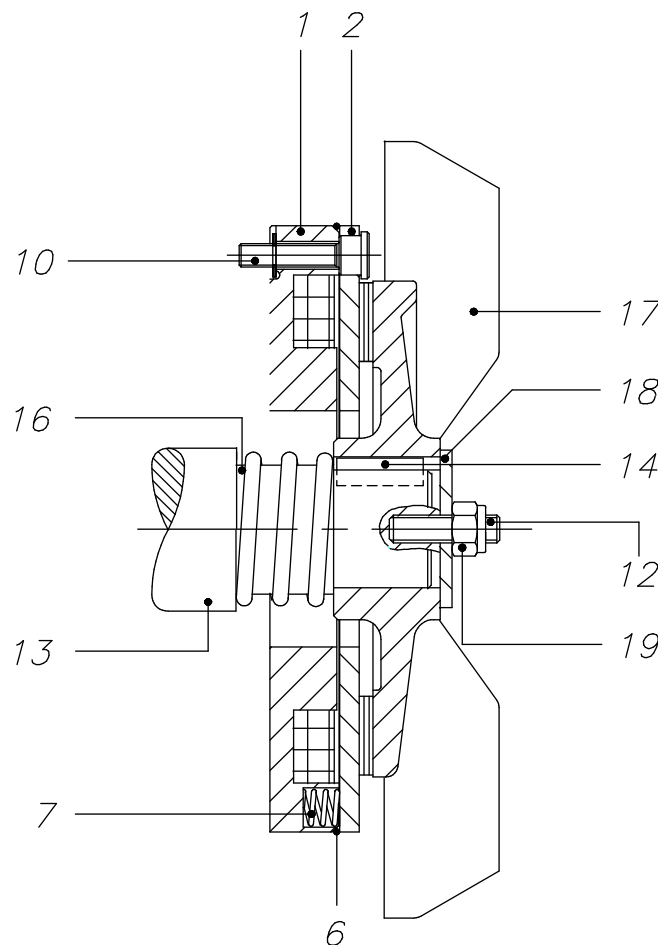
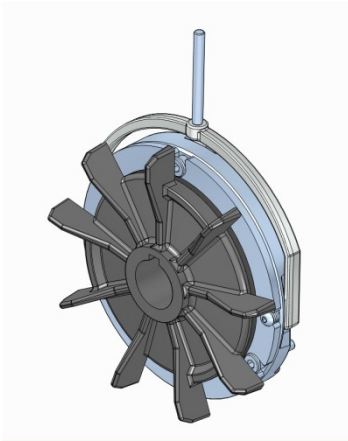




## O.E.G. SPRING PRESSURE SAFETY BRAKES IN DIRECT CURRENT MLCC TYPE

# TECHNICAL DATASHEET



- |    |                                    |
|----|------------------------------------|
| 1  | Magnet casing                      |
| 2  | Mobile anchor                      |
| 6  | "O" ring                           |
| 7  | Thrust spring                      |
| 10 | Fastening screw                    |
| 12 | Stud bolt                          |
| 13 | Driving shaft                      |
| 14 | Key                                |
| 16 | Contrast spring                    |
| 17 | Fan                                |
| 18 | Washer                             |
| 19 | Air-gap adjusting self-locking nut |

The O.E.G. MLCC brake series are safety brakes, since they act in the absence of power supply through the pressure exerted by springs. When the coil housed in the magnet body (1) is energized, the armature (2) is attracted, against the force of the springs (7), thus leaving it free to rotate the shaft (13), on which is mounted the fan (3) sliding axially on the motor shaft (13). Disconnecting the power supply, the springs (7) push the armature (2) pushing it against the fan (3). In this way the shaft (13) is braked. The softer construction creates a redundancy that makes the equipment safe.



