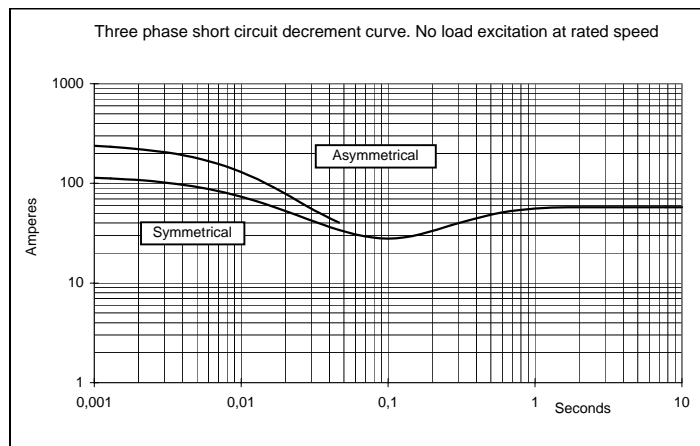
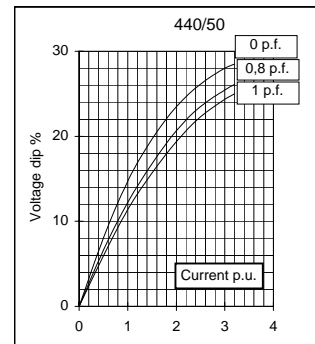
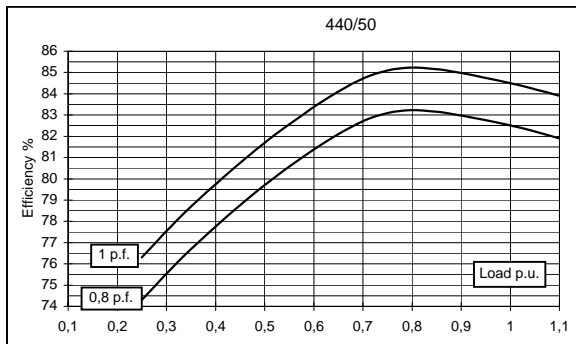
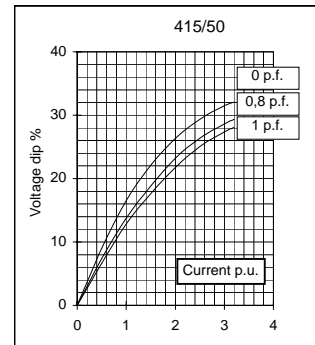
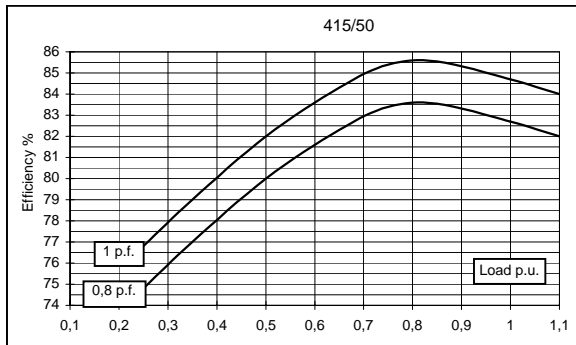
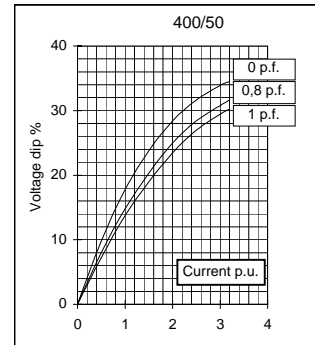
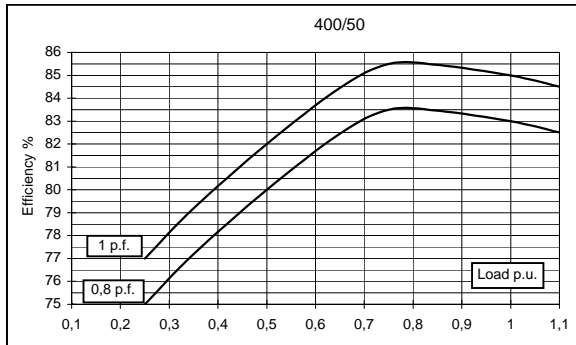
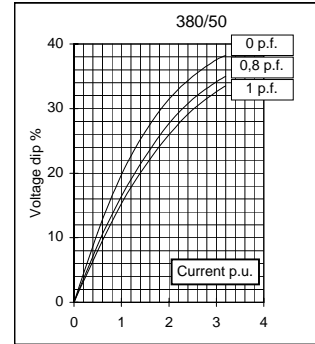
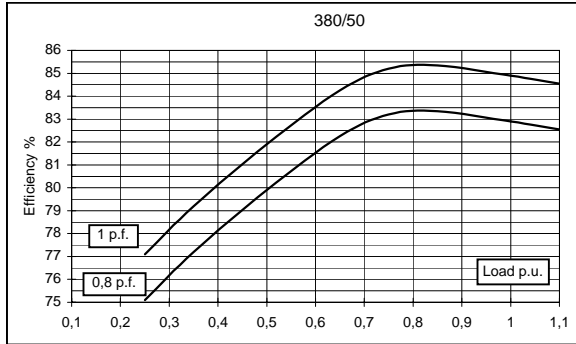


