



CHANGZHOU SPEED REDUCER MACHINE CO.,Ltd

GF Series Rotary Air-lock 、 Discharge Valve Selection Guide



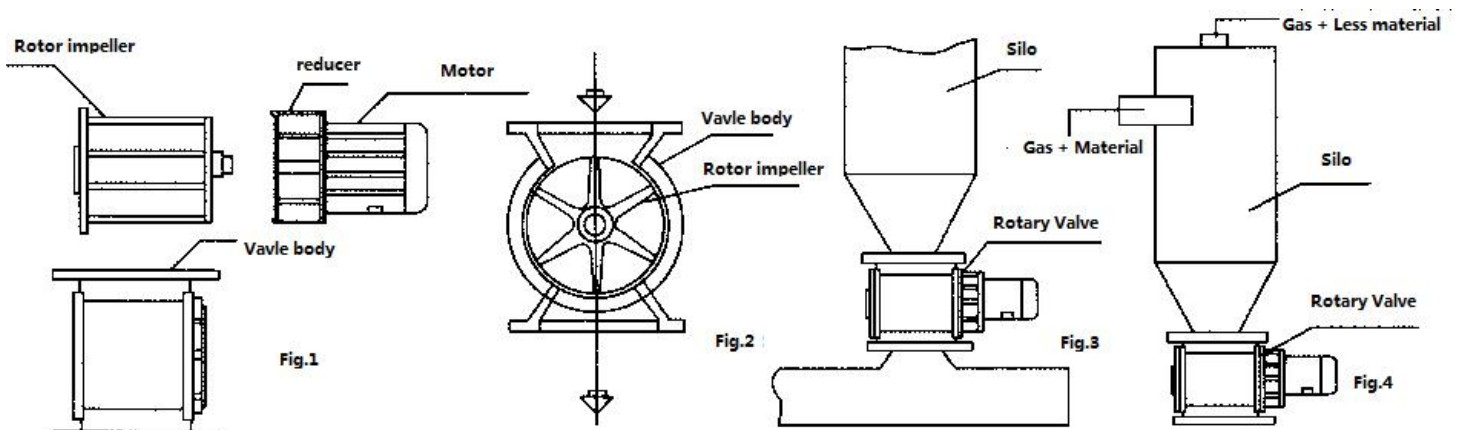
一、 Overview

The rotary valve is also called unloader valve, rotary feeder, air-lock valve. The structure of star discharge (as shown in Figure 1) is composed of a rotor impeller with several blades, a casing, a seal and a reducer, Motor and other components.

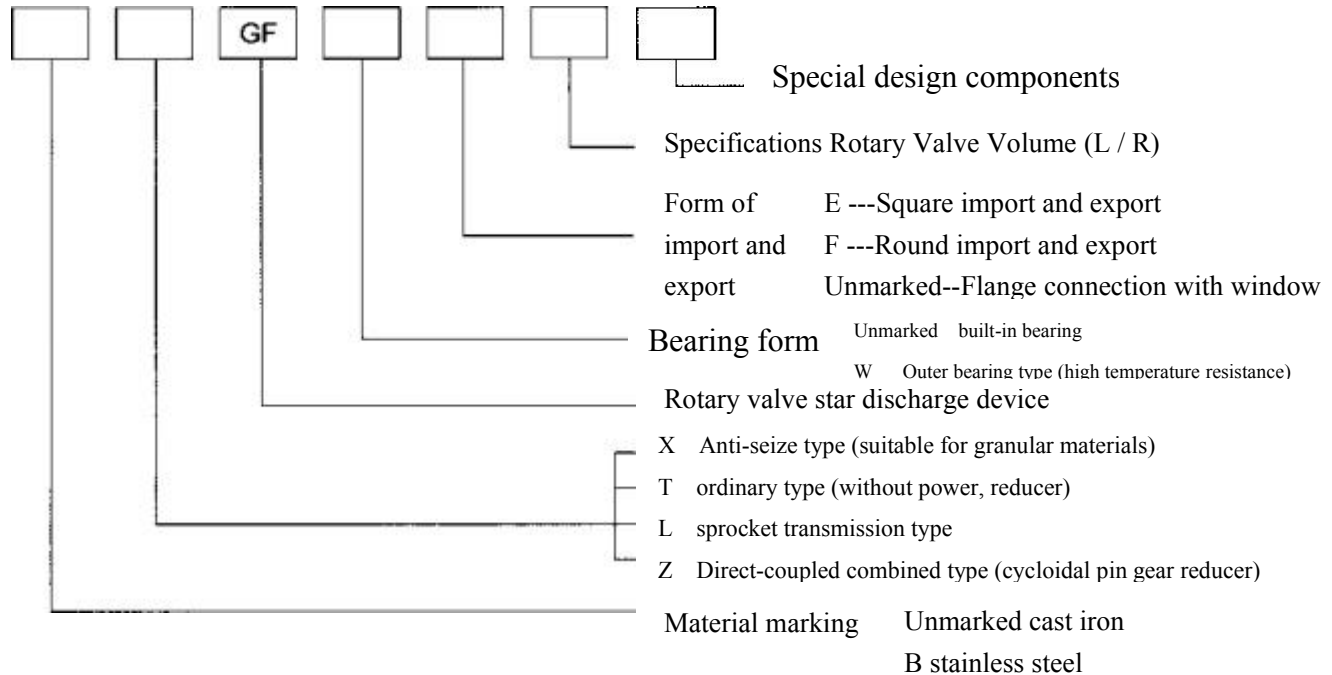
When the material in the upper silo falls by its own weight and fills the gap between the blades, it is discharged in the lower part as the blades rotate. Therefore, the rotary valve can discharge quantitatively and continuously (as shown in Figure 2).

