



GENERATOR TYPE ECO 32-2L/4

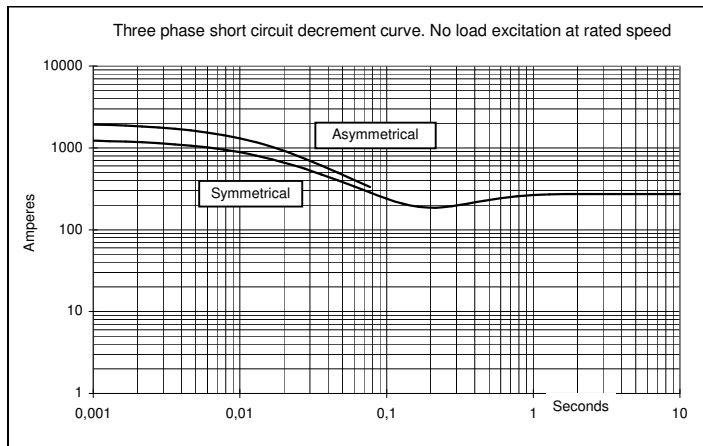
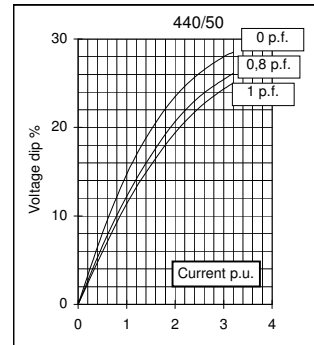
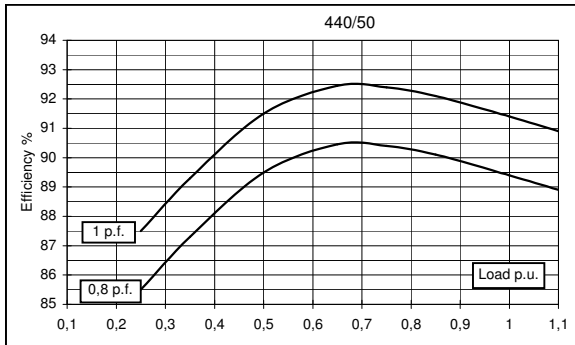
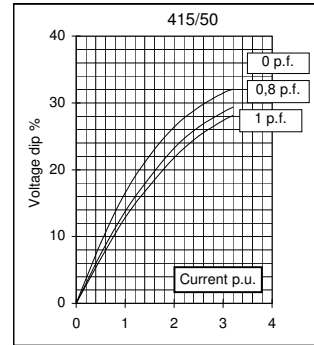
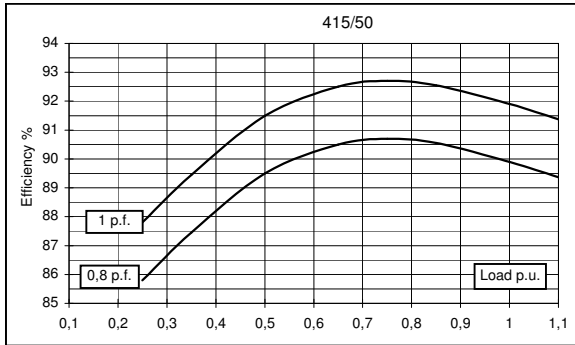
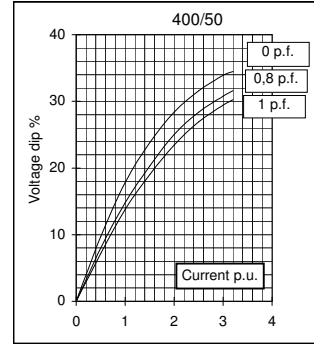
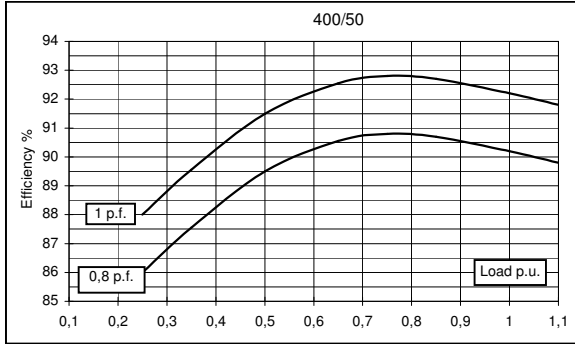
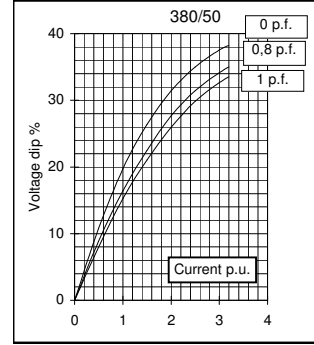
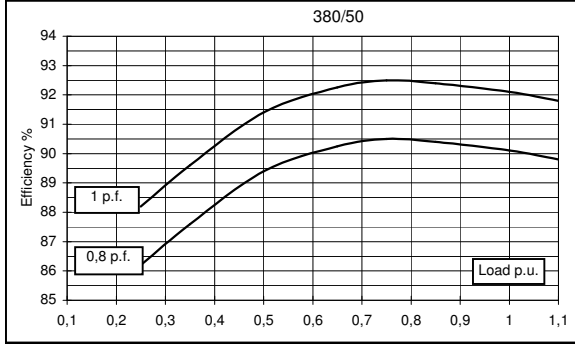
Document : **DS009A/1**
issue 009 date 13/11/2012

