

# DC MOTORS

PERMANENT MAGNETS  
WITH BRUSHES





## Gearboxes, speed variators and DC permanent magnet motors with brushes

Varmec, in addition to being a historical manufacturer of gearboxes and speed variators, has recently opened a business branch that deals with the **designing** and **manufacturing** of **DC permanent magnet motors with brushes**.

Our team is specialized in manufacturing **special DC motors in small and/or large quantities**.

Varmec aims to completely satisfy its customer needs, even the most demanding ones thanks to the **internal winding department**, to the rapid calculation and motor/gearmotor designing skills, and to our **workshop equipped** with the most advanced machine tools.



### PRODUCTION

Our range is divided into sizes related to **tube diameters** and a further subdivision based on motor **length** which defines the type.

The series are:  
MB, MQ, MBV, MQV

The **power range goes from 20W to 1500W** with options of duty services based depending upon the application.

Motors are available with protection grades starting **from IP20 up to IP65** and **tension from 12V to 170V dc**, although other voltages are available, depending upon the requirement.

Customized units can be developed upon request.

Options include power to release or power to engage **brakes, encoders, tacho generators** as well as standard and special **gearboxes**.

All our motors are **protected against corrosion** and, if required, can be supplied **painted, tropicalized, anodized** and with **thermal protection**.

#### SERIES

### MB

**Two-pole motors** with external replaceable brushes. With a smooth finish, they are not ventilated and cooling occurs by natural convection through the motor surface.

#### SIZES

MB40 – MB56 – MB71 -M80

#### POWER SUPPLY

Cable, terminal box, connector, faston

#### SERIES

### MQ

Four-pole motors with **higher power**, used with voltages from 12 to 48V dc. These include all the specifications of the MB motor series.

#### POWER SUPPLY

Terminal box

#### SERIES

### MBV-MQV

**Fan-cooled motors** with finned exterior. They have the same features as of the MB and MQ motors including the degree of protection and have the advantage of improving performance during S1 duty.

#### SIZES

MB40 – MB56 – MB71 -M80

#### POWER SUPPLY

Terminal box

#### SERIES

### MRW

**Compact gearmotors** produced in-house, silent and highly efficient. They are **lifetime lubricated** and available with **4 standard ratios**. Motors are of the MB series.

#### POWER SUPPLY

Cable, faston

#### SERIES

### DN

#### DN TACHO GENERATORS

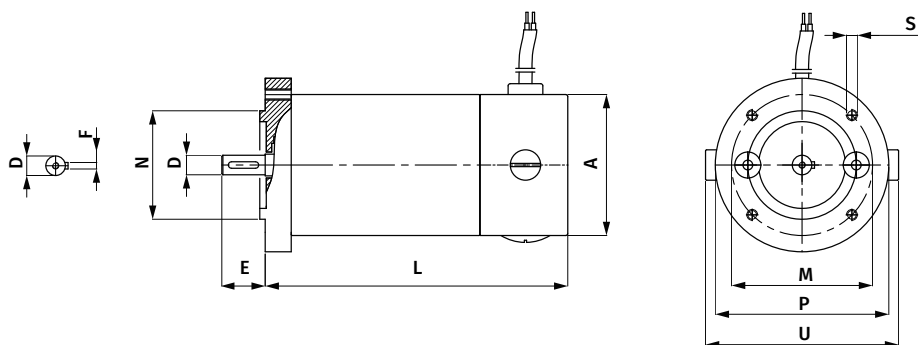
available in 10V and 20V at 1000 min<sup>-1</sup>

#### DRIVES

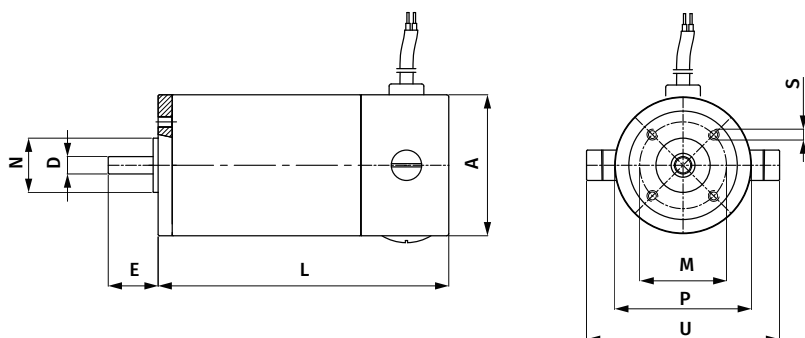
We can offer many controlled system drives

# SERIES MB40

IEC 56B14



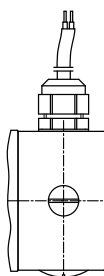
SPECIAL DESIGN



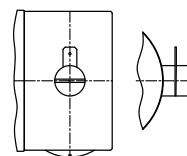
## OPTIONAL

POWER CONNECTION

Cable Gland  
IP55/65



Faston FSN  
6.35X0.8



## MB40

TECHNICAL DATA

| TYPE | V   | 1000 min <sup>-1</sup><br>W | A    | 1500 min <sup>-1</sup><br>W | A    | 2000 min <sup>-1</sup><br>W | A    | 2400 min <sup>-1</sup><br>W | A    | 3000 min <sup>-1</sup><br>W | A    | TORQUE<br>Nm | S2<br>min | WEIGHT<br>kg |
|------|-----|-----------------------------|------|-----------------------------|------|-----------------------------|------|-----------------------------|------|-----------------------------|------|--------------|-----------|--------------|
| 035  | 12  | 20                          | 2    | 30                          | 3    | 40                          | 4    | 50                          | 5    | 60                          | 6    | 0.20         | 30        | 1.10         |
|      | 24  | 20                          | 1    | 30                          | 1.5  | 40                          | 2    | 50                          | 2.5  | 60                          | 3    |              |           |              |
|      | 48  | 20                          | 0.5  | 30                          | 0.75 | 40                          | 1    | 50                          | 1.25 | 60                          | 1.5  |              |           |              |
|      | 90  | 20                          | 0.27 | 30                          | 0.4  | 40                          | 0.53 | 50                          | 0.67 | 60                          | 0.8  |              |           |              |
|      | 170 | -                           | -    | -                           | -    | 40                          | 0.28 | 50                          | 0.35 | 60                          | 0.42 |              |           |              |
| 065  | 12  | 40                          | 4.2  | 60                          | 6.3  | 80                          | 8.5  | -                           | -    | -                           | -    | 0.40         | 30        | 2.00         |
|      | 24  | 40                          | 2.1  | 60                          | 3.1  | 80                          | 4.2  | 100                         | 5.3  | 120                         | 6.4  |              |           |              |
|      | 48  | 40                          | 1    | 60                          | 1.5  | 80                          | 2.1  | 100                         | 2.6  | 120                         | 3.2  |              |           |              |
|      | 90  | 40                          | 0.56 | 60                          | 0.84 | 80                          | 1.13 | 100                         | 1.4  | 120                         | 1.7  |              |           |              |
|      | 170 | -                           | -    | 60                          | 0.44 | 80                          | 0.59 | 100                         | 0.74 | 120                         | 0.89 |              |           |              |