The rotary valve is commonly used in pneumatic output systems (as shown in Figure 3). For pressure output systems or negative pressure output systems, the rotary valve can uniformly and continuously feed the pipe to ensure pneumatic output. The gas and solids in the tube are relatively stable, so that the pneumatic conveyance can work normally, and at the same time, the upper and lower air pressure of the unloader can be cut off to play the role of air lock. Therefore, the rotary valve is an important component commonly used in pneumatic conveying systems.

The rotary valve can be used in the material collection system as the discharger of the silo (as shown in Figure 4). rotary valve is currently the most advanced unloading device in China. It is commonly used in dust removal systems as one of the important equipment of dust removal systems. It is especially suitable for dust and small particles. It is deeply affected by environmental protection, metallurgy, chemical industry, grain, cement. Engineering projects in industrial industries such as construction, road construction, and drying equipment are optimally selected.



二、 Model Specifications



(1) Special design components:

- A、 Rotor form: closed rotor; small capacity rotor; adjustable and replaceable rotor; sharpened rotor; hardened, wear-resistant rotor.
- B、 Shaft seal: air seal; packing seal; labyrinth combination seal.
- C、 Exhaust holes: standard exhaust holes; special exhaust holes.
- D、 Special reducer; special motor (frequency conversion motor, explosion-proof motor, speed-regulating motor)
- E、 Other special requirements

(2) The upper and lower flange openings of the unloader are basically square or round, and can also be selected by the user.

(3) The code w of the external bearing type indicates that the bearings at both ends are isolated from the impeller to prevent the ultra-fine powder from contacting the bearing. It is usually also used as a high-temperature resistant type with a temperature resistance of 280 ° C

(4) The discharge volume is calculated by the following formula.

$$G=0.06V \cdot N \cdot Y \cdot R \cdot K \text{ (t/ h)}$$

V-off fan volume (liter / rev)

N-off fan speed (r/ min)

Y-off fan volumetric efficiency (0.5-0.8)

R-material capacity (t / m³)



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五、 Shape and installation dimensions

BZGF, ZGF, TGF type outline drawing and installation dimensions

The feed inlet of this model is a round flange connection, with a transparent observation window for easy observation of the material flow. The outlet is a square mouth, the motor is directly connected, and the machine is compact and easy to maintain and maintain. The TGF type is a type without power, and the remaining dimensions are the same as ZGF.



