

## Electromagnetic Multi-Disc Brake

Brake with magnet body end face, fastened to gear housing.

For oil operation, coil voltage 24 V DC

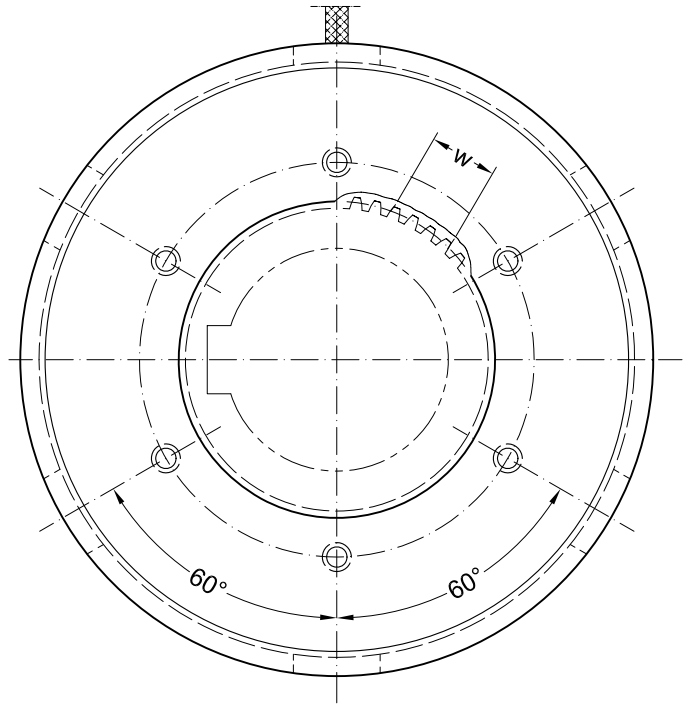
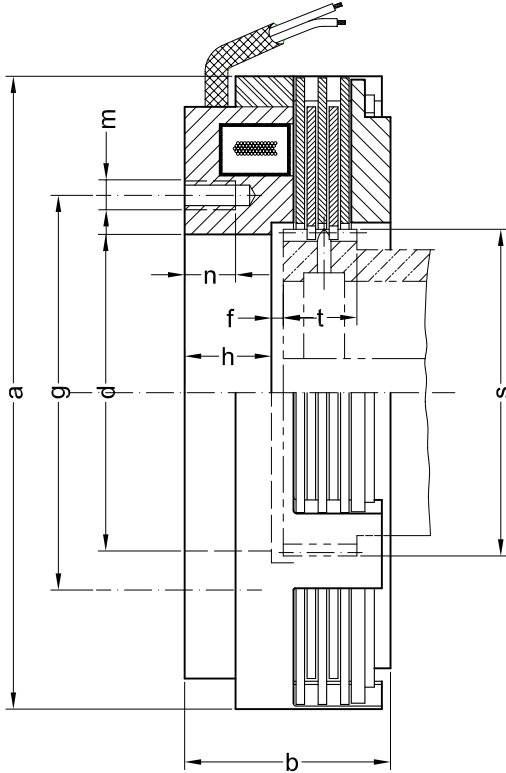
- ◆ With wear resistant, specially heat treated steel discs.
- ◆ High torque in comparison with the size.
- ◆ Inner driver (extra accessory) with hardened teeth.
- ◆ For horizontal mounting.

The brake is suited for speed engagement of main and auxiliary drives and is intended for the installation into oil lubricated gears.

A double magnetic flux circulates through the steel discs.

The brake thereby automatically compensates for the disc wear and does not need to be adjusted.

Extras: Inner driver according to customer's request.



