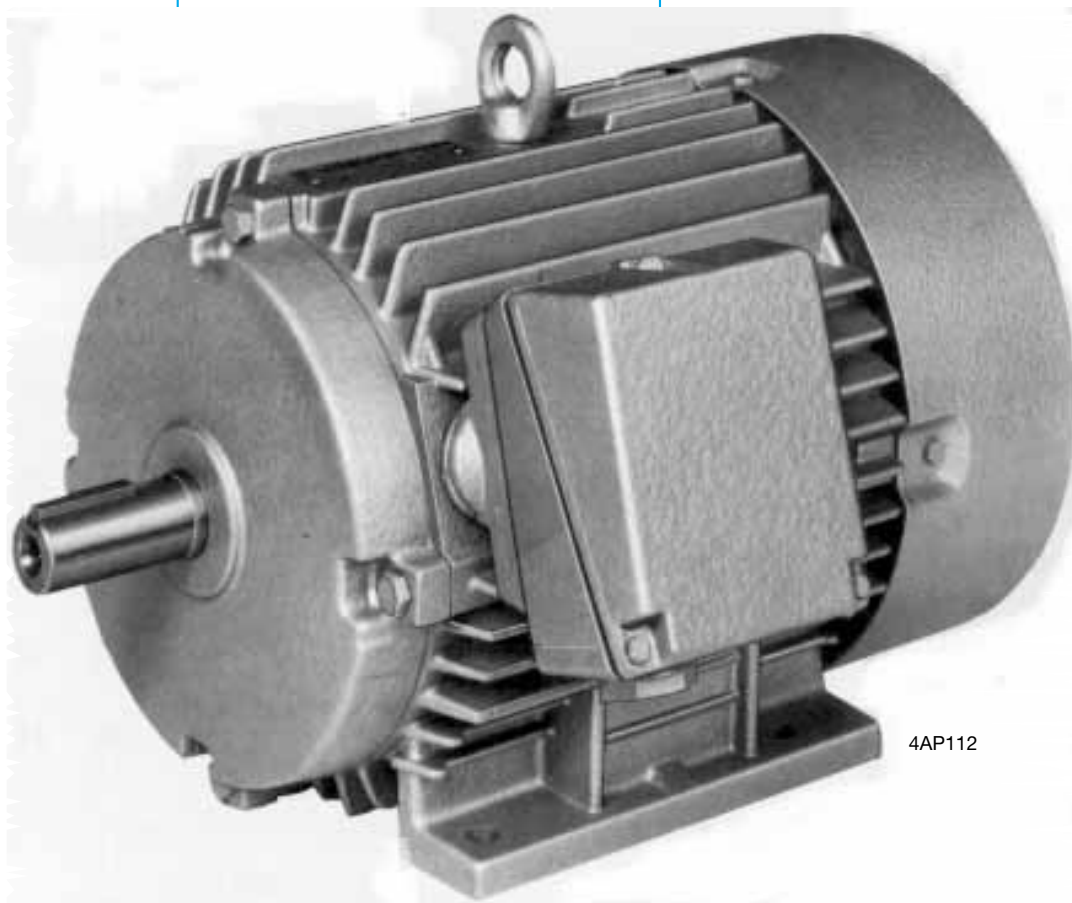
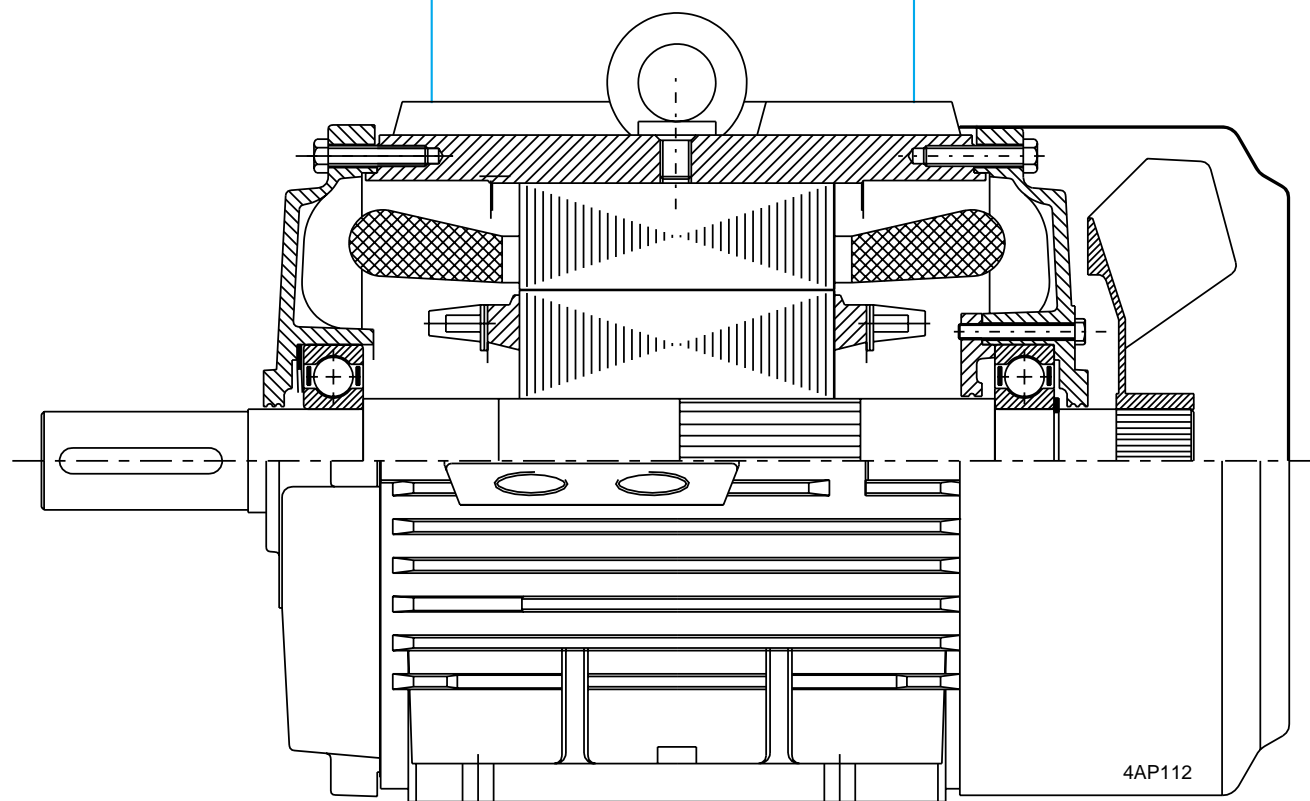