| <b>Electrical Characteristics</b>    |                     |  |       |      |       |                |       |       |       |      |
|--------------------------------------|---------------------|--|-------|------|-------|----------------|-------|-------|-------|------|
| Frequency                            | Hz                  | 50   |       |      |       | 60             |       |       |       |      |
| Voltage (star)                       | V                   | 380  | 400   | 415  | 440   | 415            | 440   | 460   | 480   |      |
| Rated power class H                  | kVA                 | 12,5   | 12,5  | 12,5 | 10,5  | 13             | 15    | 15    | 15    |      |
|                                      | kW                  | 10   | 10    | 10   | 8,4   | 10,4           | 12    | 12    | 12    |      |
| Rated power class F                  | kVA                 | 11   | 11    | 11   | 9     | 10,5           | 12,3  | 13    | 13    |      |
|                                      | kW                  | 8,8  | 8,8   | 8,8  | 7,2   | 8,4            | 9,8   | 10,4  | 10,4  |      |
| Regulation with                      | SR7/2               | ±1,5 % with any power factor and speed variations between -5% +30% |       |      |       |                |       |       |       |      |
| Insulation class                     |                     | H  |       |      |       |                |       |       |       |      |
| Execution                            |                     | Brushless  |       |      |       |                |       |       |       |      |
| Stator winding                       |                     | 6 ends   |       |      |       |                |       |       |       |      |
| Rotor                                |                     | with damping cage  |       |      |       |                |       |       |       |      |
| Efficiencies class H                 | 4/4                 | %  | 82,9  | 83   | 82,7  | 82,5           | 83,8  | 84,3  | 84,4  | 84,5 |
| (see graph. for details)             | 3/4                 | %  | 83,2  | 83,5 | 83,4  | 83,1           | 84,4  | 84,6  | 84,8  | 85   |
|                                      | 2/4                 | %  | 79,9  | 80   | 80    | 79,7           | 81,2  | 81,3  | 81,4  | 81,5 |
|                                      | 1/4                 | %  | 75,1  | 75   | 74,8  | 74,3           | 75,8  | 75,6  | 75,7  | 76   |
| Reactances (f. l.cl. F)              | Xd                  | %  | 243,8 | 220  | 204,4 | 152,7          | 255,1 | 261,8 | 239,5 | 220  |
|                                      | Xd'                 | %  | 33,02 | 29,8 | 27,68 | 20,69          | 34,55 | 35,46 | 32,45 | 29,8 |
|                                      | Xd''                | %  | 16,51 | 14,9 | 13,84 | 10,34          | 17,28 | 17,73 | 16,22 | 14,9 |
|                                      | Xq                  | %  | 108,6 | 98   | 91,0  | 68,0           | 113,6 | 116,6 | 106,7 | 98   |
|                                      | Xq'                 | %  | 108,6 | 98   | 91,0  | 68,0           | 113,6 | 116,6 | 106,7 | 98   |
|                                      | Xq''                | %  | 37,3  | 33,7 | 31,3  | 23,4           | 39,1  | 40,1  | 36,7  | 33,7 |
|                                      | X <sub>2</sub>      | %  | 17,73 | 16   | 14,86 | 11,11          | 18,55 | 19,04 | 17,42 | 16   |
|                                      | X <sub>0</sub>      | %  | 7,09  | 6,4  | 5,95  | 4,44           | 7,42  | 7,62  | 6,97  | 6,4  |
| Short Circuit Ratio                  | Kcc                 |  | 0,39  | 0,51 | 0,72  | 1,34           | 0,26  | 0,34  | 0,39  | 0,51 |
| Time Constants                       | Td'                 | sec.   | 0,043 |      |       |                |       |       |       |      |
|                                      | Td''                | sec.   | 0,01  |      |       |                |       |       |       |      |
