



# **Declutchable Wormgear Manual Override**

Pneumatic valve dedicated clutch



KH-1 to KH-8

KH-320:1 to KH-450:1



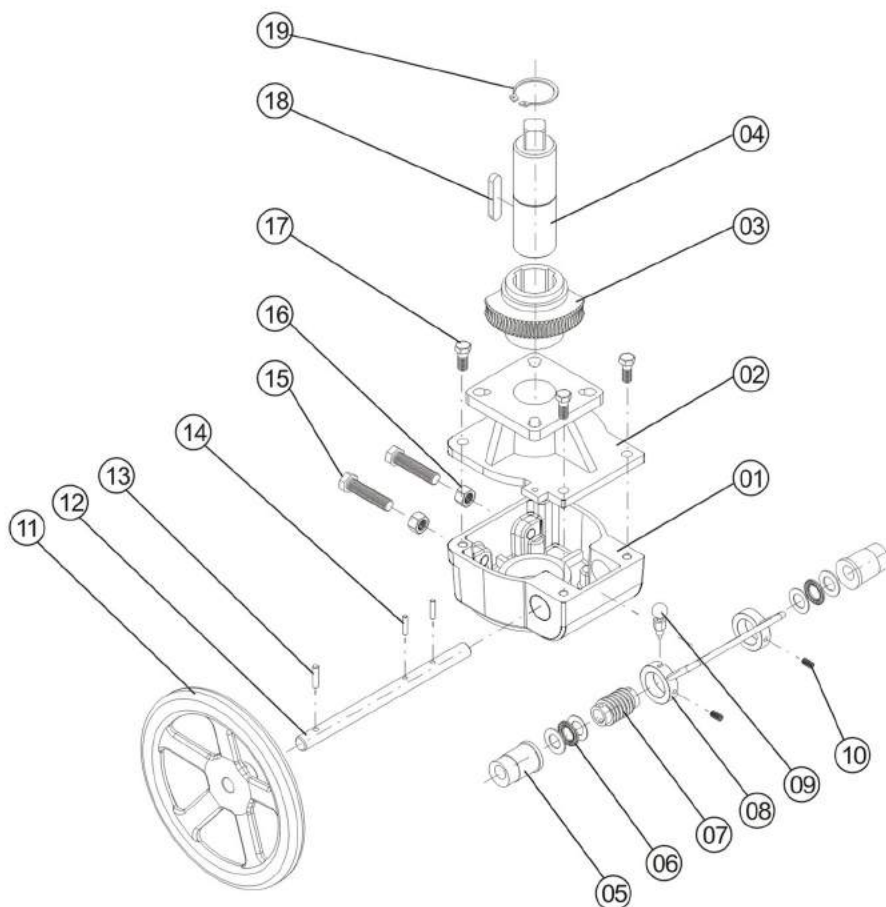
### Main purpose:

The Declutchable Wormgear Manual Override is used with pneumatic actuators and is the main component of the automatic control system. It is mainly used for rotary angle 90 ° to open and close the butterfly valve, ball valve, piston valve to achieve manual drive. It can also be used for other automatic control mechanical products which need to be manually driven.

### Features:

1. Small size, light weight, reasonable design, novel style.
2. Product serialization, the output torque parameters are easily matched with pneumatic actuators and a variety of valves.
3. KH series connection in line with ISO 5211 connection standards, the upper bulge for the tenon, the lower part is the square hole; The large torque mechanism 320: 1 and 450: 1 connection hole has a number of keyways, so that users can select the product with the corresponding valve body position.
4. Lift the limit pin, rotate the eccentric device limit of 180 or 90 ° limit automatically to achieve pneumatic drive; operate in reverse way to achieve manual drive.
5. Products leaving the shop are applied with special grease such that after assembly with valve and pneumatic actuator, it will secure overall seal, dustproof and waterproof, the protection class is IP65.

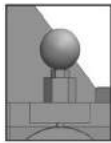
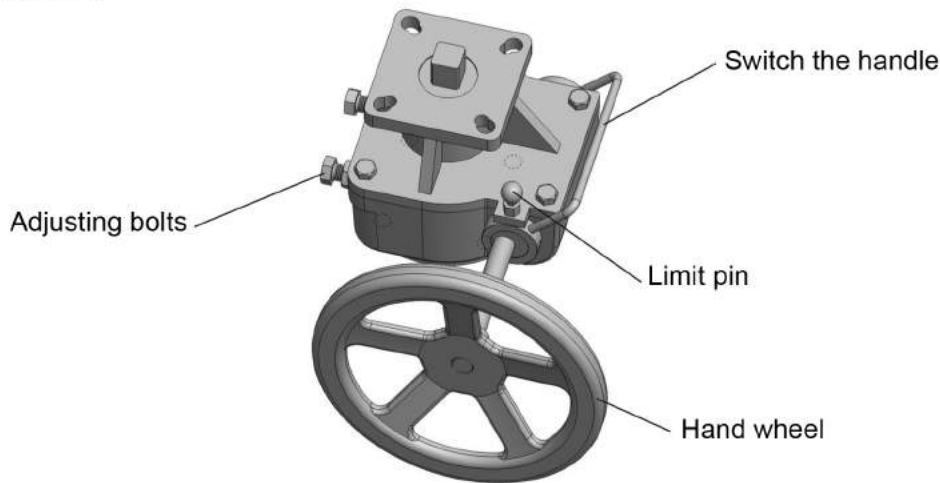
## Declutchable Wormgear Manual Override



