

Catalog VANERO



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FLOATING BALL VALVE



FLOATING BALL VALVE



Floating Ball Valve

- (1)Size: NPS 2 ~ NPS 8、 DN50 ~ DN200
- (2)Pressure: Class150 ~ Class600、 PN16 ~ PN64
- (3)Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy
- (4)Actuation: Handwheel. Gear Operator, Electric Operator, Pneumatic Operator
- (5)Application: for petroleum, natural gas, petro-chemical industries.

Design and Manufacturing

API 6D、 API 608、 BS 5351, GOST, GB

Flange Dimesions

ASME B 16.5, GOST, GB

Main Materials

A216 WCB、 WCC; A217
WC6、 WC9、 C5、 C12、 C12A、 CA15; A351
CF8、 CF8M、 CF3、 CF3M、 CF8C、 A352 LCB、 LCC;
20Л,20ГЛ, 12X18H9ТЛ, 12X18H12M3ТЛ, A105, F304,
F316, F321,etc.

Face to Face

ASME B 16.10, GOST, GB

Inspection and Test

API 598、 API 6D, GOST, GB

Features

- (1) Reliable seat design. (2) Fire-safe construction (3) complete sealing and anti-blowout stem. (4) Anti-static design. (5) Optional locking device to prevent from wrong operation. (6) Solid ball.

Main Parts And Materials

No	Part	Carbon Steel	Low Temperature Steel	Stainless Steel
1	Body	ASTM A216-WCB	ASTM A352-LCB/LCC/20ГЛ	ASTM A351-CF8/CF8M/ 12X18H9ТЛ / 12X18H12M3ТЛ
2	Gasket	304+GRAPHITE	304+GRAPHITE	304+GRAPHITE
3	Cap	ASTM A216-WCB	ASTM A352-LCB/LCC/20ГЛ	ASTM A351-CF8/CF8M/ 12X18H9ТЛ / 12X18H12M3ТЛ
4	Nut	ASTMA194-2H/2HM	ASTM A194 4	ASTM A194-2HM/8
5	Bolt	ASTM A193-B7/B7M	ASTM A320 L7	ASTM A193-B7M/B8
6	Seat	PTFE	PTFE	PTFE
7	Ball	A105+ENP	ASTM A182-F304/F321	ASTM A182-F304/ F316/F321
8	Stem	ASTM A182-F304	ASTM A182-F304/F321	ASTM A182-F304/ F316/F321
9	Gasket	304+PTFE	304+PTFE	304+PTFE
10	Static Spring	304SS	304SS	304SS/316SS
11	Packing	PTFE/GRAPHITE	PTFE/GRAPHITE	PTFE/GRAPHITE
12	Packing Gland	ASTM A216-WCB	ASTM A352-LCB/LCC/20ГЛ	ASTM A351-CF8/CF8M/ 12X18H9ТЛ / 12X18H12M3ТЛ
13	Screw	ASTMA193-B7/B7M	ASTM A320 L7	ASTM A193-B7M/B8
14	Wrench	ASTM A216-WCB	ASTM A216-WCB	ASTM A216-WCB
15	Spring Washer	65Mn	65Mn	65Mn
16	Stop	Carbon Steel	Carbon Steel	Carbon Steel

TRUNNION MOUNTED BALL VALVE



TRUNNION MOUNTED BALL VALVE



Trunnion Mounted Ball Valve

- (1) Size: NPS 8 ~ NPS 48、 DN150 ~ DN1200
- (2) Pressure: Class150 ~ Class1500、 PN16 ~ PN160
- (3) Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy
- (4) Actuation: Handwheel. Gear Operator, Electric Operator, Pneumatic Operator
- (5) Application: for petroleum, natural gas, petro-chemical industries.

Features

- (1) Fire-safe design.
- (3) Double Block and Bleed construction.
- (4) Anti-static design.
- (5) Auto-relief pressure function in case of abnormal pressure rise in cavity.
- (6) Double piston effect seat.
- (7) Full port suitable for pigging.

Design and Manufacturing

API 6D、 API 608、 BS 5351, GOST, GB

Flange Dimesions

ASME B 16.5, GOST, GB

Main Materials

A216 WCB、 WCC; A217 WC6、 WC9、 C5、 C12、 C12A、 CA15; A351 CF8、 CF8M、 CF3、 CF3M、 CF8C、 A352 LCB、 LCC; 20Л,20ГЛ, 12X18H9ТЛ, 12X18H12M3ТЛ, A105, F304, F316, F321,etc.

Face to Face

ASME B 16.10, GOST, GB

Inspection and Test

API 598、 API 6D, GOST, GB

Main Parts And Materials

No	Part	Carbon Steel	Low Temperature Steel	Stainless Steel
F	Ό ά ^	ΟΕΥΤ ΑΕΓΪ ΕΥ ΟΟ	ΟΕΪ ΓΕΣΟΟΕΣΟΟΕ	ΟΕΥΤ ΑΟΪ ΕΕΟΪ ΕΟΪ Τ ΕΑ FG FÌ J Α FG FÌ FG H
G	Ό α ς	ΟΕΥΤ ΑΕΓΪ ΕΥ ΟΟ	ΟΕΪ ΓΕΣΟΟΕΣΟΟΕ	ΟΕΥΤ ΑΟΪ ΕΕΟΪ ΕΟΪ Τ ΕΑ FG FÌ J Α FG FÌ FG H
H	Ρ ~ c	ΟΕΥΤ ΑΕΓΙ ΕΠΕΡΕΡΤ	ΟΕΥΤ ΑΕΓΙ Α	ΟΕΥΤ ΑΕΓΙ Ε ΕΤ
I	Ό c	ΟΕΥΤ ΟΕΓΗΕΟΪ ΕΟΪ Τ	ΟΕΥΤ ΑΗΓΕΑΣΪ	ΟΕΥΤ ΟΕΓΗΕΟΪ ΕΟΪ Τ
Í	Ό æ \ ^ c	ΗΕΙ ΕΟΪ ΟΕΥΡΟ	ΗΕΙ ΕΟΪ ΟΕΥΡΟ	ΗΕΙ ΕΟΪ ΟΕΥΡΟ ΕΟΪ ΟΕΥΡΟ
	U Ε α *	X Q U P	X Q U P	X Q U P
Î	Û α *	Φ ΟΥ Ρ Ο Σ Ψ Ε Ϊ Ε	Φ ΟΥ Ρ Ο Σ Ψ Ε Ϊ Ε	Φ ΟΥ Ρ Ο Σ Ψ Ε Ϊ Ε
Ï	Û ^ α ^ α α ^ !	ΟΕΥΤ ΟΕΪ ΕΟΡÚ	ΟΕΥΤ ΑΟΪ ΕΣΟΓΕΟΡÚ	ΟΕΥΤ ΑΟΪ ΕΟΪ Η Ε ΟΗΪ ΕΗΓ
ì	Û ^ æ	Û Û Χ Ø	Û Û Χ Ø	Û Û Χ Ø
J	U Ε α *	X Q U P	X Q U P	X Q U P
	Ø ^ Ε æ ^ Û α *	ΗΕΙ ΕΟΪ ΟΕΥΡΟ	ΗΕΙ ΕΟΪ ΟΕΥΡΟ	ΗΪ ΕΗΓ ΕΟΪ ΟΕΥΡΟ
F€	Ό α ς	ΟΕΥΤ ΟΕΪ ΕΟΡÚ	ΟΕΥΤ ΑΟΪ ΕΣΟΓΕΟΡÚ	ΟΕΥΤ ΑΟΪ ΕΟΪ Η Ε ΟΗΪ ΕΗΓ
FF	Ό ^ α α *	ΗΕΙ ΕÛ Χ Ø	ΗΕΙ ΕÛ Χ Ø	ΗΪ ΕΗΓ ΕÛ Χ Ø
FI	Û ^ α Û α *	ΗΕΙ Û Û	ΗΕΙ Û Û	ΗΕΙ Û Û ΗΪ ΕΗΓ Û Û ΕΗΓ

16	Bottom Stem	ASTM A105+ENP	ASTM A350 LF2+ENP	ASTM A182 F304/ F316/F321
17	O-ring	VITON	VITON	VITON
18	Gasket	304+GRAPHITE	304+GRAPHITE	304+GRAPHITE/316/F32 1 +GRAPHITE
20	Screw	ASTMA193-B7/B7M	ASTM A320 L7	ASTM A193-B8/B8M
21	Upper Stem	ASTM A182-F6a	ASTMA182-F304	ASTM A182 F304/ F316/F321
23	Bearing	304+PTFE	304+PTFE	304+PTFE/316/F321+PT FE
24	Adjusting Shim	304+PTFE	304+PTFE	304+PTFE/316/F321+PT FE
25	O-ring	VITON	VITON	VITON
26	O-ring	VITON	VITON	VITON
28	Sleeve	ASTMA105+ENP	ASTM A350 LF2+ENP	ASTM A182 F304/ F316/F321
29	Gasket	304+GRAPHITE	304+GRAPHITE	304+GRAPHITE/316/F32 1 +GRAPHITE
30	Packing	GRAPHITE	GRAPHITE	GRAPHITE
31	Packing Gland	ASTM A216-WCB	A352-LCB/LCC/20ГЛ	ASTM A351-CF8/CF8M/ 12X18H9TЛ / 12X18H12M3T
32	Bolt	ASTMA193-B7/B7M	ASTM A320 L7	ASTM A194-8/8M
33	Nut	ASTMA194-2H/2HM	ASTM A194 4	ASTM A193-B8/B8M
45	Screw	ASTMA193-B7/B7M	ASTM A320 L7	ASTMA193-B8/B8M
46	Drain Plug	ANS11045	ASTMA182-F304	ASTM A182 F304/F316
48	Injection valve	ANS11045	ASTMA182-F304	ASTM A182 F304/F316

METAL SEATED BALL VALVE



METAL SEATED BALL VALVE



Metal Seated Ball Valve

- (1) Size: NPS 4 ~ NPS 20、DN100 ~ DN500
- (2) Pressure: Class150 ~ Class2500、PN16 ~ PN420
- (3) Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy,etc
- (4) Actuation: Handwheel, Gear Operator, Electric Operator, Pneumatic Operator
- (5) Application: for petroleum, natural gas, petrochemicals, Long Distance Slurry Pipeline, Coal Water Slurry, Multiphase Flow Chemical Plant, industries.

