



603 Series Valve Gearbox

► For Multi-turn Application



Summary

- ▶ Drive train The drive train consists of bevel gear pair.
- ▶ Applicability 603 series can provide a reliable position control of gate, stop valves, as well as similar ones. They not only can be used as manual actuator, but also can be used as electric actuators when combining with the multi-turn valve actuator.
- ▶ Torque 300 ~ 5000 Nm

Features

- 1 The structure is water tightness. IP65 enclosure is standard, and IP67 or IP68 (GB4208) enclosure can be provided if need.
- 2 For manual operation, 603 series can be equipped with additional gearbox to reduce operation force.
- 3 The members in the main house are lubricated forever with molybdenum disulfide grease.
- 4 Valve position indicator, potentiometer and other optional configuration can be provided.



About us

Tianjin Beifang ValveActuator Co., Ltd. (BF for short) always focus on the design and manufacture of excellent valve actuator and control equipment.

BF attaches great importance to product design, and the design team has strong product design and innovation ability. BF has complete intellectual property rights and a number of technical patents. Over the years, our products have been annual exported in batches and were widely and successfully used in water treatment, oil, electricity, chemical and other industries.

BF acquired the authentication of quality management system standards ISO9000 of DNV in 1998. Strict quality control in all stages and constantly improving the product quality control standards is the consensus of the staff.

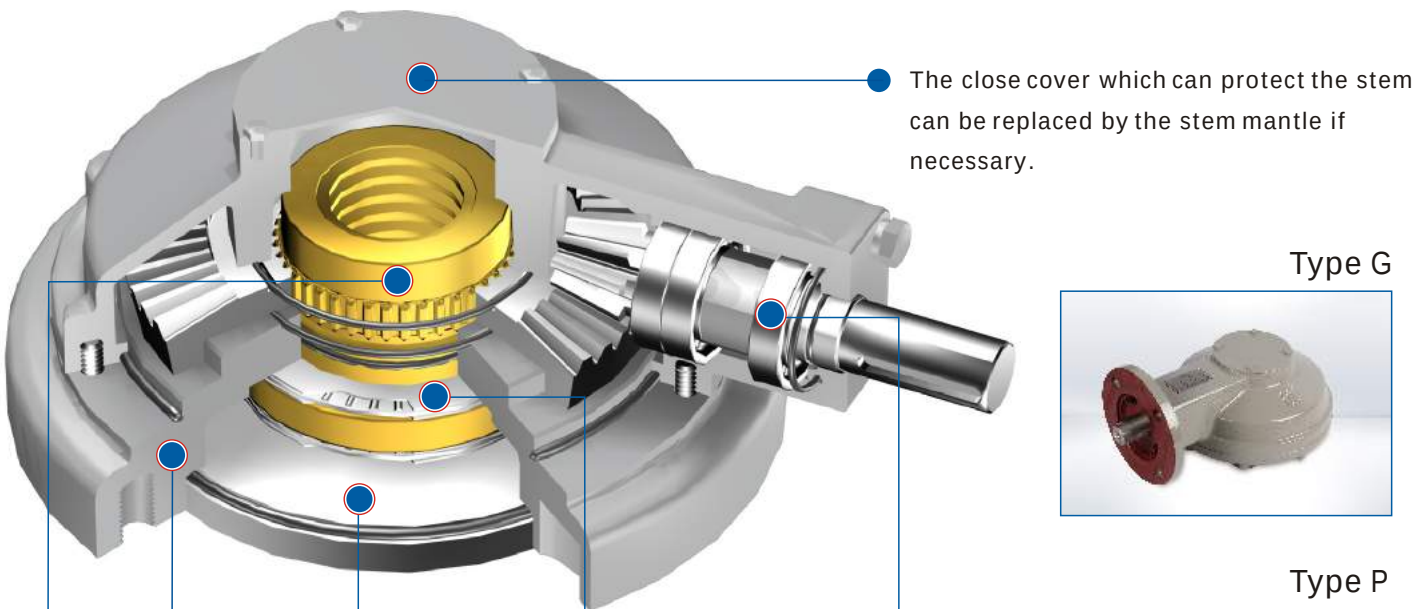
BF believes that only solid the software and hardware foundation to achieve long-term stable development. We have set up some advanced computer-aided system, such as product design, resource management, production management, and soon. And we have set up the platform of precision machining mainly based on CNC machining center. We also continue to establish and improve a documented management system.

BF will design and manufacture products solidly and continue our efforts to create more value for customers.

Where to find information

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Structure



The close cover which can protect the stem can be replaced by the stem mantle if necessary.

Type G



Type P



The double direction thrust from valve stem will be accepted by the thrust groupware which ensures high reliability of 603 series.

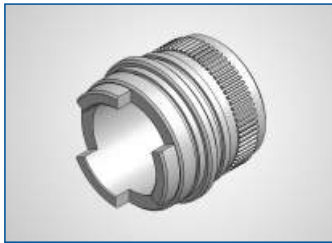
The groupware of thrust needle bearing ensures the stem nut running smoothly and improves the drive efficiency.