| Electrical Characteristics | | | | | | | | | | | |
|--------------------------------------|----------------|--|-------|-------|-------|-------|----------------|-------|-------|------|--|
| Frequency | Hz | 50 | | | | 60 | | | | | |
| Voltage (series star) | V | 380 | 400 | 415 | 440 | 415 | 440 | 460 | 480 | | |
| Rated power class H | kVA | 63 | 63 | 63 | 52 | 63 | 71 | 75,5 | 75,5 | | |
| | kW | 50 | 50 | 50 | 42 | 50 | 56,8 | 60,4 | 60,4 | | |
| Rated power class F | kVA | 60 | 60 | 60 | 47 | 58 | 68 | 72 | 72 | | |
| | kW | 48 | 48 | 48 | 38 | 46 | 54 | 57,6 | 57,6 | | |
| Regulation with | DSR | ±1 % with any power factor and speed variations between -5% +30% | | | | | | | | | |
| Insulation class | | H | | | | | | | | | |
| Execution | | Brushless | | | | | | | | | |
| Stator winding | | 12 ends | | | | | | | | | |
| Rotor | | with damping cage | | | | | | | | | |
| Efficiencies class H | 4/4 | % | 90,1 | 90,2 | 89,9 | 89,4 | 92,1 | 92,6 | 92,7 | 92,8 | |
| (see graph. for details) | 3/4 | % | 90,5 | 90,8 | 90,7 | 90,4 | 92,7 | 92,9 | 93,1 | 93,3 | |
| | 2/4 | % | 89,4 | 89,5 | 89,5 | 89,5 | 90,8 | 90,9 | 91 | 91,1 | |
| | 1/4 | % | 86,2 | 86 | 85,8 | 85,5 | 87 | 87 | 87 | 87 | |
| Reactances (f. l.cl. F) | Xd | % | 314,1 | 283,5 | 263,4 | 193,4 | 316,5 | 317,3 | 308,7 | 284 | |
| | Xd' | % | 14,85 | 13,4 | 12,45 | 9,14 | 14,96 | 15,00 | 14,59 | 13,4 | |
| | Xd'' | % | 7,91 | 7,14 | 6,63 | 4,87 | 7,97 | 7,99 | 7,77 | 7,14 | |
| | Xq | % | 123,0 | 111 | 103,1 | 75,7 | 123,9 | 124,2 | 120,9 | 111 | |
| | Xq' | % | 123,0 | 111 | 103,1 | 75,7 | 123,9 | 124,2 | 120,9 | 111 | |
| | Xq'' | % | 38,3 | 34,6 | 32,1 | 23,6 | 41,5 | 36,8 | 34,6 | 34,6 | |
| | X ₂ | % | 25,93 | 23,4 | 21,74 | 15,96 | 26,12 | 26,19 | 25,48 | 23,4 | |
| | X ₀ | % | 3,49 | 3,15 | 2,93 | 2,15 | 3,52 | 3,53 | 3,43 | 3,15 | |
| Short Circuit Ratio | Kcc | | 0,47 | 0,59 | 0,69 | 1,29 | 0,34 | 0,39 | 0,47 | 0,59 | |
| Time Constants | Td' | sec. | 0,062 | | | | | | | | |
| | Td'' | sec. | 0,014 | | | | | | | | |
| | Tdo' | sec. | 1,20 | | | | | | | | |
| | Tα | sec. | 0,028 | | | | | | | | |
| Short Circuit Current Capacity | | % | >300 | | | | >350 | | | | |
| Excitation at no load | Amp. | | 0,5 | 0,6 | 0,7 | 1 | 0,3 | 0,4 | 0,45 | 0,6 | |
| Excitation at full load | Amp. | | 2 | 2 | 2,5 | 2,9 | 1,7 | 1,8 | 1,9 | 2,1 | |
| Overload (long-term) | % | 1 hour in a 6 hours period 110% rated load | | | | | | | | | |
| Overload per 20 sec. | % | 300 | | | | | | | | | |
| Stator Winding Resistance (20°C) | Ω | 0,041 | | | | | | | | | |
| Rotor Winding Resistance (20°C) | Ω | 2,861 | | | | | | | | | |
| Exciter Resistance (20 °C) | Ω | Rotor : 0,442 | | | | | Stator : 11,35 | | | | |
| Heat dissipation at f.l.cl.H | W | 5538 | 5476 | 5662 | 4932 | 4323 | 4539 | 4756 | 4686 | | |
| Telephone Interference | | THF < 2% | | | | | TIF < 45 | | | | |
| Radio interference | | EN61000-6-3, EN61000-6-1. For others standards apply to factory | | | | | | | | | |
| Waveform Distors.(THD) at f. load | LL/LN % | 3,8 / 3,6 | | | | | | | | | |
| Waveform Distors.(THD) at no load | LL/LN % | 3 / 2,9 | | | | | | | | | |
| Mechanical characteristics | | | | | | | | | | | |
| Protection | | IP 21 (other protection on request) | | | | | | | | | |
| DE bearing | | 6312-2RS | | | | | | | | | |
| NDE bearing | | 6309-2RS | | | | | | | | | |
| Weight of wound stator assembly | kg | 95 | | | | | | | | | |
| Weight of wound rotor assembly | kg | 64,5 | | | | | | | | | |
| Weight of complete generator | kg | 282 | | | | | | | | | |
| Maximun overspeed | rpm | 2250 | | | | | | | | | |
| Unbalanced magnetic pull at f.l.cl.F | kN/mm | 4,7 | | | | | | | | | |
| Cooling air requirement | m³/min | 11,8 | | | | | 14,5 | | | | |
| Inertia Constant (H) | sec. | 0,098 | | | | | 0,118 | | | | |
| Noise level at 1m/7m | dB(A) | 75 / 60 | | | | | 79 / 64 | | | | |