IEC56B14

SPECIAL DESIGN

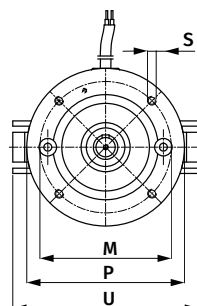
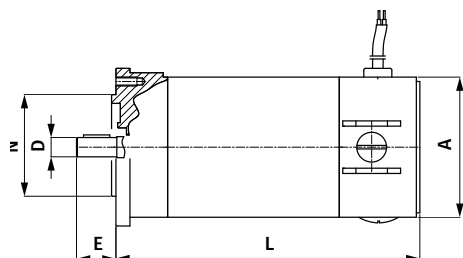
DIMENSIONS

| TYPE | L   | A  | U  | D | E  | F | DH  | P  | N  | M  | S  | L   | A  | U  | D | E  | F | DH | P  | N  | M  | S  |
|------|-----|----|----|---|----|---|-----|----|----|----|----|-----|----|----|---|----|---|----|----|----|----|----|
| 035  | 110 | 65 | 89 | 9 | 20 | 3 | M3* | 80 | 50 | 65 | M5 | 104 | 65 | 89 | 8 | 23 | 3 | -  | 65 | 25 | 40 | M5 |
| 065  | 140 | 65 | 89 | 9 | 20 | 3 | M3* | 80 | 50 | 65 | M5 | 134 | 65 | 89 | 8 | 23 | 3 | -  | 65 | 25 | 40 | M5 |

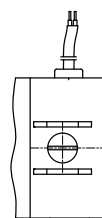
\* Optional

# SERIES MB56

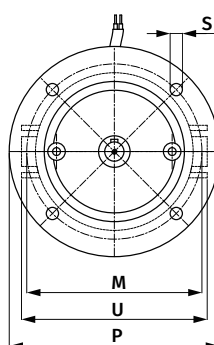
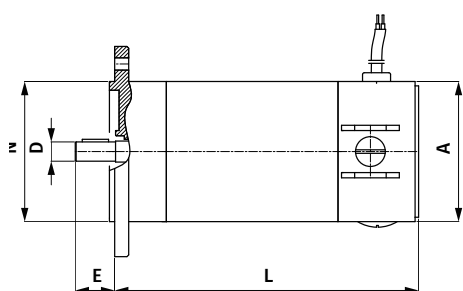
## IEC B14



Standard Power  
Connection with cable  
length 600mm

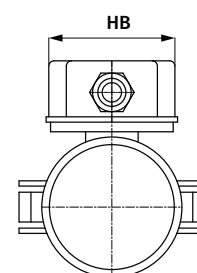
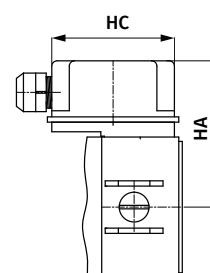


## IEC B5



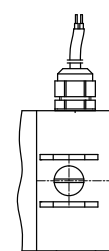
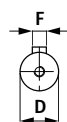
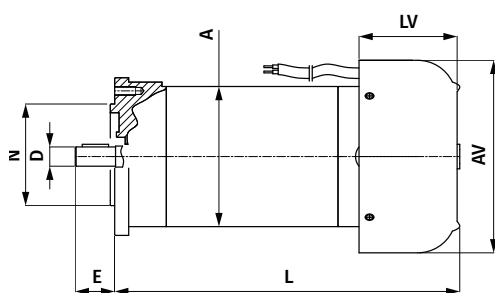
## OPTIONAL

### POWER CONNECTION

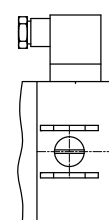


Terminal box with cable gland

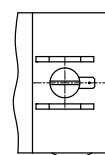
## FAN COOLED DESIGN



Cable gland  
IP55/65



Connector MPT  
max 10A



Faston  
6.35x0.8





## MB56

### TECHNICAL DATA

| TYPE | V   | 1500 min <sup>-1</sup><br>W A | 2000 min <sup>-1</sup><br>W A | 2400 min <sup>-1</sup><br>W A | 3000 min <sup>-1</sup><br>W A | TORQUE<br>Nm | S2<br>min | WEIGHT<br>kg |
|------|-----|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------|-----------|--------------|
| 040  | 12  | 50 5.5                        | 67 7.3                        | 80 8.8                        | 100 11                        | 0.33         | 25        | 2.00         |
|      | 24  | 50 2.7                        | 67 3.6                        | 80 4.4                        | 100 5.5                       |              |           |              |
|      | 48  | 50 1.4                        | 67 1.8                        | 80 2.2                        | 100 2.7                       |              |           |              |
|      | 90  | 50 0.73                       | 67 0.97                       | 80 1.16                       | 100 1.45                      |              |           |              |
|      | 170 | 50 0.39                       | 67 0.5                        | 80 0.62                       | 100 0.77                      |              |           |              |
| 050  | 12  | 70 7.5                        | 95 10                         | 110 11.7                      | 140 15                        | 0.46         | 25        | 2.30         |
|      | 24  | 70 3.5                        | 95 4.8                        | 110 6                         | 140 8                         |              |           |              |
|      | 48  | 70 1.8                        | 95 2.4                        | 110 3                         | 140 4                         |              |           |              |
|      | 90  | 70 1                          | 95 1.4                        | 110 1.6                       | 140 2                         |              |           |              |
|      | 170 | 70 0.55                       | 95 0.75                       | 110 0.9                       | 140 1.1                       |              |           |              |
| 062  | 12  | 100 10.7                      | 135 14.4                      | 160 17                        | 200 21.4                      | 0.65         | 25        | 2.70         |
|      | 24  | 100 5.4                       | 135 7.2                       | 160 8.5                       | 200 10.7                      |              |           |              |
|      | 48  | 100 2.7                       | 135 3.6                       | 160 4.3                       | 200 5.4                       |              |           |              |
|      | 90  | 100 1.4                       | 135 1.9                       | 160 2.3                       | 200 2.9                       |              |           |              |
|      | 170 | 100 0.75                      | 135 1                         | 160 1.2                       | 200 1.5                       |              |           |              |
| 075  | 12  | 125 13.5                      | 165 18                        | 200 21.5                      | 250 27                        | 0.82         | 25        | 3.10         |
|      | 24  | 125 6.7                       | 165 9                         | 200 10.8                      | 250 13.5                      |              |           |              |
|      | 48  | 125 3.4                       | 165 4.5                       | 200 5.4                       | 250 6.7                       |              |           |              |
|      | 90  | 125 1.8                       | 165 2.4                       | 200 2.9                       | 250 3.6                       |              |           |              |
|      | 170 | 125 0.95                      | 165 1.3                       | 200 1.5                       | 250 1.9                       |              |           |              |
| 095  | 12  | 150 16                        | 200 21.4                      | 240 25.6                      | 300 32                        | 0.98         | 25        | 3.70         |
|      | 24  | 150 8                         | 200 10.7                      | 240 12.8                      | 300 16                        |              |           |              |
|      | 48  | 150 4                         | 200 5.3                       | 240 6.4                       | 300 8                         |              |           |              |
|      | 90  | 150 2.1                       | 200 2.8                       | 240 3.4                       | 300 4.3                       |              |           |              |
|      | 170 | 150 1.1                       | 200 1.5                       | 240 1.8                       | 300 2.4                       |              |           |              |
| 140  | 12  | 200 21.5                      | 265 28.4                      | - -                           | - -                           | 1.30         | 25        | 4.80         |
|      | 24  | 200 10.7                      | 265 14.2                      | 320 17.2                      | 400 21.5                      |              |           |              |
|      | 48  | 200 5.4                       | 265 7.1                       | 320 8.5                       | 400 10.7                      |              |           |              |
|      | 90  | 200 2.9                       | 265 3.8                       | 320 4.6                       | 400 5.7                       |              |           |              |
|      | 170 | 200 1.5                       | 265 2                         | 320 2.4                       | 400 3                         |              |           |              |