Design and Manufacturing

API 6D、GOST, GB

Flange Dimensions

ASME B 16.5, GOST, GB

Features

- (1) Fire-safe design.
- (2) Double Block and Bleed construction.
- (3) Anti-static design.
- (4) With drain valve to release the cavity pressure.

Face to Face

ASME B 16.10, GOST, GB

Inspection and Test

API 598、API 6D, GOST, GB

Main Parts And Materials

Part	Material And Treatment	Spraying Material
Body	A105/304/316/F321+HVOF	Cr3C2
Ball	A105/304/316//321+HVOF	Cr3C2、 WC、 120Co-WC、 10Co-4Cr-WC
Stem	A182-F6a、 17-4PH+HCr/ Nitridation	/
Seat	304/316/F321+HVOF / Ni60、 17-4PH +HVOF	Cr3C2、 WC、 120Co-WC、 10Co-4Cr-WC
Spring	17 · 7PH、 Inconel X-715	/

SWING CHECK VALVE



SWING CHECK VALVE



Swing Check Valve

- (1) Size: NPS 2 ~ NPS 24、DN50 ~ DN600
- (2) Pressure: Class150 ~ Class900、PN16 ~ PN160
- (3) Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy
- (4) Application: for petroleum, natural gas, petro-chemical industries.

Design and Manufacturing

API 6D, BS1868, GOST, GB

Flange Dimesions

ASME B 16.5, GOST, GB

Main Materials

A216 WCB、WCC; A217 WC6、WC9、C5、C12、C12A、CA15; A351 CF8、CF8M、CF3、CF3M、CF8C、A352 LCB、LCC; 20Л, 20ГЛ, 12X18H9ТЛ, 12X18H12M3ТЛ, etc.

Face to Face

ASME B 16.10, GOST, GB

Inspection and Test

API 598、API 6D, GOST, GB

Features

- (1) Small hammer pressure, disc with short travel
- (2) Small open and close pressure, longer life time, reliable performance.

Main Parts And Materials

No	Part	Material				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	Stainless Steel	Stainless Steel
1	Body	ASMT A216 WCB			ASTM A351 CF8/ 12X18H9TЛ	ASTM A351 CF8M/ 12X18H12M3 ТЛ
2	Seat	A105+13Cr	A105+STL	A105+STL	ASTM A351 CF8+STL/ 12X18H9TЛ +STL	ASTM A351 CF8M+STL/ 12X18H12M3 ТЛ+STL
3	Disc	ASTM A216WCB +13Cr	ASTM A216WCB +STL	ASTM A216WCB +13Cr	ASTM A351 CF8+STL/ 12X18H9TЛ +STL	ASTM A351 CF8M+STL/ 12X18H12M3 ТЛ+STL
4	Arm	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
5	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
6	Pin	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
7	Arm Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351CF8M
8	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
9	Stud	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M

10	Screw	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193B8M
11	Gasket	304+Flexible Graphite	304+Flexible Graphite	304+Flexible Graphite	304+Flexible graphite	304+Flexible graphite
12	Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
13	Lift Hinge	ASTM A181	ASTM A181 ASTM A181		ASTM A181	ASTM A181

AXIAL FLOW CHECK VALVE



AXIAL FLOW CHECK VALVE



Axial Flow Check Valve

- (1)Size NPS 1/2~NPS64,
- (2)Pressure: Class 150~Class 2500
- (3)Material: WCB, LCC, CF8, CF8M, 20Л , 20ГЛ, 12X18H9ТЛ, A105, F304, F316, F321

Description

Yongjia Vanero Machinery Co.,Ltd is authorized exporting agent by NDiV valve company in China, who makes in the world the high-grade and high-quality Axial Flow Check Valve. The product is applied to long distance natural gas,crude oil,refined oil,and slurry transmission pipeline,and ensures the long distance transmission pipeline safe and reliable operation.

Design Specification	Refer To ASME B16.34,API 6D
Face-to-Face	,API 6D Or Customer's Specification
Flange Dimension	ASME B16.5,ASME B16.47,GB , GOST, etc
Butt Welding	ASME B16.25. ASME B31.4、 ASME B31.8
Materials	ASTM ,GB, GOST etc
	Sulfur-Resistant NACE MR01-75,NACE MR01-03
Inspection & Testing	API 6D. API598 . ISO5208 . GB/T26480 . GB/T13927

Versions And Function Of Axial Flow Check Valve

ACHS		ACHH		ACHA	
Nominal Diameter	NPS1/2"-64"	Nominal Diameter	NPS1/2"~64"	Nominal Diameter	NPS1/2"~64"
	DN15-1600		DN15-1600		DN15-1600
Pressure	Class150-2500	Pressure	Class150-2500	Pressure	Class 150 ~2500
	PN10~420		PN10~420		PN10~420
<p>It is a non-return device,service for non-corrosive or corrosive fluid medium with the temperature range from -46-540°C,It is especially applicable</p> <p>to zero leakage and fire fighting working condition.</p>		<p>Applicable for high temperature,low temperature or severe working condition.</p>		<p>ACHA version check valve closing time can be adjustable according to working condition and can be applicable for more severe occasion on water hammer.</p>	

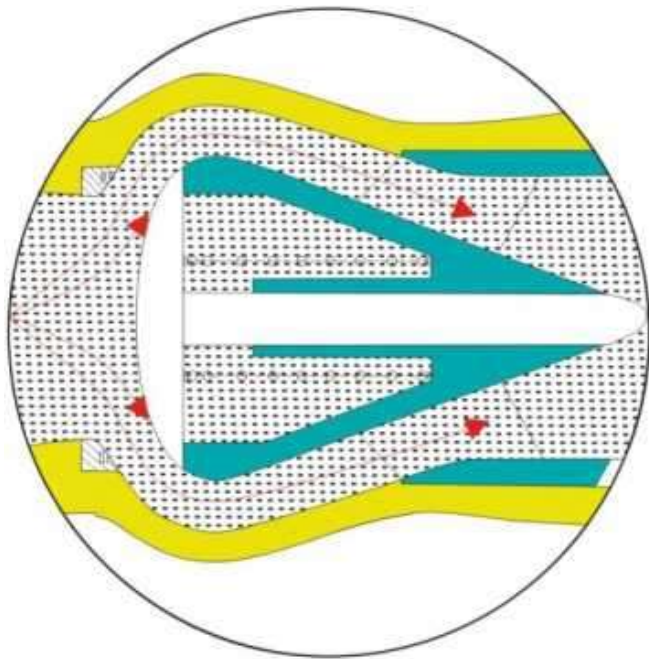
Working Principle

The unique and perfection of our axial flow check valve technology is formed from the analyze and research on fluid dynamics,and the comprehensive conclusion on manufacturing,assembly and stable analyzing in running process We laid stress on every detail from the design information input to products put into operation and service.as a professional axial flow check valve manufacturer,over thousands large amount of different sizes axial flow check valve have been supplied to critical crude oil pipeline,long distance transmission natural gas pipeline,storage facility as well as LNG plant in home and aboard.

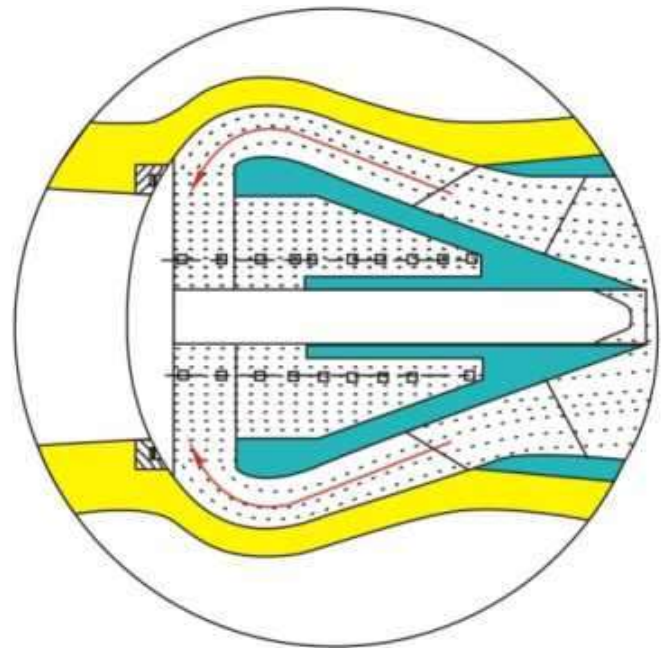
The axial flow check valve is a protective device to prevent the back flow, it is installed on the equipment (eg. compressor,pump), device (eg.gathering system .Measuring unit), or pipeline.When the medium flows to the disc,the flow will meet resistance, some power will be converse to PV to push the disc,open the valve.with the reduction of flow amount,the force of spring and medium back pressure will effect to close the valve to prevent return flow.

The check valve working characteristic is the loading force change sharply,small frequency in open and close,once it is in open or close status,it will keep a long period for this status, however once there have "shift" request,the operation must be very easily,

Therefore it has a more sever requirement on check valve compared to other ordinary mechanical operation



Valve Opening



Valve Closing

Characteristics

Single Body Structure-No Leakage

By adopting the independent patent technology, the sealing face of axial flow check valve be located on the sealing ring not on the valve body, thus ensure the machining precision of the sealing face and no leakage point in the body, then zero leakage has achieved.

Streamlined Flow Passage Design-Small Fluid Resistance, Good Flow Pattern

Full opening flow passage and venture valve body design, so there is enough and same flow passage area, the medium flows in streamline, stable in flow pattern, no cavitation, low noise, only with minimal pressure loss and operation cost.