# rotor nl<sup>®</sup>

## squirrel-cage induction motors



type

# 4AP

frame sizes

## 112 to 132

outputs (S1-50 Hz)

**4 to 11 kW**  
2-pole, 3000 min<sup>-1</sup>

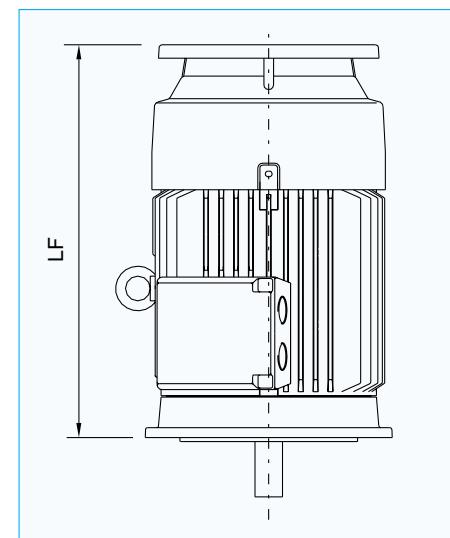
**4 to 10 kW**  
4-pole, 1500 min<sup>-1</sup>

**2.2 to 5.5 kW**  
6-pole, 1000 min<sup>-1</sup>

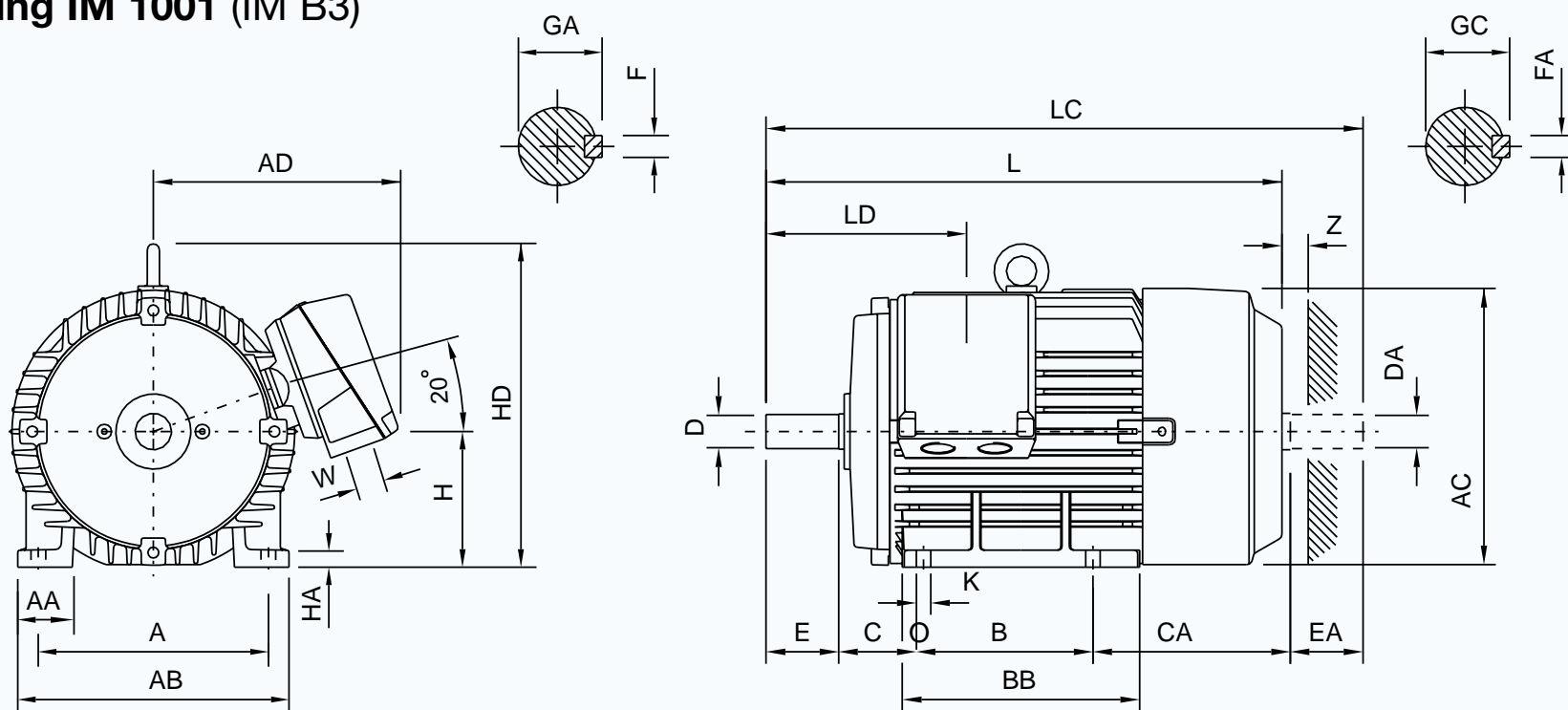
**1.5 to 4 kW**  
8-pole, 750 min<sup>-1</sup>

type **4AP**

|                              |  |                           |  |
|------------------------------|--|---------------------------|--|
| <b>design</b>                | <ul style="list-style-type: none"> <li>- cast iron housing end-shields and flanges</li> <li>- aluminium terminal box (turnable 4 x 90°)</li> <li>- SKF ball bearings or equivalent, type 2Z and fixed on N.D.E.</li> </ul>   | <b>special executions</b> | <ul style="list-style-type: none"> <li>- on request for instance:</li> <li>- protection class IPW55 - IP56</li> <li>- stand by heating</li> <li>- P.T.C. thermistors</li> <li>- special voltages</li> <li>- acc. shipping classifications</li> <li>- low noise execution</li> <li>- S.P.M. control nipples</li> <li>- pre loaded ball bearings</li> <li>- special shafts and flanges</li> <li>- with mounted brake</li> <li>- 2 comp. epoxy coating</li> <li>- double flange exec. T.E.F.C.</li> <li>- client specifications, and so on (see our pricelist)</li> </ul> |