## FEATURES

Braking torque from 3 Nm to 50 Nm.  
Normal input voltage 103 V DC and 178 V DC from half-wave current rectifier (see "Electric Accessories").  
All voltages from 12 DC to 300 V DC available on request.  
S1 Service, Class F insulation, watertight coil.  
Asbestos-free noiseless friction packing.  
Cast-iron braking fan. Steel flywheel fan molded up to size 100.  
Possible assembly of hand release device.  
Possible replacement of the single coil.  
Minimum axial dimensions, which allow mounting under headset without engine modifications.  
Vertical assembly with no added device.  
Maximum silence even on single-phased motors.  
Air-gap adjustments by means of a single nut.

## TYPICAL APPLICATION

Woodworking machine.  
Bottling machine.  
Packaging machine.



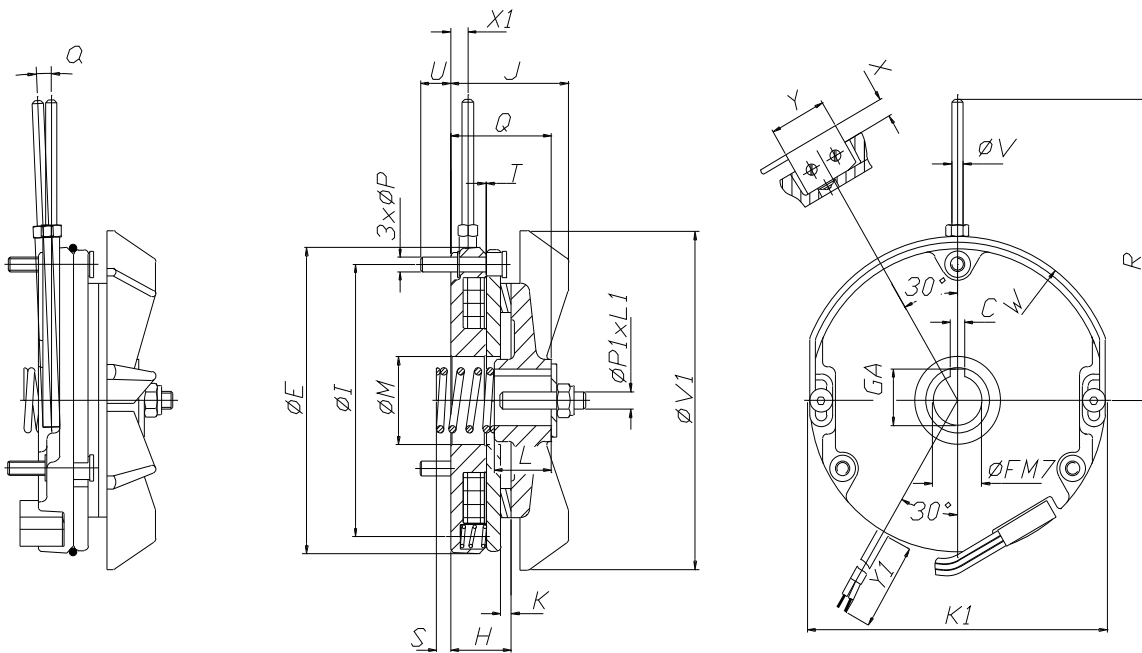
## DIMENSIONS

With reference to the drawing, see brake dimensions in the table.

Where present, the letter superscript indicates possible constructive alternatives that have to be considered coupled by apex (i.e. choosing C1 means you have GA1, X1, Y1, Z1).