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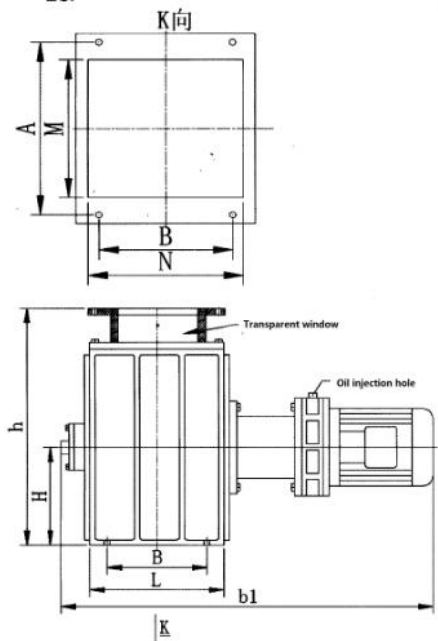
ZGF



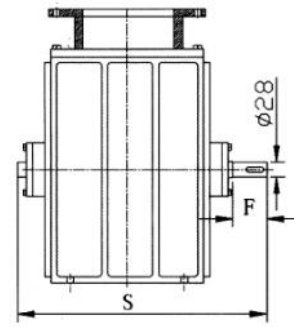
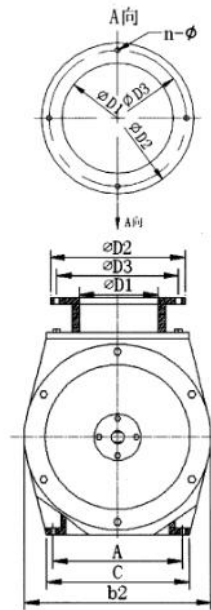
TGF



BZGF



ZGF型



TGF型

| | 型号 type | 每转体积 Volume/rotation | 功率 Power | 转速 Speed | 安装联接尺寸 Installation dimension | | | | | | | | | | | | | | | | | | |
|------|------------|-------------------------|-------------|-------------|----------------------------------|-------|--------|------|-----|-----|-----|-----|----------------|----------------|-----|----------------|-----|-----|-----|-----|-------|-----|-----|
| | | | | | (KW) | R/min | A | B | C | L | H | Di | D ₂ | D ₃ | bi | b ₂ | h | M | N | S | F | d | Φ |
| | | | | | TGF | 2.8L | 2.8L/T | 0.75 | 45 | 165 | 120 | 190 | 180 | 140 | 120 | 190 | 160 | 620 | 260 | 360 | 120 | 150 | 315 |
| | 5L | 5 L/T | 0.75 | 45 | 190 | 140 | 220 | 210 | 160 | 150 | 220 | 190 | 650 | 300 | 400 | 140 | 180 | 345 | 70 | 28 | 4-Φ9 | | |
| | 7L | 7 L/T | 0.75 | 45 | 225 | 160 | 250 | 230 | 175 | 170 | 240 | 210 | 710 | 330 | 430 | 175 | 200 | 365 | 70 | 28 | 4-Φ9 | | |
| ZGF | 9L | 9 L/T | 1.1 | 45 | 250 | 190 | 275 | 255 | 190 | 190 | 260 | 235 | 740 | 360 | 460 | 200 | 220 | 385 | 70 | 28 | 4-Φ9 | | |
| | 12L | 12L/T | 1.1 | 45 | 275 | 210 | 310 | 275 | 205 | 210 | 270 | 230 | 780 | 380 | 510 | 220 | 240 | 410 | 70 | 28 | 6-Φ11 | | |
| BZGF | 16L | 16L/T | 1.5 | 45 | 310 | 250 | 340 | 320 | 225 | 250 | 320 | 300 | 840 | 410 | 550 | 260 | 280 | 430 | 70 | 28 | 6-Φ11 | | |
| | 25L | 25L/T | 1.5 | 45 | 345 | 270 | 390 | 320 | 225 | 240 | 320 | 280 | 860 | 410 | 550 | 260 | 260 | | | | 6-Φ11 | | |

ZGFWF, ZGFWE type outline installation dimensions

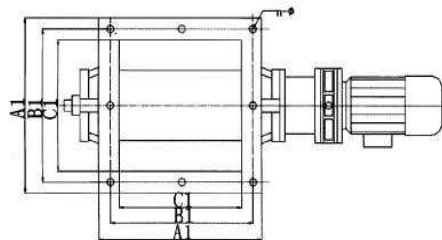
The installation size of the inlet and outlet of this type of unit is the same, there are square, round inlet and outlet, upper feed, lower discharge. It can adapt to the requirements of different installation occasions and has a wide range of applications. The external bearing plays the role of preventing dust from entering the bearing and high temperature resistance. The transmission mode is direct-coupled, the overall structure is compact, and it is easy to maintain and maintain.