### IEC DESIGNS

### FANCOOLED DES. TERMINAL BOX

### DIMENSIONS

| TYPE | L   | A  | U   | D  | E  | F | DH | P  | N  | M  | S  | P   | N  | M   | S | L   | AV  | LV | HA | HC | HB |
|------|-----|----|-----|----|----|---|----|----|----|----|----|-----|----|-----|---|-----|-----|----|----|----|----|
| 040  | 139 | 80 | 106 |    |    |   |    |    |    |    |    |     |    |     |   | 162 | 110 | 56 | 84 | 70 | 72 |
| 050  | 149 | 80 | 106 |    |    |   |    |    |    |    |    |     |    |     |   | 172 | 110 | 56 | 84 | 70 | 72 |
| 062  | 161 | 80 | 106 | 9  | 18 | 3 | M3 | 80 | 45 | 65 | M5 | 120 | 80 | 100 | 7 | 184 | 110 | 56 | 84 | 70 | 72 |
| 075  | 174 | 80 | 106 |    |    |   |    |    |    |    |    |     |    |     |   | 197 | 110 | 56 | 84 | 70 | 72 |
| 095  | 194 | 80 | 106 | 11 | 23 | 4 | M4 | 90 | 60 | 75 | M5 | 140 | 95 | 115 | 9 | 217 | 110 | 56 | 84 | 70 | 72 |
| 140  | 249 | 80 | 106 |    |    |   |    |    |    |    |    |     |    |     |   | 262 | 110 | 56 | 84 | 70 | 72 |

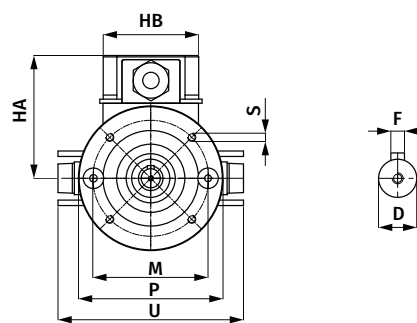
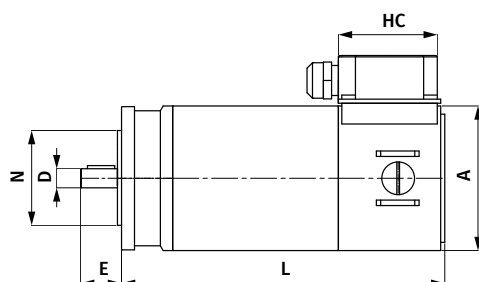
Type 040, 050, 062, 075 standard IEC 56B14/B5

Type 095, 140 standard IEC 63B14/B5

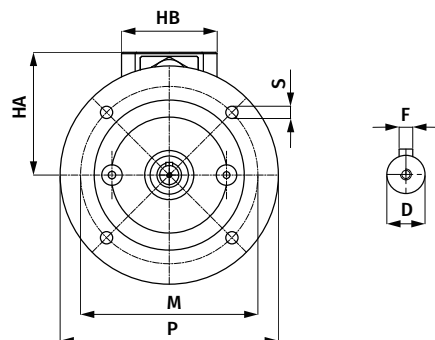
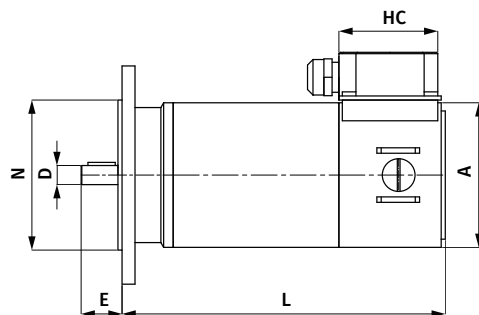
# SERIES MB71

# SERIES MB80

IEC B14



IEC B5



## MB71

### TECHNICAL DATA

| TYPE | V   | 1500 min <sup>-1</sup><br>W | A    | 2000 min <sup>-1</sup><br>W | A    | 2400 min <sup>-1</sup><br>W | A    | 3000 min <sup>-1</sup><br>W | A    | TORQUE<br>Nm | S2<br>min | WEIGHT<br>kg |
|------|-----|-----------------------------|------|-----------------------------|------|-----------------------------|------|-----------------------------|------|--------------|-----------|--------------|
| 050  | 12  | 175                         | 18.6 | 235                         | 25   | 280                         | 30   | 350                         | 37   | 1.14         | 25        | 4.50         |
|      | 24  | 175                         | 9.3  | 235                         | 12.5 | 280                         | 15   | 350                         | 18.7 |              |           |              |
|      | 48  | 175                         | 4.7  | 235                         | 6.3  | 280                         | 7.5  | 350                         | 9.4  |              |           |              |
|      | 90  | 175                         | 2.5  | 235                         | 3.3  | 280                         | 4    | 350                         | 5    |              |           |              |
|      | 170 | 175                         | 1.3  | 235                         | 1.8  | 280                         | 2.1  | 350                         | 2.8  |              |           |              |
| 103  | 24  | 300                         | 16   | 400                         | 22   | -                           | -    | -                           | -    | 1.96         | 25        | 7.00         |
|      | 48  | 300                         | 8    | 400                         | 11   | 480                         | 12.8 | 600                         | 16   |              |           |              |
|      | 90  | 300                         | 4.3  | 400                         | 5.8  | 480                         | 6.9  | 600                         | 8.7  |              |           |              |
|      | 170 | 300                         | 2.3  | 400                         | 3.1  | 480                         | 3.7  | 600                         | 4.6  |              |           |              |