Main Parts And Materials



Parts	Carbon Steel Series	Stainless Steel Series	Sulfur-resistant Series		Special Materials Series
			C.S. Valve Body	S. S. Valve Body	
Body	A105 A216-WCB, 20Л, 20ГЛ	A182-F304 F316 F321, A351-CF8 CF8M, 12X18H9ТЛ	A105 A216-WCB 20Л, 20ГЛ	A182-F304 F316 F321, A351-CF8 CF8M, 12X18H9ТЛ	2205. Hastelloy. Monel
Seat	13Cr. 304. 316,F321+Stellite			HVOF Co-Cr-W HVOF Ni-Cr	
Seat Insert	PTFE/RPTFE/PPL/NYLON/DEVLON			DEVLON / PEEK	
Disc	13Cr、 304、 316,F321+Stellite			HVOF Co-Cr-W HVOF Ni-Cr	
Spring	304、 Inconel-X 750			Inconel-X 750	
Guide Bush	A182-F6a	F304/316/F321			
Flow Diffuser	A105 A216-WCB	A182-F304 F316 A351-	A105 A216-WCB	A182-F304 F316 F321,	2205、 Monel

	20Л, 20ГЛ	CF8 CF8М 20Л,20ГЛ 12Х18Н9ТЛ		A351-CF8 CF8М 12Х18Н9ТЛ	
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GATE VALVE



GATE VALVE



Gate Valve

- (1) Size: NPS 2 ~ NPS 24、 DN50 ~ DN600
- (2) Pressure: Class150 ~ Class900、 PN16 ~ PN160
- (3) Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy
- (4) Actuation: Handwheel. Gear Operator, Electric Operator, Pneumatic Operator
- (5) Application: for petroleum, natural gas, petrochemical industries.

Applicable Standard

API 600, API 6D, GOST, ISO10434, API 603

Large Dimensions

ASME B 16.5、 ASME B 16.47、 API 605、 MSS SP-44, GOST, GB

Main Materials

A216 WCB、 WCC; A217 WC6、 WC9、 C5、 C12、 C12A、 CA15; A351 CF8、 CF8M、 CF3、 CF3M、 CF8C、 A352 LCB、 LCC; 20Л,20ГЛ, 12X18H9ТЛ, 12X18H12M3ТЛ, etc.

Face to Face

ASME B 16.10, GOST, GB, etc.

Inspection and Test

API 600、 API 598、 ISO 10434、 API 6D、 GOST, BS12569、 MSS-SP-61

Features

- (1) Flexible wedge disc, Compact & Reasonable structure with good appearance.
- (2) Stainless steel or hard alloy overlay material, long working life time.
- (3) Flexible graphite packing material, reliable sealing performance, and smaller torque for easy operation.

No.	Part	Material				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	Stainless Steel	Stainless Steel
1	Body	ASTM A216 WCB			ASTM A351 CF8/ 12X18H9TЛ	ASTM A351 CF8M/ 12X18H12M3T Л
2	Seat Ring	A105+13Cr	A105+STL	A105+STL	ASTM A351 CF8 +STL/ 12X18H9TЛ+ST L	ASTM A351 CF8M+STL/ 12X18H12M3T Л+STL
3	Disc	ASTM A216WCB+13C r	ASTM A216WCB+STL	ASTM A216WCB+13 Cr	ASTM A351 CF8 +STL/ 12X18H9TЛ+ST L	ASTM A351 CF8M+STL/ 12X18H12M3T Л+STL
4	Stem	ASTM A182F6a	ASTM A182F6a	ASTM A182F6a	ASTM A182 F304/ F321	ASTM A182 F316/ F321
5	Gasket	Soft steel +flexible graphite or F304+ flexible graphite			304+flexible graphite	316+flexible graphite
6	Bonnet	ASTM A216 WCB			ASTM A351 CF8/ 12X18H9TЛ	ASTM A351 CF8M/ 12X18H12M3T Л
7	Back seat	ASTM A182F6a			ASTM A351 CF8/ 12X18H9TЛ	ASTM A351 CF8M/ 12X18H12M3T Л
8	Packing	flexible graphite			flexible graphite	flexible graphite

9	Gland bushing	ASTM A182F6a	ASTM A182 F304	ASTM A182 F316
10	Gland	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
11	Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
12	Gland nut	Carbon steel	Carbon steel	Carbon steel
13	Handwheel	Iron	Iron	Iron
14	Locking nut	Carbon steel	Carbon steel	Carbon steel
15	screw	ASTM A193 B7	ASTM A193B7	ASTM A193B7
16	Oil cup	Carbon steel	Carbon steel	Carbon steel
17	Eye bolt	ASTM A193 B7	ASTM A193B8	ASTM A193 B8M
18	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
19	Pin	ASTM A36	304SS	316SS
20	Split pin	ASTM A36	304SS	316SS
21	Stud	ASTM A193 B7	ASTM A193B8	ASTM A193 B8M
22	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M

GLOBE VALVE



GLOBE VALVE



Globe Valve

- (1) Size: NPS1/ 2 ~ NPS 12、 DN 15 ~ DN300
- (2) Pressure: Class150 ~ Class900、 PN16 ~ PN64
- (3) Material: Carbon Steel, Stainless Steel, Alloy, Duplex Alloy
- (4) Actuation: Handwheel. Gear Operator, Electric Operator, Pneumatic Operator
- (5) Application: for petroleum, natural gas, petro-chemical industries.

Applicable Standard

ASME B16.34、 API 602, GOST, GB

Flange Dimesions

ASME B 16.50,GOST, GB

Main Materials

A216 WCB、 WCC; A217 WC6、 WC9、 C5、 C12、 C12A、 CA15; A351 CF8、 CF8M、 CF3、 CF3M、 CF8C、 A352 LCB、 LCC; 20Л, 20ГЛ, 12X18H9ТЛ, 12X18H12M3ТЛ, etc.

Face to Face

ASME B 16.10, GOST, GB, etc.

Inspection and Test

API 598,GOST,GB

Features

- (1) With back-seating design.
- (2) Forged steel seat, overlay material can be specified by customer..
- (3) Integral forged stem design.
- (4) ASTM A439 D2 or copper stem nut.
- (5) BB body and bonnet construction.

No	Part	Material				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	Stainless Steel	Stainless Steel
1	Body	ASTM A216 WCB			ASTM A351 CF8/ 12X18H9TЛ	ASTM A351 CF8M/ 12X18H12M3T Л
2	Seat	A105+13Cr	A105+STL	A105+STL	ASTM A351 CF8+STL/ 12X18H9TЛ+S TL	ASTM A351 CF8M+STL/ 12X18H12M3T Л+STL
3	Disc	ASTM A216WCB+13Cr	ASTM A216WCB+STL	ASTM A216WCB+13C r	ASTM A351 CF8+STL/ 12X18H9TЛ+S TL	ASTM A351 CF8M+STL/ 12X18H12M3T Л+STL
4	Stem	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304/F321	ASTM A182 F316/F321
5	Disc Cap	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
6	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
7	Stud	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
8	Gasket	304+flexible graphite	304+flexible graphite	304+flexible graphite	304+flexible graphite	316+Flexible graphite
9	Back- seat	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A351 F304	ASTM A351 F316
10	Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A3 CF8M

11	Packing	Flexible graphite	Flexible graphite	Flexible graphite	Flexible graphite	
12	Eye bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
13	Nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
14	Pin	ASTM A36	ASTM A36	ASTM A36	304	316
15	Split Pin	ASTM A36	ASTM A36	ASTM A36	304	316
16	Gland bushing	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304	ASTM A351 F316
17	Gland	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
18	Stem Nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
19	Handwheel	Iron	Iron	Iron	Iron	Iron
20	Flat washer	ASTM A36	ASTM A36	ASTM A36	304	316
21	Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

WORM GEARBOX



LT-Q Series



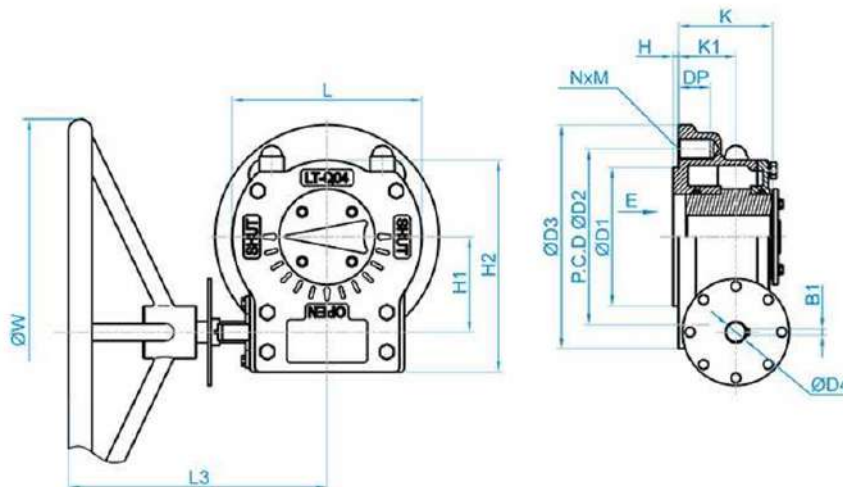
Features

- Housing and worm wheel material: Ductile Iron
- Complete Models and Ratio Alternatives. Each model matching with different flange standard numbers.
- Flange Connection by ISO 5211
- Fully Enclosed Construction, One Time Grease for Internal Parts, Long Time Performance.
- With Locking Device.
- Stroke: 0-90 degree ($\pm 5^\circ$ adjustable)
- Applicable Temperature: -20°C to $+120^\circ\text{C}$
- Enclosure: IP66
- Coupling to Valve: Shaft Key, Flat Hole, Square Head, etc
- The position of the handwheel is on the right by default
- Turn the hand wheel clockwise to close the valve and turn it counterclockwise to open it

Customization

- Enclosure: IP68
- Worm Wheel Material: Aluminum bronze
- Input Shaft Material: Stainless Steel
- Applicable Temperature: -29°C , -46°C Or $+120^\circ\text{C}$, 170°C
- The position of the handwheel is on the left.
- Customized Handwheel Diameter.