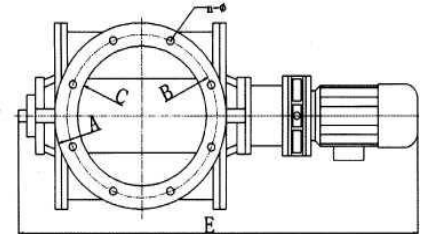
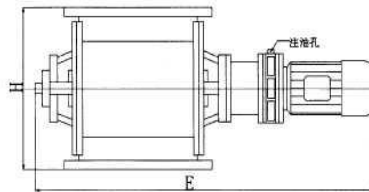
ZGFWE



ZGFWF



ZGFWE型



ZGFWF型

| 型号 type | 每转体积 Volume/rotation | 功率 Power | 转速 Speed | 工作温度 temperature | 重量 weight | 安装联接尺寸 Installation dimension | | | | | | | | |
|------------|-------------------------|-------------|-------------|---------------------|--------------|----------------------------------|-----|-----|---------|-----|---------|-----|------|----------|
| | | (KW) | R/min | (°C) | | ΦA | ΦB | ΦC | A1 | B1 | C1 | H | E | n-Φ (mm) |
| 2type | 2L/T | 0.75 | 24 | 280 | 75 | 240 | 200 | 150 | 240x240 | 200 | 150x150 | 240 | 850 | 8-Φ11 |
| 4type | 4L/T | 0.75 | 24 | 280 | 105 | 280 | 240 | 180 | 270x270 | 230 | 180x180 | 280 | 900 | 8-Φ11 |
| 6type | 6L/T | 0.75 | 24 | 280 | 110 | 300 | 260 | 200 | 290x290 | 250 | 200x200 | 300 | 930 | 8-Φ11 |
| 8type | 8L/T | 0.75 | 24 | 280 | 125 | 320 | 280 | 220 | 310x310 | 270 | 220x220 | 320 | 950 | 8-Φ11 |
| 10type | 10L/T | 1.1 | 24 | 280 | 135 | 340 | 300 | 240 | 330x330 | 290 | 240x240 | 340 | 1000 | 8-Φ13 |
| 12type | 12L/T | 1.1 | 24 | 280 | 140 | 360 | 320 | 260 | 350x350 | 310 | 260x260 | 360 | 1030 | 8-Φ17 |
| 14type | 14L/T | 1.1 | 24 | 280 | 160 | 380 | 340 | 280 | 370x370 | 330 | 280x280 | 380 | 1050 | 8-Φ17 |
| 16type | 16L/T | 1.1 | 24 | 280 | 180 | 400 | 360 | 300 | 400x400 | 350 | 300x300 | 400 | 1080 | 8-Φ17 |
| 18type | 18L/R | 1.5 | 24 | 280 | 195 | 420 | 380 | 320 | 420x420 | 370 | 320x320 | 420 | 1100 | 8-Φ17 |
| 20type | 20L/T | 1.5 | 24 | 280 | 210 | 440 | 400 | 340 | 440x440 | 390 | 340x340 | 440 | 1150 | 8-Φ17 |
| 26type | 26L/T | 2.2 | 24 | 280 | 310 | 500 | 460 | 400 | 510x510 | 450 | 400x400 | 560 | 1300 | 12-Φ17 |
| 30type | 30L/T | 3 | 24 | 280 | 350 | 560 | 500 | 440 | 550x550 | 495 | 440x440 | 550 | 1350 | 12-Φ17 |
| 40type | 40L/T | 3 | 24 | 280 | 450 | 620 | 558 | 500 | 620x620 | 558 | 500x500 | 620 | 1500 | 12-Φ17 |
| 50type | 50L/T | 3 | 24 | 280 | 500 | 650 | 600 | 540 | 650x650 | 600 | 540x540 | 650 | 1600 | 12-Φ17 |



ZGFF, ZGFE type installation dimensions

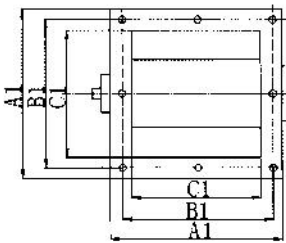
This type of unit has the same inlet and outlet installation dimensions, with square, round inlet and outlet, upper feeding and lower discharging, which can meet the requirements of different installation occasions. The machine has a compact structure and is easy to maintain and maintain.



