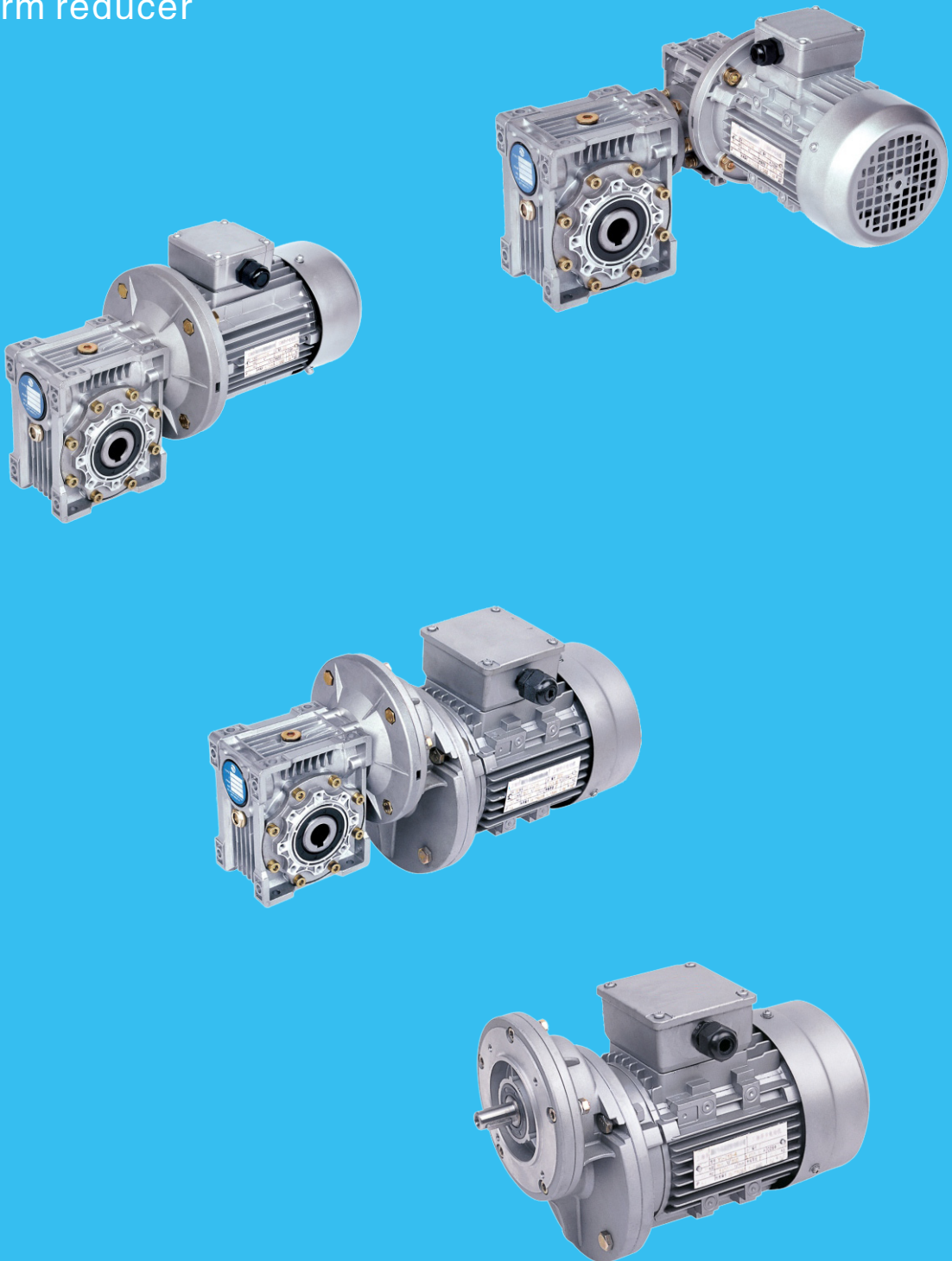


# BC-MWG SERIES

worm reducer



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## BC-MWG Series worm reducer

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## BC-MWG Series worm reducer

### The advantages of worm reducer

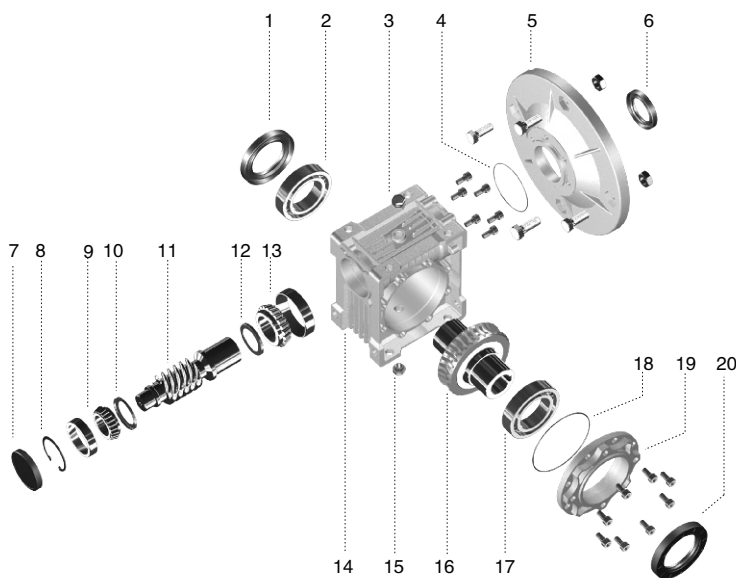
High quality Aluminum alloy ,appearance elegant, efficient radiator, high carrying ability. Installed in multi-surfaces,hollow output shaft, various input and output type, conjoin other transmission machinery easily.

Small size, constriction compact, lightweight, and save place for mounting.

Run steadily and low noise.

High reliability and high efficiency.

### Basic structure



|    | Name              |
|----|-------------------|
| 1  | Oil seal          |
| 2  | Bearing           |
| 3  | Breather vent     |
| 4  | O-type seal ring  |
| 5  | Input flange      |
| 6  | Oil seal          |
| 7  | Seal and cover    |
| 8  | Circlip hole use  |
| 9  | Bearing           |
| 10 | Oil baffle disc   |
| 11 | Worm              |
| 12 | Oil baffle disc   |
| 13 | Bearing           |
| 14 | Tank              |
| 15 | Plug screw        |
| 16 | Gear              |
| 17 | Bearing           |
| 18 | O-type seal ring  |
| 19 | Bearing and cover |
| 20 | Oil seal          |

## Model designation

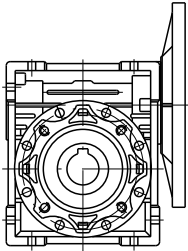
| 1                                  | 2 | 3 | 4 | 5 | 6                               |
|------------------------------------|---|---|---|---|---------------------------------|
| Model BC-MWG                       |   |   |   |   | Input and output shaft Code: YZ |
| 25-185 Type                        |   |   |   |   | DZ1、DZ2                         |
|                                    |   |   |   |   | SZ                              |
|                                    |   |   |   |   | Omitting without it             |
| Nominal ratio 7.5-100              |   |   |   |   | Accessory for mounting:F1、FL1   |
| Electric Motor type and power (KW) |   |   |   |   | F2、FL2                          |
|                                    |   |   |   |   | TA                              |
|                                    |   |   |   |   | Omitting without it             |

## Sign explanation

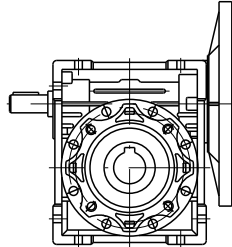
|                                      |                                                                                  |
|--------------------------------------|----------------------------------------------------------------------------------|
| BC-MWG                               | With input flange (using with electric motor)                                    |
| BC-WG                                | With input shaft                                                                 |
| 25-30-40-50-63-75-90-110-130-150-185 | Type(centre distance)                                                            |
| 7.5-10-15-20-25-30-40-50-60-80-100   | Nominal ratio                                                                    |
| HL0.18                               | With electric motor in series HL, the power is 0.18KW                            |
| HLEJ0.18                             | With breaking motor,the power is 0.18KW                                          |
| F.....(1-2).FL.....(1-2 )            | Output flange and mounting position (F-output short flang. FL-output long flang) |
| TA                                   | With torque arm                                                                  |
| YZ                                   | With extention worm shaft                                                        |
| DZ1,DZ2                              | With single output shaft                                                         |
| SZ                                   | With double output shaft                                                         |

( Chart 1 )

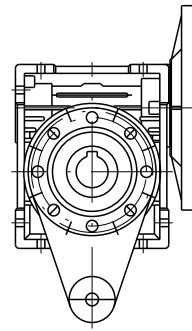
BC-MWG.....



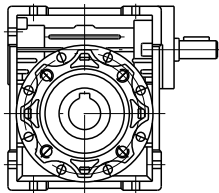
BC-MWG.....YZ



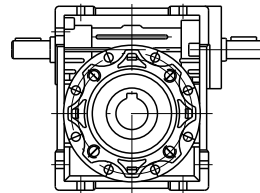
.....TA



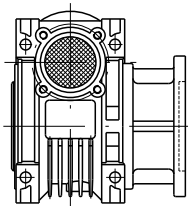
BC-WG.....



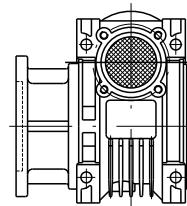
BC-WG.....YZ



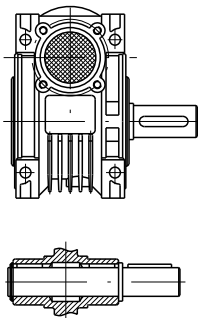
.....F1,FL1



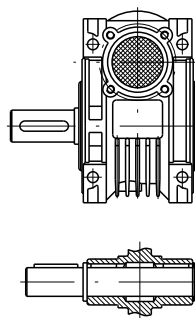
.....F2,FL2



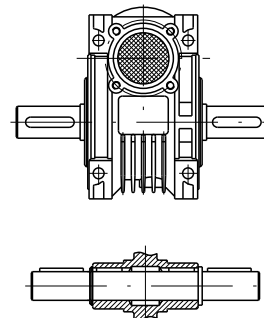
.....DZ1



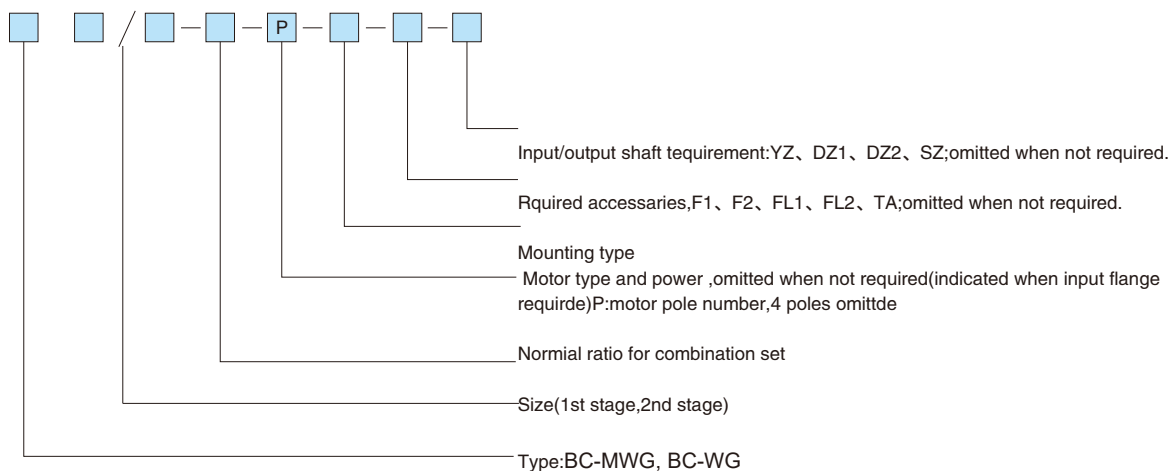
.....DZ2



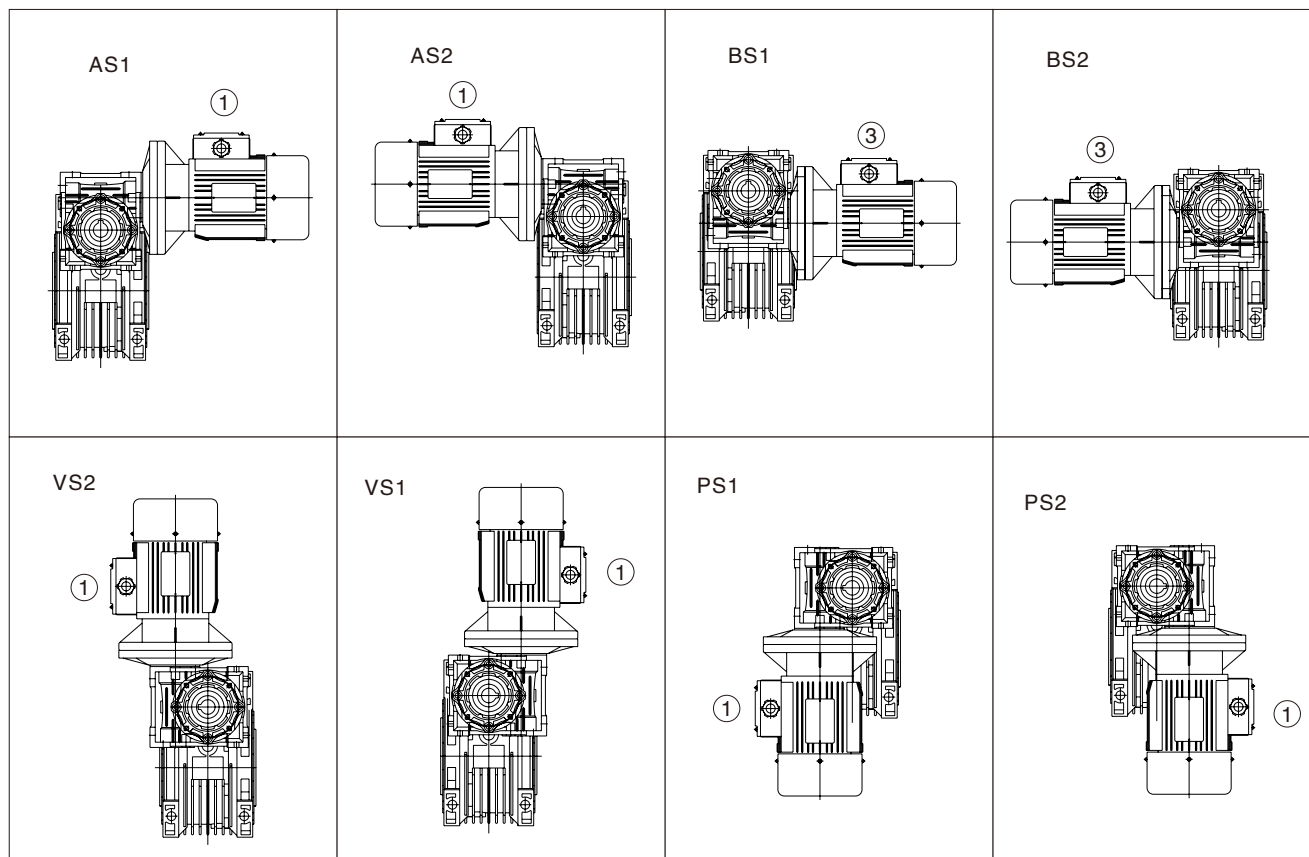
.....SZ



## Indication for combination BC-MWG series worm speed reducer



## Mounting type and it is symbol



## Example of sign

---

1.BC-MWG40-30-0.18-F1-SZ

Meaning: WMRV type, frame size 40, nominal ratio 30, with Motor 0.18KW motor, F1 output flange, dual output shafts

2.BC-WG40-30-F1

Explanation: BC-WG type frame size 40, nominal ratio 30, without motor, with output flange F1

1.BC-MWG40-30-0.18-F1-SZ

Means:model: BC-MWG size:40

Nominal ratio: 30

Equipped electric motor:0.18KW

Output flange:F1

Double output shaft:SZ

2.BC-WG40-30-F1

Means:mokel: BC-WG size:40

Nominal ratio: 30

Without electric motor

Output flange:F1

## The requirement of using and maintain

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Do not make pressure on output part and box when mounting it ,

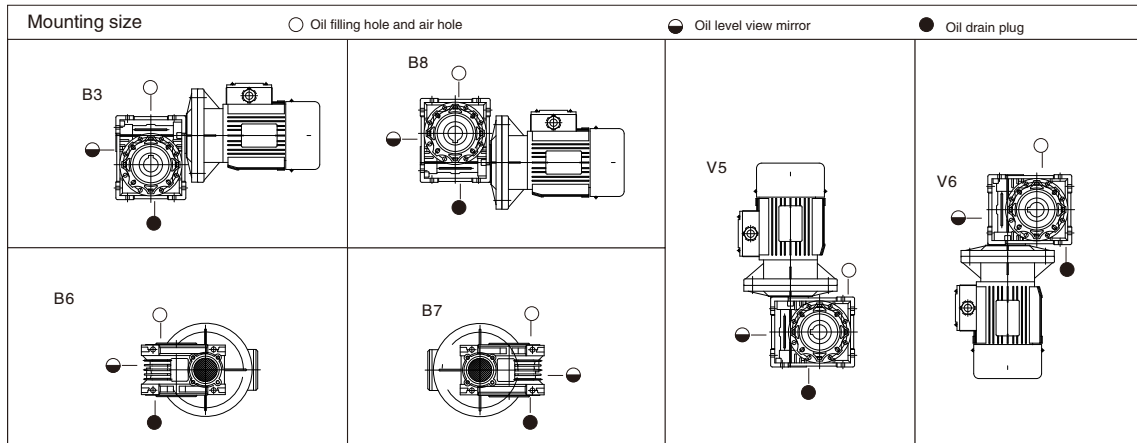
It must replace lubrication oil after it runs 400 hours when first using it ,after it , replace lubrication oil per running 4000 hours.