### Material list

| NO. | Quantity | Name                         | Standard material             | Optional material |
|-----|----------|------------------------------|-------------------------------|-------------------|
| 01  | 1        | Case                         | Aluminum alloy/ Ductile iron  |                   |
| 02  | 1        | Bracket cover                | Aluminum alloy/ Ductile iron  |                   |
| 03  | 1        | Turbine                      | Ductile iron                  |                   |
| 04  | 1        | Connecting shaft             | Carbon steel                  |                   |
| 05  | 1        | Eccentric sets               | Carbon steel                  |                   |
| 06  | 1        | Bearing components           | Bearing steel                 |                   |
| 07  | 1        | Vortex rod                   | Carbon steel                  |                   |
| 08  | 1        | Handle                       | Carbon steel                  |                   |
| 09  | 1        | Limit assembly               | Carbon steel/ Stainless steel |                   |
| 10  | 1        | Set screws                   | Carbon steel                  |                   |
| 11  | 1        | Hand wheel                   | Carbon steel                  |                   |
| 12  | 1        | Scroll shaft                 | Carbon steel chrome           |                   |
| 13  | 1        | Cylindrical pin hand wheel   | Carbon steel                  |                   |
| 14  | 1        | Cylindrical pin hand turbine | Carbon steel                  |                   |
| 15  | 1        | Adjustment bolts             | Stainless steel               |                   |
| 16  | 1        | Nuts                         | Stainless steel               |                   |
| 17  | 1        | Bolts                        | Stainless steel               |                   |
| 18  | 1        | Flat key                     | Carbon steel                  |                   |
| 19  | 1        | Flexible retaining ring      | Spring steel                  |                   |

## Instructions



Lift limit pin



Left-handed to manual



Right-handed to manual

## Instructions

Manual operation: lift the limit pin rotation switch, handle, left-hand upward direction to the manual limit position, confirm that has been in place, then the turbine vortex will engage, turn the hand wheel to open or close the valve.