### IEC DESIGNS

### DIMENSIONS

| TYPE | L   | A   | U   | HA | HC | HB |  | D  | E  | F | DH | P   | N         | M  | S  | P   | N        | M   | S |
|------|-----|-----|-----|----|----|----|--|----|----|---|----|-----|-----------|----|----|-----|----------|-----|---|
| 050  | 184 | 106 | 136 | 90 | 72 | 71 |  | 11 | 23 | 4 | M4 | 99  | IEC 63B14 |    |    | 140 | IEC 56B5 |     |   |
| 103  | 237 |     |     |    |    |    |  |    |    |   |    |     | IEC 71B14 |    |    |     | IEC 56B5 |     |   |
|      |     |     |     |    |    |    |  | 14 | 30 | 5 | M5 | 110 | 70        | 85 | M6 | 140 | 110      | 130 | 9 |

Standard IEC 71B14/B5

## MB80

### TECHNICAL DATA

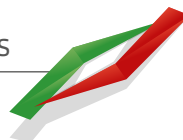
| TYPE | V   | 1500 min <sup>-1</sup><br>W | A   | 2000 min <sup>-1</sup><br>W | A    | 2400 min <sup>-1</sup><br>W | A    | 3000 min <sup>-1</sup><br>W | A    | TORQUE<br>Nm | S2<br>min | WEIGHT<br>kg |
|------|-----|-----------------------------|-----|-----------------------------|------|-----------------------------|------|-----------------------------|------|--------------|-----------|--------------|
| 103  | 90  | 450                         | 6.4 | 600                         | 8.6  | 720                         | 10.2 | 900                         | 12.8 | 2.94         | 25        | 10.00        |
|      | 170 | 450                         | 3.4 | 600                         | 4.5  | 720                         | 5.5  | 900                         | 6.8  |              |           |              |
| 139  | 90  | 600                         | 8.5 | 800                         | 11.4 | 960                         | 13.6 | 1200                        | 17   | 3.92         | 25        | 12.00        |
|      | 170 | 600                         | 4.6 | 800                         | 6    | 960                         | 7.2  | 1200                        | 9    |              |           |              |
| 175  | 90  | 750                         | 11  | 1000                        | 14.5 | 1200                        | 17.3 | 1500                        | 21.6 | 4.9          | 25        | 14.00        |
|      | 170 | 750                         | 5.7 | 1000                        | 7.7  | 1200                        | 9.2  | 1500                        | 11.5 |              |           |              |

### IEC DESIGNS

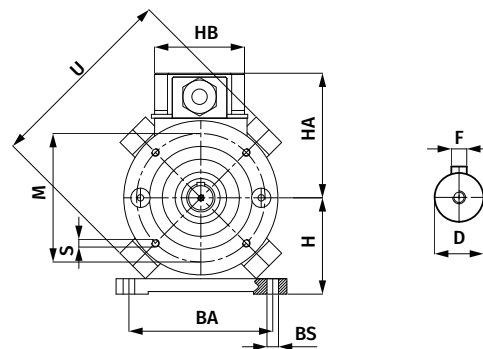
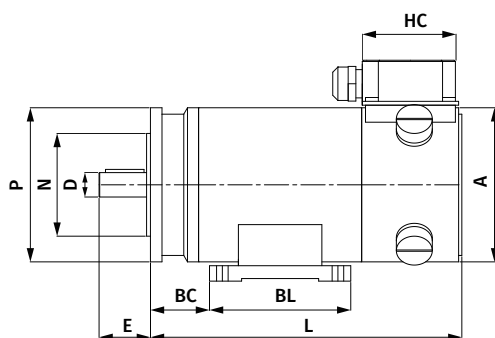
### DIMENSIONS

| TYPE | L   | A   | U   | HA | HC | HB |  | D  | E  | F | DH | P   | N         | M   | S   | P  | N   | M        | S   |          |   |  |  |  |
|------|-----|-----|-----|----|----|----|--|----|----|---|----|-----|-----------|-----|-----|----|-----|----------|-----|----------|---|--|--|--|
| 067  | 207 | 120 | 150 | 92 | 70 | 70 |  | 19 | 40 | 6 | M6 | 120 | IEC 80B14 |     |     | M6 | 200 | IEC 80B5 |     |          |   |  |  |  |
| 103  | 243 |     |     |    |    |    |  |    |    |   |    |     | 80        | 100 | 130 |    |     | 165      | 11  |          |   |  |  |  |
| 139  | 279 |     |     |    |    |    |  |    |    |   |    |     | IEC 71B14 |     |     |    |     |          |     | IEC 71B5 |   |  |  |  |
| 175  | 315 |     |     |    |    |    |  |    |    |   |    |     | 70        | 85  | M6  |    |     | 160      | 110 | 130      | 9 |  |  |  |

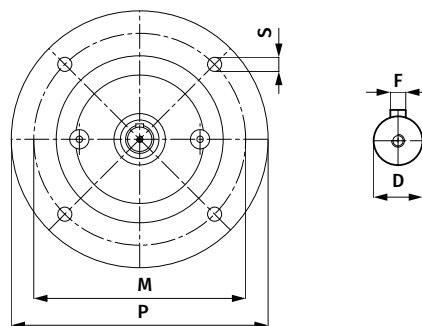
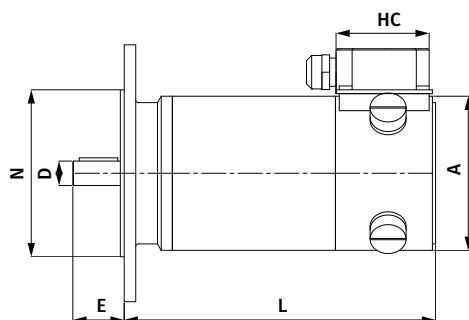
Standard IEC 80B14/B5