| <b>mounting</b>              | <ul style="list-style-type: none"> <li>- foot mounted motor IM 1001 (IM B3)</li> <li>- flange mounted motor IM 3001 (IM B5) - IM 3601 (IM B14)</li> <li>- foot flange mounted motor IM 2001 (IM B35) - IM 2101 (IM B34)</li> <li>- all frame-mountings according IEC 34-7 code II (I)</li> </ul> | <b>canopy on fanhood</b>  | <ul style="list-style-type: none"> <li>- necessary in the execution EEx-e-II-T3 vertical mounted (with shaft downwards)</li> </ul>   |
| <b>dimensions</b>            | <ul style="list-style-type: none"> <li>- according IEC 72 / DIN 42673, DIN 42677</li> </ul>  |                           |  |
| <b>cooling</b>               | <ul style="list-style-type: none"> <li>- T.E.F.C. IC 411 according IEC 34-6 (with external cooling)</li> </ul>   |                           |  |
| <b>protection class</b>      | <ul style="list-style-type: none"> <li>- IP55</li> </ul>   |                           |  |
| <b>isulation class</b>       | <ul style="list-style-type: none"> <li>- F (temperature limit 155°C)</li> </ul>  |                           |  |
| <b>temperature rise</b>      | <ul style="list-style-type: none"> <li>- within class B (<math>\leq 80</math> K)</li> </ul>  |                           |  |
| <b>technical information</b> | <ul style="list-style-type: none"> <li>- test reports and certificats available</li> </ul>   |                           |  |