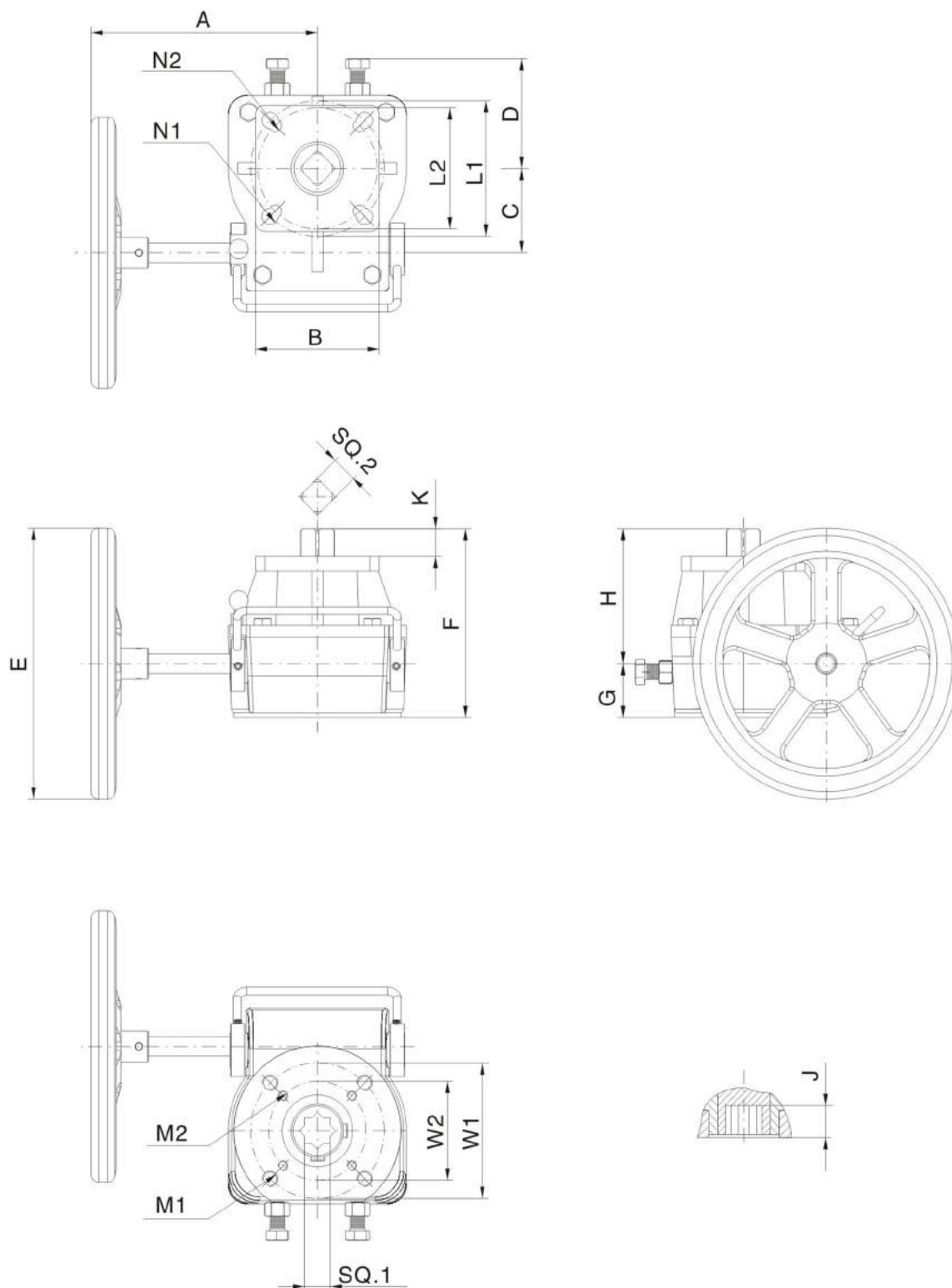
Automatic operation: lift the limit switch rotation switch handle, right-hand down to the automatic limit position, to confirm that has been in place, then the turbine vortex will disengage, hand wheel turning will be idling.

Note: When switching handle up and down rotating it may cause jamming. This is due to engagement of the turbine vortex, shake hand wheel to eliminate the jam.

## Technical parameter

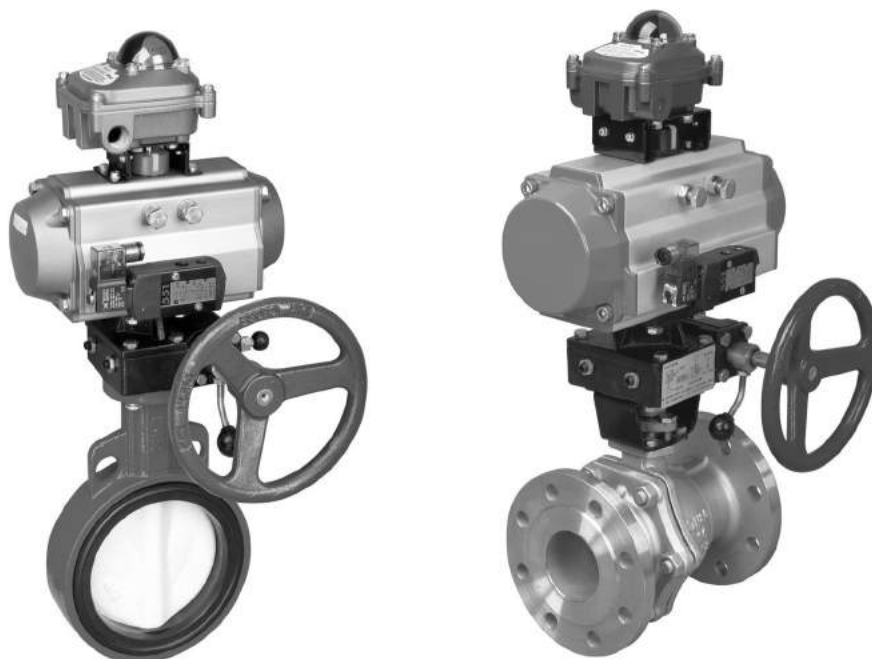
| Model | Speed ratio | Input torque | Output torque | Hand wheel diameter | Weight |
|-------|-------------|--------------|---------------|---------------------|--------|
| KH-1  | 26:1        | 50           | 280           | Ø180                | 2.6    |
| KH-2  | 28:1        | 60           | 360           | Ø200                | 4.0    |
| KH-3  | 38:1        | 90           | 620           | Ø280                | 6.5    |
| KH-4  | 54:1        | 110          | 1310          | Ø300                | 13     |
| KH-5  | 80:1        | 140          | 2600          | Ø400                | 32     |
| KH-6  | 78:1        | 200          | 3500          | Ø500                | 43     |
| KH-7  | 98:1        | 200          | 4200          | Ø600                | 65     |
| KH-8  | 100:1       | 200          | 5500          | Ø600                | 115    |