IEC B14



IEC B5



## MQ80

### TECHNICAL DATA

| TYPE | V  | 1500 min <sup>-1</sup> |      | 2000 min <sup>-1</sup> |      | 2400 min <sup>-1</sup> |      | 3000 min <sup>-1</sup> |     | TORQUE<br>Nm | S2<br>min | WEIGHT<br>kg |
|------|----|------------------------|------|------------------------|------|------------------------|------|------------------------|-----|--------------|-----------|--------------|
|      |    | W                      | A    | W                      | A    | W                      | A    | W                      | A   |              |           |              |
| 067  | 12 | 300                    | 32   | 400                    | 44   | 480                    | 51.2 | 600                    | 64  | 1.96         | 25        | 8.00         |
|      | 24 | 300                    | 16   | 400                    | 22   | 480                    | 25.6 | 600                    | 32  |              |           |              |
|      | 48 | 300                    | 8    | 400                    | 11   | 480                    | 12.8 | 600                    | 16  |              |           |              |
| 103  | 12 | 450                    | 48   | 600                    | 64   | 720                    | 76.8 | 900                    | 96  | 2.94         | 25        | 10.00        |
|      | 24 | 450                    | 24   | 600                    | 32   | 720                    | 38.4 | 900                    | 48  |              |           |              |
|      | 48 | 450                    | 12   | 600                    | 16   | 720                    | 19.2 | 900                    | 24  |              |           |              |
| 139  | 12 | 600                    | 66   | 800                    | 86   | 960                    | 106  | 1200                   | 132 | 3.92         | 25        | 12.00        |
|      | 24 | 600                    | 33   | 800                    | 43   | 960                    | 53   | 1200                   | 66  |              |           |              |
|      | 48 | 600                    | 16.5 | 800                    | 21.5 | 960                    | 26.5 | 1200                   | 33  |              |           |              |
| 175  | 12 | 750                    | 82   | 1000                   | 110  | -                      | -    | -                      | -   | 4.90         | 25        | 14.00        |
|      | 24 | 750                    | 41   | 1000                   | 55   | 1200                   | 66   | 1500                   | 82  |              |           |              |
|      | 48 | 750                    | 20.5 | 1000                   | 27.5 | 1200                   | 33   | 1500                   | 41  |              |           |              |

### IEC DESIGNS

### FORM B3

### DIMENSIONS

| TYPE | L   | A   | U   | HA | HC | HB | D E F DH P N M S P N M S |    |   |    |     |    |     |    |          |     |     |    |    |  | H  | BC | BL | BA  | BS |
|------|-----|-----|-----|----|----|----|--------------------------|----|---|----|-----|----|-----|----|----------|-----|-----|----|----|--|----|----|----|-----|----|
| 067  | 207 | 120 | 150 | 97 | 70 | 70 | IEC 71B14                |    |   |    |     |    |     |    | IEC 71B5 |     |     |    |    |  | 77 | 38 | 90 | 112 | 9  |
| 103  | 243 |     |     |    |    |    | 14                       | 30 | 5 | M5 | 120 | 80 | 100 | M6 | 200      | 130 | 165 | 11 | 56 |  |    |    |    |     |    |
| 139  | 279 |     |     |    |    |    | IEC 80B14                |    |   |    |     |    |     |    | IEC 80B5 |     |     |    |    |  |    | 74 |    |     |    |
| 175  | 315 |     |     |    |    |    | 19                       | 40 | 6 | M6 | 110 | 70 | 85  | M6 | 160      | 110 | 130 | 9  | 92 |  |    |    |    |     |    |

Type 067 standard IEC 71B14/B5

Type 103, 139, 175 standard IEC 80B14/B5

## MBV56

### TECHNICAL DATA

| TYPE | V   | 1500 min <sup>-1</sup> |      | 2000 min <sup>-1</sup> |      | 2400 min <sup>-1</sup> |      | 3000 min <sup>-1</sup> |      | TORQUE<br>Nm | DUTY TYPE | WEIGHT<br>kg |
|------|-----|------------------------|------|------------------------|------|------------------------|------|------------------------|------|--------------|-----------|--------------|
|      |     | W                      | A    | W                      | A    | W                      | A    | W                      | A    |              |           |              |
| 050  | 12  | 70                     | 7.5  | 95                     | 10   | 110                    | 11.7 | 140                    | 15   | 0.46         | S1        | 2.70         |
|      | 24  | 70                     | 3.5  | 95                     | 4.8  | 110                    | 6    | 140                    | 8    |              |           |              |
|      | 48  | 70                     | 1.8  | 95                     | 2.4  | 110                    | 3    | 140                    | 4    |              |           |              |
|      | 90  | 70                     | 1    | 95                     | 1.4  | 110                    | 1.6  | 140                    | 2    |              |           |              |
|      | 170 | 70                     | 0.55 | 95                     | 0.75 | 110                    | 0.9  | 140                    | 1.1  |              |           |              |
| 062  | 12  | 100                    | 10.7 | 135                    | 14.4 | 160                    | 17   | 200                    | 21.4 | 0.65         | S1        | 3.30         |
|      | 24  | 100                    | 5.4  | 135                    | 7.2  | 160                    | 8.5  | 200                    | 10.7 |              |           |              |
|      | 48  | 100                    | 2.7  | 135                    | 3.6  | 160                    | 4.3  | 200                    | 5.4  |              |           |              |
|      | 90  | 100                    | 1.4  | 135                    | 1.9  | 160                    | 2.3  | 200                    | 2.9  |              |           |              |
|      | 170 | 100                    | 0.75 | 135                    | 1    | 160                    | 1.2  | 200                    | 1.5  |              |           |              |
| 095  | 12  | 150                    | 16   | 200                    | 21.4 | 240                    | 25.6 | -                      | -    | 0.98         | S1        | 4.70         |
|      | 24  | 150                    | 8    | 200                    | 10.7 | 240                    | 12.8 | 300                    | 16   |              |           |              |
|      | 48  | 150                    | 4    | 200                    | 5.3  | 240                    | 6.4  | 300                    | 8    |              |           |              |
|      | 90  | 150                    | 2.1  | 200                    | 2.8  | 240                    | 3.4  | 300                    | 4.3  |              |           |              |
|      | 170 | 150                    | 1.1  | 200                    | 1.5  | 240                    | 1.8  | 300                    | 2.4  |              |           |              |
| 140  | 12  | 200                    | 21.5 | 265                    | 28.4 | -                      | -    | -                      | -    | 1.3          | S1        | 6.00         |
|      | 24  | 200                    | 10.7 | 265                    | 14.2 | 320                    | 17.2 | 400                    | 21.5 |              |           |              |
|      | 48  | 200                    | 5.4  | 265                    | 7.1  | 320                    | 8.5  | 400                    | 10.7 |              |           |              |
|      | 90  | 200                    | 2.9  | 265                    | 3.8  | 320                    | 4.6  | 400                    | 5.7  |              |           |              |
|      | 170 | 200                    | 1.5  | 265                    | 2    | 320                    | 2.1  | 400                    | 3    |              |           |              |

## MBV71

|     |     |     |      |     |      |     |      |     |      |      |    |      |
|-----|-----|-----|------|-----|------|-----|------|-----|------|------|----|------|
| 050 | 12  | 175 | 18.6 | 235 | 25   | 280 | 30   | 350 | 37   | 1.14 | S1 | 5.5  |
|     | 24  | 175 | 9.3  | 235 | 12.5 | 280 | 15   | 350 | 18.7 |      |    |      |
|     | 48  | 175 | 4.7  | 235 | 6.3  | 280 | 7.5  | 350 | 9.4  |      |    |      |
|     | 90  | 175 | 2.5  | 235 | 3.3  | 280 | 4    | 350 | 5    |      |    |      |
|     | 170 | 175 | 1.3  | 235 | 1.8  | 280 | 2.1  | 350 | 2.8  |      |    |      |
| 103 | 24  | 300 | 16   | 400 | 22   | -   | -    | -   | -    | 1.96 | S1 | 9.00 |
|     | 48  | 300 | 8    | 400 | 11   | 480 | 12.8 | 600 | 16   |      |    |      |
|     | 90  | 300 | 4.3  | 400 | 5.8  | 480 | 6.9  | 600 | 8.7  |      |    |      |
|     | 170 | 300 | 2.3  | 400 | 3.1  | 480 | 3.7  | 600 | 4.6  |      |    |      |