| Data and Dimensions                   |                                   | LCBW 0,7* | LCBW 1,5 | LCBW 3 | LCBW 6 | LCBW 12 | LCBW 20 | LCBW 30 | LCBW 50 | LCBW 80 | LCBW 125 | LCBW 200 | LCBW 300 |
|---------------------------------------|-----------------------------------|-----------|----------|--------|--------|---------|---------|---------|---------|---------|----------|----------|----------|
| Static torque                         | Nm                                | 12        | 25       | 50     | 100    | 200     | 320     | 500     | 800     | 1300    | 2000     | 3200     | 5000     |
| Dynamic torque                        | Nm                                | 7         | 15       | 30     | 63     | 125     | 200     | 300     | 500     | 780     | 1250     | 2000     | 3000     |
| Idling torque                         | Nm                                | 0,06      | 0,14     | 0,25   | 0,5    | 0,8     | 1,1     | 1,8     | 2,8     | 3,5     | 5,5      | 7,5      | 10       |
| Friction work per engagement          | kJ                                | 4         | 6,5      | 9      | 15     | 25      | 35      | 50      | 65      | 100     | 160      | 250      | 350      |
| Thermal capacity                      | W                                 | 30        | 55       | 80     | 140    | 240     | 350     | 470     | 650     | 900     | 1300     | 1700     | 2200     |
| Speed maximum                         | min <sup>-1</sup>                 | 5000      | 4500     | 4000   | 3800   | 3500    | 3200    | 3000    | 2700    | 2500    | 2200     | 1900     | 1600     |
| Torque-Time Constant - to 60 % torque | s                                 | 0,12      | 0,15     | 0,20   | 0,25   | 0,32    | 0,40    | 0,50    | 0,65    | 0,80    | 0,95     | 1,2      | 1,5      |
| Disengagement time - to 10 % torque   | s                                 | 0,04      | 0,05     | 0,07   | 0,10   | 0,12    | 0,15    | 0,20    | 0,25    | 0,30    | 0,35     | 0,40     | 0,50     |
| Coil power consumption at 20 °C       | W                                 | 12        | 17       | 23     | 27     | 32      | 39      | 43      | 53      | 56      | 75       | 100      | 118      |
| Mass moment of Inertia - inner discs  | 10 <sup>-3</sup> kgm <sup>2</sup> | 0,02      | 0,04     | 0,10   | 0,3    | 0,65    | 1,3     | 2,4     | 4,3     | 8,4     | 17       | 33       | 60       |
| Mass (weight)                         | kg                                | 0,45      | 0,75     | 1,1    | 1,9    | 3,1     | 4,0     | 5,7     | 8,6     | 11,5    | 17,5     | 26       | 36       |
| Ø a                                   | mm                                | 70        | 80       | 95     | 112    | 134     | 147     | 165     | 190     | 210     | 240      | 275      | 310      |
| b                                     | mm                                | 23        | 29,5     | 35     | 41     | 46      | 50      | 56      | 62      | 68      | 78       | 88       | 96       |
| Ø d max H7                            | mm                                | 30        | 35       | 48     | 55     | 65      | 72      | 85      | 98      | 105     | 120      | 140      | 160      |
| f                                     | mm                                | 1,5       | 1,5      | 2      | 2      | 3       | 3       | 3       | 3       | 3       | 3        | 4        | 4        |
| Ø g                                   | mm                                | 36        | 43       | 52     | 65     | 75      | 85      | 90      | 105     | 120     | 140      | 170      | 190      |
| h                                     | mm                                | 12        | 15       | 18     | 21     | 22      | 22      | 24      | 28      | 29      | 34       | 38       | 41       |
| m                                     | mm                                | M4        | M5       | M6     | M6     | M8      | M8      | M8      | M10     | M12     | M12      | M16      | M16      |
| n                                     | mm                                | 6         | 7        | 8      | 10     | 10      | 12      | 12      | 15      | 18      | 18       | 20       | 20       |
| t min.                                | mm                                | 6         | 10       | 11     | 13     | 15      | 18      | 20      | 20      | 24      | 27       | 30       | 34       |
| Inner driver <sup>1)</sup>            | module 2)                         | mm        | 1,5      | 1,5    | 1,5    | 1,5     | 2       | 2       | 2,5     | 2,5     | 3        | 3        | 3        |
|                                       | number of teeth                   | -         | 22       | 26     | 35     | 40      | 34      | 38      | 35      | 40      | 36       | 41       | 47       |
|                                       | s addendum circle Ø 3)            | mm        | 34       | 40     | 53     | 61      | 69      | 77      | 89      | 102     | 110      | 126      | 144      |
|                                       | root circle Ø                     | mm        | 29,25    | 35,25  | 48,75  | 56,25   | 63      | 71      | 81,25   | 93,75   | 100,5    | 115,5    | 133,5    |
|                                       | measured over tooth number        | -         | 3        | 3      | 4      | 5       | 4       | 5       | 4       | 5       | 4        | 5        | 6        |
| w - 0,05 tooth width                  | mm                                | 11,48     | 11,56    | 16,18  | 20,71  | 21,55   | 27,57   | 26,99   | 34,55   | 32,44   | 41,50    | 50,61    | 50,90    |

\* Production and delivery only from 5 items.

1) basic tooth profile as per DIN 867, zero profile offset 2) pressure angle 20° 3) addendum correction