Model A Single Stage



LT-Q04	F1	57:	19	12	15	50	10	14	4xM	17	3	89	19	88	54	25	20	6	46
	4	1	00	5	.5		0	0	16-24	5		.5	9			1			0
	F1						13	16	4xM	21	3								
	6						0	5	20-30	0									
LT-Q05	F1	62:	23	14	16	60	13	16	4xM	21	4								
	6	1	50	5	.5		0	5	20-30	0		10	23	10	60	27	25	8	50
	F2						16	20	8xM	25	4								
	0						0	0	16-24	5		7	3	0		8			0
LT-Q06	F1						13	16	4xM	21	4								
	6						0	5	20-30	0									
	F2	68:	30	16	19	70	16	20	8xM	25	4	12	26	10	60	30	25	8	60
	0	1	00	0			0	0	16-24	5		5	0	0		9			0
	F2						20	25	8xM	30	4								
	5						0	4	16-24	0									
B	F1						13	16	4xM	21	4								
	6	15	40	12	33	60	0	5	20-30	0		10	23	10	60	35	25	8	50
LT-Q05 B	F2	2:1	00	2			16	20	8xM	25	4								0
	0						0	0	16-24	5		7	3	0		2			
LT-Q06 B	F1	18	50	12	40	70	13	16	4xM	21	4	12	26	10	60	38	25	8	60
	6	4:1	00	5			0	5	20-30	0		5	0	0		2			0

		F2 0						16 0	20 0	8xM 16- 24	25 5	4								
		F2 5						20 0	25 4	8xM 16- 24	30 0	4								
	LT- Q07	F2 5	25 0:1	72 00	12 7	57	85	20 0	25 4	8xM 16- 24	30 0	4	12 6	28 8	13 7	67	42 6	25	8	60 0
	LT- Q08	F2 5	27 5:1	85 00	14 5	60	95	20 0	25 4	8x M16- 24	30 0	4	13 8	31 2	14 7	74	43 6	25	8	60 0
		F3 0						23 0	29 8	8x M20- 30	35 0	4								
	LT- Q08 B	F2 5	33 0:1	95 00	13 0	75	95	20 0	25 4	8x M16- 24	30 0	4	13 8	31 2	14 7	74	43 8	25	8	60 0
		F3 0						23 0	29 8	8x M20- 30	35 0	4								
	LT- Q09 B	F2 5	37 8:1	11 00	13 0	84	11 5	20 0	25 4	8x M16- 24	35 0	4	15 5	35 5	15 1	77	45 5	25	8	60
		F3 0						23 0	29 8	8x M20- 30		4								
C	LT- Q09	F2 5		13 50 0	12 0	11 2	11 5	20 0	25 4	8xM 16- 24	35 0	4	15 5	35 5	15 1	77	49 2	25	8	60 0

	F3 0						23 0	29 8	8xM 20- 30		4								
LT- Q10	F2 5	56 0:1	17 00 0	13 0	13 4	11 5	20 0	25 4	8xM 16- 24	35 0	4	18 0	38 5	15 1	77	50 4	25	8	60 0
	F3 0						23 0	29 8	8xM 20- 30		4								
LT- W11 Q	F2 5	69 5:1	25 00 0	13 0	19 3	13 0	20 0	25 4	8xM 16- 24	35 0	4	20 3	50 1	19 5	12 2	54 1	25	8	60 0
	F3 0						23 0	29 8	8xM 20- 30		4								
	F3 5						26 0	35 6	8xM 30- 45		41 5								
LT- W12 Q	F2 5	79 3:1	32 00 0	14 5	22 3	13 0	20 0	25 4	8xM 16- 24	35 0	4	23 0	55 3	19 5	12 4	55 6	25	8	70 0
	F3 0						23 0	29 8	8xM 20- 30		4								
	F3 5						26 0	35 6	8xM 30- 45		41 5								

W SERIES



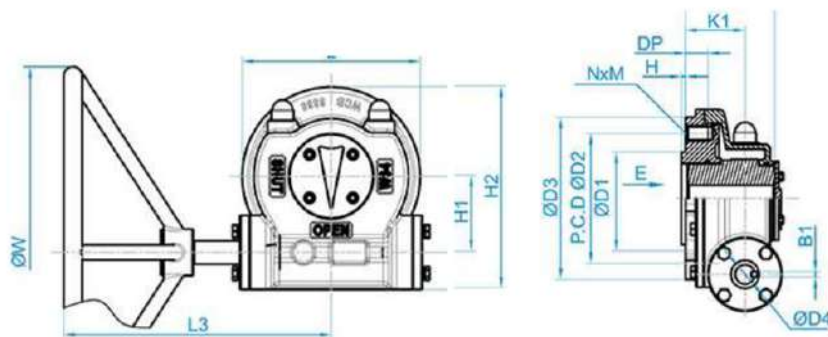
Features

- Housing material: WCB; Worm Wheel material: Ductile Iron
- Complete Models and Ratio Alternatives. Each model matching with different flange standard numbers.
- Flange Connection by ISO 5211
- Stroke: 0-90 degree ($\pm 5^\circ$ adjustable)
- Applicable Temperature:-20° C to +120° C
- Enclosure: IP66
- Coupling to Valve: Shaft Key, Flat Hole, Square Head,etc
- The position of the handwheel is on the right by default
- Turn the hand wheel clockwise to close the valve and turn it counterclockwise to open it
- Input can be coupling with electric actuator (ISO 5210 or GB2920 flange)

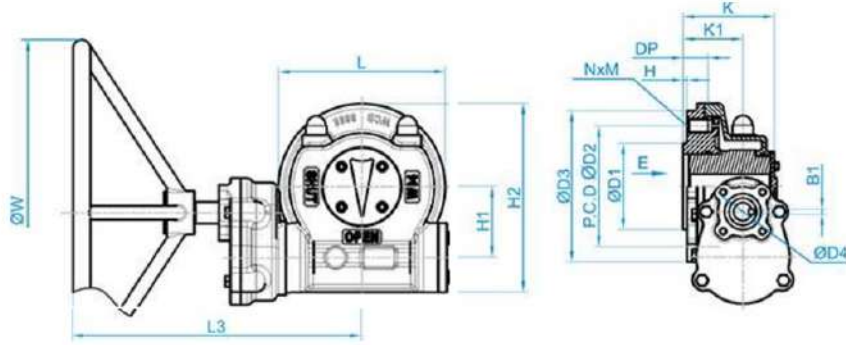
Customization

- Enclosure: IP68
- Manual gearbox with locking device
- Input by chain wheel
- Worm Wheel Material: Aluminum bronze
- Input Shaft Material: Stainless Steel
- Applicable Temperature: -46°C,-59°C ,-73°C Or +120°C, 170°C
- The position of the handwheel is on the left.
- Customized Handwheel Diameter.
- Housing material: Stainless steel or cryogenic Steel

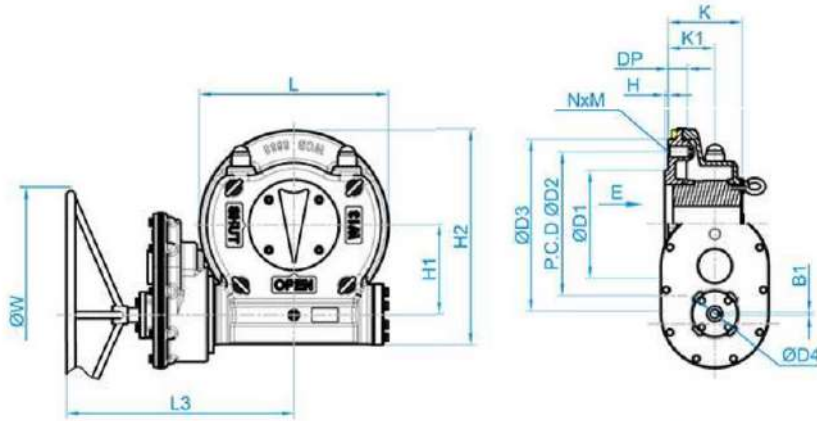
Model A



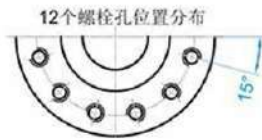
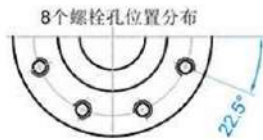
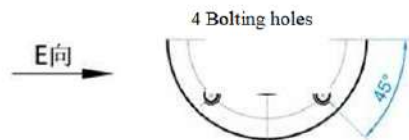
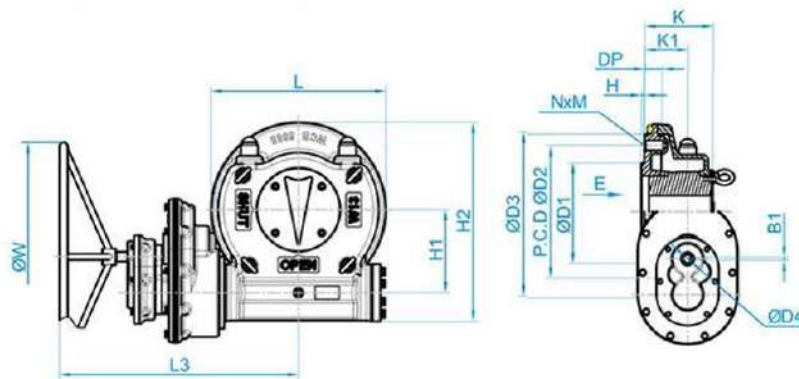
Model B



Model C



Model D



	Model	Technical Data							Standard Flange					Standard Outline Dimension				Handwheel and Coupling		
		Ratio	Output Torque Nm	Input Torque Nm	Efficiency $\pm 10\%$	Flange	Flange Optional	Max. Stem mm	D1	D2	N-M-DP	D3	H	K	K1	L	L3	D4	B1	W
A	W03	44:1	1400	100	14.1	F12	F10-F14	45	85	125	4xM12-18	150	3	85	53	165	271	20	6	360
	W04	52:1	2000	135	15	F14	F12-F16	55	100	140	4xM16-24	175	3	95	64	192	278	20	6	460
	W05	56:1	2500	150	16.8	F16	(F12)-F14	65	130	165	4xM20-30	210	3	107	71	225	308			500
	W06	67:1	3200	170	18.9	F20	(F14)-F16-F25	72	160	200	8xM16-24	255	4	110	73	257	348	25	8	600
	W07	77:1	3800	190	20	F25	F16-	85	200	25	8xM1	30	4	12	80	27	38	25	8	60