|                          | 63   | 71   | 80   | 90   | 100   | 112   | 132   | 132L/160 |
|--------------------------|------|------|------|------|-------|-------|-------|----------|
| <b>M<sub>F</sub>[Nm]</b> | 3    | 4    | 7    | 7/11 | 13/18 | 13/18 | 18/25 | 30/50    |
| <b>C</b>                 | 5    | 5    | 6    | 8    | 8     | 10    | 10    | 10       |
| <b>E</b>                 | 92   | 103  | 126  | 126  | 154   | 154   | 154   | 200      |
| <b>F</b>                 | 15   | 17   | 20   | 25   | 30    | 30    | 35    | 35       |
| <b>GA</b>                | 17,3 | 19,3 | 22,8 | 28,3 | 33,3  | 33,3  | 38,3  | 38,3     |
| <b>H</b>                 | 21   | 21   | 23   | 23   | 26    | 29    | 29    | 38       |
| <b>I</b>                 | 43   | 93   | 116  | 116  | 139   | 139   | 178   | 178      |
| <b>J</b>                 | 39   | 41   | 42   | 43   | 50    | 60    | 65    | 70       |
| <b>K</b>                 | 3,7  | 3,7  | 3,7  | 3,7  | 3,7   | 7     | 7     | 7        |
| <b>L</b>                 | 20   | 20   | 22   | 23   | 28    | 28    | 37    | 37       |
| <b>L<sup>1</sup></b>     | 30   | 30   | 40   | 40   | 40    | 40    | 40    | 40       |
| <b>M</b>                 | 30   | 30   | 45   | 45   | 60    | 60    | 60    | 80       |
| <b>P</b>                 | M5   | M5   | M5   | M5   | M6    | M6    | M6    | M8       |
| <b>P<sup>1</sup></b>     | M6   | M6   | M8   | M8   | M10   | M10   | M10   | M10      |
| <b>Q</b>                 | 34   | 35   | 37   | 38   | 44    | 48    | 57    | 61       |
| <b>S</b>                 | 6    | 15   | 16   | 20   | 22    | 18    | 19    | 15       |
| <b>T</b>                 | 0,2  | 0,2  | 0,2  | 0,2  | 0,25  | 0,25  | 0,3   | 0,3      |
| <b>U</b>                 | 6,7  | 7,9  | 8,3  | 8,3  | 7,8   | 7,2   | 7,2   | 8,2      |
| <b>V<sup>1</sup></b>     | 109  | 116  | 143  | 155  | 170   | 182   | 213   | 213      |
| <b>Y<sup>1</sup></b>     | 200  | 200  | 250  | 250  | 300   | 300   | 300   | 400      |
| <b>PESO[daN]</b>         | 1,06 | 1,29 | 2,08 | 2,09 | 3,57  | 4,51  | 7,35  | 7,35     |
| <b>P [W]</b>             | 18   | 18   | 25   | 25   | 35    | 35    | 60    | 60       |

## DRAWINGS



### TECHNICAL INFORMATION

The brakes are supplied in the standard three-spring version. The braking torque is preset. Brakes with higher or lower braking torques with respect to the standard version can be supplied on request.

### BRAKE SELECTION

The following table shows the characteristic values to be taken into consideration for the check calculation of the correct brake selection.