### mounting IM 1001 (IM B3)

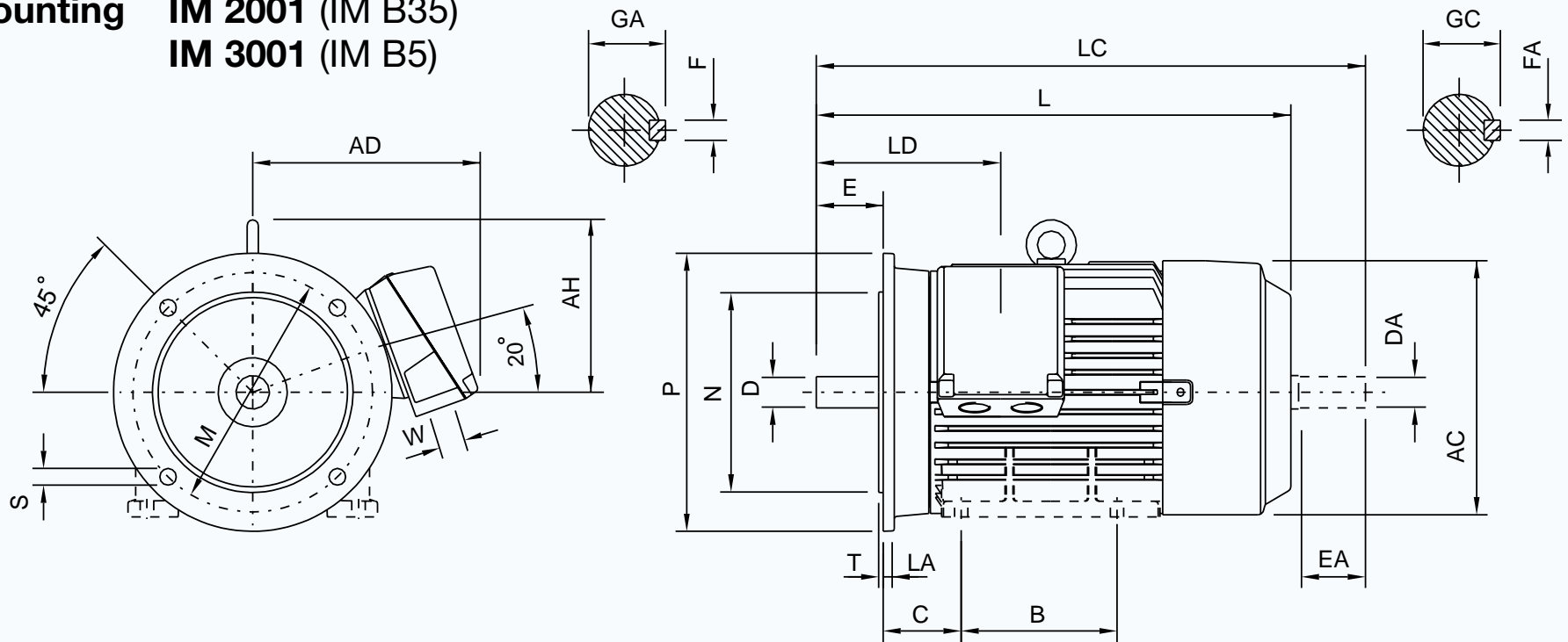


| IM 1001 (IM B3) |                 |    |     |     |     |     |     |     |    |            |            |    |     |          |     |            |     |       | dimensions in mm. |      |
|-----------------|-----------------|----|-----|-----|-----|-----|-----|-----|----|------------|------------|----|-----|----------|-----|------------|-----|-------|-------------------|------|
| type            | A               | AA | AB  | AC  | AD  | AH  | B   | BB  | C  | CA         | H          | HA | HD  | K        | L   | LF         | LC  | LD    | W                 | Z(>) |
| 4AP112M         | 190             | 45 | 225 | 240 | 202 | 155 | 140 | 195 | 70 | 163        | 112        | 15 | 267 | 12 (M10) | 426 | 410.5      | 493 | 165.5 | 2 x PG 21         | 50   |