It must keep coaxial degree and vertical degree in just lever when conjoining reducer with other device . Must keep plenty of oil lubrication in the reducer and check it often.

Must add or replace in time when oil reduce or get bad. (lubrication type see attached table )

It is useful to keep reducer clean so that reducer radiates warmth more efficiently.

# Installation type of reducer and the corresponding oil feeding amount and lubrication varieties



## 2.Oil amount to various installation patterns

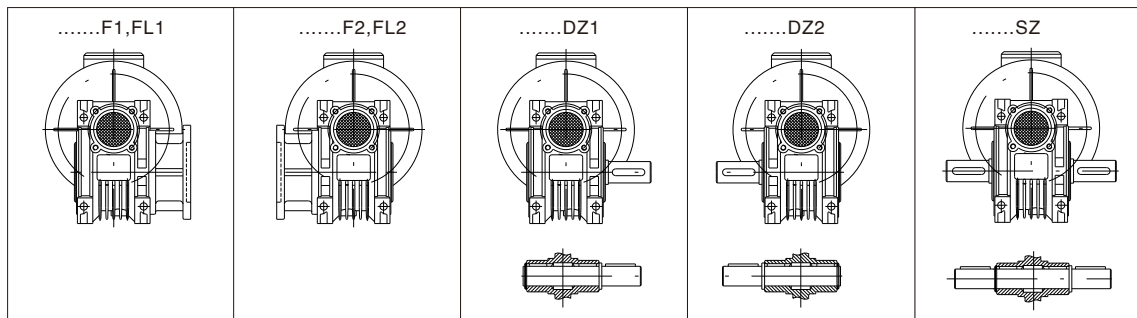
| Types of worm speed reducers |       | BC-WG25 | BC-WG30 | BC-WG40 | BC-WG50 | BC-WG63 | BC-WG75 | BC-WG90 | BCWG110 | BCWG130 | BCWG150 | BCWG185 |
|------------------------------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Lubricating oil              | B3    | 0.02    | 0.04    | 0.08    | 0.15    | 0.3     | 0.55    | 1.0     | 3.0     | 4.5     | 7.0     | 10      |
|                              | B6.B7 |         |         |         |         |         |         |         | 2.5     | 3.5     | 5.4     | 8.0     |
|                              | B8    |         |         |         |         |         |         |         | 2.2     | 3.3     | 5.1     | 7.5     |
|                              | V5    |         |         |         |         |         |         |         | 3.0     | 4.5     | 7.0     | 10      |
|                              | V6    |         |         |         |         |         |         |         | 2.2     | 3.3     | 5.1     | 8.0     |

## 3. Lubricating oil

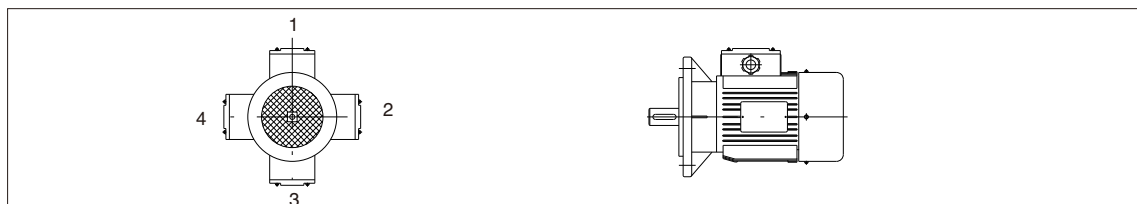
| Types of worm speed reducers |                     | BC-WG25、40、50、63、75、90 |  |  |  | BCWG110、130、150、185 |  |                   |  |
|------------------------------|---------------------|------------------------|--|--|--|---------------------|--|-------------------|--|
|                              | Lubricant           | Oil synthetic          |  |  |  | Oil synthetic       |  | Oil mineral       |  |
|                              | Ambient Temperature | -25℃ ~ +50℃            |  |  |  | -25℃ ~ +50℃         |  | -5℃ ~ +40℃        |  |
| ISO                          |                     | VG320                  |  |  |  | VG320               |  | VG460             |  |
| Used in interior             |                     | WA460                  |  |  |  | WA460               |  |                   |  |
| Equivalent                   | AGIP                | TELUM VSF320           |  |  |  | TELUM VSF320        |  | BLASIA 460        |  |
|                              | SHELL               | TIVELA S320            |  |  |  | TIVELA S320         |  | OMALA OIL 460     |  |
|                              | ESSO                | S220                   |  |  |  | S220                |  | SPARTAN EP 460    |  |
|                              | MOBIL               | GLYGOYLE 30            |  |  |  | GLYGOYLE 30         |  | MOBIL GEAR 634    |  |
|                              | CASTROL             | ALPHASYN PG 320        |  |  |  | ALPHASYN PG 320     |  | ALPHA MAX 460     |  |
|                              | BP                  | ENERGOL SG-XP 320      |  |  |  | ENERGOL SG-XP 320   |  | ENETGOL SG-XP 460 |  |

## Output flange "F、FL"、Output shaft "DZ、SZ"

Installation pattern of output flange F、FL,output spindle DZ、SZ of speed reducers



## Installation pattern of motor terminal box



The carrying ability of worm reducer ( Attached table)

| Reference circle of worm slide(m/s) | Lubrication type |
|-------------------------------------|------------------|
| $\leq 2.2$                          | G-N680W(G-N460W) |
| $> 2.5-5$                           | G-N320W          |
| $> 5-12$                            | G-N220W          |

By table 2 and 3,can find out the service factor(sf)about worm reducer. (Table 2)

| NO of starts per hour <10                  |                       |         |         |
|--------------------------------------------|-----------------------|---------|---------|
| Nature of load generated by driven machine | Hours running per day |         |         |
|                                            | <2                    | 2~8     | 8~16    |
| Uniform                                    | sf=0.8                | sf=1    | sf=1.25 |
| Moderate shock                             | sf=1                  | sf=1.25 | sf=1.5  |
| heavy shock                                | sf=1.25               | sf=1.5  | sf=1.75 |

(Table 3)

| NO of starts per hour >10                  |                       |         |         |
|--------------------------------------------|-----------------------|---------|---------|
| Nature of load generates by driven machine | Hours running per day |         |         |
|                                            | <2                    | 2~8     | 8~24    |
| Uniform                                    | sf=1                  | sf=1.25 | sf=1.75 |
| Moderate shock                             | sf=1.5                | sf=1.75 | sf=2    |
| Heavy shock                                | sf=1.75               | sf=2    | sf=2.25 |

## Parameter Selections

Single step reducer(flange input,input speed is 1400r/min)/(matched with 4 poles motor)

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type     | Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type     |
|----------------------|---------------------|------|-----------|----------|----------------------|---------------------|------|-----------|----------|
| <b>0.06kW</b>        |                     |      |           |          | <b>0.12kW</b>        |                     |      |           |          |
| 186.7                | 2.6                 | 4.2  | 7.5       | BC-MWG25 | 46.7                 | 17.2                | 2.6  | 30        | BC-MWG40 |
| 140                  | 3.4                 | 3.5  | 10        |          | 35                   | 21                  | 1.9  | 40        |          |
| 93.3                 | 4.9                 | 2.5  | 15        |          | 28                   | 25                  | 1.5  | 50        |          |
| 70                   | 6.1                 | 2.0  | 20        |          | 23.3                 | 28                  | 1.3  | 60        |          |
| 46.7                 | 8.2                 | 1.6  | 30        |          | 17.5                 | 34                  | 1.0  | 80        |          |
| 35                   | 10                  | 1.3  | 40        |          | 14                   | 38                  | 0.8  | 100       |          |
| 28                   | 12                  | 0.9  | 50        |          |                      |                     |      |           |          |
| 23.3                 | 14                  | 0.7  | 60        |          | 23.3                 | 29                  | 2.3  | 60        | BC-MWG50 |
| 186.7                | 2.6                 | 6.9  | 7.5       | BC-MWG30 | 17.5                 | 35                  | 1.9  | 80        |          |
| 140                  | 3.4                 | 5.4  | 10        |          | 14                   | 40                  | 1.4  | 100       |          |
| 93.3                 | 4.7                 | 3.8  | 15        |          | <b>0.18kW</b>        |                     |      |           |          |
| 70                   | 6                   | 3.0  | 20        |          | 186.7                | 7.8                 | 2.3  | 7.5       | BC-MWG30 |
| 56                   | 7                   | 3.0  | 25        |          | 140                  | 10                  | 1.8  | 10        |          |
| 46.7                 | 8                   | 2.5  | 30        |          | 93.3                 | 14                  | 1.3  | 15        |          |
| 35                   | 9.7                 | 1.9  | 40        |          | 70                   | 18                  | 1.0  | 20        |          |
| 28                   | 11                  | 1.5  | 50        | 56       | 21                   | 1.0                 | 25   |           |          |
| 23.3                 | 13                  | 1.3  | 60        | 46.7     | 24                   | 0.8                 | 30   |           |          |
| 17.5                 | 14                  | 0.9  | 80        |          | 70                   | 19                  | 2.0  | 20        | BC-MWG40 |
| <b>0.09kW</b>        |                     |      |           |          | 56                   | 23                  | 1.7  | 25        |          |
| 186.7                | 3.9                 | 2.8  | 7.5       | BC-MWG25 | 46.7                 | 26                  | 1.7  | 30        |          |
| 140                  | 5.1                 | 2.4  | 10        |          | 35                   | 32                  | 1.3  | 40        |          |
| 93.3                 | 7.3                 | 1.6  | 15        |          | 28                   | 38                  | 1.0  | 50        |          |
| 70                   | 9.2                 | 1.3  | 20        |          | 23.3                 | 43                  | 0.8  | 60        |          |
| 46.7                 | 12                  | 1.1  | 30        |          |                      |                     |      |           |          |
| 35                   | 15                  | 0.9  | 40        |          |                      |                     |      |           |          |
|                      |                     |      |           |          | 35                   | 32                  | 2.3  | 40        | BC-MWG50 |
| 186.7                | 3.9                 | 4.6  | 7.5       | BC-MWG30 | 28                   | 39                  | 1.9  | 50        |          |
| 140                  | 5                   | 3.6  | 10        |          | 23.3                 | 43                  | 1.6  | 60        |          |
| 93.3                 | 7.1                 | 2.5  | 15        |          | 17.5                 | 52                  | 1.2  | 80        |          |
| 70                   | 9                   | 2.0  | 20        |          | 14                   | 60                  | 0.9  | 100       |          |
| 56                   | 10                  | 2.0  | 25        |          | <b>0.25kW</b>        |                     |      |           |          |
| 46.7                 | 12                  | 1.7  | 30        |          | 186.7                | 11                  | 3.6  | 7.5       | BC-MWG40 |
| 35                   | 14                  | 1.2  | 40        |          | 140                  | 14                  | 2.8  | 10        |          |
| 28                   | 17                  | 1.0  | 50        |          | 93.3                 | 21                  | 1.9  | 15        |          |
| 23.3                 | 19                  | 0.9  | 60        |          | 70                   | 27                  | 1.5  | 20        |          |
|                      |                     |      |           | 56       | 32                   | 1.2                 | 25   |           |          |
| 28                   | 19                  | 2.0  | 50        | BC-MWG40 | 46.7                 | 36                  | 1.3  | 30        |          |
| 23.3                 | 21                  | 1.7  | 60        |          | 35                   | 44                  | 0.9  | 40        |          |
| 17.5                 | 26                  | 1.3  | 80        |          | 28                   | 37                  | 0.8  | 50        |          |
| 14                   | 29                  | 1.0  | 100       |          |                      |                     |      |           |          |
| <b>0.12kW</b>        |                     |      |           |          |                      |                     |      |           |          |
| 186.7                | 5.2                 | 3.4  | 7.5       | BC-MWG30 | 70                   | 26                  | 2.7  | 20        | BC-MWG50 |
| 140                  | 6.7                 | 2.7  | 10        |          | 56                   | 32                  | 2.2  | 25        |          |
| 93.3                 | 9.5                 | 1.9  | 15        |          | 46.7                 | 37                  | 2.3  | 30        |          |
| 70                   | 12                  | 1.5  | 20        |          | 35                   | 46                  | 1.7  | 40        |          |
| 56                   | 14                  | 1.5  | 25        |          | 28                   | 54                  | 1.4  | 50        |          |
| 46.7                 | 16                  | 1.3  | 30        |          | 23.3                 | 60                  | 1.1  | 60        |          |
| 35                   | 19                  | 0.9  | 40        |          | 17.5                 | 72                  | 0.9  | 80        |          |
| 28                   | 23                  | 0.8  | 50        |          |                      |                     |      |           |          |

| Output speed<br>(r/min) | Output torque<br>(N.m) | (fs) | Ratio<br>(i) | Type     |
|-------------------------|------------------------|------|--------------|----------|
| 0.25kW                  |                        |      |              |          |
| 28                      | 56                     | 2.4  | 50           | BC-MWG63 |
| 23.3                    | 63                     | 2.0  | 60           |          |
| 17.5                    | 78                     | 1.6  | 80           |          |
| 14                      | 87                     | 1.4  | 100          |          |
| 0.37kW                  |                        |      |              |          |
| 186.7                   | 16                     | 2.4  | 7.5          | BC-MWG40 |
| 140                     | 21                     | 1.9  | 10           |          |
| 93.3                    | 31                     | 1.3  | 15           |          |
| 70                      | 39                     | 1.0  | 20           |          |
| 56                      | 47                     | 0.8  | 25           | BC-MWG50 |
| 46.7                    | 53                     | 0.8  | 30           |          |
| 140                     | 21                     | 3.3  | 10           |          |
| 93.3                    | 31                     | 2.4  | 15           |          |
| 70                      | 40                     | 1.8  | 20           | BC-MWG63 |
| 56                      | 48                     | 1.5  | 25           |          |
| 46.7                    | 55                     | 1.5  | 30           |          |
| 35                      | 68                     | 1.1  | 40           |          |
| 28                      | 80                     | 0.9  | 50           | BC-MWG63 |
| 23.3                    | 89                     | 0.8  | 60           |          |
| 35                      | 70                     | 2.1  | 40           |          |
| 28                      | 83                     | 1.6  | 50           |          |
| 23.3                    | 94                     | 1.4  | 60           | BC-MWG63 |
| 17.5                    | 115                    | 1.1  | 80           |          |
| 14                      | 129                    | 0.9  | 100          |          |
| 0.55kW                  |                        |      |              |          |
| 186.7                   | 25                     | 2.9  | 7.5          | BC-MWG50 |
| 140                     | 32                     | 2.2  | 10           |          |
| 93.3                    | 46                     | 1.6  | 15           |          |
| 70                      | 59                     | 1.2  | 20           |          |
| 56                      | 71                     | 1.0  | 25           | BC-MWG63 |
| 46.7                    | 81                     | 1.0  | 30           |          |
| 35                      | 80                     | 0.9  | 40           |          |
| 70                      | 60                     | 2.2  | 20           |          |
| 56                      | 73                     | 1.8  | 25           | BC-MWG63 |
| 46.7                    | 83                     | 1.9  | 30           |          |
| 35                      | 105                    | 1.4  | 40           |          |
| 28                      | 124                    | 1.1  | 50           |          |
| 23.3                    | 140                    | 0.9  | 60           | BC-MWG75 |
| 35                      | 108                    | 2.0  | 40           |          |
| 28                      | 129                    | 1.6  | 50           |          |
| 23.3                    | 146                    | 1.4  | 60           |          |
| 17.5                    | 180                    | 1.1  | 80           | BC-MWG90 |
| 14                      | 206                    | 0.9  | 100          |          |
| 17.5                    | 189                    | 1.5  | 80           |          |
| 14                      | 221                    | 1.2  | 100          |          |
| 186.7                   | 34                     | 2.1  | 7.5          | BC-MWG90 |
| 140                     | 44                     | 1.6  | 10           |          |