|                                      | Tdo'                | sec.   | 0,65  |      |       |                |       |       |       |      |
|                                      | T <sub>α</sub>      | sec.   | 0,009 |      |       |                |       |       |       |      |
| Short Circuit Current Capacity       |                     | %  | >300  |      |       |                | >320  |       |       |      |
| Excitation at no load                | Amp.                |  | 0,3   | 0,32 | 0,35  | 0,4            | 0,2   | 0,24  | 0,26  | 0,3  |
| Excitation at full load              | Amp.                |  | 1,2   | 1,22 | 1,3   | 1,4            | 0,9   | 1     | 1,1   | 1,2  |
| Overload (long-term)                 | %                   | 1 hour in a 6 hours period 110% rated load                         |       |      |       |                |       |       |       |      |
| Overload per 20 sec.                 | %                   | 300  |       |      |       |                |       |       |       |      |
| Stator Winding Resistance (20°C)     | Ω                   | 0,678  |       |      |       |                |       |       |       |      |
| Rotor Winding Resistance (20°C)      | Ω                   | 8,238  |       |      |       |                |       |       |       |      |
| Exciter Resistance (20 °C)           | Ω                   | Rotor : 1,453  |       |      |       | Stator : 15,71 |       |       |       |      |
| Heat dissipation at f.l.cl.H         | W                   | 2063   | 2048  | 2092 | 1782  | 2011           | 2235  | 2218  | 2201  |      |
| Telephone Interference               |                     | THF < 2 %  |       |      |       | TIF < 45       |       |       |       |      |
| Radio interference                   |                     | EN60034-1, VDE0875K. For others standards apply to factory         |       |      |       |                |       |       |       |      |
| Waveform Distors.(THD) at f. load    | LL/LN %             | 4,7 / 4,5  |       |      |       |                |       |       |       |      |
| Waveform Distors.(THD) at no load    | LL/LN %             | 4 / 4  |       |      |       |                |       |       |       |      |
| <b>Mechanical characteristics</b>    |                     |  |       |      |       |                |       |       |       |      |
| Protection                           |                     | IP 23 (other protection on request)                                |       |      |       |                |       |       |       |      |
| DE bearing                           |                     | 6308-2RS   |       |      |       |                |       |       |       |      |
| NDE bearing                          |                     | 6305-2RS   |       |      |       |                |       |       |       |      |
| Weight of wound stator assembly      | kg                  | 21,2   |       |      |       |                |       |       |       |      |
| Weight of wound rotor assembly       | kg                  | 11,5   |       |      |       |                |       |       |       |      |
| Weight of complete generator         | kg                  | 69   |       |      |       |                |       |       |       |      |
| Maximun overspeed                    | rpm                 | 4500   |       |      |       |                |       |       |       |      |
| Unbalanced magnetic pull at f.l.cl.F | kN/mm               | 2,8  |       |      |       |                |       |       |       |      |
| Cooling air requirement              | m <sup>3</sup> /min | 6,2  |       |      |       | 7,8            |       |       |       |      |
| Inertia Constant (H)                 | sec.                | 0,254  |       |      |       | 0,305          |       |       |       |      |
| Noise level at 1m/7m                 | dB(A)               | 85 / 70  |       |      |       | 89 / 73        |       |       |       |      |