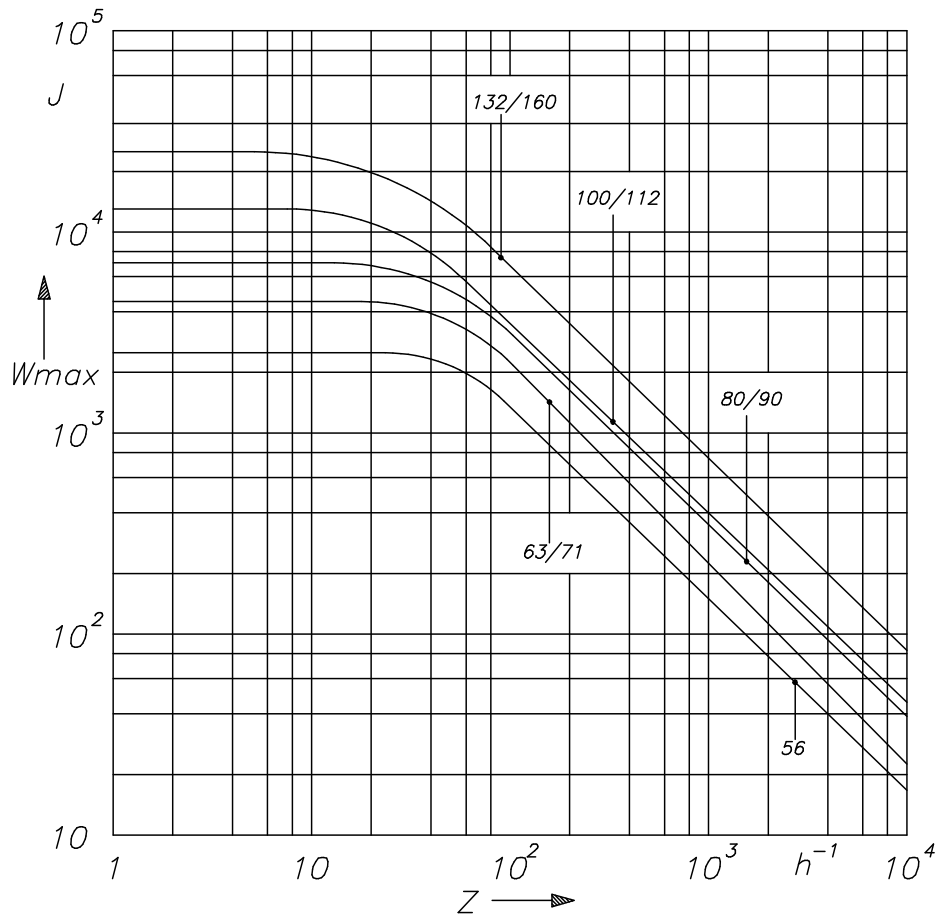
|                      |                                | 63   | 71   | 80   | 90   | 100   | 112   | 132L  | 160   |
|----------------------|--------------------------------|------|------|------|------|-------|-------|-------|-------|
| Braking torque       | $M_F$ [Nm]                     | 3    | 4    | 7    | 7/11 | 13/18 | 13/18 | 30/50 | 30/50 |
|                      | $T_{min}$ [mm]                 | 0,2  | 0,2  | 0,2  | 0,2  | 0,25  | 0,25  | 0,3   | 0,3   |
| Air Gap              | $T_{max}$ [mm]                 | 0,5  | 0,6  | 0,6  | 0,6  | 0,65  | 0,65  | 0,7   | 0,7   |
|                      | $n_{max}$ [min <sup>-1</sup> ] | 6000 | 6000 | 3600 | 3600 | 3000  | 3000  | 3600  | 3600  |
| Release lever height | X [mm]                         |      |      |      |      |       |       |       |       |
| Brake disc moment of | J [kgcm <sup>2</sup> ]         | 3    | 5    | 10   | 11   | 30    | 34    | 50    | 50    |



|                                 |   |     |     |     |     |     |     |      |      |
|---------------------------------|---|-----|-----|-----|-----|-----|-----|------|------|
| <b>inertia</b>                  |   |     |     |     |     |     |     |      |      |
| <b>Brake life</b>               | <b><math>W^{1)_{tot}}</math><br/>[MJ]</b> | 250 | 250 | 375 | 375 | 500 | 500 | 1650 | 1650 |
|                                 | <b><math>W^{2)_{2}}</math><br/>[MJ]</b>   | 30  | 40  | 60  | 60  | 80  | 80  | 132  | 132  |
| <b><math>t_1</math></b>         | <b>[ms]</b>                               | 30  | 40  | 60  | 60  | 100 | 100 | 150  | 150  |
| <b><math>t_1^{3)}</math></b>    | <b>[ms]</b>                               | 4   | 4   | 6   | 8   | 16  | 16  | 16   | 16   |
| <b><math>t_2 DC^{4)}</math></b> | <b>[ms]</b>                               | 20  | 40  | 60  | 90  | 120 | 140 | 180  | 200  |

1. For friction packing wear up to a 1 mm thickness
2. Between two wear adjustments from  $T_{min}$  to  $T_{max}$
3. Opening on AC side
4. Opening on DC side

## BRAKE WORKING DIAGRAM FOR CALCULATIONS



LAVORO MASSIMO PER NUMERO DI INTERVENTI/ORA