The small bevel gear shaft is supported by the rolling bearing, which improves the drive efficiency.

The drive shaft can be dismantled independently. In addition, there are various output drive types for you to choose.



Copper alloy stem nut
The stem nut which transmit torque and bear thrust will be supplied with a pilot hole.



Steel plug sleeve
This output drive is for transmission of torque.



Steel solid sleeve
This output drive can be machined flexibly by user to match the valve stem.

Mechanical parameters

Model	Max. ¹ Output torque	Allowable max. Thrust (stem nut)		Without additional gearbox				With additional gearbox ³			
		Manual operation	Motor operation	Ratio	Efficiency	Input torque ²	Weight	Ratio	Efficiency	Input torque ²	Weight
	Nm	kN	kN			Nm	Kg			Nm	Kg
6030	300	66	49	3:1	0.8	126	12	N/A	N/A	N/A	N/A
6031	600	111	83	3:1	0.8	250	24	N/A	N/A	N/A	N/A
6032	1200	200	150	4:1	0.8	375	41	12:1	0.72	138	56
6033	2500	356	267	6:1	0.8	521	58	21:1	0.72	161	79
6034	5000	667	500	6:1	0.8	1042	80	43:1	0.72	161	110

Note 1: During manual operation, allowable instantaneous torque is 1.1 to 1.3 times the value in the table. During motor operation, the output torque can not exceed the value.
Note 2: Input torque is the value when the products output maximum torque.
Note 3: The additional gearbox is used for 6032 to 6034, and is only used for manual operation.

Model and Specification

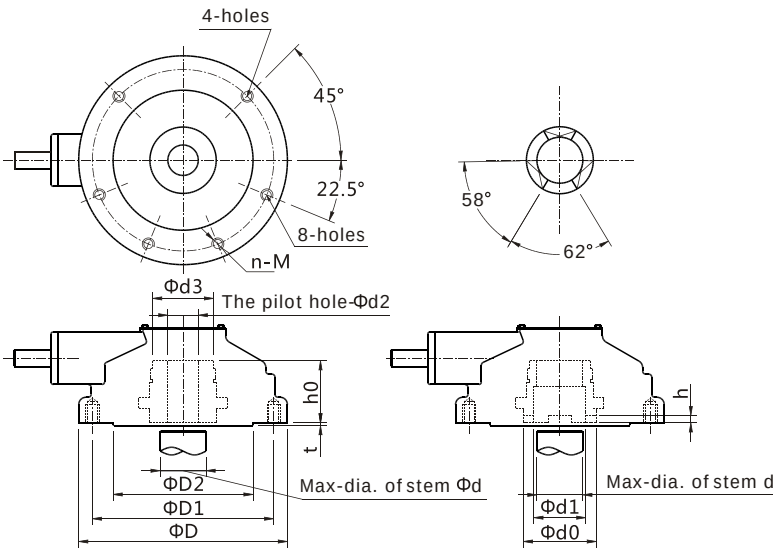
6032	-	36	P	-	L	:	F25-Y15	:	F14-06	Input connection code (If it is hand wheel, omit the code)
										Connection code for valve (Refer to page 4)
										Work environment
									Null	Standard: -20~+80 °C
									L	Low temperature : -40~+80 °C
									H	Ultralow temperature : -60~+60 °C
										Structure and configuration
									Null	Standard: Manual operation and without additional gearbox
									S	With additional reduction gearbox
									G	With input flange, combining with multi-turn electric actuators
									P	With mechanical position indicator
									W	Add a potentiometer base on type P
										The turns (It is necessary to be supplied for type P and type W)
										Model

Overall dimension

Output mounting dimension

Dimensions of flange mm					
Code	D	D1	D2	t	n-M
F10	125	102	70	3	4-M10
F14	175	140	100	3	4-M16
F16	210	165	130	4.5	4-M20
F25	300	254	200	4.5	8-M16
F30	350	298	230	4.5	8-M20
F35	415	356	260	4.5	8-M30

Dimensions of plug mm			
Code	d0	d1	h
Y08	55	42	10
Y10	72	50	12
Y12	78	60	12
Y14	93	70	12
Y15	95	75	12
Y19	119	95	13
Y22	135	111	13
Y25	158	125	15

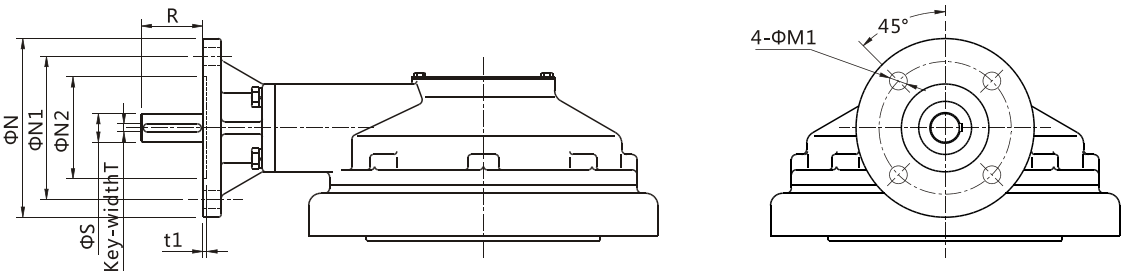


- 1、"Connection code" shows the output drive types and mounting dimensions (Please refer to "Model and specification" on page 3)
"Flange code + Plug code" is for "Type Y", "Flange code + letter T" is for "Type T"
- 2、The valve in the table is show as standard. If require special size, please contact us.