## MBV80

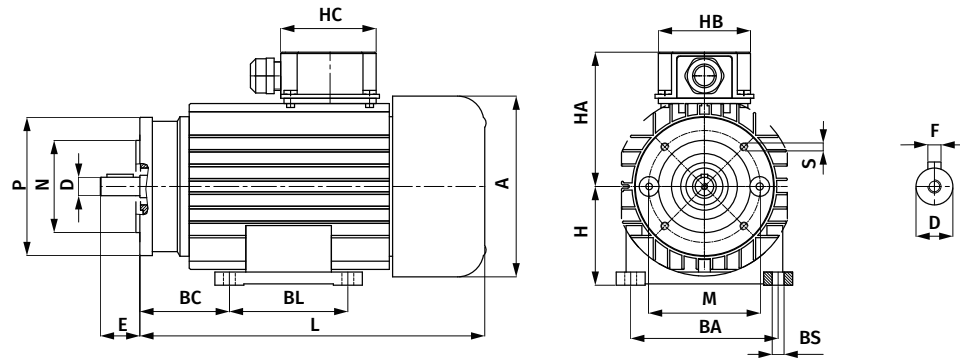
|     |     |     |     |     |      |     |      |      |      |      |    |       |
|-----|-----|-----|-----|-----|------|-----|------|------|------|------|----|-------|
| 103 | 90  | 450 | 6.4 | 600 | 8.6  | 720 | 10.2 | 900  | 12.8 | 2.94 | S1 | 12.00 |
|     | 170 | 450 | 3.4 | 600 | 4.5  | 720 | 5.5  | 900  | 6.8  |      |    |       |
| 139 | 90  | 600 | 8.5 | 800 | 11.4 | 960 | 13.6 | 1200 | 17   | 3.92 | S1 | 15.00 |
|     | 170 | 600 | 4.6 | 800 | 6    | 960 | 7.2  | 1200 | 9    |      |    |       |

## MQV80

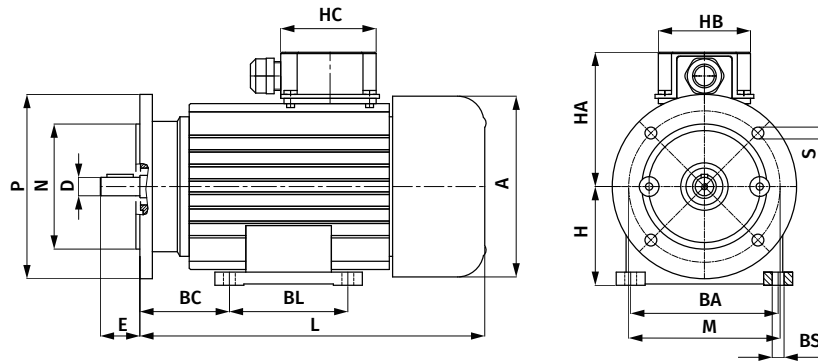
|     |    |     |      |      |      |      |      |      |    |      |    |       |
|-----|----|-----|------|------|------|------|------|------|----|------|----|-------|
| 067 | 12 | 300 | 32   | 400  | 44   | 480  | 51.2 | 600  | 64 | 1.96 | S1 | 9.00  |
|     | 24 | 300 | 16   | 400  | 22   | 480  | 25.6 | 600  | 32 |      |    |       |
|     | 48 | 300 | 8    | 400  | 11   | 480  | 12.8 | 600  | 16 |      |    |       |
| 103 | 12 | 450 | 48   | 600  | 64   | 720  | 76.8 | 900  | 96 | 2.94 | S1 | 12.00 |
|     | 24 | 450 | 24   | 600  | 32   | 720  | 38.4 | 900  | 48 |      |    |       |
|     | 48 | 450 | 12   | 600  | 16   | 720  | 19.2 | 900  | 24 |      |    |       |
| 139 | 12 | 600 | 66   | 800  | 86   | -    | -    | -    | -  | 3.92 | S1 | 15.00 |
|     | 24 | 600 | 33   | 800  | 43   | 960  | 53   | 1200 | 66 |      |    |       |
|     | 48 | 600 | 16.5 | 800  | 21.5 | 960  | 26.5 | 1200 | 33 |      |    |       |
| 175 | 12 | 750 | 82   | -    | -    | -    | -    | -    | -  | 4.9  | S1 | 18.00 |
|     | 24 | 750 | 41   | 1000 | 55   | 1200 | 66   | 1500 | 82 |      |    |       |
|     | 48 | 750 | 20.5 | 1000 | 27.5 | 1200 | 33   | 1500 | 41 |      |    |       |



IEC B14



IEC B5



## MBV56

### IEC DESIGNS

### FORM B3\*

#### DIMENSIONS

| TYPE | L   | A   | HA | HC | HB | D  | E  | F | DH | P   | N  | M   | S | P  | N  | M  | S  | H  | BC | BL | BA  | BS |
|------|-----|-----|----|----|----|----|----|---|----|-----|----|-----|---|----|----|----|----|----|----|----|-----|----|
| 050  | 171 |     |    |    |    |    |    |   |    |     |    |     |   |    |    |    |    |    |    |    |     |    |
| 062  | 183 |     |    |    |    |    |    |   |    |     |    |     |   |    |    |    |    |    |    |    |     |    |
| 095  | 216 | 110 | 90 | 72 | 70 | 9  | 18 | 3 | M3 | 120 | 80 | 100 | 7 | 80 | 50 | 65 | M5 | 63 | 30 | 80 | 100 | 9  |
| 140  | 271 |     |    |    |    | 11 | 23 | 4 | M4 | 140 | 95 | 115 | 9 | 90 | 60 | 75 | M5 |    | 36 | 80 | 100 | 9  |

Type 050, 062 standard IEC 56B14/B5 - Type 095, 140 standard IEC 63B14/B5

## MBV71

|     |     |     |     |    |    |    |    |   |    |           |     |   |     |          |    |    |  |    |    |    |     |   |
|-----|-----|-----|-----|----|----|----|----|---|----|-----------|-----|---|-----|----------|----|----|--|----|----|----|-----|---|
| 050 | 209 | 138 | 102 | 72 | 70 | 11 | 23 | 4 | M4 | IEC 63B14 |     |   |     | IEC 63B5 |    |    |  | 75 | 46 | 90 | 112 | 9 |
|     | 140 |     |     |    |    |    |    |   |    | 95        | 115 | 9 | 90  | 60       | 75 | M5 |  |    |    |    |     |   |
| 103 | 262 |     |     |    |    | 14 | 30 | 5 | M5 | IEC 71B14 |     |   |     | IEC 71B5 |    |    |  | 68 |    |    |     |   |
|     | 160 |     |     |    |    |    |    |   |    | 110       | 130 | 9 | 105 | 70       | 85 | M6 |  |    |    |    |     |   |