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type      |
|----------------------|---------------------|------|-----------|-----------|
| 0.75kW               |                     |      |           |           |
| 93.3                 | 63                  | 1.2  | 15        | BC-MWG50  |
| 70                   | 81                  | 0.9  | 20        |           |
| 93.3                 | 63                  | 2.2  | 15        | BC-MWG63  |
| 70                   | 83                  | 1.6  | 20        |           |
| 56                   | 100                 | 1.3  | 25        |           |
| 46.7                 | 114                 | 1.4  | 30        |           |
| 35                   | 143                 | 1.0  | 40        | BC-MWG75  |
| 56                   | 102                 | 2.0  | 25        |           |
| 46.7                 | 117                 | 2.0  | 30        |           |
| 35                   | 147                 | 1.5  | 40        |           |
| 28                   | 177                 | 1.2  | 50        |           |
| 23.3                 | 200                 | 1.0  | 60        |           |
| 28                   | 184                 | 1.8  | 50        | BC-MWG90  |
| 23.3                 | 212                 | 1.5  | 60        |           |
| 17.5                 | 258                 | 1.1  | 80        |           |
| 14                   | 302                 | 0.9  | 100       |           |
| 1.1kW                |                     |      |           |           |
| 186.7                | 49                  | 2.6  | 7.5       | BC-MWG63  |
| 140                  | 65                  | 2.0  | 10        |           |
| 93.3                 | 93                  | 1.5  | 15        |           |
| 70                   | 122                 | 1.1  | 20        |           |
| 56                   | 146                 | 0.9  | 25        |           |
| 46.7                 | 167                 | 1.0  | 30        |           |
| 35                   | 165                 | 0.9  | 40        |           |
| 93.3                 | 95                  | 2.1  | 15        | BC-MWG75  |
| 70                   | 123                 | 1.7  | 20        |           |
| 56                   | 150                 | 1.3  | 25        |           |
| 46.7                 | 171                 | 1.3  | 30        |           |
| 35                   | 216                 | 1.0  | 40        |           |
| 28                   | 264                 | 0.9  | 50        |           |
| 23.3                 | 223                 | 0.8  | 60        |           |
| 35                   | 225                 | 1.6  | 40        | BC-MWG90  |
| 28                   | 270                 | 1.3  | 50        |           |
| 23.3                 | 311                 | 1.0  | 60        |           |
| 17.5                 | 328                 | 0.9  | 80        |           |
| 28                   | 281                 | 2.3  | 50        | BC-MWG110 |
| 23.3                 | 324                 | 1.9  | 60        |           |
| 17.5                 | 402                 | 1.3  | 80        |           |
| 14                   | 473                 | 1.0  | 100       |           |
| 1.5kW                |                     |      |           |           |
| 186.7                | 67                  | 1.9  | 7.5       | BC-MWG63  |
| 140                  | 89                  | 1.5  | 10        |           |
| 93.3                 | 127                 | 1.1  | 15        |           |
| 70                   | 166                 | 0.8  | 20        |           |

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type      |
|----------------------|---------------------|------|-----------|-----------|
| 1.5kW                |                     |      |           |           |
| 140                  | 90                  | 2.2  | 10        | BC-MWG75  |
| 93.3                 | 130                 | 1.5  | 15        |           |
| 70                   | 168                 | 1.3  | 20        |           |
| 56                   | 205                 | 1.0  | 25        |           |
| 46.7                 | 233                 | 1.0  | 30        |           |
| 70                   | 171                 | 2.1  | 20        | BC-MWG90  |
| 56                   | 210                 | 1.6  | 25        |           |
| 46.7                 | 239                 | 1.7  | 30        |           |
| 35                   | 307                 | 1.2  | 40        |           |
| 28                   | 368                 | 0.9  | 50        |           |
| 23.3                 | 424                 | 0.8  | 60        | BC-MWG110 |
| 35                   | 319                 | 2.2  | 40        |           |
| 28                   | 384                 | 1.7  | 50        |           |
| 23.3                 | 442                 | 1.4  | 60        |           |
| 17.5                 | 548                 | 0.9  | 80        |           |
| 2.2kW                |                     |      |           |           |
| 186.7                | 100                 | 1.8  | 7.5       | BC-MWG75  |
| 140                  | 132                 | 1.5  | 10        |           |
| 93.3                 | 191                 | 1.0  | 15        |           |
| 70                   | 240                 | 0.9  | 20        |           |
| 46.7                 | 269                 | 0.8  | 30        |           |
| 186.7                | 101                 | 2.9  | 7.5       | BC-MWG90  |
| 140                  | 134                 | 2.3  | 10        |           |
| 93.3                 | 194                 | 1.9  | 15        |           |
| 70                   | 252                 | 1.4  | 20        |           |
| 56                   | 308                 | 1.1  | 25        |           |
| 46.7                 | 351                 | 1.2  | 30        | BC-MWG110 |
| 35                   | 433                 | 1.0  | 40        |           |
| 28                   | 393                 | 0.9  | 50        |           |
| 70                   | 255                 | 2.5  | 20        |           |
| 56                   | 315                 | 2.2  | 25        |           |
| 46.7                 | 356                 | 2.0  | 30        | BC-MWG130 |
| 35                   | 468                 | 1.5  | 40        |           |
| 28                   | 563                 | 1.2  | 50        |           |
| 23.3                 | 648                 | 1.0  | 60        |           |
| 35                   | 468                 | 2.2  | 40        |           |
| 28                   | 563                 | 1.7  | 50        | BC-MWG150 |
| 23.3                 | 648                 | 1.4  | 60        |           |
| 17.5                 | 816                 | 1.0  | 80        |           |
| 14                   | 869                 | 0.8  | 100       |           |
| 28                   | 570                 | 2.5  | 50        |           |
| 23.3                 | 657                 | 1.9  | 60        | BC-MWG150 |
| 17.5                 | 816                 | 1.4  | 80        |           |
| 14                   | 960                 | 1.0  | 100       |           |

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type      |
|----------------------|---------------------|------|-----------|-----------|
| 3kW                  |                     |      |           |           |
| 186.7                | 136                 | 1.4  | 7.5       | BC-MWG75  |
| 140                  | 180                 | 1.1  | 10        |           |
| 93.3                 | 261                 | 0.8  | 15        |           |
| 186.7                | 138                 | 2.1  | 7.5       | BC-MWG90  |
| 140                  | 182                 | 1.7  | 10        |           |
| 93.3                 | 264                 | 1.4  | 15        |           |
| 70                   | 344                 | 1.0  | 20        |           |
| 56                   | 420                 | 0.8  | 25        |           |
| 46.7                 | 479                 | 0.9  | 30        |           |
| 93.3                 | 264                 | 2.5  | 15        | BC-MWG110 |
| 70                   | 348                 | 1.9  | 20        |           |
| 56                   | 430                 | 1.6  | 25        |           |
| 46.7                 | 485                 | 1.5  | 30        |           |
| 35                   | 638                 | 1.1  | 40        |           |
| 28                   | 767                 | 0.9  | 50        | BC-MWG130 |
| 56                   | 429                 | 2.2  | 25        |           |
| 46.7                 | 491                 | 2.1  | 30        |           |
| 35                   | 638                 | 1.6  | 40        |           |
| 28                   | 767                 | 1.3  | 50        |           |
| 23.3                 | 884                 | 1.0  | 60        |           |
| 17.5                 | 1113                | 0.8  | 80        |           |
| 28                   | 777                 | 1.8  | 50        | BC-MWG150 |
| 23.3                 | 896                 | 1.4  | 60        |           |
| 17.5                 | 1113                | 1.0  | 80        |           |
| 14                   | 1310                | 0.8  | 100       |           |
| 4kW                  |                     |      |           |           |
| 186.7                | 182                 | 1.0  | 7.5       | BC-MWG75  |
| 140                  | 240                 | 0.8  | 10        |           |
| 186.7                | 184                 | 1.6  | 7.5       | BC-MWG90  |
| 140                  | 243                 | 1.3  | 10        |           |
| 93.3                 | 352                 | 1.0  | 15        |           |
| 70                   | 458                 | 0.8  | 20        |           |
| 140                  | 242                 | 2.5  | 10        | BC-MWG110 |
| 93.3                 | 352                 | 1.9  | 15        |           |
| 70                   | 464                 | 1.4  | 20        |           |
| 56                   | 573                 | 1.2  | 25        |           |
| 46.7                 | 647                 | 1.1  | 30        |           |
| 56                   | 573                 | 1.6  | 25        | BC-MWG130 |
| 46.7                 | 655                 | 1.6  | 30        |           |
| 35                   | 851                 | 1.2  | 40        |           |
| 28                   | 1023                | 1.0  | 50        |           |
| 23.3                 | 1179                | 0.8  | 60        |           |

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type      |
|----------------------|---------------------|------|-----------|-----------|
| 4kW                  |                     |      |           |           |
| 28                   | 1036                | 1.4  | 50        | BC-MWG150 |
| 23.3                 | 1195                | 1.1  | 60        |           |
| 17.5                 | 1484                | 0.8  | 80        |           |
|                      |                     |      |           |           |
| 28                   | 1019                | 2.3  | 50        | BC-MWG185 |
| 23.3                 | 1195                | 1.9  | 60        |           |
| 17.5                 | 1500                | 1.4  | 80        |           |
| 14                   | 1766                | 1.0  | 100       |           |
| 5.5kW                |                     |      |           |           |
| 186.7                | 253                 | 2.2  | 7.5       | BC-MWG110 |
| 140                  | 334                 | 1.8  | 10        |           |
| 93.3                 | 484                 | 1.4  | 15        |           |
| 70                   | 638                 | 1.0  | 20        |           |
| 56                   | 711                 | 0.9  | 25        |           |
|                      |                     |      |           |           |
| 140                  | 333                 | 2.5  | 10        | BC-MWG130 |
| 93.3                 | 490                 | 1.9  | 15        |           |
| 70                   | 645                 | 1.4  | 20        |           |
| 56                   | 788                 | 1.2  | 25        |           |
| 46.7                 | 900                 | 1.2  | 30        |           |
| 35                   | 1171                | 0.9  | 40        | BC-MWG150 |
| 28                   | 1103                | 0.8  | 50        |           |
| 70                   | 645                 | 2.0  | 20        |           |
| 56                   | 788                 | 1.5  | 25        |           |
| 46.7                 | 934                 | 1.3  | 30        |           |
| 35                   | 1171                | 1.3  | 40        | BC-MWG185 |
| 28                   | 1426                | 1.0  | 50        |           |
| 23.3                 | 1643                | 0.8  | 60        |           |
| 56                   | 777                 | 2.5  | 25        |           |
| 46.7                 | 864                 | 2.5  | 30        |           |
| 35                   | 1168                | 2.2  | 40        | BC-MWG185 |
| 28                   | 1402                | 1.7  | 50        |           |
| 23.3                 | 1643                | 1.4  | 60        |           |
| 17.5                 | 2063                | 1.0  | 80        |           |
| 7.5kW                |                     |      |           |           |
| 186.7                | 345                 | 1.6  | 7.5       | BC-MWG110 |
| 140                  | 455                 | 1.3  | 10        |           |
| 93.3                 | 660                 | 1.0  | 15        |           |
|                      |                     |      |           |           |
| 186.7                | 349                 | 2.1  | 7.5       | BC-MWG130 |
| 140                  | 455                 | 1.8  | 10        |           |
| 93.3                 | 668                 | 1.4  | 15        |           |
| 70                   | 880                 | 1.0  | 20        |           |
| 56                   | 1074                | 0.9  | 25        |           |
| 46.7                 | 1228                | 0.8  | 30        | BC-MWG185 |
| 35                   | 1596                | 0.7  | 40        |           |

| Output speed (r/min) | Output torque (N.m) | (fs) | Ratio (i) | Type      |
|----------------------|---------------------|------|-----------|-----------|
| 7.5kW                |                     |      |           |           |
| 70                   | 880                 | 1.5  | 20        | BC-MWG150 |
| 56                   | 1074                | 1.1  | 25        |           |
| 46.7                 | 1274                | 0.9  | 30        |           |
| 35                   | 1596                | 1.0  | 40        |           |
|                      |                     |      |           |           |
| 56                   | 1060                | 1.8  | 25        | BC-MWG185 |
| 46.7                 | 1179                | 1.9  | 30        |           |
| 35                   | 1593                | 1.6  | 40        |           |
| 28                   | 1911                | 1.2  | 50        |           |
| 23.3                 | 2240                | 1.0  | 60        |           |
| 11kW                 |                     |      |           |           |
| 186.7                | 512                 | 2.3  | 7.5       | BC-MWG150 |
| 140                  | 675                 | 1.8  | 10        |           |
| 93.3                 | 990                 | 1.3  | 15        |           |
| 70                   | 1291                | 1.0  | 20        |           |
| 56                   | 1576                | 0.8  | 25        |           |
|                      |                     |      |           |           |
| 93.3                 | 922                 | 1.9  | 15        | BC-MWG185 |
| 70                   | 1274                | 1.8  | 20        |           |
| 56                   | 1554                | 1.2  | 25        |           |
| 46.7                 | 1729                | 1.3  | 30        |           |
| 35                   | 2336                | 1.1  | 40        |           |
| 28                   | 2803                | 0.8  | 50        |           |
| 15kW                 |                     |      |           |           |
| 186.7                | 698                 | 1.7  | 7.5       | BC-MWG150 |
| 140                  | 921                 | 1.3  | 10        |           |
| 93.3                 | 1351                | 0.9  | 15        |           |
| 70                   | 1760                | 0.7  | 20        |           |
|                      |                     |      |           |           |
| 140                  | 900                 | 2.0  | 10        | BC-MWG185 |
| 93.3                 | 1257                | 1.4  | 15        |           |
| 70                   | 1737                | 1.3  | 20        |           |
| 56                   | 2120                | 0.9  | 25        |           |
| 46.7                 | 2357                | 0.9  | 30        |           |
| 18.5KW               |                     |      |           |           |
| 186.7                | 823                 | 2.1  | 7.5       | BC-MWG185 |
| 140                  | 1110                | 1.6  | 10        |           |
| 93.3                 | 1550                | 1.1  | 15        |           |
| 70                   | 2143                | 1.0  | 20        |           |
| 22KW                 |                     |      |           |           |
| 186.7                | 979                 | 1.8  | 7.5       | BC-MWG185 |
| 140                  | 1320                | 1.3  | 10        |           |
| 93.3                 | 1844                | 0.9  | 15        |           |
| 70                   | 2548                | 0.9  | 20        |           |

# Double step reducer(flange input,input speed is 1400r/min)/(matched with 4 poles moter)

| Output speed (r/min) | Output torque (N.m) | (fs) | High speed transmission ratio (i1) | Low speed transmission ratio (i2) | General transmission ratio (i) | Combination model size |
|----------------------|---------------------|------|------------------------------------|-----------------------------------|--------------------------------|------------------------|
| <b>0.06kW</b>        |                     |      |                                    |                                   |                                |                        |
| 14                   | 25                  | 1.3  | 10                                 | 10                                | 100                            | 25/30                  |
| 9.3                  | 32                  | 0.9  | 10                                 | 15                                | 150                            |                        |
| 7                    | 41                  | 0.7  | 10                                 | 20                                | 200                            |                        |
| 5.6                  | 44                  | 0.8  | 10                                 | 25                                | 250                            |                        |
| 4.7                  | 59                  | 1.2  | 10                                 | 30                                | 300                            | 25/40                  |
| 3.5                  | 71                  | 0.9  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 82                  | 0.7  | 20                                 | 25                                | 500                            |                        |
| 2.3                  | 101                 | 0.6  | 20                                 | 30                                | 600                            |                        |
| 1.9                  | 116                 | 0.5  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 143                 | 0.5  | 30                                 | 30                                | 900                            |                        |
| 1.2                  | 171                 | 0.4  | 30                                 | 40                                | 1200                           |                        |
| 0.9                  | 197                 | 0.3  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 217                 | 0.3  | 60                                 | 30                                | 1800                           |                        |
| 0.6                  | 268                 | 0.2  | 60                                 | 40                                | 2400                           |                        |
| 0.5                  | 324                 | 0.2  | 60                                 | 50                                | 3000                           |                        |
| 0.4                  | 294                 | 0.1  | 50                                 | 80                                | 4000                           |                        |
| 0.3                  | 356                 | 0.1  | 50                                 | 100                               | 5000                           |                        |
| 4.7                  | 57                  | 1.3  | 10                                 | 30                                | 300                            |                        |
| 3.5                  | 70                  | 0.9  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 96                  | 0.6  | 20                                 | 25                                | 500                            |                        |
| 2.3                  | 104                 | 0.7  | 20                                 | 30                                | 600                            |                        |
| 1.9                  | 121                 | 0.6  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 139                 | 0.5  | 30                                 | 30                                | 900                            |                        |
| 1.2                  | 166                 | 0.4  | 30                                 | 40                                | 1200                           |                        |
| 0.9                  | 196                 | 0.4  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 218                 | 0.3  | 60                                 | 30                                | 1800                           |                        |
| 0.58                 | 261                 | 0.2  | 60                                 | 40                                | 2400                           |                        |
| 0.4                  | 300                 | 0.2  | 80                                 | 40                                | 3200                           |                        |
| 0.4                  | 279                 | 0.1  | 50                                 | 80                                | 4000                           |                        |
| 0.28                 | 338                 | 0.1  | 50                                 | 100                               | 5000                           |                        |
| 1.6                  | 141                 | 1.0  | 30                                 | 30                                | 900                            |                        |
| 1.2                  | 169                 | 0.7  | 30                                 | 40                                | 1200                           |                        |
| 0.93                 | 199                 | 0.7  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 222                 | 0.7  | 60                                 | 30                                | 1800                           |                        |
| 0.6                  | 266                 | 0.5  | 60                                 | 40                                | 2400                           |                        |
| 0.5                  | 307                 | 0.4  | 60                                 | 50                                | 3000                           |                        |
| 0.35                 | 288                 | 0.3  | 50                                 | 80                                | 4000                           |                        |
| 0.29                 | 311                 | 0.3  | 60                                 | 80                                | 4800                           |                        |
| 0.9                  | 203                 | 1.1  | 30                                 | 50                                | 1500                           | 30/63                  |
| 0.78                 | 225                 | 0.9  | 30                                 | 60                                | 1800                           |                        |
| 0.58                 | 276                 | 0.8  | 60                                 | 40                                | 2400                           |                        |
| 0.47                 | 319                 | 0.7  | 60                                 | 50                                | 3000                           |                        |
| 0.35                 | 306                 | 0.6  | 50                                 | 80                                | 4000                           |                        |
| 0.28                 | 360                 | 0.4  | 50                                 | 100                               | 5000                           |                        |
| 0.6                  | 330                 | 1.1  | 60                                 | 40                                | 2400                           |                        |
| 0.47                 | 377                 | 0.8  | 60                                 | 50                                | 3000                           |                        |