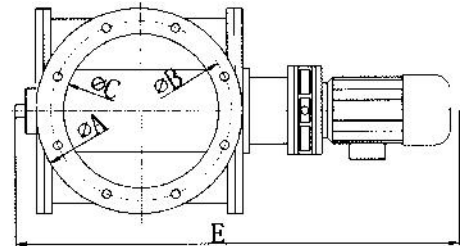
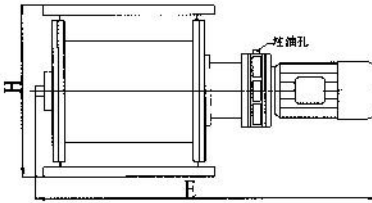
ZGFE



ZGFF



ZGFE型



ZGFF型

| 型号 type | 每转体积 Volume/rotation | 功率 Power | 转速 Speed | 工作温度 temperature | 重量 weight | 安装联接尺寸 Installation dimension | | | | | | | | |
|------------|-------------------------|-------------|-------------|---------------------|--------------|----------------------------------|-----|-----|---------|-----|---------|-----|-----|----------|
| | | (KW) | R/min | (°C) | Kg | ΦA | ΦB | ΦC | A1 | B1 | C1 | H | E | n-Φ (mm) |
| 2type | 2L/T | 0.75 | 24 | W80 | 40 | 240 | 200 | 150 | 240x240 | 200 | 150x150 | 240 | 500 | 8-Φ11 |
| 4type | 4L/T | 0.75 | 24 | W80 | 60 | 280 | 240 | 180 | 270x270 | 230 | 180x180 | 280 | 530 | 8-Φ11 |
| 6type | 6L/T | 0.75 | 24 | W80 | 75 | 300 | 260 | 200 | 290x290 | 250 | 200x200 | 300 | 550 | 8-Φ11 |
| 8type | 8L/T | 0.75 | 24 | <80 | 80 | 320 | 280 | 220 | 310x310 | 270 | 220x220 | 320 | 580 | 8-Φ11 |
| 10type | 10L/T | 1.1 | 24 | W80 | 100 | 340 | 300 | 240 | 330x330 | 290 | 240x240 | 340 | 600 | 8-Φ13 |
| 12type | 12L/T | 1.1 | 24 | W80 | 115 | 360 | 320 | 260 | 350x350 | 310 | 260x260 | 360 | 620 | 8-Φ17 |
| 14type | 14L/T | 1.1 | 24 | W80 | 130 | 380 | 340 | 280 | 370x370 | 330 | 280x280 | 380 | 640 | 8-Φ17 |
| 16type | 16L/T | 1.1 | 24 | ^80 | 150 | 400 | 360 | 300 | 400x400 | 350 | 300x300 | 400 | 670 | 8-Φ17 |
| 18type | 18L/R | 1.5 | 24 | W80 | 165 | 420 | 380 | 320 | 420x420 | 370 | 320x320 | 420 | 690 | 8-Φ17 |
| 20type | 20L/T | 1.5 | 24 | W80 | 180 | 440 | 400 | 340 | 440x440 | 390 | 340x340 | 440 | 710 | 8-Φ17 |
| 26type | 26L/T | 2.2 | 24 | W80 | 230 | 500 | 460 | 400 | 510x510 | 450 | 400x400 | 560 | 770 | 12-Φ17 |
| 30type | 30L/T | 3 | 24 | W80 | 280 | 560 | 500 | 440 | 550x550 | 495 | 440x440 | 550 | 820 | 12-Φ17 |
| 40type | 40L/T | 3 | 24 | W80 | 320 | 620 | 558 | 500 | 620x620 | 558 | 500x500 | 620 | 950 | 12-Φ17 |
| 50type | 50L/T | 3 | 24 | W80 | 380 | 650 | 600 | 540 | 650x650 | 600 | 540x540 | 650 | 990 | 12-Φ17 |