		1	00		.1	5	F20		0	4	6-24	0		1		2	0		0	
	W08	86:	45	196	22	F2	F25	95	20	25	8xM1	30	4	13	92	30	38	25	8	65
		1	00		.5	5			0	4	6-24	0		5		0	7			0

B	W03-1S	11	15	50	30	F1	F10-F14	45	85	12	4xM1	15	3	85	53	16	29	20	6	32
		0:1	00			2				5	2-18	0				5	2			0
	W04-1S	13	21	66	32	F1	F12-F16	55	10	14	4xM1	17	3	95	64	19	33	20	6	36
		0:1	00			4				0	0	6-24	5			2	0			0
	W05-1S	16	38	79	48	F1	(F12)-F14	65	13	16	4xM2	21	3	10	71	22	37	25	8	40
		5:1	00			6				0	5	0-30	0		7	5	6			0
	W06-1S	19	48	89	54	F2	(F14)-F16-F25	72	16	20	8xM1	25	4	11	73	25	38	25	8	50
		5:1	00			0				0	0	6-24	5		0	7	6			0
W07-1S	19	60	111	54	F2	F16-F20	85	20	25	8xM1	30	4	12	80	27	42	25	8	60	
	5:1	00			5				0	4	6-24	0		1	2	4			0	
W07-2S	28	72	91	79	F2	F16-F20	85	20	25	8xM1	30	4	12	80	27	42	25	8	60	
	6:1	00			5				0	4	6-24	0		1	2	4			0	
W08-1S	31	90	113	80	F2	F25	95	20	25	8xM1	30	4	13	92	30	45	25	8	60	
	4:1	00			5				0	4	6-24	0		5	0	7			0	
W09-1S	34	11	128	86	F3	F25	10	23	29	8	XM20	35	4	14	95	32	47	25	8	60
	7:1	00			0				0	8	-30	0		3	0	5			0	

C	W07-1SS	36	72	77	93	F2	F16-F20	85	20	25	8xM1	30	4	12	80	27	45	25	8	60
		0:1	00			5			0	4	6-24	0		1	2	0			0	
	W08-1SS	39	90	95	95	F2	F25	95	20	25	8xM1	30	4	13	92	30	45	25	8	60
	4:1	00			5				0	4	6-24	0		5	0	7			0	
W09-1SS	57	13	88	15	F3	F25	10	23	29	8xM2	35	4	14	95	32	47	25	8	60	
	2:1	50			4				0	8	0-30	0		3	0	5			0	

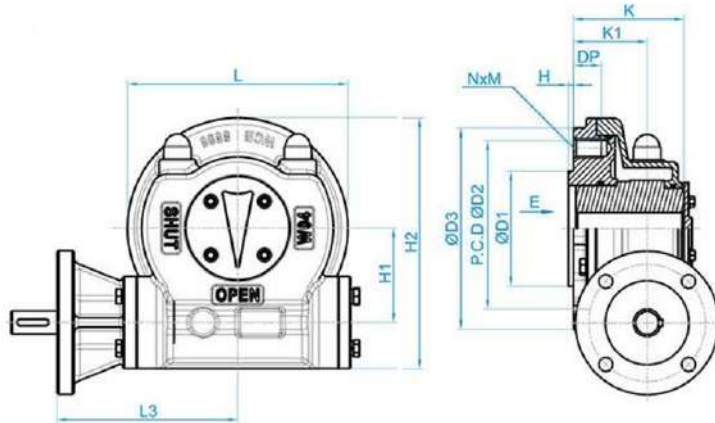
	W10-1SS	67 5:1 0	18 00 0	105	17 2	F3 0	F25	11 5	23 0	29 8	8xM2 0-30	35 0	4	15 3	10 0	37 0	49 0	25	8	60 0
	W11-1SS	83 5:1 0	28 00 0	121	23 1	F3 5	F25- F30	13 0	26 0	35 6	8xM3 0-45	41 5	4	18 3	12 2	45 0	57 4	25	8	60 0
	W12-1SS	95 3:1 0	35 00 0	131	26 8	F3 5	F25- F30	13 0	26 0	35 6	8 XM30 -45	41 5	4	18 5	12 4	49 5	58 9	25	8	70 0
	W13-1SS	14 03: 1	48 00 0	131	36 7	F4 0	F30- F35	15 0	30 0	40 6	8xM3 6-54	47 5	5	20 5	13 2	53 5	62 7	25	8	70 0
	W14-1SS	16 32: 1	63 00 0	148	42 7	F4 0	F30- F35	15 0	30 0	40 6	8xM3 6-54	47 5	5	21 7	14 4	61 0	69 2	25	8	80 0
	W15-1SS	20 74: 1	80 00 0	148	54 0	F4 8	F35- F40	18 0	37 0	48 3	12xM 36-54	56 0	5	23 9	15 2	66 0	73 1	25	8	80 0
	W16-1SS	24 34: 1	12 00 00	203	59 2	F4 8	F35- F40- F60	20 0	37 0	48 3	12xM 36-54	56 0	5	26 3	16 4	76 5	76 1	25	8	80 0
D	W11-1SS-1S	16 70: 1	28 00 0	70	40 5	F3 5	F25- F30	13 0	26 0	35 6	8 XM30 -45	41 5	4	18 3	12 2	45 0	67 2	25	8	60 0
	W12-1SS-1S	19 05: 1	35 00 0	82	42 7	F3 5	F25- F30	13 0	26 0	35 6	8 XM30 -45	41 5	4	18 5	12 4	49 5	68 7			60 0
	W13-1SS-1S	28 05: 1	48 00 0	75	64 3	F4 0	F30- F35	15 0	30 0	40 6	8 XM36 -54	47 5	5	20 5	13 2	53 5	72 5	25	8	60 0

W14-1SS-1S	32:10	63:00	85	74:8	F4:0	F30-F35	15:0	30:0	40:6	8xM3-6-54	47:5	5	21:7	14:4	61:0	79:0	25	8	60:0
W15-1SS-1S	41:10	80:00	85	94:5	F4:8	F35-F40	18:0	37:0	48:3	12xM36-54	56:0	5	23:9	15:2	66:0	82:9	25	8	70:0
W16-1SS-1S	49:10	120:00	120	103:5	F4:8	F35-F40-F60	20:0	37:0	48:3	12xM36-54	56:0	5	26:3	16:4	76:5	85:9	25	8	70:0

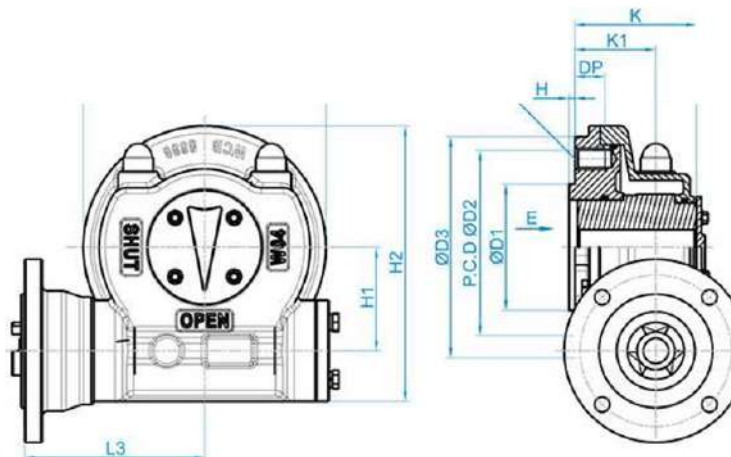
DW SERIES



ISO 5210 Flange connection



GB2920 Flange Connection



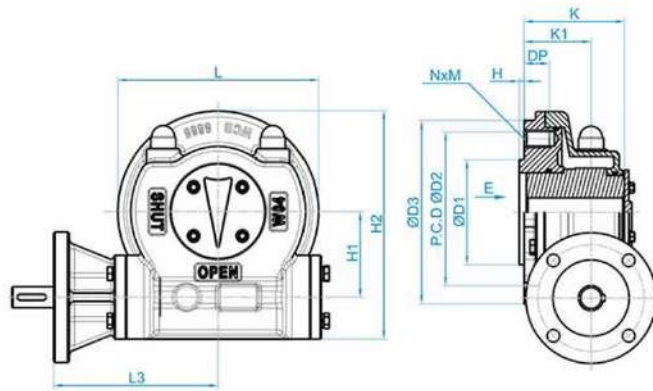
Model	Technical Data							Standard Flange					Standard Outline					Actuator Flange No.
	Ratio	Output Torque Nm	Input Torque Nm	Efficient ±1 0%	Flange	Flange Optional	Max. Stemm m	D1	D2	NxM- DP	D3	H	K	K1	L	H1	H2	
DW03	44:1	1000	71	14.1	F12	F10-F14	45	85	125	4xM12-18	150	3	85	53	165	70	192	F10 Z10
DW04	52:1	1600	107	15	F14	F12-F16	55	100	140	4xM16-24	175	3	95	64	192	82	218	F10 Z10
DW05	44:1	2500	167	15	F16	(F12)-F14	65	130	165	4xM20-30	210	3	107	71	225	95	255	F10、 F14 Z10、 Z20/Z30
DW06	52:1	4000	237	16.9	F20	(F14)-F16-F25	72	160	200	8xM16-24	255	4	110	73	257	111	287	F10、 F14 Z10、 Z20/Z30
DW07	52:1	5500	328	16.8	F25	F16-F20	85	200	254	8xM16-24	300	4	121	80	272	127	332	F1 ^Ø F14、 F16 Z20/Z30. Z45
DW08	57:1	7500	437	17.2	F25	F25	95	200	254	8xM16-24	300	4	135	92	300	140	345	F10、 F14、 F16