| Output speed (r/min) | Output torque (N.m) | (fs) | High speed transmission ratio (i1) | Low speed transmission ratio (i2) | General transmission ratio (i) | Combination model size |
|----------------------|---------------------|------|------------------------------------|-----------------------------------|--------------------------------|------------------------|
| 0.06kW               |                     |      |                                    |                                   |                                |                        |
| 0.35                 | 355                 | 0.7  | 50                                 | 80                                | 4000                           | 40/75                  |
| 0.28                 | 419                 | 0.5  | 50                                 | 100                               | 5000                           |                        |
| 0.5                  | 405                 | 1.4  | 60                                 | 50                                | 3000                           |                        |
| 0.35                 | 365                 | 1.3  | 50                                 | 80                                | 4000                           | 40/90                  |
| 0.28                 | 431                 | 1.0  | 50                                 | 100                               | 5000                           |                        |
| 0.09kW               |                     |      |                                    |                                   |                                |                        |
| 14                   | 37                  | 0.8  | 10                                 | 10                                | 100                            | 25/30                  |
| 9.3                  | 49                  | 0.6  | 10                                 | 15                                | 150                            |                        |
| 7                    | 62                  | 0.5  | 10                                 | 20                                | 200                            |                        |
| 5.6                  | 66                  | 0.5  | 10                                 | 25                                | 250                            |                        |
| 4.7                  | 75                  | 0.4  | 10                                 | 30                                | 300                            |                        |
| 3.5                  | 107                 | 0.3  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 115                 | 0.2  | 20                                 | 25                                | 500                            |                        |
| 2.3                  | 135                 | 0.2  | 20                                 | 30                                | 600                            |                        |
| 1.9                  | 151                 | 0.2  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 178                 | 0.2  | 30                                 | 30                                | 900                            |                        |
| 1.2                  | 212                 | 0.1  | 30                                 | 40                                | 1200                           |                        |
| 0.9                  | 247                 | 0.1  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 304                 | 0.1  | 60                                 | 30                                | 1800                           |                        |
| 0.58                 | 340                 | 0.1  | 60                                 | 40                                | 2400                           |                        |
| 0.47                 | 405                 | 0.1  | 60                                 | 50                                | 3000                           |                        |
| 4.7                  | 88                  | 0.8  | 10                                 | 30                                | 300                            | 30/40                  |
| 3.5                  | 107                 | 1.2  | 10                                 | 40                                | 400                            | 30/50                  |
| 2.8                  | 123                 | 1.0  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 159                 | 0.9  | 20                                 | 30                                | 600                            |                        |
| 1.9                  | 185                 | 0.8  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 212                 | 0.7  | 30                                 | 30                                | 900                            |                        |
| 1.6                  | 200                 | 1.0  | 15                                 | 60                                | 900                            |                        |
| 1.2                  | 263                 | 0.9  | 30                                 | 40                                | 1200                           | 30/63                  |
| 0.93                 | 305                 | 0.7  | 30                                 | 50                                | 1500                           |                        |
| 0.9                  | 359                 | 1.1  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 404                 | 1.0  | 60                                 | 30                                | 1800                           | 40/75                  |
| 0.58                 | 496                 | 0.7  | 60                                 | 40                                | 2400                           |                        |
| 0.5                  | 608                 | 0.9  | 60                                 | 50                                | 3000                           |                        |
| 0.35                 | 548                 | 0.8  | 50                                 | 80                                | 4000                           | 40/90                  |
| 0.12kW               |                     |      |                                    |                                   |                                |                        |
|                      |                     |      | 10                                 |                                   |                                | 30/50                  |
| 4.7                  | 118                 | 1.2  | 10                                 | 30                                | 300                            |                        |
| 3.5                  | 142                 | 0.9  |                                    | 40                                | 400                            |                        |
| 2.8                  | 164                 | 0.7  | 10                                 | 50                                | 500                            |                        |
| 2.8                  | 171                 | 1.3  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 208                 | 1.1  | 15                                 | 40                                | 600                            |                        |
| 1.9                  | 241                 | 0.9  | 15                                 | 50                                | 750                            | 30/63                  |

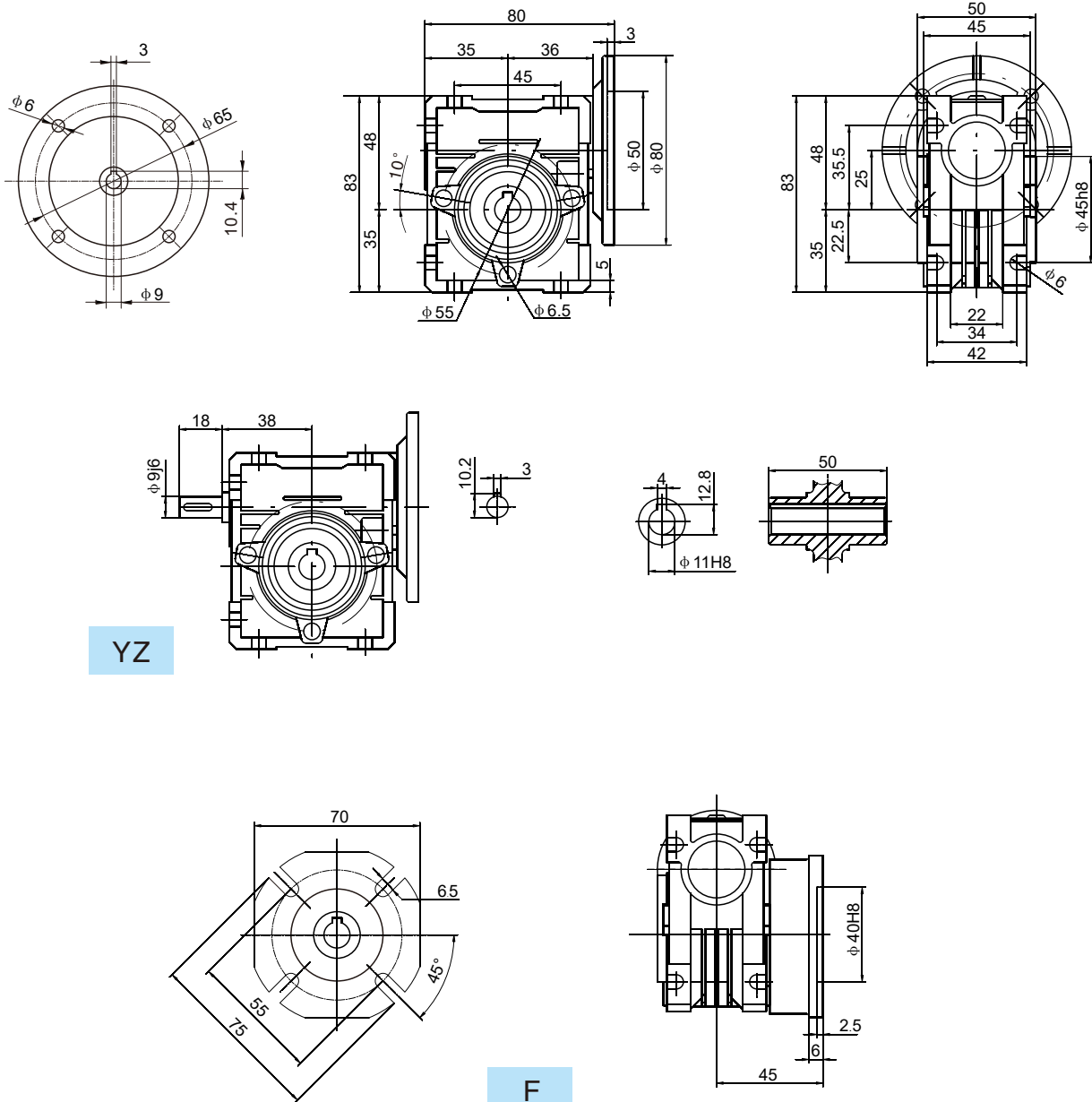
| Output speed (r/min) | Output torque (N.m) | (fs) | High speed transmission ratio (i1) | Low speed transmission ratio (i2) | General transmission ratio (i) | Combination model size |
|----------------------|---------------------|------|------------------------------------|-----------------------------------|--------------------------------|------------------------|
| 0.12kW               |                     |      |                                    |                                   |                                |                        |
| 1.6                  | 324                 | 1.2  | 30                                 | 30                                | 900                            | 40/75                  |
| 1.2                  | 399                 | 0.9  | 30                                 | 40                                | 1200                           |                        |
| 0.78                 | 546                 | 0.9  | 30                                 | 60                                | 1800                           | 40/90                  |
| 0.58                 | 695                 | 0.9  | 60                                 | 40                                | 2400                           |                        |
| 0.5                  | 883                 | 1.2  | 60                                 | 50                                | 3000                           | 50/110                 |
| 0.35                 | 784                 | 1.0  | 50                                 | 80                                | 4000                           |                        |
| 0.28                 | 928                 | 0.8  | 50                                 | 100                               | 5000                           |                        |
| 0.18kW               |                     |      |                                    |                                   |                                |                        |
| 3.5                  | 221                 | 1.0  | 10                                 | 40                                | 400                            | 30/63                  |
| 2.8                  | 257                 | 0.8  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 362                 | 1.1  | 20                                 | 30                                | 600                            | 40/75                  |
| 1.9                  | 435                 | 0.9  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 487                 | 0.8  | 30                                 | 30                                | 900                            | 40/90                  |
| 1.2                  | 629                 | 1.0  | 30                                 | 40                                | 1200                           |                        |
| 0.93                 | 735                 | 0.8  | 30                                 | 50                                | 1500                           |                        |
| 0.78                 | 860                 | 1.5  | 60                                 | 30                                | 1800                           | 50/110                 |
| 0.58                 | 1113                | 1.1  | 60                                 | 40                                | 2400                           |                        |
| 0.25kW               |                     |      |                                    |                                   |                                |                        |
| 3.5                  | 336                 | 1.1  | 10                                 | 40                                | 400                            | 40/75                  |
| 2.8                  | 384                 | 0.8  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 511                 | 1.2  | 15                                 | 40                                | 600                            | 40/90                  |
| 1.9                  | 598                 | 0.9  | 15                                 | 50                                | 750                            |                        |
| 1.6                  | 667                 | 0.8  | 15                                 | 60                                | 900                            | 50/110                 |
| 1.2                  | 943                 | 1.3  | 30                                 | 40                                | 1200                           |                        |
| 0.93                 | 1064                | 1.2  | 50                                 | 30                                | 1500                           |                        |
| 0.78                 | 1195                | 1.1  | 60                                 | 30                                | 1800                           | 63/130                 |
| 0.6                  | 1624                | 1.0  | 60                                 | 40                                | 2400                           |                        |
| 0.47                 | 1935                | 0.8  | 60                                 | 50                                | 3000                           |                        |
| 0.35                 | 2046                | 0.6  | 50                                 | 80                                | 4000                           | 63/150                 |
| 0.28                 | 2430                | 0.5  | 50                                 | 100                               | 5000                           |                        |
| 0.78                 | 1199                | 1.8  | 60                                 | 30                                | 1800                           |                        |
| 0.6                  | 1446                | 1.8  | 60                                 | 40                                | 2400                           | 40/75                  |
| 0.5                  | 1713                | 1.4  | 60                                 | 50                                | 3000                           |                        |
| 0.4                  | 2026                | 0.9  | 50                                 | 80                                | 4000                           |                        |
| 0.3                  | 2251                | 0.7  | 50                                 | 100                               | 5000                           | 40/90                  |
| 0.37kW               |                     |      |                                    |                                   |                                |                        |
| 4.7                  | 405                 | 1.0  | 10                                 | 30                                | 300                            | 40/75                  |
| 3.5                  | 498                 | 0.7  | 10                                 | 40                                | 400                            |                        |
| 4.7                  | 401                 | 1.5  | 7.5                                | 40                                | 300                            | 40/90                  |
| 3.5                  | 523                 | 1.2  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 611                 | 0.9  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 757                 | 0.8  | 15                                 | 40                                | 600                            |                        |

| Output speed (r/min) | Output torque (N.m) | (fs) | High speed transmission ratio (i1) | Low speed transmission ratio (i2) | General transmission ratio (i) | Combination model size |
|----------------------|---------------------|------|------------------------------------|-----------------------------------|--------------------------------|------------------------|
| 0.25kW               |                     |      |                                    |                                   |                                |                        |
| 1.9                  | 949                 | 1.3  | 25                                 | 30                                | 750                            | 50/110                 |
| 1.6                  | 1079                | 1.2  | 30                                 | 30                                | 900                            |                        |
| 1.2                  | 1396                | 0.8  | 30                                 | 40                                | 1200                           |                        |
| 0.9                  | 1674                | 1.1  | 50                                 | 30                                | 1500                           | 63/130                 |
| 0.78                 | 1887                | 0.9  | 60                                 | 30                                | 1800                           |                        |
| 0.78                 | 1774                | 1.2  | 60                                 | 30                                | 1800                           | 63/150                 |
| 0.6                  | 2141                | 1.2  | 60                                 | 40                                | 2400                           |                        |
| 0.5                  | 2535                | 0.9  | 60                                 | 50                                | 3000                           |                        |
| 0.55kW               |                     |      |                                    |                                   |                                |                        |
| 4.7                  | 639                 | 2.0  | 10                                 | 30                                | 300                            | 50/110                 |
| 3.5                  | 826                 | 1.4  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 984                 | 1.1  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 1181                | 1.0  | 15                                 | 40                                | 600                            | 63/130                 |
| 1.9                  | 1411                | 0.9  | 25                                 | 30                                | 750                            |                        |
| 2.8                  | 995                 | 1.6  | 10                                 | 50                                | 500                            |                        |
| 1.9                  | 1470                | 1.2  | 25                                 | 30                                | 750                            | 63/150                 |
| 1.2                  | 2132                | 0.8  | 30                                 | 40                                | 1200                           |                        |
| 0.78                 | 2637                | 0.8  | 60                                 | 30                                | 1800                           |                        |
| 0.6                  | 3182                | 0.8  | 60                                 | 40                                | 2400                           | 63/150                 |
| 0.75kW               |                     |      |                                    |                                   |                                |                        |
| 4.7                  | 871                 | 1.5  | 10                                 | 30                                | 300                            | 50/110                 |
| 3.5                  | 1126                | 1.1  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 1357                | 1.1  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 1631                | 1.0  | 15                                 | 40                                | 600                            | 63/130                 |
| 1.9                  | 2005                | 0.9  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 2283                | 0.8  | 30                                 | 30                                | 900                            |                        |
| 2.8                  | 1290                | 1.8  | 10                                 | 50                                | 500                            | 63/150                 |
| 2.3                  | 1529                | 1.7  | 15                                 | 40                                | 600                            |                        |
| 1.9                  | 1783                | 1.3  | 25                                 | 30                                | 750                            |                        |
| 1.6                  | 2215                | 0.9  | 30                                 | 30                                | 900                            | 63/150                 |
| 1.2                  | 2680                | 1.0  | 30                                 | 40                                | 1200                           |                        |
| 1.1 kW               |                     |      |                                    |                                   |                                |                        |
| 4.7                  | 1312                | 1.3  | 10                                 | 30                                | 300                            | 63/130                 |
| 3.5                  | 1671                | 1.0  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 1991                | 0.8  | 10                                 | 50                                | 500                            |                        |
| 9.3                  | 752                 | 3.1  | 10                                 | 15                                | 150                            | 63/150                 |
| 7                    | 966                 | 2.4  | 10                                 | 20                                | 200                            |                        |
| 5.6                  | 1175                | 1.7  | 10                                 | 25                                | 250                            |                        |
| 4.7                  | 1364                | 1.7  | 10                                 | 30                                | 300                            | 63/150                 |
| 3.5                  | 1619                | 1.6  | 10                                 | 40                                | 400                            |                        |
| 2.8                  | 1893                | 1.2  | 10                                 | 50                                | 500                            |                        |
| 2.3                  | 2242                | 1.2  | 15                                 | 40                                | 600                            | 63/150                 |
| 1.9                  | 2616                | 0.9  | 25                                 | 30                                | 750                            |                        |

| Output speed<br>(r/min) | Output torque<br>(N.m) | (fs) | High speed<br>transmission<br>ratio (i1) | Low speed<br>transmission<br>ratio (i2) | General<br>transmission<br>ratio (i) | Combination<br>model<br>size |
|-------------------------|------------------------|------|------------------------------------------|-----------------------------------------|--------------------------------------|------------------------------|
| <b>1.5kW</b>            |                        |      |                                          |                                         |                                      |                              |
| 4.7                     | 1789                   | 1.0  | 10                                       | 30                                      | 300                                  | 63/130                       |
| 3.5                     | 2279                   | 0.7  | 10                                       | 40                                      | 400                                  |                              |
| 9.3                     | 1026                   | 2.3  | 10                                       | 15                                      | 150                                  | 63/150                       |
| 7                       | 1317                   | 1.8  | 10                                       | 20                                      | 200                                  |                              |
| 5.6                     | 1602                   | 1.3  | 10                                       | 25                                      | 250                                  |                              |
| 4.7                     | 1860                   | 1.3  | 10                                       | 30                                      | 300                                  |                              |
| 3.5                     | 2208                   | 1.2  | 10                                       | 40                                      | 400                                  |                              |
| 2.8                     | 2582                   | 0.9  | 10                                       | 50                                      | 500                                  |                              |
| 2.3                     | 3057                   | 0.9  | 15                                       | 40                                      | 600                                  |                              |