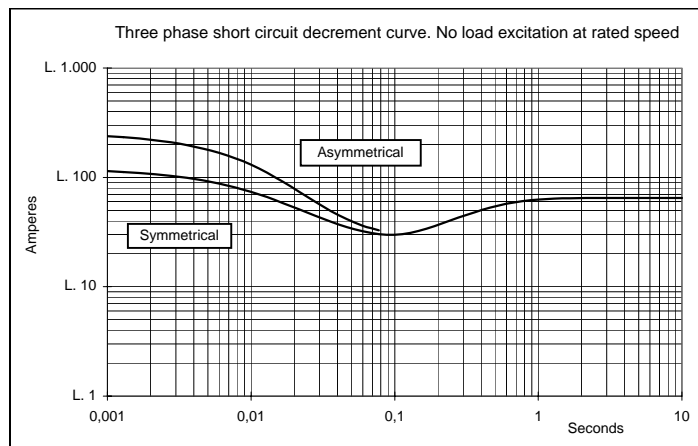
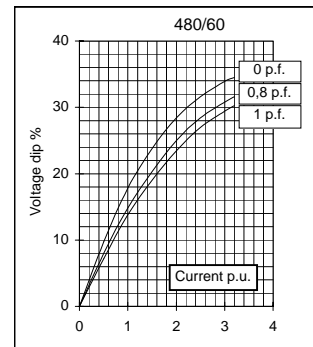
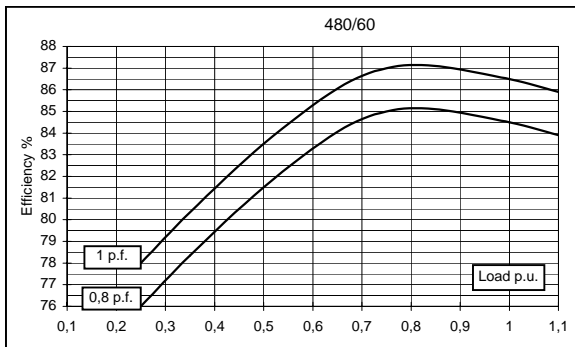
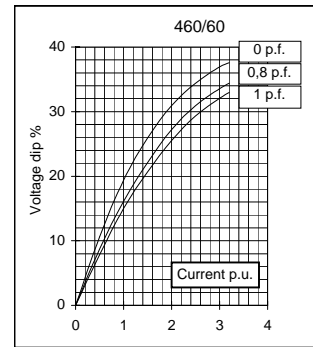
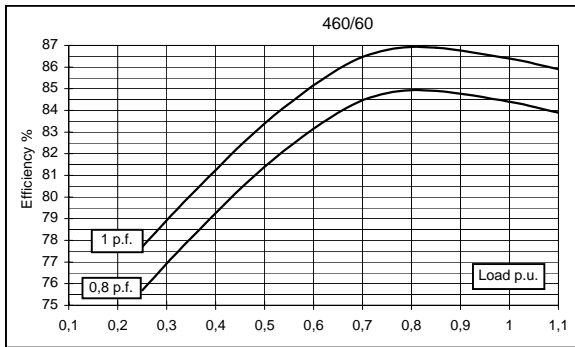
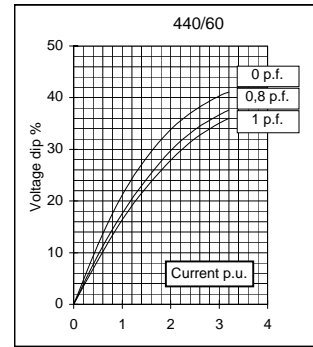
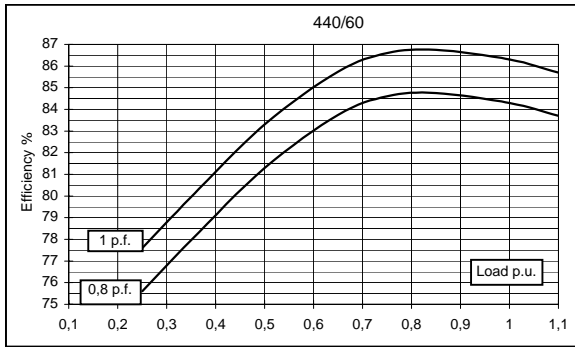
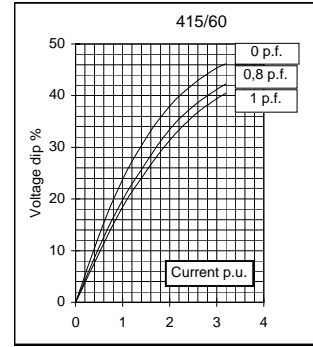
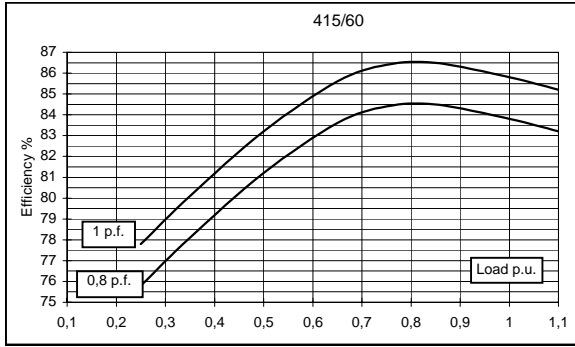
All technical data are to be considered as a reference and they can be modified without any notice.