		0																Z20/Z30. Z45/Z60
DW0 9	50: 1	100 00	595	16. 8	F3 0	F25	10 0	23 0	29 8	8xM2 0-30	35 0	4	14 3	95	32 0	15 2	37 7	F14、 F16、 F25 Z45/Z60. Z90
		135 00	804															
DW1 0	59: 1	140 00	745	18. 8	F3 0	F25	11 5	23 0	29 8	8xM2 0-30	35 0	4	15 3	10 0	37 0	17 6	42 7	F14、 F16、 F25 Z60、 Z90/Z120
		180 00	957															
DW1 1	57: 1	200 00	101 5	19. 7	F3 5	F25- F30	13 0	26 0	35 6	8xM3 0-45	41 5	4	18 3	12 2	45 0	20 3	50 3	F16、 F25、 F30 Z90/Z120 . Z180
		270 00	137 1															
DW1 2	65: 1	280 00	134 6	20. 8	F3 5	F25- F30	13 0	26 0	35 6	8xM3 0-45	41 5	4	18 5	12 4	49 5	23 0	55 3	F16、 F25、 F30 Z90/Z120 . Z180
		320 00	153 9															
DW1 3	61: 1	350 00	175 0	20	F4 0	F30- F35	15 0	30 0	40 6	8xM3 6-54	47 5	5	20 5	13 2	53 5	25 4	60 9	F25、 F30 Z120、 Z180/Z25 0
		450 00	225 0															
DW1 4	71: 1	500 00	215 5	23. 2	F4 0	F30- F35	15 0	30 0	40 6	8xM3 6-54	47 5	5	21 7	14 4	61 0	28 9	68 2	F25、F30 Z120、 Z180/Z25 0
		600 00	258 6															
DW1 5	69: 1	600 00	266 7	22. 5	F4 8	F35- F40	18 0	37 0	48 3	12xM 36-54	56 0	5	23 9	15 2	66 0	32 5	75 2	F30、 F35 Z180/Z25 0. Z350
		700	311															

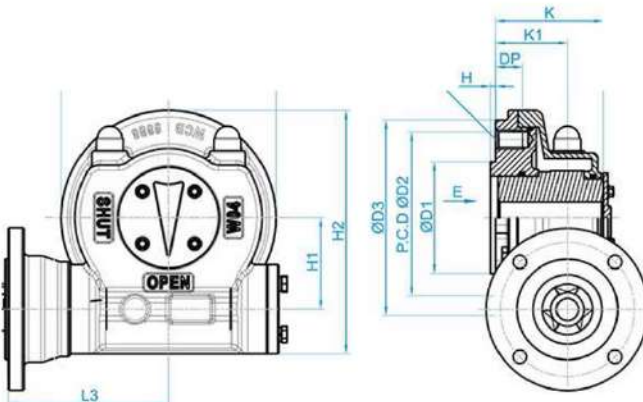
		00	1																	
		800	355																	
		00	6																	
DW1	81:	800	325																	F30, F35
6	1	00	2																	Z250,
		100	406	24.	F4	F35-	20	37	48	12xM	56									Z350/Z50
		000	5	6	8	F40-	0	0	3	36-54	0	5	26	16	76	38	87			0
		120	487			F60							3	4	5	0	3			
		000	8																	

DFW Series

ISO 5210 Flange connection



GB2920 Flange Connection



Model	Technical Data							Standard Flange Dimension					Standard Outline Dimension					Actuator Flange No.
	Ratio	Output Torque Nm	Input Torque Nm	Efficiency ±1%	Flange	Flange Optimal	Max. Stemm	D1	D2	NxM-DP	D3	H	K	K1	L	H1	H2	ISO 5210 GB 2920
DF W05	56:1	2000	120	16.8	F16	(F12) -F14	65	130	165	4xM2 0-30	210	3	107	71	225	95	255	F10、F14 Z10、Z20
		2800	170															
DF W06	67:1	3000	160	18.9	F20	(F14) -F16- F25	72	160	200	8xM1 6-24	255	4	110	73	257	111	287	F10、F14 Z10、Z20
		3800	200															
DF W07	77:1	4000	200	20	F25	F16- F20	85	200	254	8xM1 6-24	300	4	121	80	272	127	332	F10、F14、 F16 Z10、 Z20/Z30
		4500	225															
DF W08	86:1	4800	220	22.5	F25	F25	95	200	254	8xM1 6-24	300	4	135	92	300	140	345	F10、F14、 F16 Z10、 Z20/Z30
		5500	250															
DF W09	63:1	7000	390	18.1	F30	F25	100	230	298	8xM2 0-30	350	4	143	95	320	152	377	F14、F16、 F25 Z45/Z60、Z90
		9000	500															
		11000	610															

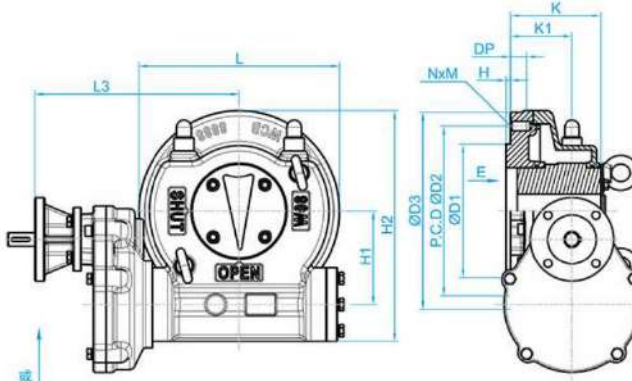
		150 00	700				5											
DF W11	69: 1	180 00	820	22. 1	F3 5	F25- F30	1 3 0	26 0	35 6	8xM3 0-45	41 5	4	18 3	12 2	45 0	20 3	50 3	F16、 F25 Z60、 Z90/Z120
		220 00	100 0															
DF W12	79: 1	200 00	840	23. 8	F3 5	F25- F30	1 3 0	26 0	35 6	8xM3 0-45	41 5	4	18 5	12 4	49 5	23 0	55 3	F16、 F25、 F30 Z60、 Z90/Z120
		280 00	118 0															
DF W13	74: 1	300 00	117 0	25. 7	F4 0	F30- F35	1 5 0	30 0	40 6	8xM3 6-54	47 5	5	20 5	13 2	53 5	25 4	60 9	F25、 F30 Z120、 Z180
		380 00	148 0															
DF W14	85: 1	400 00	143 0	28. 1	F4 0	F30- F35	1 5 0	30 0	40 6	8xM3 6-54	47 5	5	21 7	14 4	61 0	28 9	68 2	F25、 F30 Z120、 Z180
		490 00	175 0															
DF W15	81: 1	500 00	190 0	26. 4	F4 8	F35- F40	1 8 0	37 0	48 3	12xM 36- 54	56 0	5	23 9	15 2	66 0	32 5	75 2	F30、 F35 Z180/Z250
		550 00	209 0															
		650 00	247 0															
DF W16	94: 1	700 00	246 0	28. 5	F4 8	F35- F40- F60	2 0 0	37 0	48 3	12xM 36- 54	56 0	5	26 3	16 4	76 5	38 0	87 3	F30、 F35 Z180/Z250. Z350
		800 00	281 0															
		00 0	0															

DW-S Series



Model A (DW-1S Series)

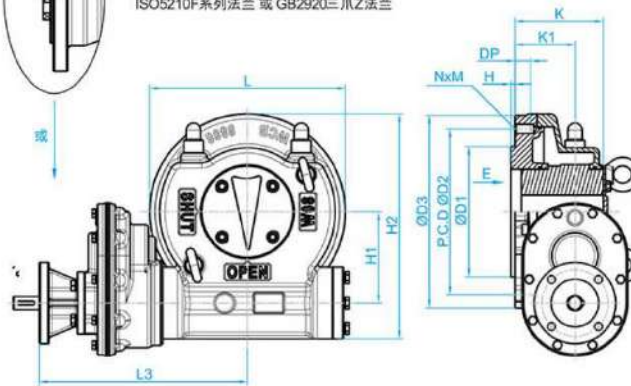
类型 A (DW-1S型号) ▼



DW-S系列电动法兰可选配
ISO5210F系列法兰 或 GB2920三爪Z法兰

Model B (DW-1SS Series)

类型 B (DW-1SS型号) ▼



Model	Technical Data				Standard Flange Dimension						Standard Outline Dimension				
	Output Torque Nm	Flange	Flange Optional	Max. Stem mm	D1	D2	NxM-DP	D3	H	K	K1	L	H1	H2	
A DW03-1S	1500	F12	F10-F14	45	85	125	4xM12-18	150	3	85	53	165	70	192	

DW04-1S	2100	F14	F12-F16	55	3	10	14	4xM16-24	17	5	95	64	192	82	218		
DW05-1S	3800	F16	(F12)-F14	65		13	16	4xM20-30	21	0	3	10	7	71	225	95	255
DW06-1S	4800	F20	(F14)-F16-F25	72		16	20	8xM16-24	25	5	4	11	0	73	257	111	287
DW07-1S	6000	F25	F16-F20	85		20	25	8xM16-24	30	0	4	12	1	80	272	127	332
DW07-2S	7200	F25	F16-F20	85		20	25	8xM16-24	30	0	4	12	1	80	272	127	332
DW08-1S	9000	F25	F25	95		20	25	8xM16-24	30	0	4	13	5	92	300	140	345
DW09-1S	11000	F30	F25	100		23	29	8xM20-30	35	0	4	14	3	95	320	152	377

B	DW07-1SS	7200	F25	F16-F20	85		20	25	8xM16-24	30	0	4	12	1	80	272	127	332
	DW08-1SS	9000	F25	F25	95		20	25	8xM16-24	30	0	4	13	5	92	300	140	345
	DW09-1SS	13500	F30	F25	100		23	29	8xM20-30	35	0	4	14	3	95	320	152	377
	DW10-1SS	18000	F30	F25	115		23	29	8xM20-30	35	0	4	15	3	100	370	176	427
	DW11-1SS	27000	F35	F25-F30	130		26	35	8xM30-45	41	5	4	18	3	122	450	203	503
	DW12-1SS	35000	F35	F25-F30	130		26	35	8xM30-45	41	5	4	18	5	124			
	DW13-1SS	45000	F40	F30-F35	150		30	40	8xM36-54	47	5	5	20	5	132	535	254	609
	DW14-60000	F40	F30-F35		150		30	40	8xM36-	47	5	5	21		144	610	289	682

DW15-1SS	80000	F48	F35-F40	180	37 0	48 3	12xM36 -54	56 0	5	23 9	152	660	325	752	
DW16-1SS	120000	F48	F35- F40-F60	200	37 0	48 3	12xM36 -54	56 0	5	26 3	164	765	380	873	