| 4AP132S         | 216             | 47 | 255 | 280 | 218 | 174 | 140 | 202 | 89 | 181        | 132        | 17 | 316 | 12 (M10) | 483 | 453.5      | 570 | 213   | 2 x PG 21         | 50   |
| 4AP132M         | 216             | 47 | 255 | 280 | 218 | 174 | 178 | 240 | 89 | 181        | 132        | 17 | 316 | 12 (M10) | 521 | 491.5      | 608 | 213   | 2 x PG 21         | 50   |
|                 |                 |    |     |     |     |     |     |     |    | frame size |            |    |     |          |     |            |     |       |                   |      |
| bearing type    | D.E. and N.D.E. |    |     |     |     |     |     |     |    | 112        | 6306-2Z/C3 |    |     |          | 132 | 6308-2Z/C3 |     |       |                   |      |

shaft extension with  
tapped centre bore

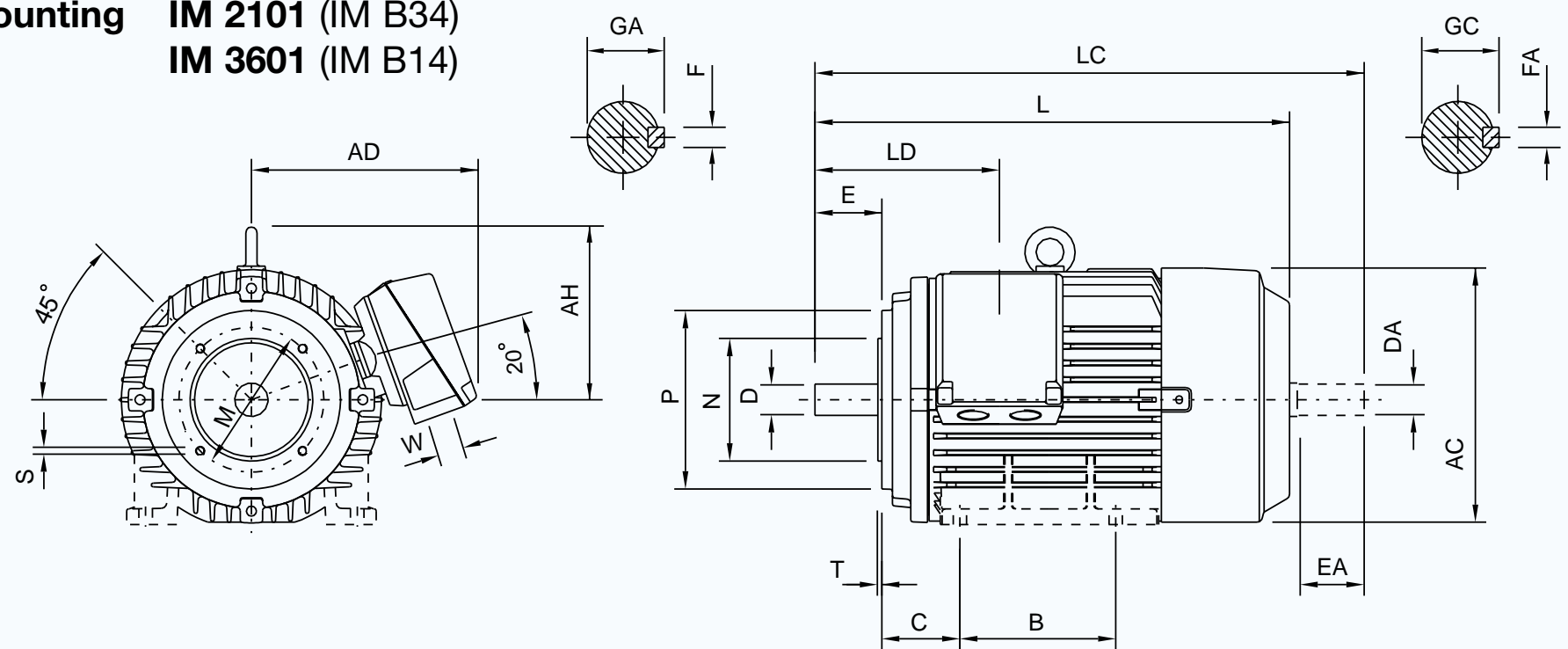
according DIN 332 type DS  
- shaft  $\varnothing$  28 - M10 x 22  
 $\varnothing$  38 - M12 x 28