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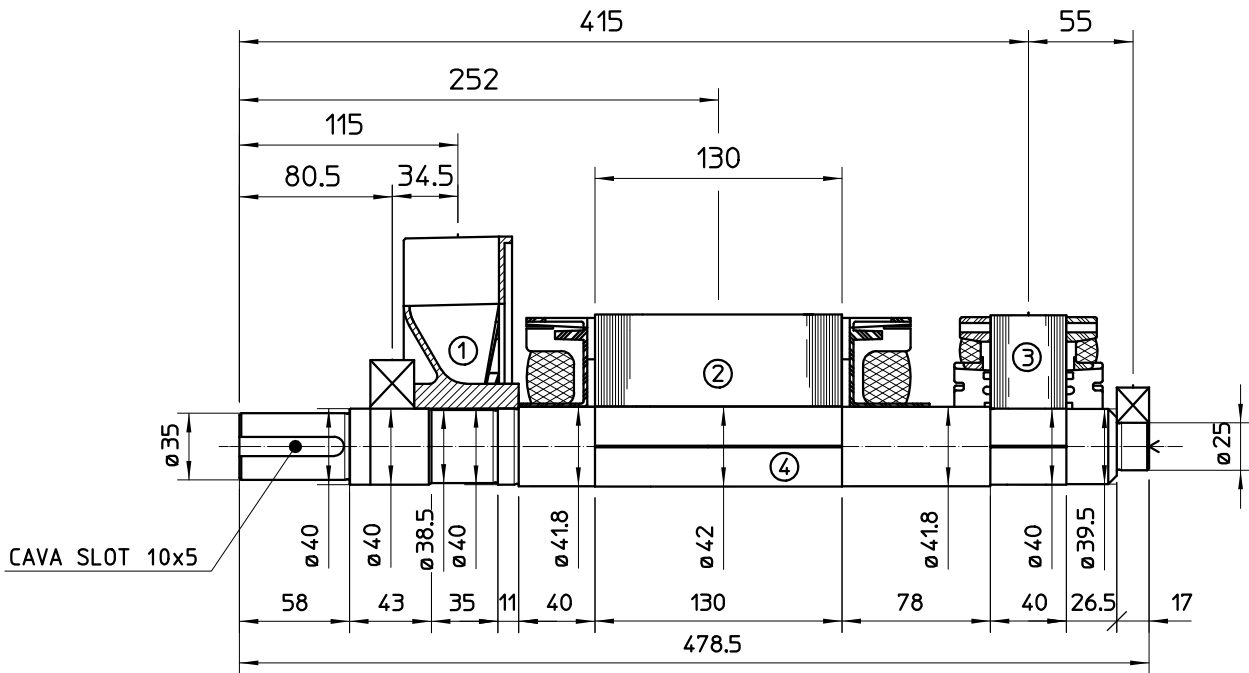
**50 Hz**