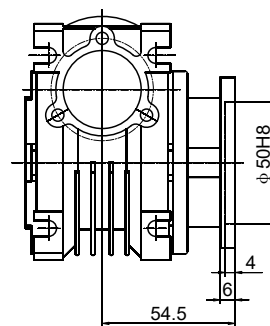
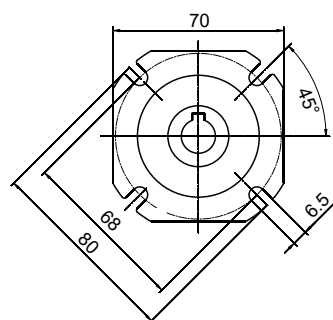
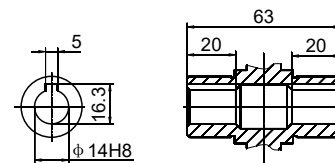
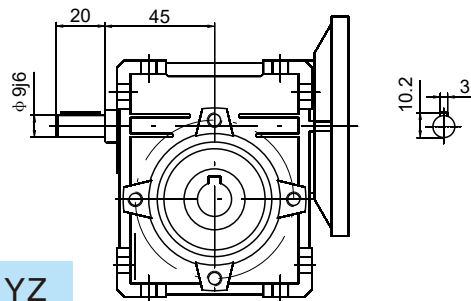
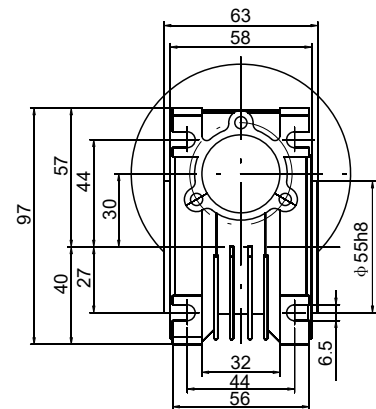
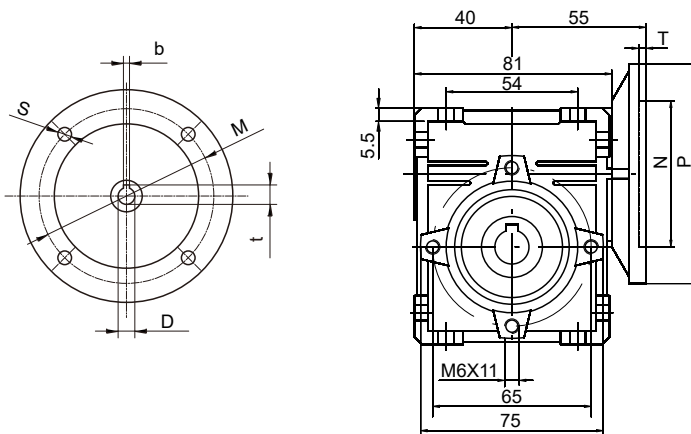
## DIMENSION

### BC-MWG25



Weight without motor  $\approx 0.8\text{kg}$

## BC-MWG30

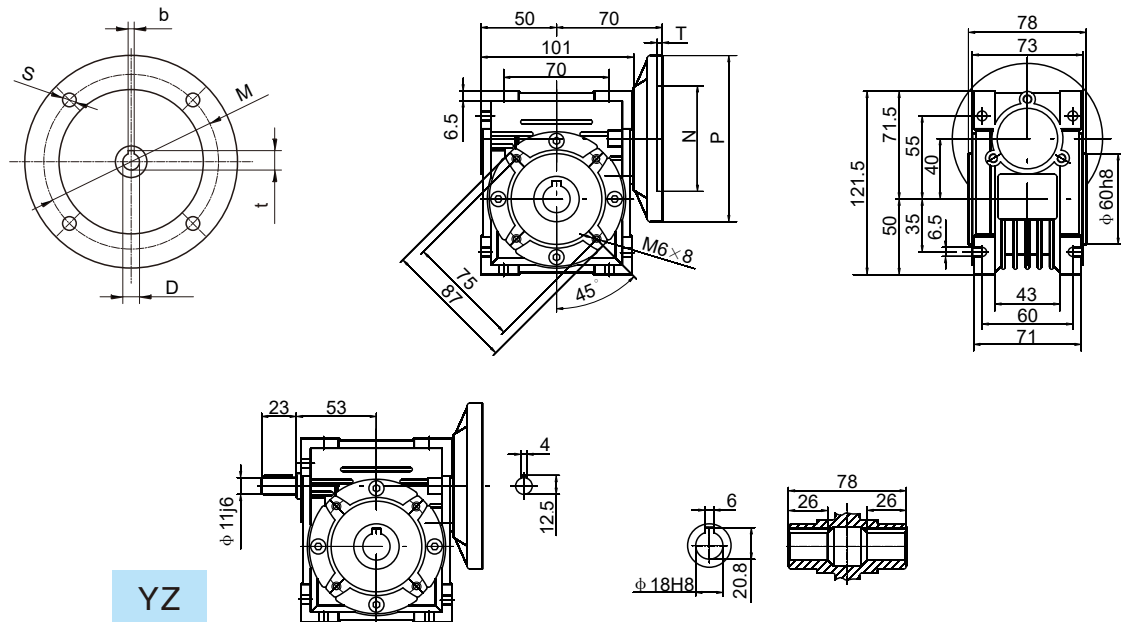


**F**

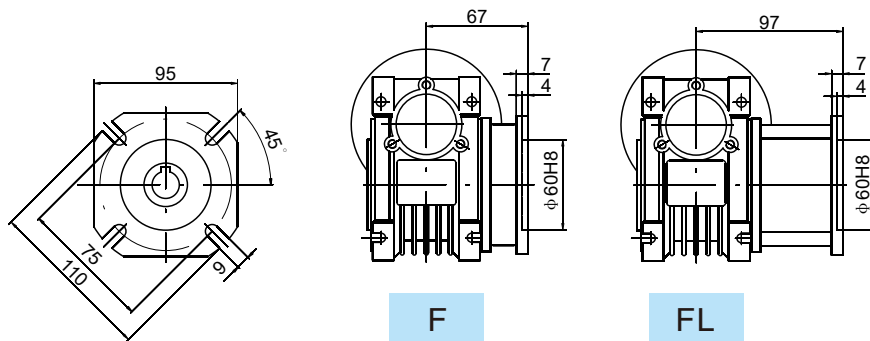
| IEC   | DE8 | b | t    | P   | M   | N  | S   | T   |
|-------|-----|---|------|-----|-----|----|-----|-----|
| 56B5  | 9   | 3 | 10.4 | 120 | 100 | 80 | 7   | 3.5 |
| 56B14 | 9   | 3 | 10.4 | 80  | 65  | 50 | 5.5 | 3   |
| 63B14 | 11  | 4 | 12.8 | 90  | 75  | 60 | 5.5 | 3   |
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95 | 9   | 3.5 |

Weight without motor  $\approx 1.2\text{kg}$

## BC-MWG40

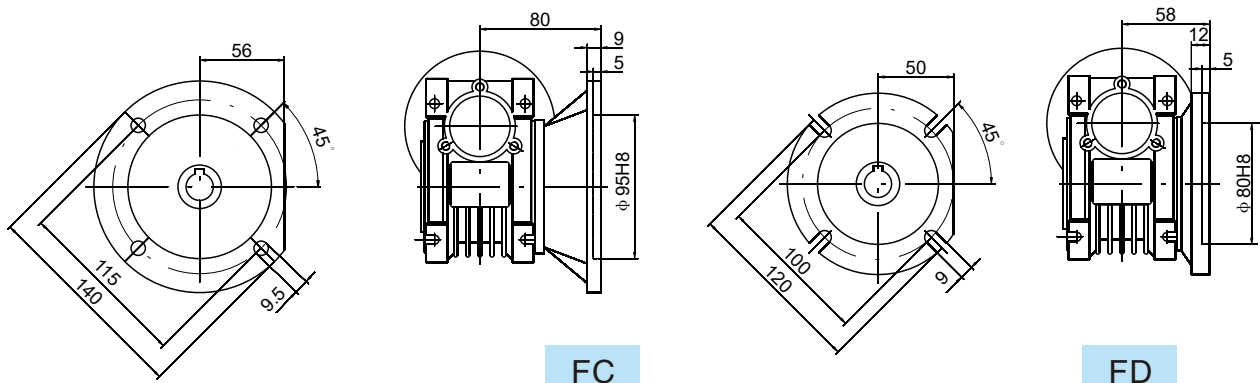


YZ



F

FL



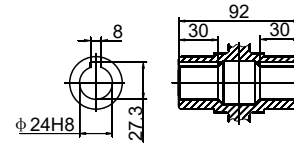
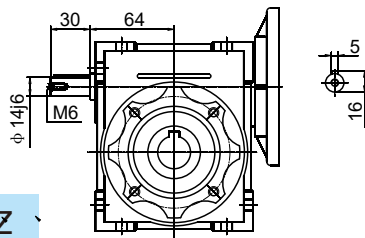
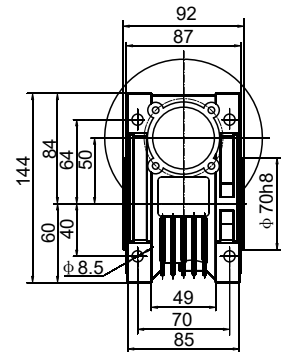
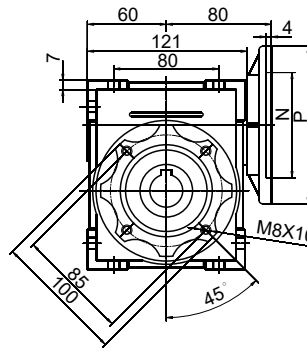
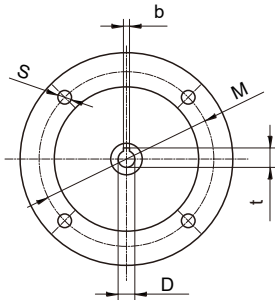
FC

FD

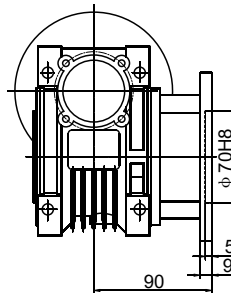
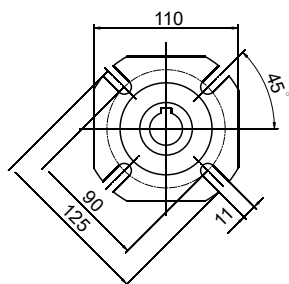
| IEC   | DE8 | b | t    | P   | M   | N   | S   | T   |
|-------|-----|---|------|-----|-----|-----|-----|-----|
| 56B14 | 9   | 3 | 10.4 | 80  | 65  | 50  | 5.5 | 3   |
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9   | 3.5 |
| 63B14 | 11  | 4 | 12.8 | 90  | 75  | 60  | 5.5 | 3   |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9   | 4   |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7   | 3   |

Weight without motor ≈ 2.2kg

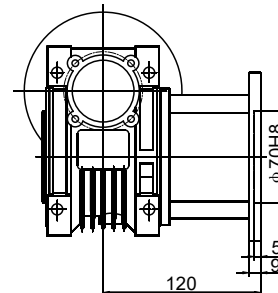
## BC-MWG50



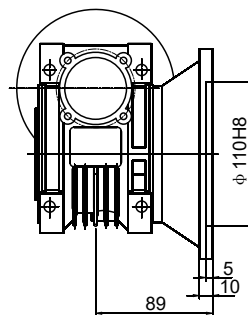
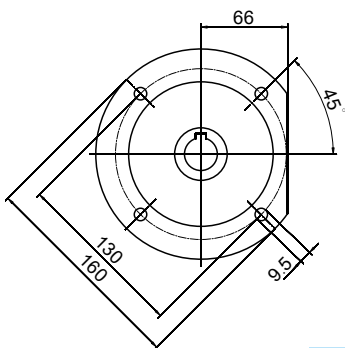
YZ



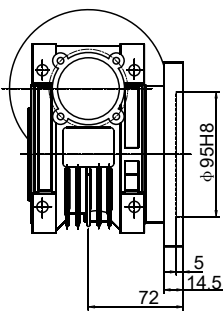
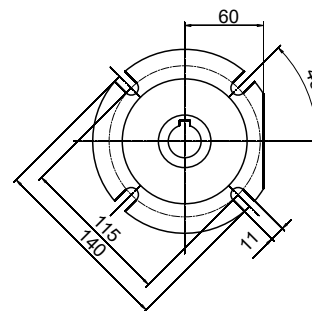
F



FL



FC

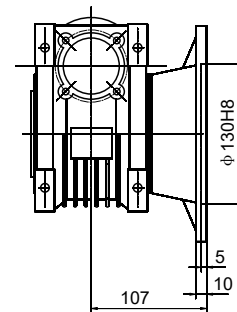
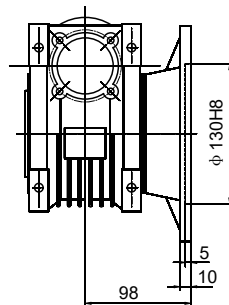
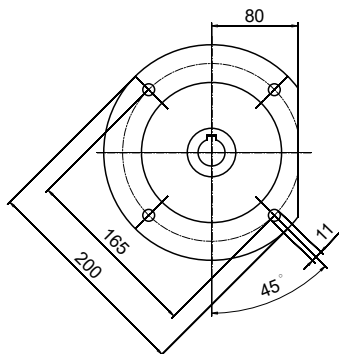
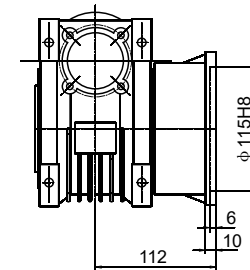
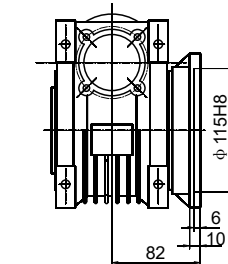
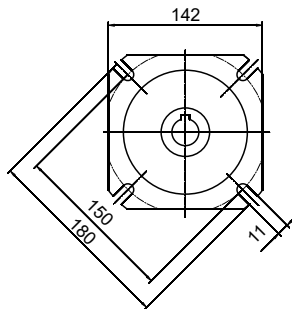
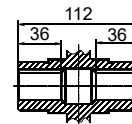
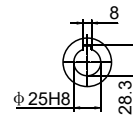
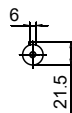
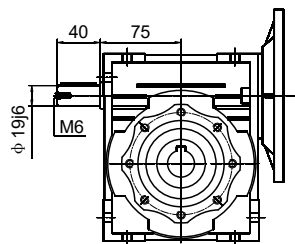
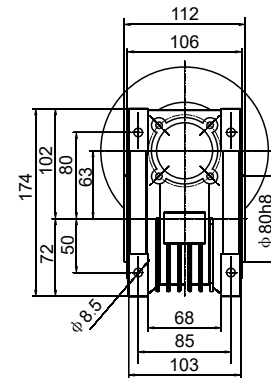
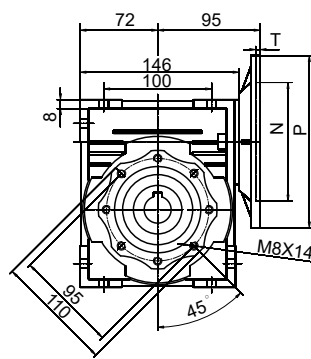
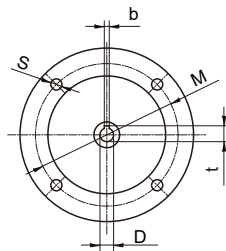


FD

| IEC   | DE8 | b | t    | P   | M   | N   | S   | T   |
|-------|-----|---|------|-----|-----|-----|-----|-----|
| 63B14 | 11  | 4 | 12.8 | 90  | 75  | 60  | 5.5 | 3   |
| 63B5  | 11  | 4 | 12.8 | 140 | 115 | 95  | 9   | 3.5 |
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9   | 4   |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7   | 3   |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11  | 4   |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 7   | 3.5 |