mounting **IM 2001 (IM B35)**  
**IM 3001 (IM B5)**



all other dimensions equal mounting IM 1001 (IM B3)

mounting **IM 2101 (IM B34)**  
**IM 3601 (IM B14)**



all other dimensions equal mounting IM 1001 (IM B3)

| shaft dimensions |    |    |    | in mm. |    |    |    | IM 2001 (IM B35) |      | IM 3001 (IM B5) |    | IM 2101 (IM B34) |    |     |      |     | IM 3601 (IM B14) A-small, B-large |     |     |      |     |          |     |
|------------------|----|----|----|--------|----|----|----|------------------|------|-----------------|----|------------------|----|-----|------|-----|-----------------------------------|-----|-----|------|-----|----------|-----|
| D k6             | E  | F  | GA | DA k6  | EA | FA | GC | M                | N j6 | P               | S  | T                | LA | M   | N j6 | P   | S                                 | T   | M   | N j6 | P   | S        | T   |
| 28               | 60 | 8  | 31 | 28     | 60 | 8  | 31 | 215              | 180  | 250             | 15 | 4                | 12 | 130 | 110  | 160 | M8 x 13                           | 3.5 | 165 | 130  | 200 | M10 x 14 | 3.5 |
| 38               | 80 | 10 | 41 | 38     | 80 | 10 | 41 | 265              | 230  | 300             | 15 | 4                | 20 | 165 | 130  | 200 | M10 x 14                          | 3.5 | -   | -    | -   | -        | -   |
| 38               | 80 | 10 | 41 | 38     | 80 | 10 | 41 | 265              | 230  | 300             | 15 | 4                | 20 | 165 | 130  | 200 | M10 x 14                          | 3.5 | -   | -    | -   | -        | -   |



## technical data

calculated values based on main frequency 50 Hz.

\* standard outputs based on continuous operation (S1) and an ambient temperature of max. 55° C.

outputs for intermittent operation S2, S3 etc., other ambient temperatures or frequencies on request.

\*\* **extra types** (not standardized) with higher outputs as mentioned in NEN 3321 and DIN 42673.

temperature rise of these types within class F and dimensions according IEC 72.

| type | output<br>kW | speed<br>min <sup>-1</sup> | rated current A |      |      | power faktor<br>cos φ | efficiency<br>% | ratio                     |                          |                            | moment of inertia J<br>kgm <sup>2</sup> .10 <sup>-4</sup> | mass<br>kg |
|------|--------------|----------------------------|-----------------|------|------|-----------------------|-----------------|---------------------------|--------------------------|----------------------------|---|------------|
|      |              |                            | 230V            | 400V | 500V |                       |                 | starting current<br>Is/Ir | starting torque<br>Ts/Tr | brake-down torque<br>Tb/Tr |   |            |

### 2-pole, synchronous speed 3000 min<sup>-1</sup>

|                         |     |      |      |      |      |      |    |     |     |     |     |    |
|-------------------------|-----|------|------|------|------|------|----|-----|-----|-----|-----|----|
| 4AP112-2sB              | 4   | 2840 | 14.5 | 8.3  | 6.7  | 0.87 | 80 | 4.8 | 2.5 | 2.3 | 70  | 45 |
| 4AP112M-2B **extra type | 5.5 | 2870 | 19.5 | 11.2 | 9.0  | 0.86 | 82 | 5.6 | 2.8 | 2.5 | 90  | 50 |
| 4AP132S-2B1             | 5.5 | 2930 | 18.7 | 10.8 | 8.7  | 0.88 | 83 | 7.5 | 2.9 | 3.8 | 140 | 71 |
| 4AP132S-2B1             | 7.5 | 2910 | 24.6 | 14.2 | 11.3 | 0.91 | 84 | 6.7 | 2.1 | 2.9 | 140 | 72 |
| 4AP132M-2 **extra type  | 11  | 2930 | 36.7 | 21.2 | 17.0 | 0.86 | 87 | 7.0 | 2.0 | 2.4 | 210 | 85 |