## Outline connection dimension table

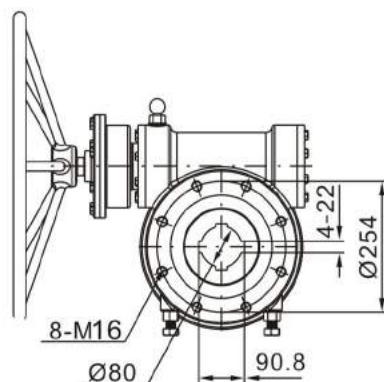
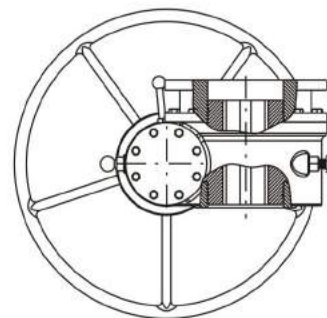
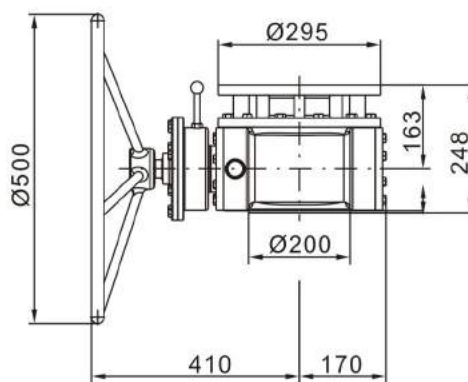
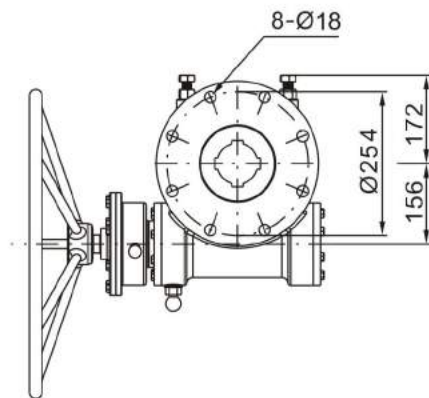


## Outline connection dimension table

| Item | KH-1  | KH-2  | KH-3  | KH-4  | KH-5  | KH-6  | KH-7  | KH-8  |
|------|-------|-------|-------|-------|-------|-------|-------|-------|
| A    | 150   | 170   | 200   | 260   | 310   | 370   | 435   | 440   |
| B    | 70    | 95    | 115   | 130   | 155   | 160   | 160   | 320   |
| C    | 50    | 55    | 82    | 85    | 125   | 140   | 170   | 210   |
| D    | 43    | 65    | 90    | 102   | 110   | 140   | 160   | 170   |
| E    | Ø180  | Ø200  | Ø280  | Ø300  | Ø400  | Ø500  | Ø600  | Ø600  |
| F    | 120   | 127   | 150   | 195   | 209   | 233   | 233   | 252   |
| G    | 35    | 40    | 40    | 60    | 55    | 60    | 60    | 65    |
| H    | 85    | 87    | 110   | 135   | 154   | 172   | 173   | 187   |
| J    | 16    | 19    | 24    | 29    | 40    | 50    | 50    | 58    |
| K    | 15    | 19    | 22    | 28    | 39    | 48    | 48    | 55    |
| M1   | M8x4  | M10X4 | M10X4 | M16x4 | M20x4 | M20x4 | M20x4 | M16x8 |
| M2   | M6x4  | M8x4  | M8x4  | ----  | ---   | ---   | ---   | ---   |
| W1   | 70    | 102   | 102   | 140   | 165   | 165   | 165   | 254   |
| W2   | 50    | 70    | 70    | ----  | ---   | ---   | ---   | ---   |
| SQ.1 | 14    | 17    | 22    | 27    | 36    | 46    | 46    | 55    |
| N1   | Ø10x4 | Ø12x4 | Ø14x4 | Ø18x4 | Ø22x4 | Ø22x4 | Ø22x4 | Ø18x8 |
| N2   | Ø8x4  | Ø10x4 | Ø12x4 | Ø14x4 | Ø18x4 | ---   | ---   | ---   |
| L1   | 70    | 102   | 125   | 140   | 165   | 165   | 165   | 254   |
| L2   | 50    | 70    | 102   | 125   | 140   | ---   | ---   | ---   |
| SQ.2 | 14    | 17    | 22    | 27    | 36    | 46    | 46    | 55    |



## Dimensions and connection dimensions



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