PRECISION CASTING



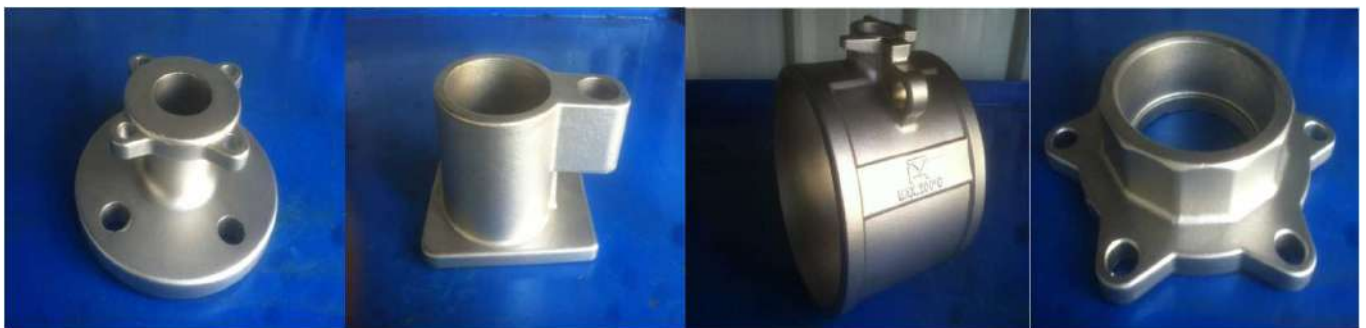
Precision Casting

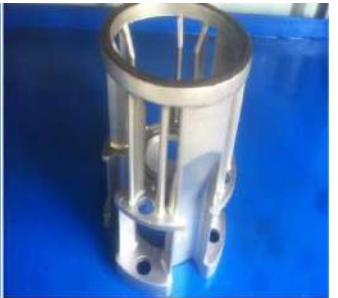


Our castings are widely used for Pump, Valve, Machinery, Auto Parts, and Building hardware.

Material Range: Stainless Steel, Carbon Steel, Duplex Stainless Steel, Heat Resistant Steel, Nickel based-alloy Steel, etc.

Standard Applicable: ASTM, GOST, DIN, BS, and JIS





PNEUMATIC ACTUATOR



NAW-G Series

Actuator



Water Proof

O-Rings are fitted on body and cap to prevent water ingress per IP66.

Standard Assembly Dimensions of Accessories

The shaft driven accessory interface conforms to NUMAR standard, and is identical on all NAW Series models, allowing standardization of accessory mounting hardware and installation practices.

Wear resistant

By advanced surface treatment, the guide rod and piston rod combined with self-lubricating bearings, providing superior wear resistance and longer life time for all sliding components.

ISO Valve Mounting

NAW Series actuators interface meets ISO standard for each torque range.

Corrosion Resistant

NAW actuators are coated by three layers of protective coatings in order to meet the sever environmental requirement of petro-chemical industry. The inner surface of the cylinder is coated by PTFE to ensure the corrosion resistant and self-lubricating.

Safety design of Spring Module

To ensure the safety of personnel during installation and maintenance, the spring module has specific design that it can only be integrally removed from the power module along the axial direction of the cylinder module. This can prevent accidental release of the spring force, protecting personnel from injury and the actuator from accidental damage.

Torque Table :

Model	Max. Torque of Drive Module	Air Source Pressure									
		3 Bar		4Bar		5Bar		6Bar		7Bar	
		Start/ending	Runnin g	Start/ending	Runnin g	Start/ending	Running	Start/ending	Runnin g	Start/ending	Running
NAW-G0-180-DA	1000	660	360	890	480	1110	600	1330	720	1550	840
NAW-G0-200-DA		830	504	1107	672	1384	839	-	—	-	-
NAW-G1-250-DA	2000	1550	840	2070	1120	2590	1400	3110	1680	3630	1960
NAW-G1-300-DA		1861	1129					-			
NAW-G2-250-DA		1622	984	2163	1312	2704	1640	3245	1968	3786	2296
NAW-G2-300-DA	4000	2710	1460	3610	1950	4520	2440	5420	2930	6320	3420
NAW-G2-350-DA		3180	1929	4240	2572	—	-	—	-	—	-
NAW-G3-350-DA		—	—	5235	3175	7096	3838	8512	4598	9937	5368
NAW-G3-400-DA	8000	4984	3023	6646	4031	8307	5039	—	—	—	—
NAW-G3-450-DA		6309	3827	8412	5103	—	—	-	—	—	—
NAW-G4-400-DA		—	—	9480	5120	11258	6080	13509	7305	15770	8521
NAW-G4-450-DA	16000	7710	4677	10280	6236	12850	7795	15420	9354	-	
NAW-G4-500-		9519	5774	12693	7700	15866	9625	-	—	—	—

W- G0 - 20 0- SR 4		46	36	71	41			- G0- 200 - SR5					14	0 6	
NA W- G1 - 25 0- SR 4	20	1 160	5 30	8 10	12 20	560	860	NAW - G1- 250 - SR5	20	1494	744	906	1 497	7 46	90 9
NA W- G1 - 30 0- SR 4	00	1 641	8 36	1 053	17 16	8 81	1128	NAW - G1- 300 - SR5	00	2089	1063	1 340	2120	1 083	137 2
NA W- G2 - 25 0- SR 4	40 00	1 423	7 23	9 09	14 95	768	980	NAW - G2- 250 - SR5	40 00	1726	883	1 123	1 880	9 79	127 8
NA W- G2 - 30 0- SR 4		2 101	9 20	1 380	21 70	980	1470	NAW - G2- 300 - SR5		2690	1336	1 617	2709	1 348	163 6
NA W-		2 883	1 456	1 810	29 01	1 474	1828	NAW -		3549	1819	2317	3572	1 938	234 0

- 35 0- SR 4								350 -SR5							
NA W- G3 - 35 0- SR 4		3 510	1 540	2 210	36 60	1 610	2310	NAW - G3- 350 - SR5		4400	2237	2816	4 251	2271	266 7
NA W- G3 - 40 0- SR 4	80 00	4 400	2 237	2 816	45 69	23 41	2984	NAW - G3- 400 - SR5	80 00	5506	2740	3332	5 899	2893	372 4
NA W- G3 - 45 0- SR 4		5 506	2 740	3 332	60 13	30 54	3 840	NAW - G3- 450 - SR5		7026	3463	4140	7542	3780	465 3
NA W- G4 - 40 0- SR 4	16 00 0	5 977	2 972	3 607	61 02	30 49	3 732	NAW - G4- 400 - SR5	16 00 0	7929	3968	4869	7892	4001	2
NA W- G4		8 810	4 408	5 410	86 93	43 36	5 292	NAW - G4- 500		1041 7	5236	6471	11 158	5694	721 1

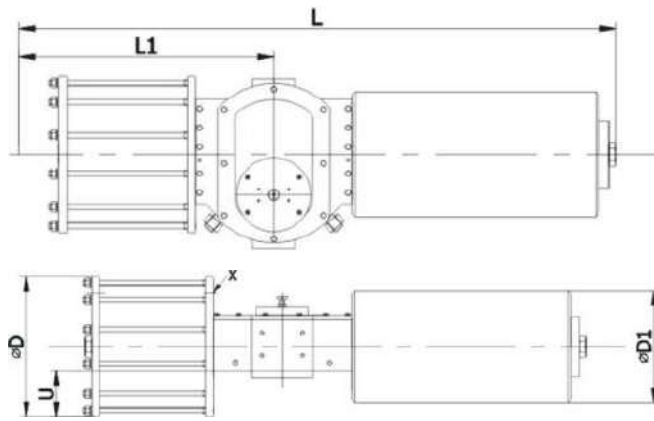
0-SR4								-SR5									
NAW-G4-500-SR4		10 417	5 349	6 471	10 593	5 231	6 648	NAW-G4-550-SR5		1269 6	6379	7880	13 451	6847	863 6		
NAW-G5-500-SR4		11 690	5 010	7 253	12 066	5 988	7 250	NAW-G5-500-SR5		1372 7	6879	8462	14 751	7514	948 5		
NAW-G5-600-SR4	32 00 0	14 449	7 241	8 907	14 356	7183	8 813	NAW-G5-600-SR5	32 00 0	1818 5	8971	1075 2	18 327	9058	108 94		
NAW-G5-700-SR4		19 069	9 491	11 549	20 114	1014 0	12 594	NAW-G5-700-SR5		2386 4	1177 2	14 109	25 470	12767	157 15		
NAW-G7-600-	63 00 0	20 920	8 790	11 610	21 790	91 50	12 090	NAW-G7-600-SR5	63 00 0	2142 6	1087 9	13 666	21 644	11 014	138 84		

SR 4																				
NA W- G7 - 70 0- SR 4		23 806	11 451	13 666	26 086	13 642	1791 8	NAW -G7 -70 0- SR5		3001 5	1512 0	18 757	29 304	14 679	180 46					
NA W- G7 - 80 0- SR 4		30 015	15 120	18 757	31 461	16 016	2020 3	NAW -G7 -80 0- SR5		3542 5	1770 2	2167 9	41095	21218	273 49					
NA W- G8 - 80 0- SR 4	12 50 00	33 844	16 948	20 827	38 254	19 417	25 237	NAW -G8 -80 0- SR5	12 50 00	4578 9	2321 4	2909 7	44 755	22574	280 63					
NA W- G8 - 90 0- SR 4		45 789	23 344	29 097	45 677	2314 6	28 986	NAW -G8 -90 0- SR5		5734 8	2869 0	3520 0	58 269	29261	361 21					
NA W- G8 - W O O- SR		57 348	28 690	35 200	57 115	2854 6	34 968	NAW - G8- 100 0- SR5 ,		6960 2	3478 9	4261 8	72 776	36756	92					