Weight without motor ≈ 3.8kg

## BC-MWG63

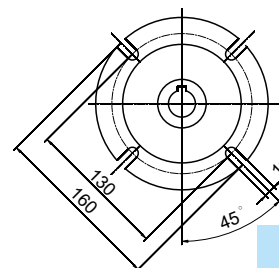


FC

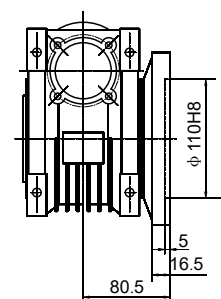
FD

Weight without motor ≈ 6.2kg

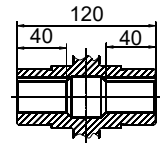
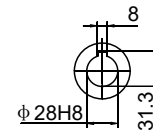
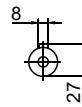
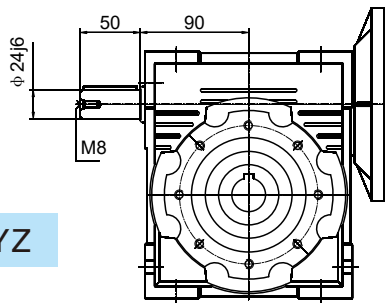
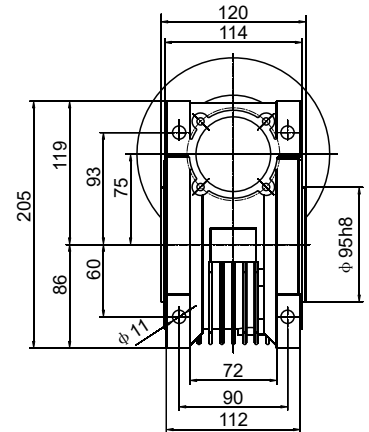
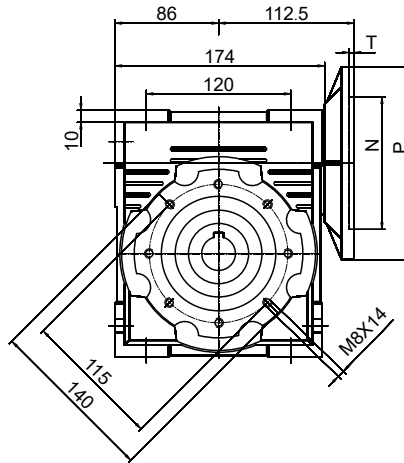
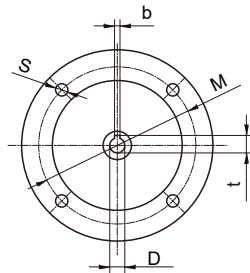
| IEC   | DEs | b | t    | P   | M   | N   | S  | T   |
|-------|-----|---|------|-----|-----|-----|----|-----|
| 71B5  | 14  | 5 | 16.3 | 160 | 130 | 110 | 9  | 4   |
| 71B14 | 14  | 5 | 16.3 | 105 | 85  | 70  | 7  | 3   |
| 80B5  | 19  | 6 | 21.8 | 200 | 165 | 130 | 11 | 4   |
| 80B14 | 19  | 6 | 21.8 | 120 | 100 | 80  | 7  | 3.5 |
| 90B5  | 24  | 8 | 27.3 | 200 | 165 | 130 | 11 | 4   |
| 90B14 | 24  | 8 | 27.3 | 140 | 115 | 95  | 9  | 3.5 |



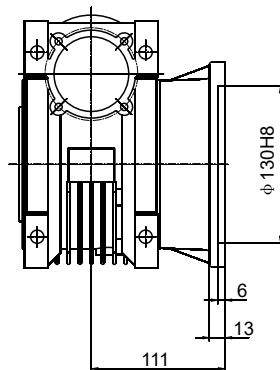
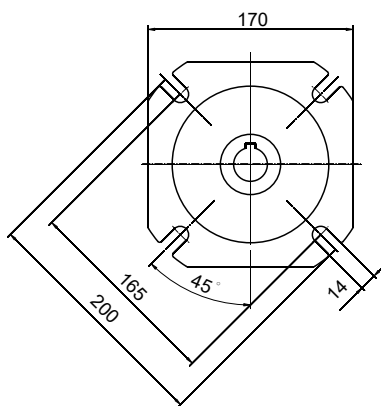
FE



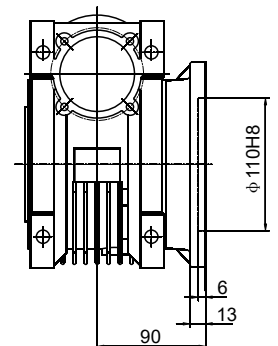
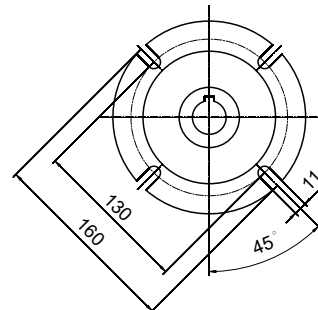
# BC-MWG75



YZ



F

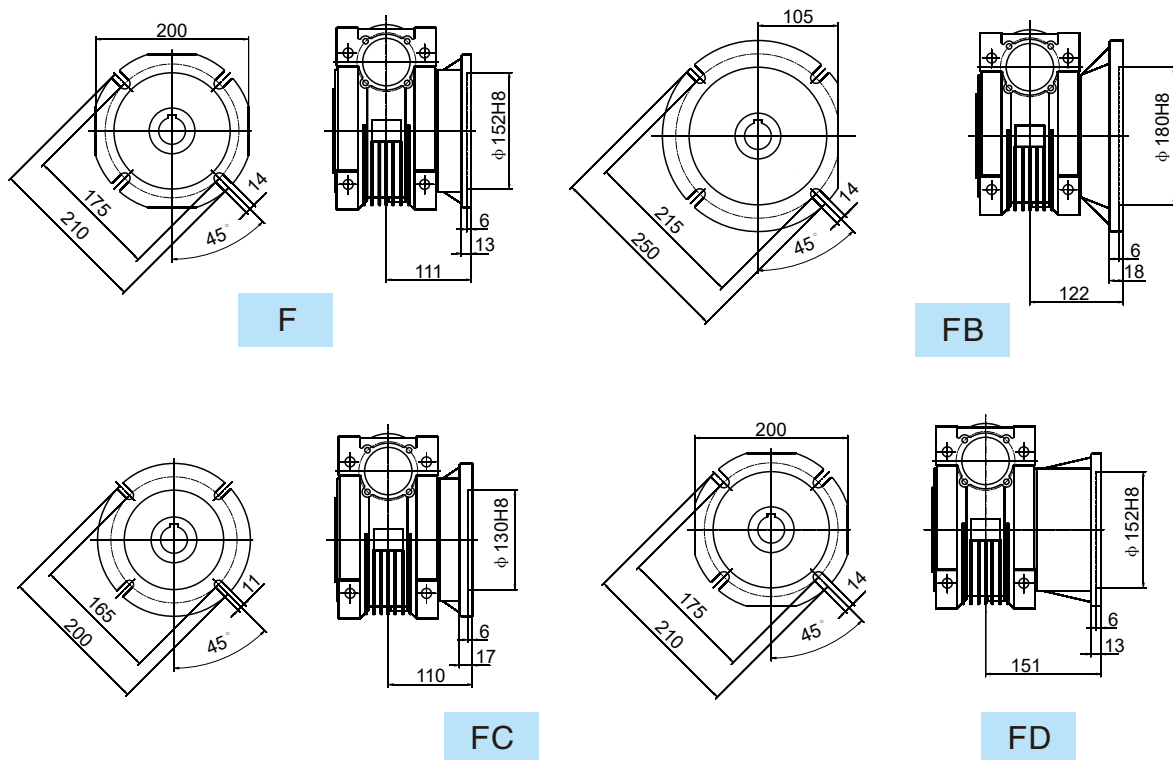
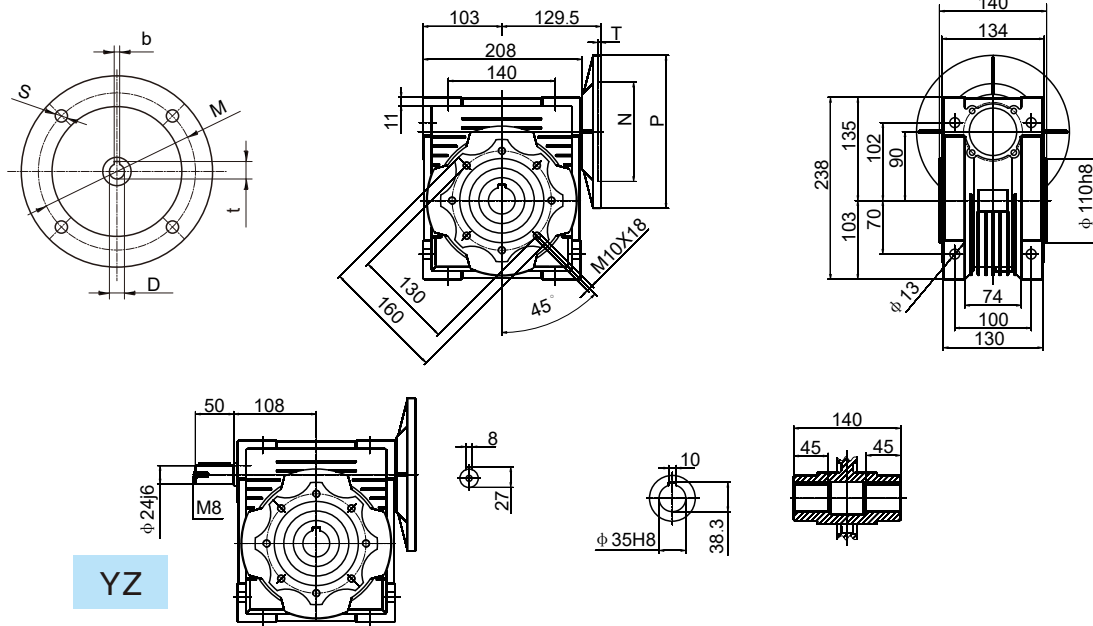


FB

| IEC        | DE8 | b | t    | P   | M   | N   | S    | T   |
|------------|-----|---|------|-----|-----|-----|------|-----|
| 80B5       | 19  | 6 | 21.8 | 200 | 165 | 130 | 11   | 4   |
| 80B14      | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5  | 3.5 |
| 90B5       | 24  | 8 | 27.3 | 200 | 165 | 130 | 11   | 4   |
| 90B14      | 24  | 8 | 27.3 | 140 | 115 | 95  | 9    | 3.5 |
| 100/112B5  | 28  | 8 | 31.3 | 250 | 215 | 180 | 13.5 | 4   |
| 100/112B14 | 28  | 8 | 31.3 | 160 | 130 | 110 | 9    | 4.5 |

Weight without motor ≈ 9kg

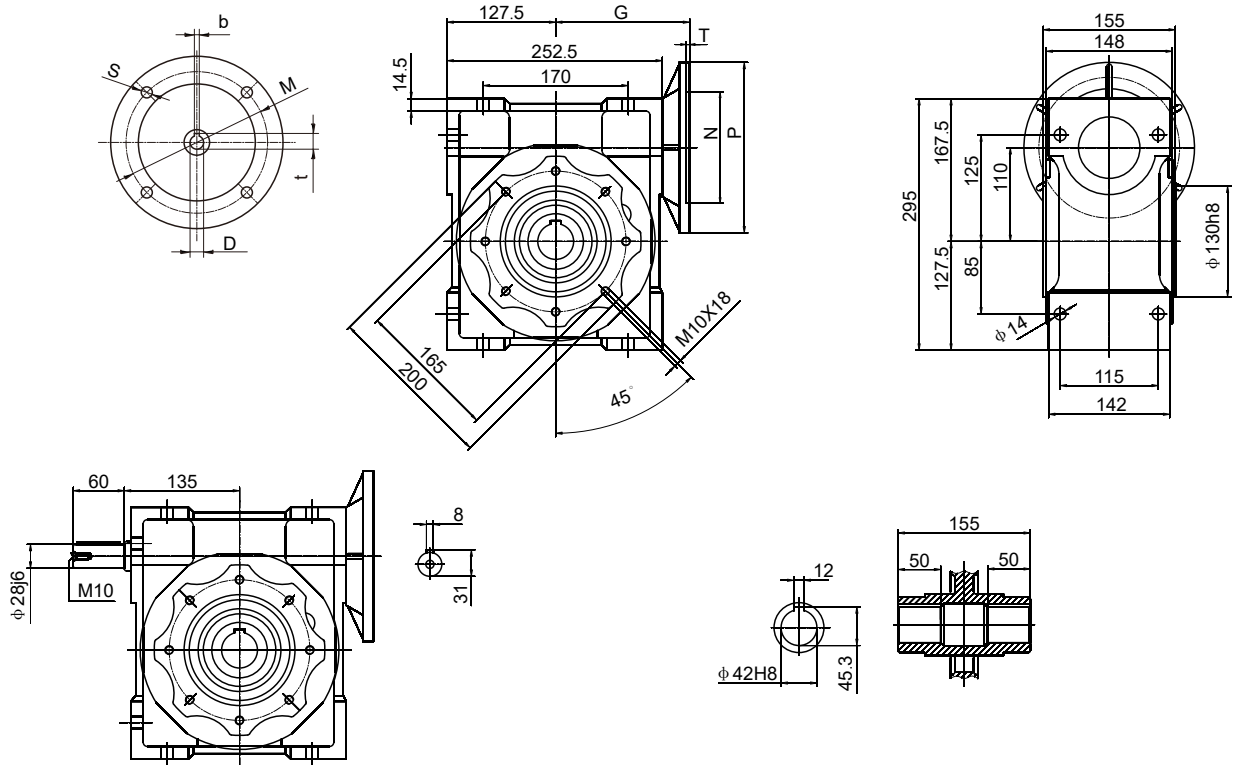
## BC-MWG90



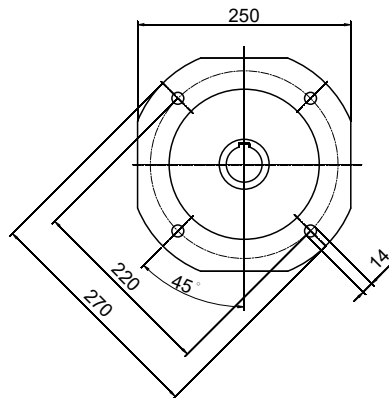
| IEC        | DE8 | b | t    | P   | M   | N   | S    | T   |
|------------|-----|---|------|-----|-----|-----|------|-----|
| 80B5       | 19  | 6 | 21.8 | 200 | 165 | 130 | 11   | 4   |
| 80B14      | 19  | 6 | 21.8 | 120 | 100 | 80  | 6.5  | 3.5 |
| 90B5       | 24  | 8 | 27.3 | 200 | 165 | 130 | 11   | 4   |
| 90B14      | 24  | 8 | 27.3 | 140 | 115 | 95  | 9    | 3.5 |
| 100/112B5  | 28  | 8 | 31.3 | 250 | 215 | 180 | 13.5 | 4   |
| 100/112B14 | 28  | 8 | 31.3 | 160 | 130 | 110 | 9    | 4.5 |