**60 Hz**

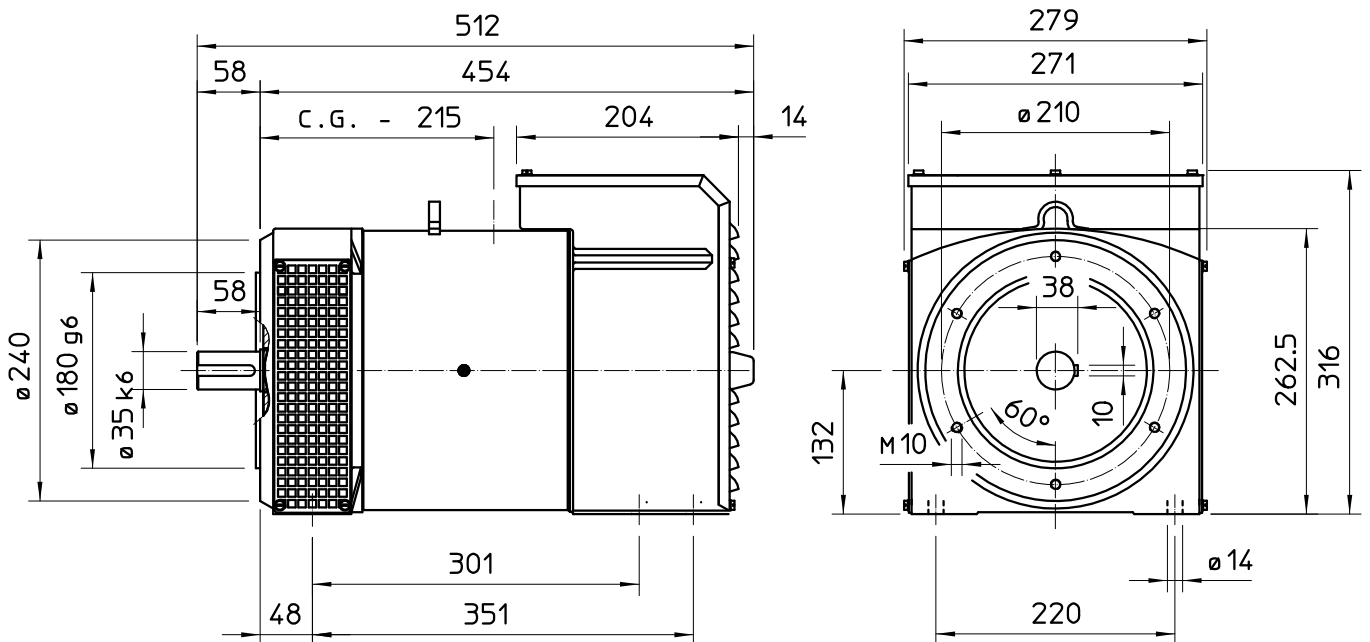


## TWO BEARING MOMENTS OF INERTIA

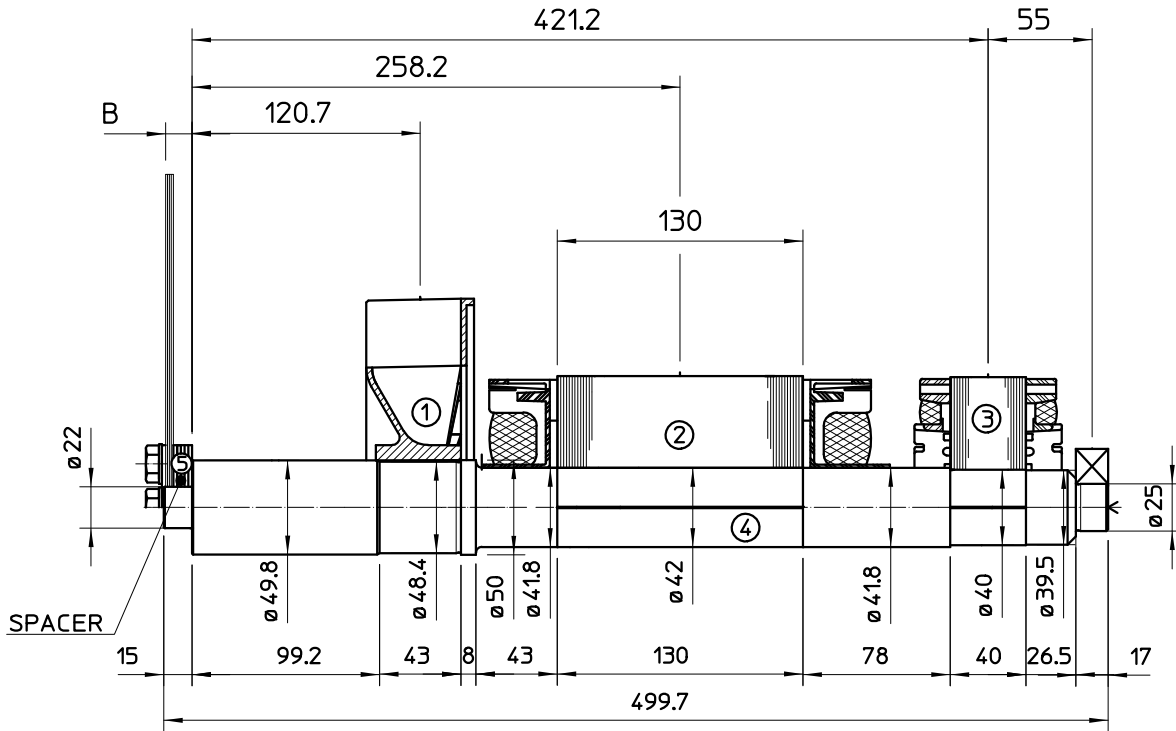


| COMPONENT    | WEIGHT Kg | J Kg <sup>m<sup>2</sup></sup> |
|--------------|-----------|-------------------------------|
| 1 FAN        | 0.93      | 0.0036                        |
| 2 MAIN ROTOR | 12.42     | 0.029                         |
| 3 EX ROTOR   | 4.12      | 0.011                         |
| 4 SHAFT      | 4.7       | 0.00097                       |
| 6 TOTAL      | 22.17     | 0.04457                       |

