal Seated Eccentric Butterfly Valve	**78**
EFC-313	Triple Eccentric Flange Butterfly Valve	**81**
EFC-315	Triple Eccentric Wafer Butterfly Valve	**83**
EFC-335	Knife Gate Valve	**115**
EFC-424	API Forged Steel Gate Valve	**92**
EFC-425	API Liftcheck Valve	**94**
EFC-426	API Forged Steel Check Valve	**97**
EFC-427	API Wafer Type Check Valve	**71**
EFC-428	API Y Pattern Strainer	**99**
EFC-429	API Triple Offset Lug Butterfly Valve	**102**
EFC-459	Wafer Butterfly Valve	**85**
EFC-521	High Pressure Gate Valve	**55**
EFC-522	Forged Steel Trunnion Mounted Ball Valve	**30**
EFC-527	2-PC Ball Valve	**32**
EFC-528	2-PC Trunnion Ball Valve	**127**
EFC-529	2-PC Ball Valve	**34**
EFC-530	2-PC Trunnion Ball Valve	**129**

Riferimenti del catalogo

DOCUMENTAZIONE DI ORIGINE

Le schede tecniche provengono dal documento fornito:

“Oil & Gas Valves”, Euro Flow Control, emesso il 23 settembre 2026.

EAP Global Limited, trading as Euro Flow Control.

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DATI TECNICI E CONFIGURAZIONI

I codici EFC identificano i prodotti della documentazione originale.

Le specifiche sono indicative e soggette a conferma in offerta.

Dimensioni, materiali, classi e certificazioni vanno confermati

per la configurazione richiesta, secondo le condizioni riportate

nel documento originale a pagina 131.

LETTURA DELLE SCHEDE

Testi, tabelle, immagini e disegni tecnici sono conservati in inglese.

Le schede mantengono la sequenza del documento di origine.

Il sommario e l’indice rimandano alla prima pagina di ogni prodotto.

OIL & GAS

Catalogo tecnico

ITALIANA VALVOLE INDUSTRIALI