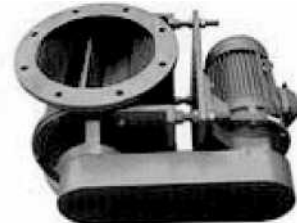


LGFWF, LGFWE type outline installation dimensions

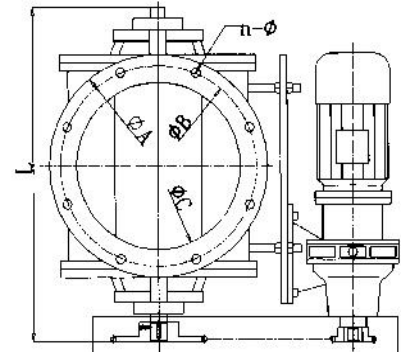
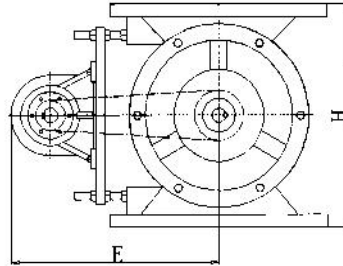
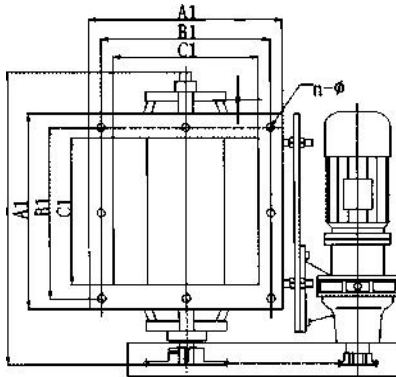
The installation size of the inlet and outlet of this type of unit is the same, with round or square inlet and outlet, upper feed, lower feed, the reduction motor is side-mounted, directly connected to the host through the connecting plate, and sprocket drive. Suitable for high temperature and other general working conditions.



LGFWE



LGFWF



| 型号 type | 每转体积 Volume/rotation | 安装联 接尺寸 | | | | | | | Installation dimension | | | | |
|------------|-------------------------|---------|-----|-----|---------|-----|---------|-----|------------------------|-------|-------------|-----|----------|
| | | ΦA | ΦB | ΦC | A1 | B1 | C1 | E | Motor | Speed | temperature | L | n-Φ (mm) |
| 2type | 2L/T | 240 | 200 | 150 | 240x240 | 200 | 150x150 | 320 | BWD0-0.75-59 | 24 | 280 | 450 | 8-Φ11 |
| 4type | 4L/T | 280 | 240 | 180 | 270x270 | 230 | 180x180 | 350 | BWD0-0.75-59 | 24 | 280 | 480 | 8-Φ11 |
| 6type | 6L/T | 300 | 260 | 200 | 290x290 | 250 | 200x200 | 370 | BWD0-0.75-59 | 24 | 280 | 500 | 8-Φ11 |
| 8type | 8L/T | 320 | 280 | 220 | 310x310 | 270 | 220x220 | 380 | BWD0-0.75-59 | 24 | 280 | 520 | 8-Φ11 |
| 10type | 10L/T | 340 | 300 | 240 | 330x330 | 290 | 240x240 | 380 | BWD0-0.75-59 | 24 | 280 | 540 | 8-Φ11 |
| 12type | 12L/T | 360 | 320 | 260 | 350x350 | 310 | 260x260 | 440 | BWD1-0.75-59 | 24 | 280 | 560 | 8-Φ17 |
| 14type | 14L/T | 380 | 340 | 280 | 370x370 | 330 | 280x280 | 450 | BWD1-1.1-59 | 24 | 280 | 580 | 8-Φ17 |
| 16type | 16L/T | 400 | 360 | 300 | 400x400 | 350 | 300x300 | 460 | BWD1-1.5-59 | 24 | 280 | 600 | 8-Φ17 |
| 18type | 18L/R | 420 | 380 | 320 | 420x420 | 370 | 320x320 | 480 | BWD1-1.5-59 | 24 | 280 | 620 | 8-Φ17 |
| 20type | 20L/T | 440 | 400 | 340 | 440x440 | 390 | 340x340 | 500 | BWD1-1.5-59 | 24 | 280 | 640 | 8-Φ17 |
| 26type | 26L/T | 500 | 460 | 400 | 510x510 | 450 | 400x400 | 530 | BWD2-2.2-59 | 24 | 280 | 700 | 12-Φ17 |
| 30type | 30L/T | 560 | 500 | 440 | 550x550 | 495 | 440x440 | 550 | BWD2-3-59 | 24 | 280 | 760 | 12-Φ17 |



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|--------|-------|-----|-----|-----|---------|-----|---------|-----|-----------|----|-----|-----|--------|
| 40type | 40L/T | 620 | 558 | 500 | 620x620 | 558 | 500x500 | 560 | BWD2-4-59 | 24 | 280 | 820 | 12-Φ17 |
| 50type | 50L/T | 650 | 600 | 540 | 650x650 | 600 | 540x540 | 580 | BWD4-4-59 | 24 | 280 | 850 | 12-Φ17 |