### 4-pole, synchronous speed 1500 min<sup>-1</sup>

|                        |     |      |      |      |      |      |    |     |     |     |     |    |
|------------------------|-----|------|------|------|------|------|----|-----|-----|-----|-----|----|
| 4AP112M-4              | 4   | 1440 | 14.4 | 8.3  | 6.6  | 0.83 | 84 | 6.5 | 2.9 | 3.0 | 120 | 50 |
| 4AP112M-4 **extra type | 5.5 | 1410 | 20.4 | 11.0 | 9.4  | 0.84 | 80 | 5.5 | 2.7 | 3.0 | 120 | 51 |
| 4AP132S-4              | 5.5 | 1450 | 18.8 | 10.8 | 8.7  | 0.85 | 86 | 7.0 | 2.2 | 2.9 | 230 | 67 |
| 4AP132M-4              | 7.5 | 1450 | 25.0 | 14.4 | 11.6 | 0.86 | 87 | 7.0 | 2.2 | 2.9 | 300 | 80 |
| 4AP132M-4 **extra type | 10  | 1450 | 36.0 | 20.7 | 16.6 | 0.83 | 84 | 6.1 | 2.3 | 2.2 | 300 | 80 |

### 6-pole, synchronous speed 1000 min<sup>-1</sup>

|                        |     |     |      |      |     |      |    |     |     |     |     |    |
|------------------------|-----|-----|------|------|-----|------|----|-----|-----|-----|-----|----|
| 4AP112M-6s             | 2.2 | 950 | 9.0  | 5.2  | 4.1 | 0.77 | 80 | 4.5 | 2.3 | 2.7 | 120 | 42 |
| 4AP112M-6 **extra type | 3   | 940 | 11.4 | 6.6  | 5.3 | 0.80 | 82 | 5.0 | 2.4 | 2.5 | 170 | 48 |
| 4AP132S-6              | 3   | 960 | 11.0 | 6.4  | 5.1 | 0.81 | 85 | 6.2 | 2.5 | 2.8 | 380 | 65 |
| 4AP132S-6 **extra type | 4   | 960 | 15.2 | 8.7  | 7.0 | 0.79 | 84 | 6.0 | 2.5 | 3.0 | 380 | 66 |
| 4AP132M-6              | 4   | 950 | 14.5 | 8.4  | 6.7 | 0.82 | 84 | 5.7 | 2.4 | 2.7 | 480 | 78 |
| 4AP132M-6              | 5.5 | 950 | 20.2 | 11.7 | 9.3 | 0.80 | 85 | 6.0 | 2.5 | 3.2 | 480 | 79 |

### 8-pole, synchronous speed 750 min<sup>-1</sup>

|                        |     |     |      |     |     |      |    |     |     |     |     |    |
|------------------------|-----|-----|------|-----|-----|------|----|-----|-----|-----|-----|----|
| 4AP112M-8s             | 1.5 | 710 | 6.6  | 3.8 | 3.0 | 0.72 | 78 | 4.0 | 1.8 | 2.0 | 120 | 41 |
| 4AP112M-8 **extra type | 2.2 | 700 | 9.2  | 5.3 | 4.2 | 0.75 | 80 | 4.0 | 1.9 | 2.2 | 160 | 48 |
| 4AP132S-8              | 2.2 | 710 | 8.8  | 5.1 | 4.1 | 0.78 | 80 | 4.3 | 1.8 | 2.5 | 380 | 65 |
| 4AP132S-8 **extra type | 3   | 715 | 12.6 | 7.3 | 5.9 | 0.73 | 81 | 5.0 | 2.3 | 2.3 | 380 | 66 |
| 4AP132M-8              | 3   | 720 | 12.1 | 7.0 | 5.6 | 0.75 | 83 | 4.9 | 2.3 | 2.8 | 480 | 77 |
| 4AP132M-8 **extra type | 4   | 715 | 16.2 | 9.3 | 7.5 | 0.75 | 82 | 5.0 | 2.3 | 2.6 | 480 | 78 |