Model	Dimensions of flange		Dimensions of plug		Dimensions of stem nut				mm
	Standard	Options	Standard	Options	d	d2	d3	h0	
6030	F14	F10	Y08	Y10	42	25	55	60	
6031	F16	F14	Y12	Y10	55	32	70	70	
6032	F25	F16	Y15	Y14	65	46	85	85	
6033	F30	F25	Y22	Y19	85	65	110	104	
6034	F35	F30	Y25	Y22	100	65	130	118	

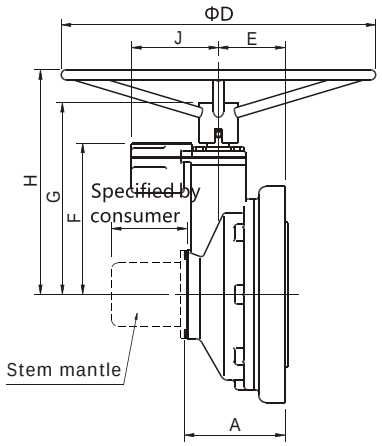
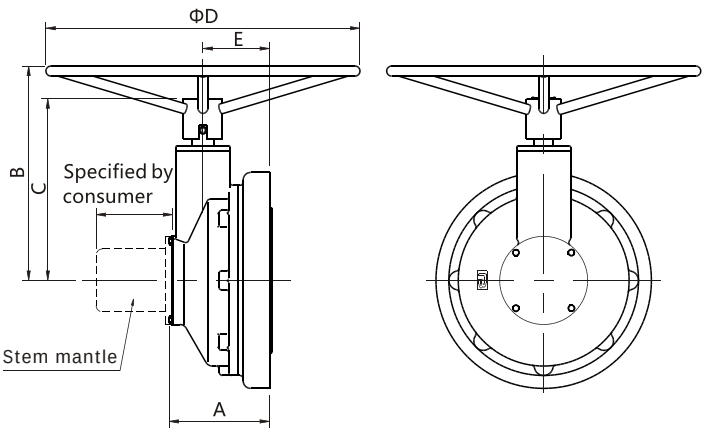
Input mounting dimension (For combining with multi-turn electric actuators)

Model	Flange						Input shaft			mm
	Code	N	N1	N2	t1	4-ΦM1	S	R	T	
6030	F10	125	102	70	3.5	4-Φ12	24	40	8	
6031	F10	125	102	70	3.5	4-Φ12	28	56	8	
6032	F14	175	140	100	4.5	4-Φ18	32	60	10	
6033	F14	175	140	100	4.5	4-Φ18	32	60	10	
6034	F16	210	165	130	6	4-Φ22	38	65	10	



Direct hand operation (Standard)

With position indicator (Type P)

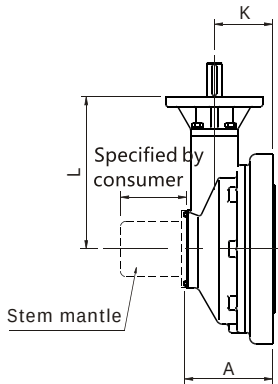
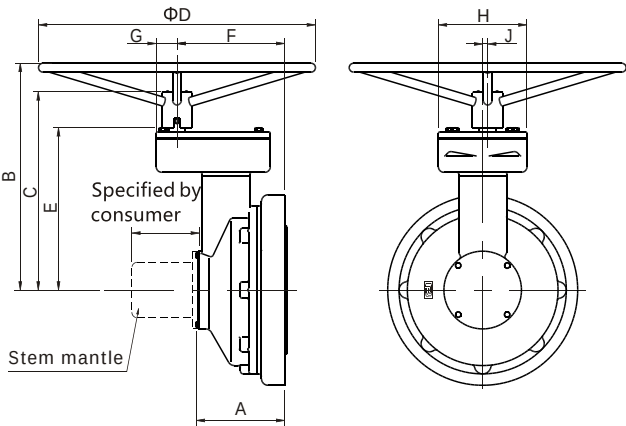


Unit:mm

Model	A	B	C	D	E	F	G	H	J
6030	110	215	178	400	70	150	200	237	127
6031	126	264	214	500	80	170	236	285	133
6032	144	313	263	500	95	212	278	328	136
6033	160	326	278	600	106	240	299	347	139
6034	197	384	335	600	133.5	291	355	404	146

With additional gearbox (Type S)

For combining with multi-turn electric actuators (Type G)



Unit:mm

Model	A	B	C	D	E	F	G	H	J	K	L*
6030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	134
6031	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80	193
6032	144	365	326	400	270	172	39	140	13	95	210
6033	160	409	359	500	293	195	38	160	9	106	271
6034	197	517	468	600	401	133.5	172	180	0	133.5	337