Weight without motor ≈ 12kg

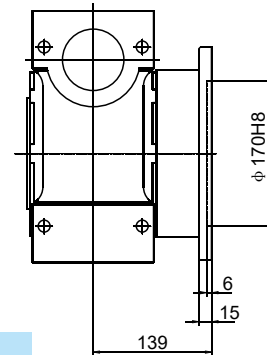
## BC-MWG110



YZ

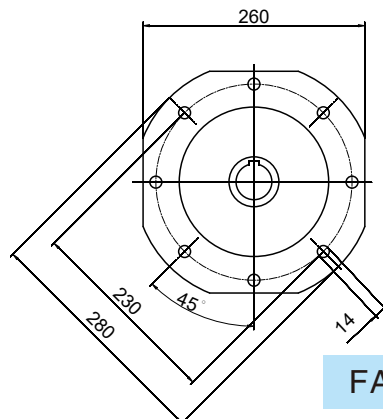


F

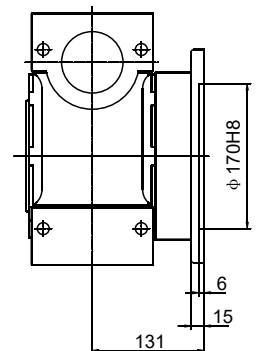


Weight without motor ≈ 38kg

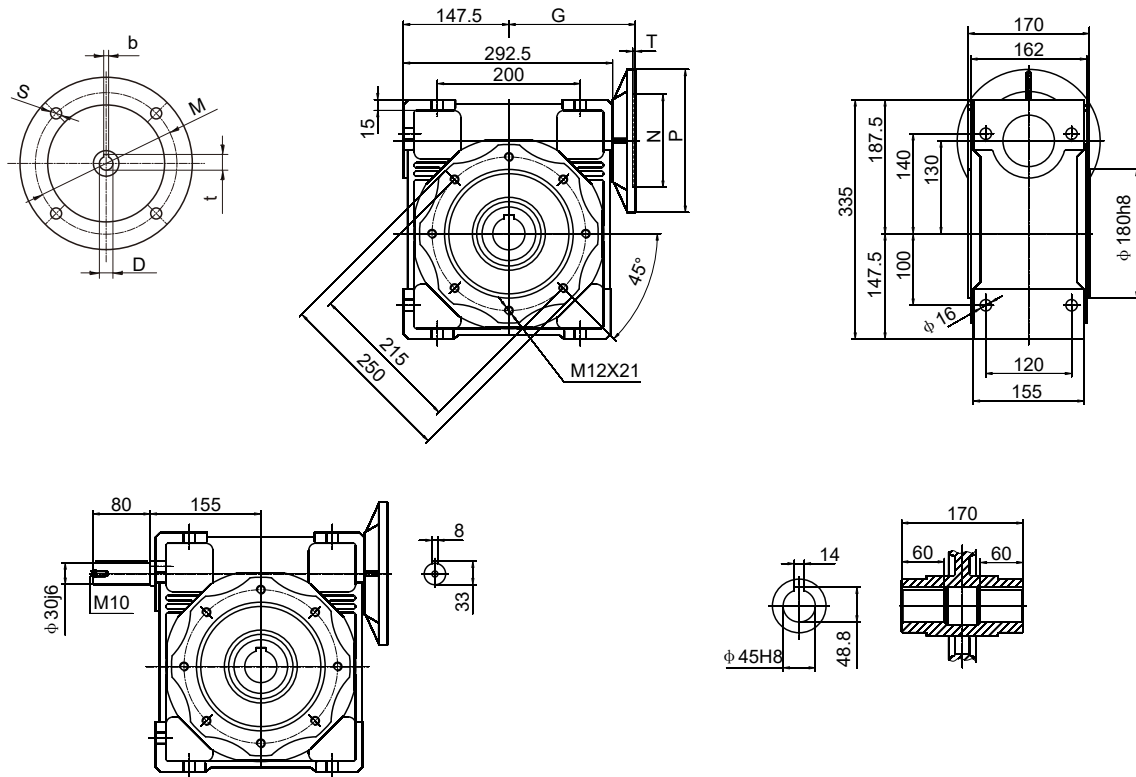
| IEC        | DE8 | b  | t    | P   | M   | N   | S    | T   | G   |
|------------|-----|----|------|-----|-----|-----|------|-----|-----|
| 90B5       | 24  | 8  | 27.3 | 200 | 165 | 130 | 11   | 4   | 157 |
| 90B14      | 24  | 8  | 27.3 | 140 | 115 | 95  | 9    | 3.5 | 157 |
| 100/112B5  | 28  | 8  | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 155 |
| 100/112B14 | 28  | 8  | 31.3 | 160 | 130 | 110 | 9    | 4.5 | 155 |
| 132B5      | 38  | 10 | 41.3 | 300 | 265 | 230 | 13.5 | 4.5 | 159 |



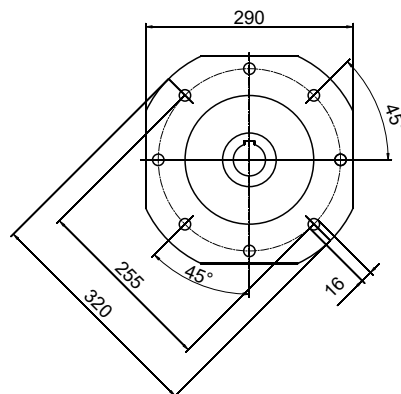
FA



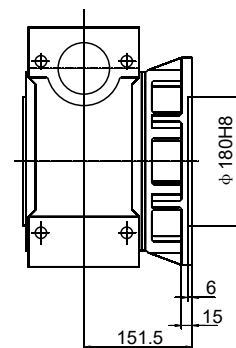
## BC-MWG130



YZ

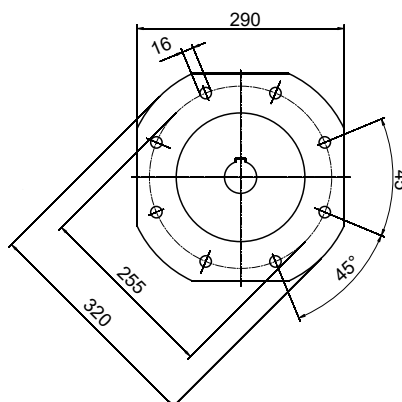


F

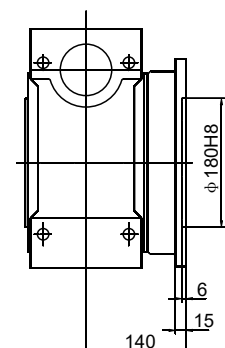


Weight without motor ≈ 55kg

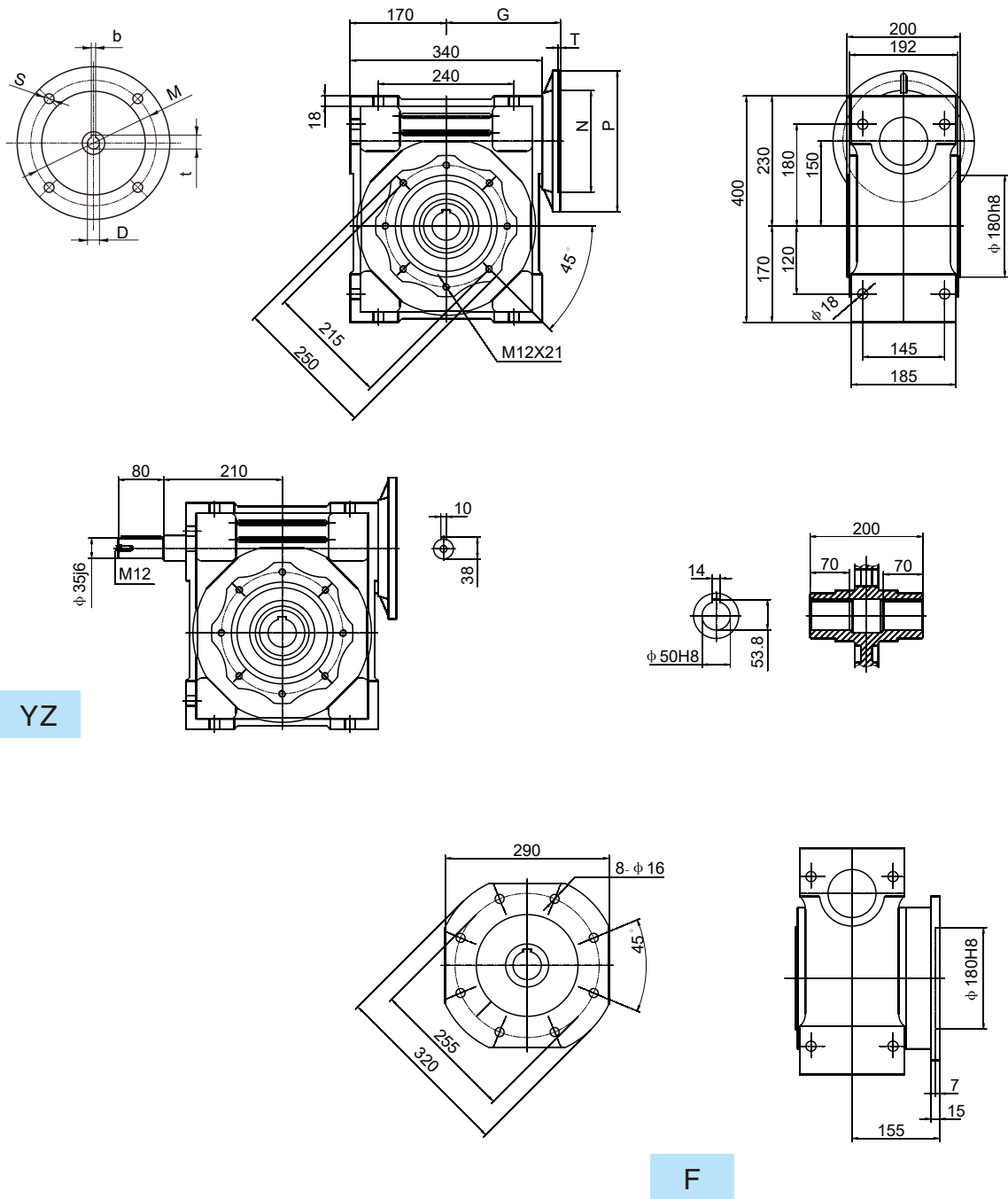
| IEC        | DE8 | b  | t    | P   | M   | N   | S    | T   | G   |
|------------|-----|----|------|-----|-----|-----|------|-----|-----|
| 90B5       | 24  | 8  | 27.3 | 200 | 165 | 130 | 11   | 4   | 177 |
| 90B14      | 24  | 8  | 27.3 | 140 | 115 | 95  | 9    | 3.5 | 177 |
| 100/112B5  | 28  | 8  | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 175 |
| 100/112B14 | 28  | 8  | 31.3 | 160 | 130 | 110 | 9    | 4.5 | 175 |
| 132B5      | 38  | 10 | 41.3 | 300 | 265 | 230 | 13.5 | 4.5 | 179 |



FA



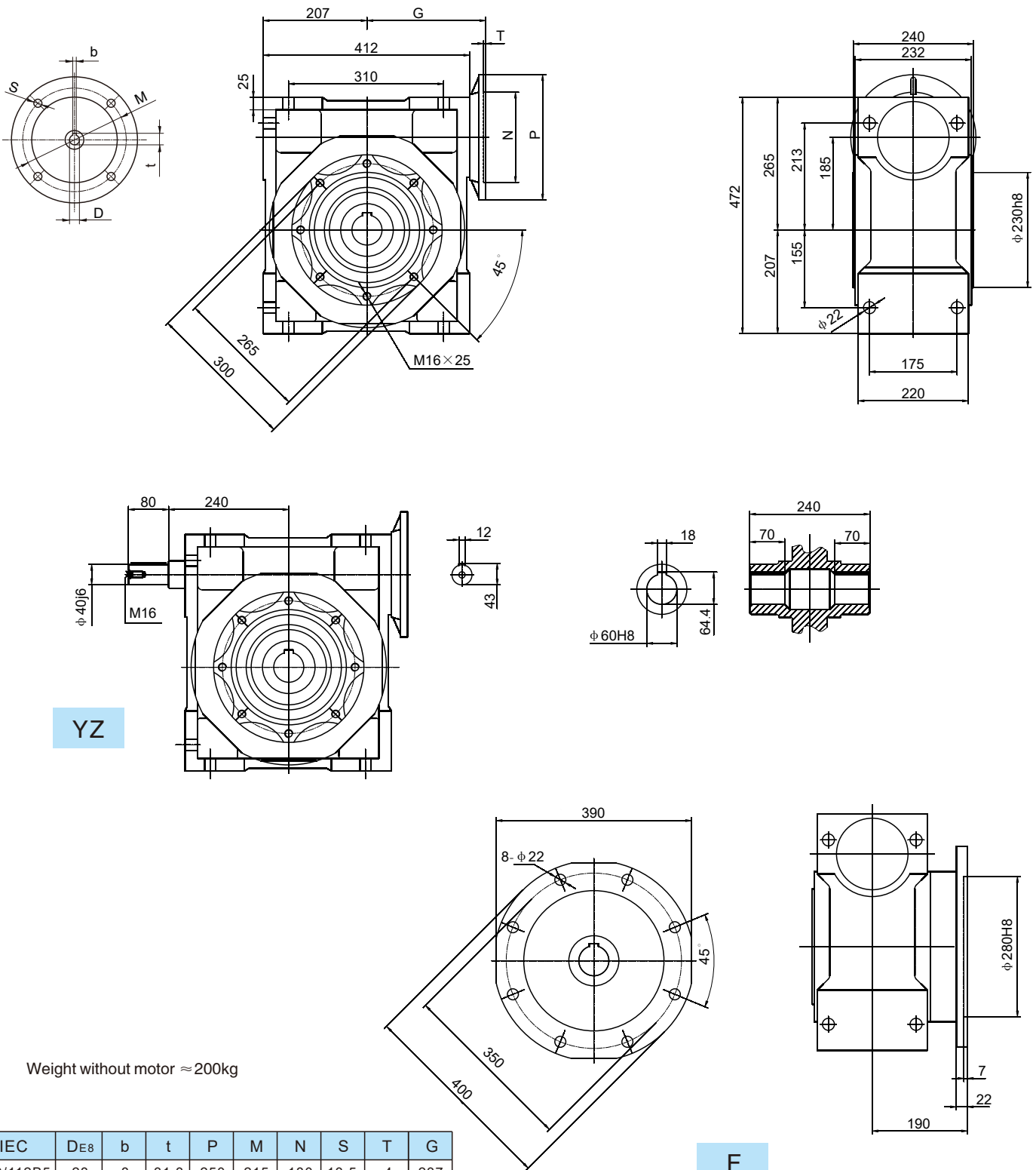
## BC-MWG150



Weight without motor  $\approx 105\text{kg}$

| IEC       | DE8 | b  | t    | P   | M   | N   | S    | T   | G   |
|-----------|-----|----|------|-----|-----|-----|------|-----|-----|
| 100/112B5 | 28  | 8  | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 202 |
| 132B5     | 38  | 10 | 41.3 | 300 | 265 | 230 | 13.5 | 4.5 | 202 |
| 160B5     | 42  | 12 | 45.3 | 350 | 300 | 250 | 18   | 6   | 212 |

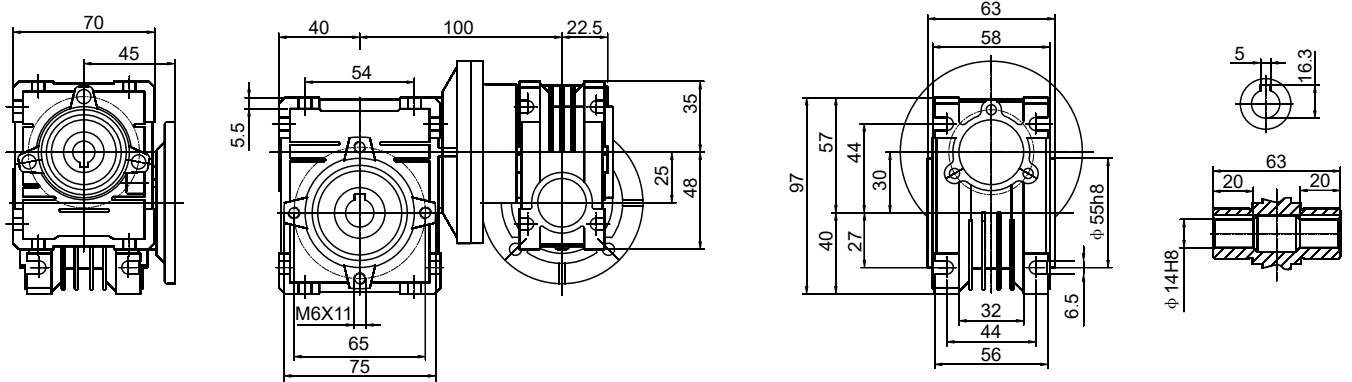
## BC-MWG185



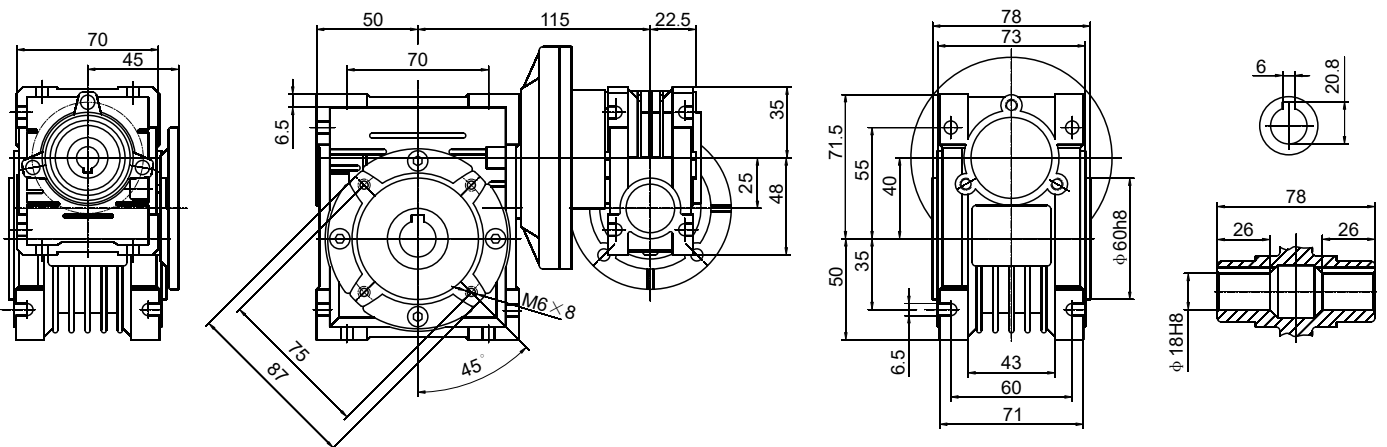
Weight without motor ≈ 200kg

| IEC       | DE8 | b  | t    | P   | M   | N   | S    | T   | G   |
|-----------|-----|----|------|-----|-----|-----|------|-----|-----|
| 100/112B5 | 28  | 8  | 31.3 | 250 | 215 | 180 | 13.5 | 4   | 237 |
| 132B5     | 38  | 10 | 41.3 | 300 | 265 | 230 | 13.5 | 4.5 | 237 |
| 160B5     | 42  | 12 | 45.3 | 350 | 300 | 250 | 18   | 6   | 247 |
| 180B5     | 48  | 14 | 51.8 | 350 | 300 | 250 | 18   | 6   | 247 |