## TWO BEARING DIMENSIONS



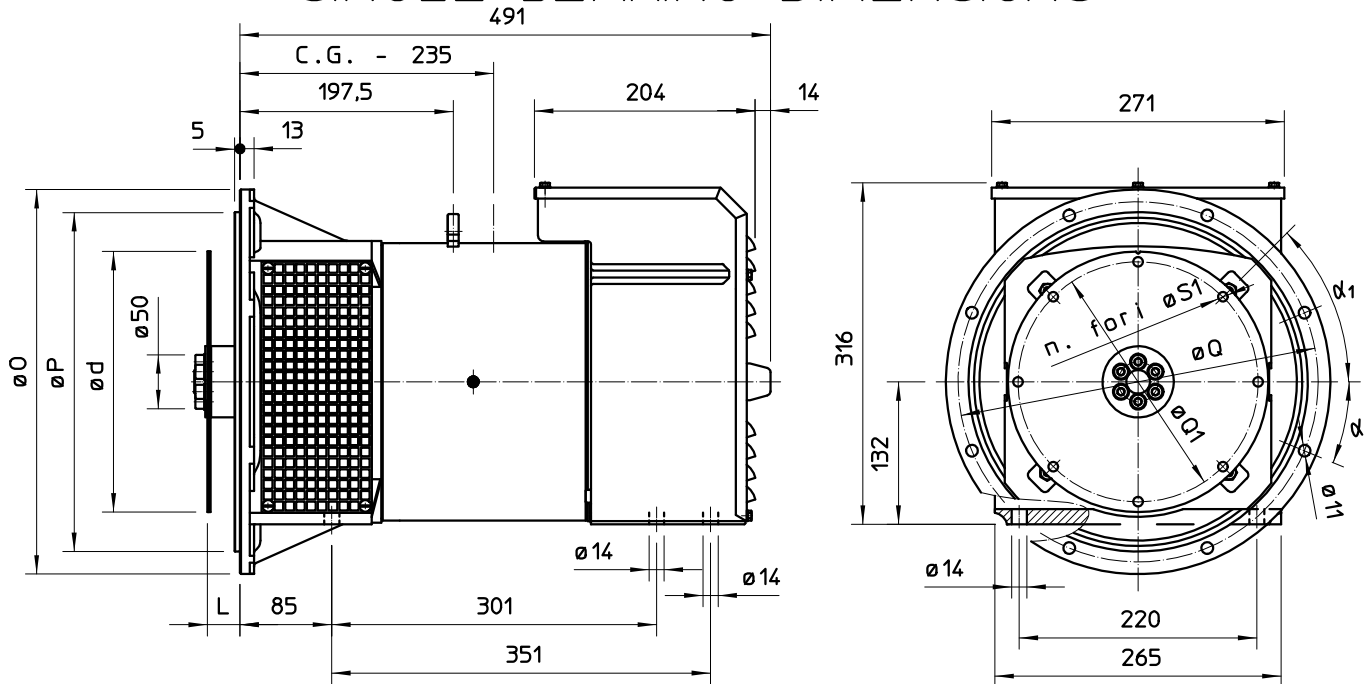
# SINGLE BEARING MOMENTS OF INERTIA



| COMPONENT    | WEIGHT Kg | J Kg <sup>m2</sup> |
|--------------|-----------|--------------------|
| 1 FAN        | 0.82      | 0.0032             |
| 2 MAIN ROTOR | 12.42     | 0.029              |
| 3 EX ROTOR   | 4.12      | 0.011              |
| 4 SHAFT      | 5.6       | 0.0012             |
| TOTAL        | 22.96     | 0.0444             |

| SAE N. | SHAFT COUPLING FLEX PLATE |           |                    |
|--------|---------------------------|-----------|--------------------|
|        | B (mm)                    | WEIGHT kg | J kg <sup>m2</sup> |
| 5      | 4                         | 1.14      | 0.0067             |
| 6 1/2  | 4                         | 1.42      | 0.0103             |
| 7 1/2  | 4                         | 1.97      | 0.0171             |
| 8      | 27.6                      | 2.59      | 0.0319             |
| 10     | 14                        | 3.1       | 0.0481             |
| 11 1/2 | 14                        | 3.1       | 0.0481             |

# SINGLE BEARING DIMENSIONS



GIUNTI A DISCO COUPLING DISC PLATEX  
DISQUE DE MONOPALIER SCHEIBENKUPPLUNG  
JUNTAS A DISCOS

| FLANGIA<br>FLANGE<br>BRIDE<br>FLANSCH<br>BRIDAS | SAE N. | O   | P     | Q      | n. for i | α      |
|---|--------|-----|-------|--------|----------|--------|
|   | 6      | 308 | 266.7 | 285.75 | 8        | 22°30' |
|   | 5      | 356 | 314.3 | 333.4  | 8        | 22°30' |
|   | 4      | 403 | 362   | 381    | 12       | 15°    |
|   | 3      | 451 | 409.6 | 428.6  | 12       | 15°    |

| SAE N. | L    | d      | Q1     | n. for i | S1 | α1  |
|--------|------|--------|--------|----------|----|-----|
| 6 1/2  | 30.2 | 215.9  | 200    | 6        | 9  | 60° |
| 7 1/2  | 30.2 | 241.3  | 222.25 | 8        | 9  | 45° |
| 8      | 62   | 263.52 | 244.47 | 6        | 11 | 60° |
| 10     | 53.8 | 314.32 | 295.27 | 8        | 11 | 45° |
| 11 1/2 | 39.6 | 352.42 | 333.37 | 8        | 11 | 45° |

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