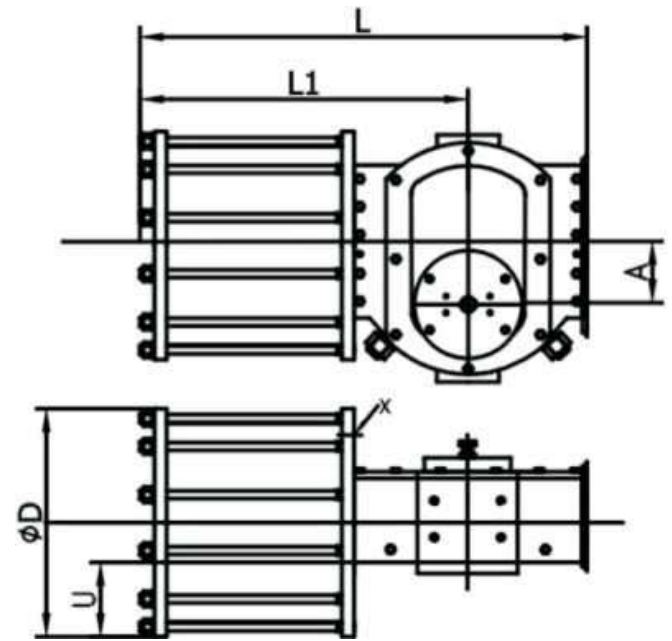
NA W- G9 - 90 0- SR 4		63 398	31 514	38 261	62 685	3107 2	37 548		NAW -G9 -90 0- SR5		7887 8	3971 0	4921 7	76 967	38524	473 05
NA W- G9 - WO O- SR 4	25 00 00	78 878	39 048	49 217	75 409	3822 0	45 747		NAW - G9- 100 O- SR5	25 00 00	9 5891	4 7761	5817 7	97 605	48824	598 91
NA W- G9 - 11 00 - SR 4		95 891	47 761	58 177	92 620	4573 3	5490 6		NAW -G 9 -11 00- SR5		1123 69	5 7081	7176 4	11673 3	59787	761 27

Model	Max. Torque	Spring Break	Spring Running	Spring End	Air Break	Air Running	Air End
NAW-G0-180-SR6	1000	789	402	550	877	546	620
NAW-G0-200-SR6		—	—	-	—	-	-
NAW-G1-250-SR6	2000	1641	836	1053	1831	952	1242
NAW-G1-300-SR6		—	-	—	—	—	
NAW-G2-250-SR6	4000	2107	1076	1363	2242	1159	
NAW-G2-300-SRS		2883	1456	1810	3382	1764	2308
NAW-G2-350-SR6		—	—	-	-	—	—
NAW-G3-350-SR6	8000	5506	2740	3332	5148	2670	2974
NAW-G3-400-SR6		7029	3463	4140	6937	3406	4048
NAW-G3-450-SR6		—	—	—	—	—	—

NAW-G4-400-SR6	16000	10417	5236	6471	10664	5389	6718
NAW-G4-500-SR6		12696	6379	7880	13291	6738	8459
NAW-G4-550-SR6		15644	7724	9271	16327	8147	9952
NAW-G5-500-SR6	32000	16366	8095	9676	16712	8288	10022
NAW-G5-600-SR6		22471	10908	12716	22179	10727	12424
NAW-G5-700-SR6		28953	14335	17288	30207	15112	18543
NAW-G7-600-SR6	63000	26630	13472	16828	25544	12799	15471
NAW-G7-700-SR6		35425	17702	21679	35995	18056	22248
NAW-G7-800-SR6		47742	23883	29300	46029	22821	28593
NAW-G8-800-SR6	125000	57348	28690	35200	53420	26257	31275
NAW-G8-900-SR6		69602	34788	42618	69545	34753	42561
NAW-G8-1000-SR6		82680	41743	51976	86497	42250	55793
NAW-G9-900-SR6	250000	95891	47761	58177	93243	46119	55529
NAW-G9-1000-SR6		112369	57081	71764	115175	58821	74570
NAW-G9-1100-SR6		—	—	—	—	—	—



Spring Return Single Acting



Double Acting

Model	ISO Connect Flange	L1	L	D	D1	U	"X (NPT)"
NAW-G0-180SR4	F12	345	875	230	180	50	1/4"
NAW-G0-200SR4		345	875	270	180	70	3/8"
NAW-G1-250SR4	F14	455	1290	320	220	65	3/8"
NAW-G1-300SR4		455	1290	375	276	90	3/8"
NAW-G2-250SR4	F16	515	1460	320	276	58	3/8"
NAW-G2-300SR4		515	1460	375	280	83	1/2"
NAW-G2-350SR4		515	1460	420	299	108	1/2"
NAW-G3-350SR4	F25	588	1660	420	320	90	1/2"
NAW-G3-400SR4		588	1660	480	350	120	1/2"
NAW-G3-450SR4		588	1660	520	400	140	1/2"
NAW-G4-400SR4	F30	705	1915	480	400	94	3/4"
NAW-G4-450SR4		705	1915	520	400	114	3/4"
NAW-G4-500SR4		705	1915	590	455	149	3/4"
NAW-G5-500SR4	F35	885	2270	590	455	125	3/4"
NAW-G5-600SR4		885	2270	630	455	175	3/4"
NAW-G5-700SR4		885	2270	790	455	225	3/4"
NAW-G7-600SR4	F40	1065	2820	690	530	132	1"

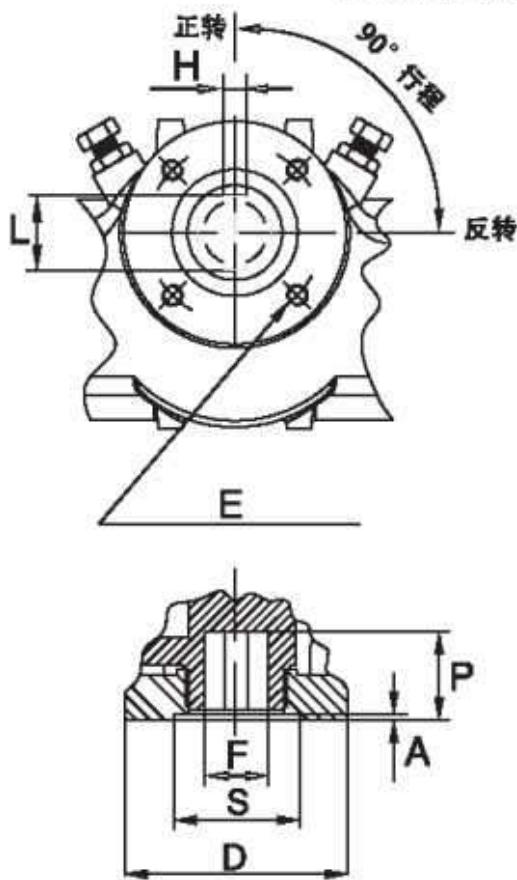
NAW-G7-700SR4		1065	2820	790	560	197	1"
NAW-G7-800SR4		1065	2820	900	630*	237	1"
NAW-G8-800SDA	F48	1255	3445	900	630*	219	1"-2
NAW-G8-900DA		1255	3445	1020	630,	274	1"-2
NAW-G8-1000DA		1255	3885	1113	630,	335	1"-2
NAW-G9-900DA	F48	1530	4250	1020	630*	300	1"-2
NAW-G9-1000DA		1530	4250	1150	762*	350	1"-2
NAW-G9-1100DA		1530	4250	1250	762*	400	1"-2

Model	ISO Connect Flange	L1	L	D	D1	U	"X (NPT)"
OAW-G0-180DA	F12	345	495	230	45	50	1/4"
OAW-G0-200DA		345	495	270	45	70	3/8"
OAW-G1-250DA	F14	455	640	320	60	65	3/8"
OAW-G1-300DA		455	640	375	60	90	3/8"
OAW-G2-250DA	F16	515	730	320	75	58	3/8"
OAW-G2-300DA		515	730	375	75	83	1/2"
OAW-G2-350DA		515	730	420	75	108	1/2"
OAW-G3-350DA	F25	588	810	420	88	90	1/2"
OAW-G3-400DA		588	810	480	88	120	1/2"
OAW-G3-450DA		588	810	520	88	140	1/2"
OAW-G4-400DA	F30	705	970	480	109	94	3/4"
OAW-G4-450DA		705	970	520	109	114	3/4"
OAW-G4-500DA		705	970	590	109	149	3/4"
OAW-G5-500DA	F35	885	1225	590	137	125	3/4"
OAW-G5-600DA		885	1225	630	137	145	
OAW-G5-700DA		885	1225	690	137	175	3/4"
OAW-G7-600DA	F40	1065	1375	690	170	132	1"
OAW-G7-700DA		1065	1375	790	170	197	1"
OAW-G7-800DA		1065	1375	900	170	237	1"-2

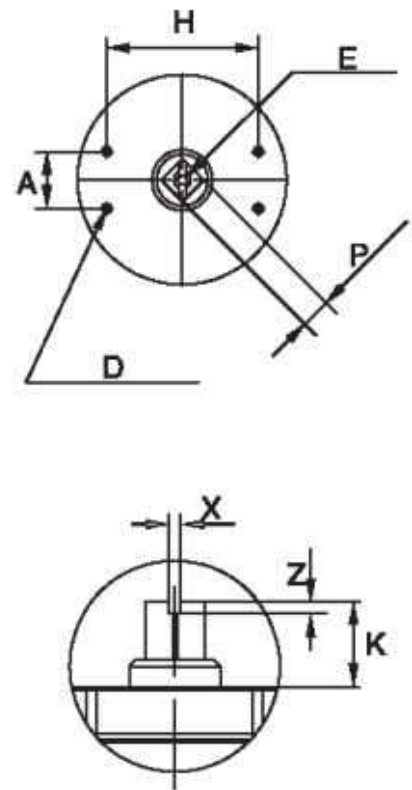
OAW-G8-900DA		1255	1600	1010	190	274	1"-2
OAW-G8-1000DA		1255	1600	1113	190	335	1"-2
OAW-G9-900DA	F48	1440	2390	1020	270	300	1"-2
OAW-G9-1000DA		1440	2390	1150	270	350	1"-2
OAW-G9-1100DA		1440	2390	2390	270	400	1"-2

Installation Diagram:

Bottom Connection Dimensions



Top Connection Dimensions



Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Соленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13

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