Standard IEC 71B14/B5

## MBV80

|     |     |     |     |    |    |    |    |    |     |           |     |     |     |          |    |     |    |    |     |     |     |    |
|-----|-----|-----|-----|----|----|----|----|----|-----|-----------|-----|-----|-----|----------|----|-----|----|----|-----|-----|-----|----|
| 103 | 284 | 155 | 112 | 72 | 70 |    |    |    |     | IEC 71B14 |     |     |     | IEC 71B5 |    |     |    | 90 | 88  | 100 | 125 | 11 |
|     | 14  |     |     |    |    | 30 | 5  | M5 | 160 | 110       | 130 | 9   | 105 | 70       | 85 | M6  |    |    |     |     |     |    |
| 139 | 320 |     |     |    |    |    |    |    |     | IEC 80B14 |     |     |     | IEC 80B5 |    |     |    |    |     |     |     |    |
|     |     |     |     |    |    | 19 | 40 | 6  | M6  | 200       | 130 | 165 | 11  | 120      | 80 | 100 | M6 | 90 | 106 | 100 | 125 | 11 |

Standard IEC 80B14/B5

## MQV80

|     |     |     |     |    |    |    |    |   |    |           |     |     |    |          |     |     |    |     |    |     |     |    |
|-----|-----|-----|-----|----|----|----|----|---|----|-----------|-----|-----|----|----------|-----|-----|----|-----|----|-----|-----|----|
| 067 | 248 | 155 | 112 | 72 | 70 | 14 | 30 | 5 | M5 | IEC 71B14 |     |     |    | IEC 71B5 |     |     |    | 90  | 25 | 100 | 125 | 11 |
| 103 | 284 |     |     |    |    |    |    |   |    | 160       | 110 | 130 | 9  | 105      | 70  | 85  | M6 | 90  | 50 | 100 | 125 | 11 |
| 139 | 320 |     |     |    |    |    |    |   |    | IEC 80B14 |     |     |    | IEC 80B5 |     |     |    | 90  | 86 | 100 | 125 | 11 |
| 175 | 356 |     |     |    |    |    |    |   |    | 19        | 40  | 6   | M6 | 200      | 130 | 165 | 11 | 120 | 80 | 100 | M6  | 90 |

Type 067 standard IEC 71B14/B55 - Type 103, 139, 175 standard IEC 80B14/B5

\* B3 form standard supplied with B14

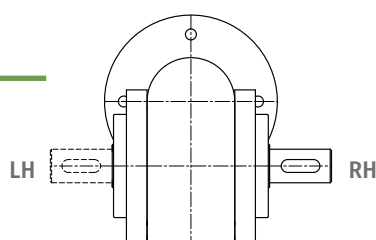


## MRW40

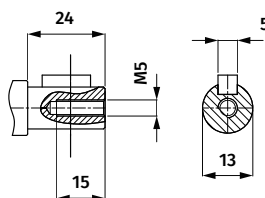
### TECHNICAL DATA

| TYPE | V   | i    | T <sub>2</sub><br>Nm | 1000 min <sup>-1</sup>              |    |      | 1500 min <sup>-1</sup>              |    |      | 2000 min <sup>-1</sup>              |    |      | 2500 min <sup>-1</sup>              |     |      | 3000 min <sup>-1</sup>              |     |      | WEIGHT<br>kg |
|------|-----|------|----------------------|-------------------------------------|----|------|-------------------------------------|----|------|-------------------------------------|----|------|-------------------------------------|-----|------|-------------------------------------|-----|------|--------------|
|      |     |      |                      | n <sub>2</sub><br>min <sup>-1</sup> | W  | A    | n <sub>2</sub><br>min <sup>-1</sup> | W  | A    | n <sub>2</sub><br>min <sup>-1</sup> | W  | A    | n <sub>2</sub><br>min <sup>-1</sup> | W   | A    | n <sub>2</sub><br>min <sup>-1</sup> | W   | A    |              |
| 035  | 12  | 11.5 | 1.85                 | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      | 1.70         |
|      |     | 23   | 3.16                 | 44                                  | 20 | 2.00 | 66                                  | 30 | 3.00 | 88                                  | 40 | 4.00 | 110                                 | 50  | 5.00 | 132                                 | 60  | 6.00 |              |
|      |     | 28   | 3.68                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 4.24                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 24  | 11.5 | 1.85                 | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 3.16                 | 44                                  | 20 | 1.00 | 66                                  | 30 | 1.50 | 88                                  | 40 | 2.00 | 110                                 | 50  | 2.50 | 132                                 | 60  | 3.00 |              |
|      |     | 28   | 3.68                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 4.24                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 48  | 11.5 | 1.85                 | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 3.16                 | 44                                  | 20 | 0.5  | 66                                  | 30 | 0.75 | 88                                  | 40 | 1.00 | 110                                 | 50  | 1.25 | 132                                 | 60  | 1.50 |              |
|      |     | 28   | 3.66                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 4.24                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 90  | 11.5 | 1.85                 | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 3.16                 | 44                                  | 20 | 0.27 | 66                                  | 30 | 0.40 | 88                                  | 40 | 0.53 | 110                                 | 50  | 0.67 | 132                                 | 60  | 0.80 |              |
|      |     | 28   | 3.68                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 4.24                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 170 | 11.5 | 1.85                 |                                     | -  |      |                                     |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 3.16                 |                                     |    |      |                                     |    |      | 88                                  | 40 | 0.28 | 110                                 | 50  | 0.35 | 132                                 | 60  | 0.42 |              |
|      |     | 28   | 3.68                 |                                     |    |      |                                     |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 4.24                 |                                     |    |      |                                     |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
| 065  | 12  | 11.5 | 3.7                  | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      |                                     |     |      |                                     |     |      | 2.60         |
|      |     | 23   | 6.32                 | 44                                  | 40 | 4.20 | 66                                  | 60 | 6.30 | 88                                  | 80 | 8.50 |                                     |     |      |                                     |     |      |              |
|      |     | 28   | 7.36                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      |                                     |     |      |                                     |     |      |              |
|      |     | 35   | 8.48                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      |                                     |     |      |                                     |     |      |              |
|      | 24  | 11.5 | 3.7                  | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 6.32                 | 44                                  | 40 | 2.10 | 66                                  | 60 | 3.10 | 88                                  | 80 | 4.20 | 110                                 | 100 | 5.30 | 132                                 | 120 | 6.40 |              |
|      |     | 28   | 7.36                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 8.48                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 48  | 11.5 | 3.7                  | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 6.32                 | 44                                  | 40 | 1.00 | 66                                  | 60 | 1.50 | 88                                  | 80 | 2.10 | 110                                 | 100 | 2.60 | 132                                 | 120 | 3.20 |              |
|      |     | 28   | 7.36                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 8.48                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 90  | 11.5 | 3.7                  | 87                                  |    |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 6.32                 | 44                                  | 40 | 0.56 | 66                                  | 60 | 0.84 | 88                                  | 80 | 1.13 | 110                                 | 100 | 1.40 | 132                                 | 120 | 1.70 |              |
|      |     | 28   | 7.36                 | 36                                  |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 8.48                 | 29                                  |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |
|      | 170 | 11.5 | 3.7                  |                                     | -  |      | 131                                 |    |      | 174                                 |    |      | 218                                 |     |      | 261                                 |     |      |              |
|      |     | 23   | 6.32                 |                                     |    |      | 66                                  | 60 | 0.44 | 88                                  | 80 | 0.59 | 110                                 | 100 | 0.74 | 132                                 | 120 | 0.89 |              |
|      |     | 28   | 7.36                 |                                     |    |      | 54                                  |    |      | 72                                  |    |      | 90                                  |     |      | 108                                 |     |      |              |
|      |     | 35   | 8.48                 |                                     |    |      | 44                                  |    |      | 58                                  |    |      | 73                                  |     |      | 87                                  |     |      |              |