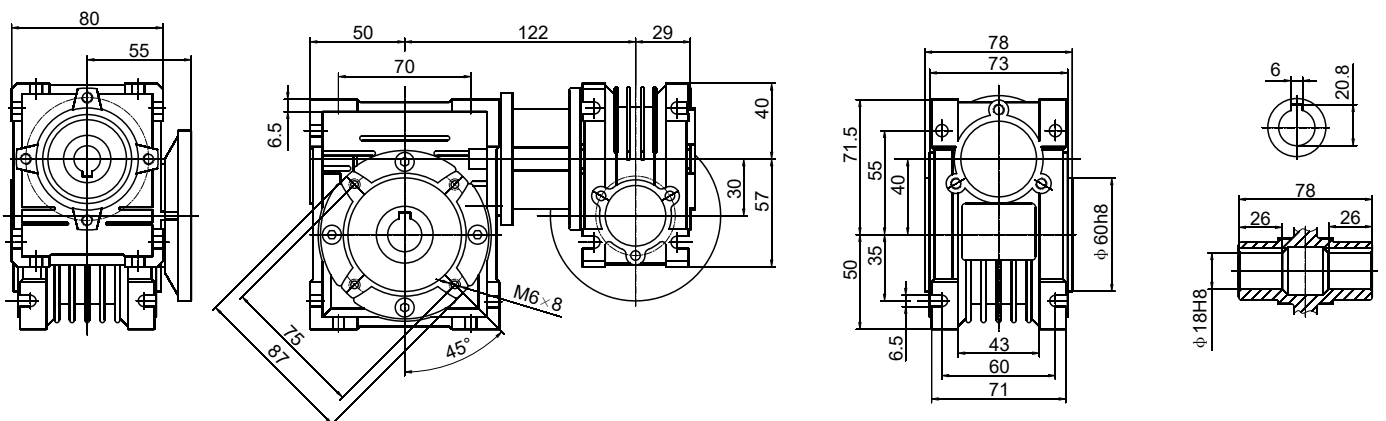
### BC-MWG25/30



### BC-MWG25/40



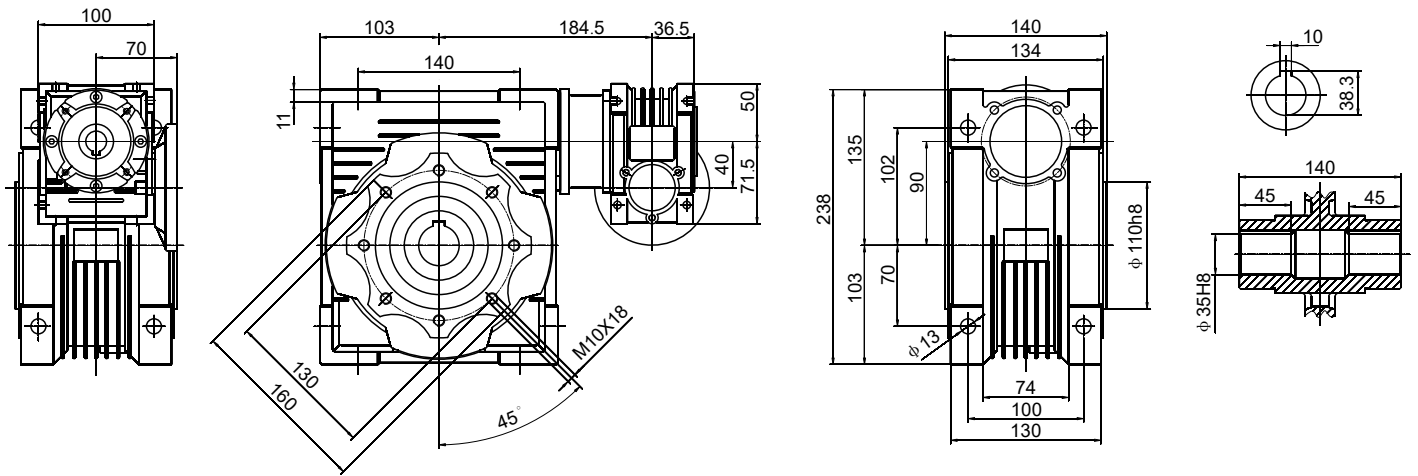
### BC-MWG30/40



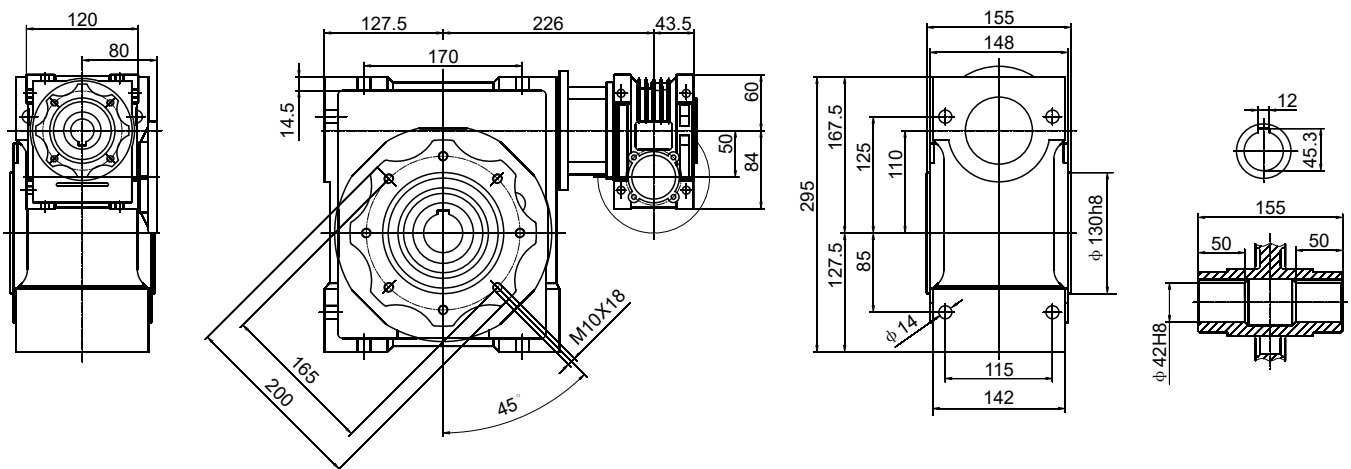
Technical drawing of the 3000 series pump assembly, showing four views with dimensions in mm:

- Front View (Top Left):** Shows the front of the pump head with a width of 80 mm and a depth of 55 mm.
- Top View (Middle Left):** Shows the top of the pump head with a width of 72 mm, a depth of 100 mm, and a total width of 145 mm. It includes a 45-degree chamfer and a 95 mm dimension. A screw is labeled M8X14.
- Side View (Bottom Left):** Shows the side of the pump head with a width of 29 mm, a depth of 40 mm, and a total width of 106 mm. It includes a 30 mm dimension and a 57 mm dimension.
- Detail View (Right):** Shows a detailed view of the pump head with a width of 112 mm, a depth of 106 mm, and a total width of 174 mm. It includes a 72 mm dimension, a 102 mm dimension, an 80 mm dimension, a 63 mm dimension, a 50 mm dimension, a 68 mm dimension, an 86 mm dimension, and a 104 mm dimension. It also shows a 25H8 fit and a 80h8 fit.

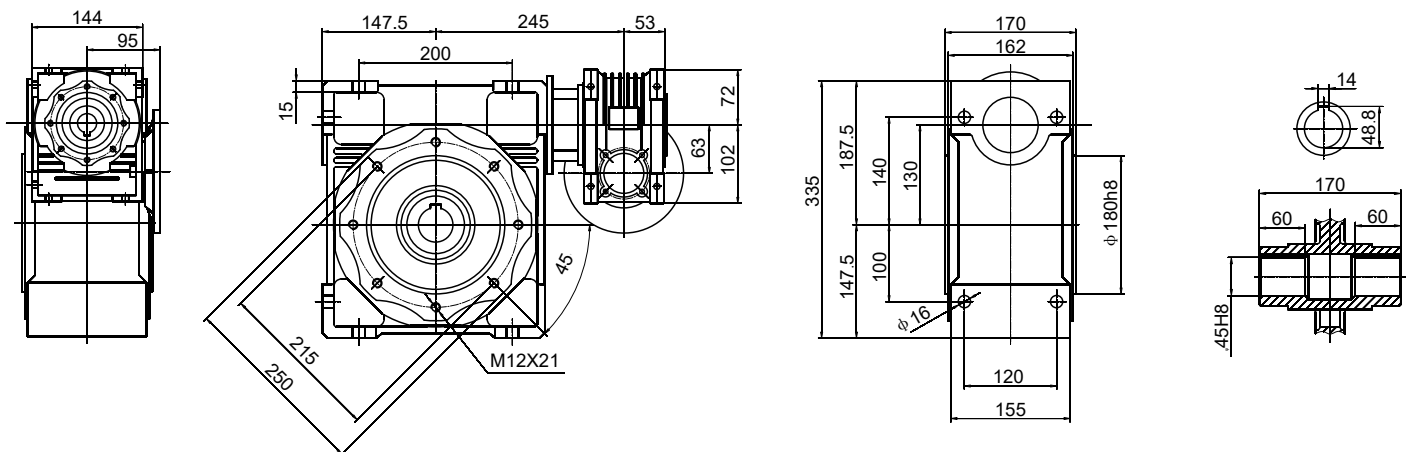
### BC-MWG40/90



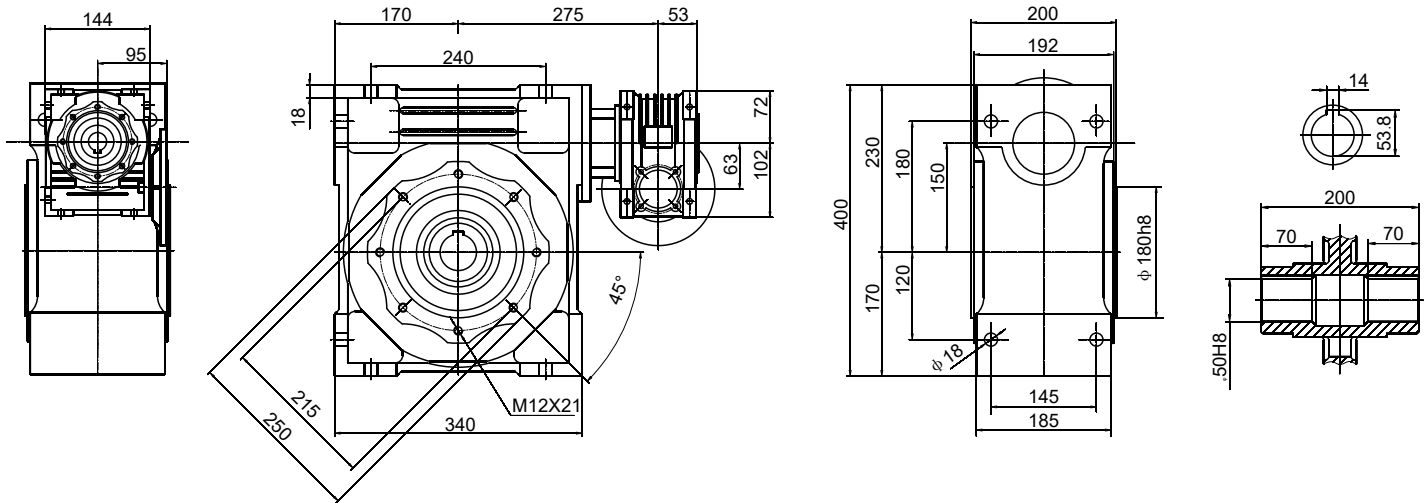
### BC-MWG50/110

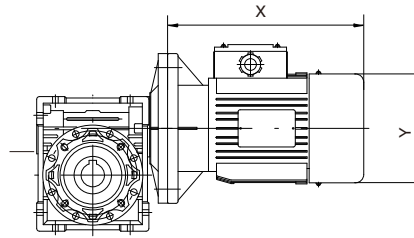


### BC-MWG63/130



BC-MWG63/150



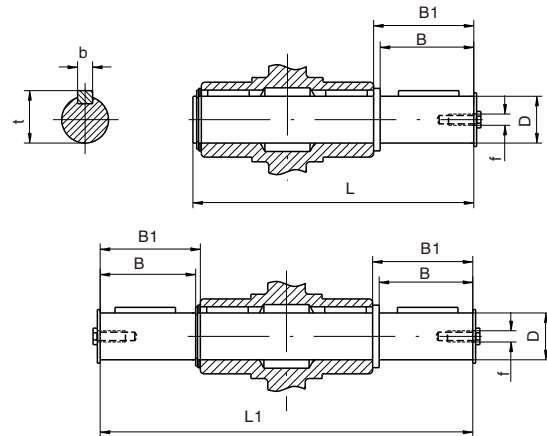


Overall dimensions for electric motor

| Size   | 56   |      | 63   |      | 71   |      | 80   |      | 90  |     | 100 |   | 112 | 132 |     | 160 |     | 180  |     |     |     |
|--------|------|------|------|------|------|------|------|------|-----|-----|-----|---|-----|-----|-----|-----|-----|------|-----|-----|-----|
| ( kw ) | 0.06 | 0.09 | 0.12 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 1.1 | 1.5 | 2.2 | 3 | 4   | 5.5 | 7.5 | 11  | 15  | 18.5 | 22  |     |     |
| X      | 175  |      | 200  |      | 240  |      | 245  |      | 270 |     | 295 |   | 315 |     | 340 | 390 | 430 | 520  | 565 | 580 | 615 |
| Y      | 120  |      | 130  |      | 140  |      | 160  |      | 175 |     | 195 |   | 225 | 275 |     | 320 |     | 360  |     |     |     |

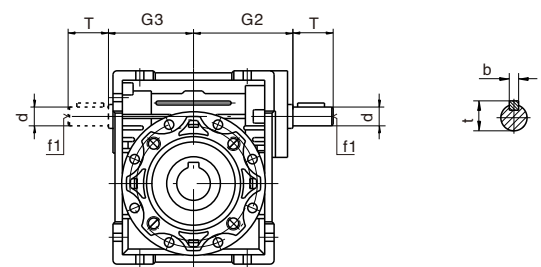
Dimensions of single/double output shaft

| Type | D(h6) | B   | B1   | L   | L1  | f   | b  | t    |
|------|-------|-----|------|-----|-----|-----|----|------|
| 25   | 11    | 23  | 25.5 | 81  | 101 | —   | 4  | 12.5 |
| 30   | 14    | 30  | 32.5 | 102 | 128 | M6  | 5  | 16   |
| 40   | 18    | 40  | 43   | 128 | 164 | M6  | 6  | 20.5 |
| 50   | 24    | 50  | 53.5 | 153 | 199 | M8  | 8  | 27   |
| 63   | 25    | 50  | 53.5 | 173 | 219 | M10 | 8  | 28   |
| 75   | 28    | 60  | 63.5 | 192 | 247 | M10 | 8  | 31   |
| 90   | 35    | 80  | 84   | 234 | 308 | M12 | 10 | 38   |
| 110  | 42    | 80  | 84.5 | 249 | 324 | M16 | 12 | 45   |
| 130  | 45    | 80  | 85   | 265 | 340 | M16 | 14 | 48.5 |
| 150  | 50    | 102 | 110  | 324 | 420 | M20 | 14 | 53.5 |
| 185  | 60    | 112 | 120  | 374 | 480 | M20 | 18 | 64   |



Dimensions of extension worm shafts

| Type | G3  | G2  | T  | d(j6) | b  | t    | f1  |
|------|-----|-----|----|-------|----|------|-----|
| 25   | 38  | 42  | 18 | 9     | 3  | 10.2 | —   |
| 30   | 45  | 51  | 20 | 9     | 3  | 10.2 | —   |
| 40   | 53  | 60  | 23 | 11    | 4  | 12.5 | M6  |
| 50   | 64  | 74  | 30 | 14    | 5  | 16   | M6  |
| 63   | 75  | 90  | 40 | 19    | 6  | 21.5 | M6  |
| 75   | 90  | 105 | 50 | 24    | 8  | 27   | M8  |
| 90   | 108 | 125 | 50 | 24    | 8  | 27   | M8  |
| 110  | 135 | 142 | 60 | 28    | 8  | 31   | M10 |
| 130  | 155 | 162 | 80 | 30    | 8  | 33   | M10 |
| 150  | 210 | 195 | 80 | 35    | 10 | 38   | M12 |
| 185  | 240 | 240 | 80 | 40    | 12 | 43   | M16 |



Dimensions of torque arms

| Type | K1  | R  | KH | G  | KG   |
|------|-----|----|----|----|------|
| 25   | 70  | 15 | 8  | 14 | 17.5 |
| 30   | 85  | 15 | 8  | 14 | 24   |
| 40   | 100 | 18 | 10 | 14 | 31.5 |
| 50   | 100 | 18 | 10 | 14 | 38.5 |
| 63   | 150 | 18 | 10 | 14 | 49   |
| 75   | 200 | 30 | 20 | 25 | 47.5 |
| 90   | 200 | 30 | 20 | 25 | 57.5 |
| 110  | 250 | 35 | 25 | 30 | 62   |
| 130  | 250 | 35 | 25 | 30 | 69   |
| 150  | 250 | 35 | 25 | 30 | 84   |