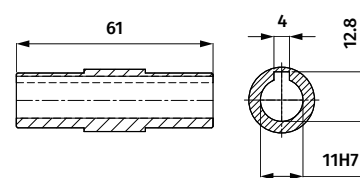
### Output Shaft



RIGHT STANDARD OUTPUT



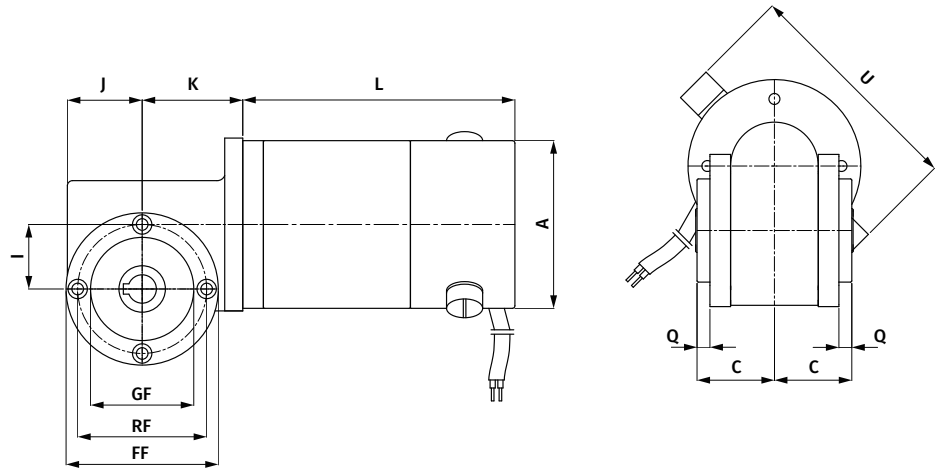
SOLID SHAFT



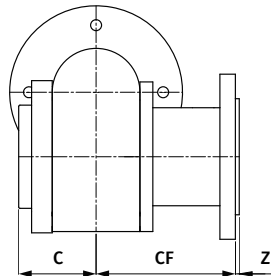
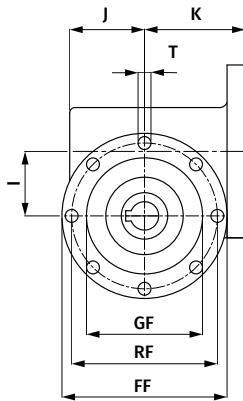
HOLLOW SHAFT



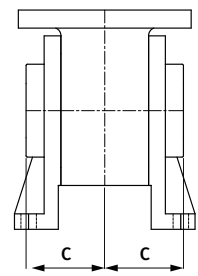
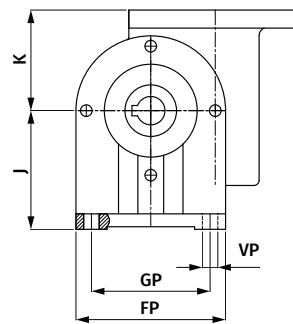
STANDARD FORM



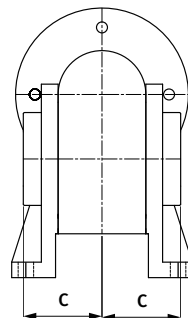
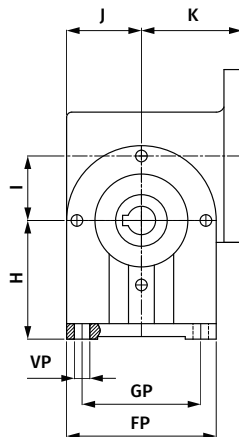
FORM F



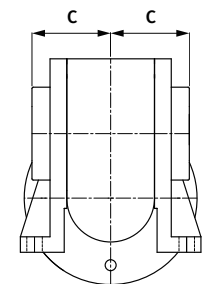
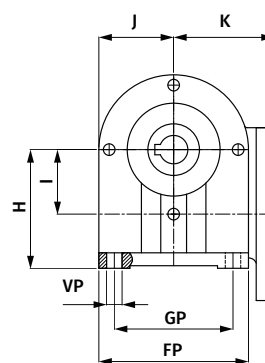
FORM D



FORM P



FORM I



## MOTOR MB40

## GEARBOX

| DIMENSIONS | TYPE       | L   | A  | U  | FORMS    | H  | I  | J  | K  | C    | CF   | Z   | Q | GP | FP | VP | GF | RF   | FF | T |
|------------|------------|-----|----|----|----------|----|----|----|----|------|------|-----|---|----|----|----|----|------|----|---|
|            | <b>035</b> | 106 | 65 | 89 | STANDARD | -  | 25 | 29 | 39 | 30   | -    | -   | 5 | -  | -  | -  | 40 | 50   | 59 | - |
|            |            |     |    |    | P        | 46 | 25 | 29 | 39 | 30.5 | -    | -   | - | 46 | 58 | 6  | -  | -    | -  | - |
|            |            |     |    |    | D        | 46 | 25 | 29 | 39 | 30.5 | -    | -   | - | 46 | 58 | 6  | -  | -    | -  | - |
|            | <b>065</b> | 136 | 65 | 89 | I        | 46 | 25 | 29 | 39 | 30.5 | -    | -   | - | 46 | 58 | 6  | -  | -    | -  | - |
|            |            |     |    |    | F        | -  | 25 | 29 | 39 | 30   | 55.5 | 1.5 | - | -  | -  | -  | 45 | 56.5 | 64 | 5 |



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