All technical data are to be considered as a reference and they can be modified without any notice.
This document is a propriety of Mecc Alte S.p.a..All rights reserved.



50 Hz



This document is a propriety of Mecc Alte S.p.a.. All rights reserved.

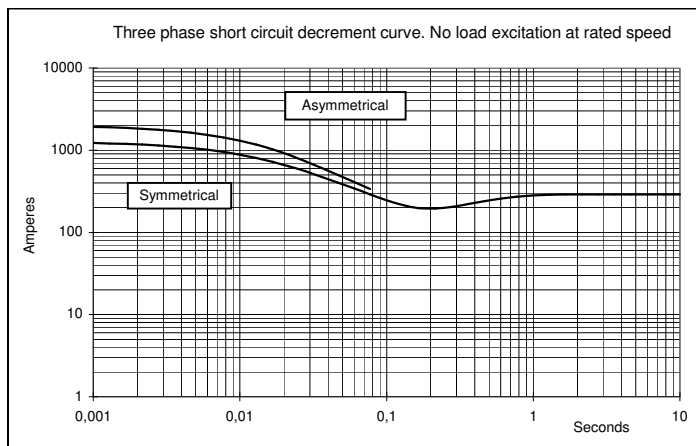
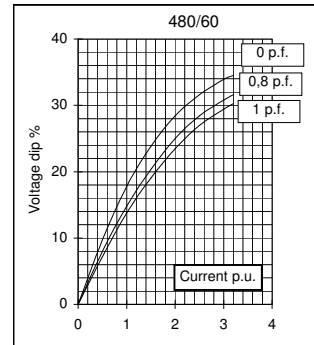
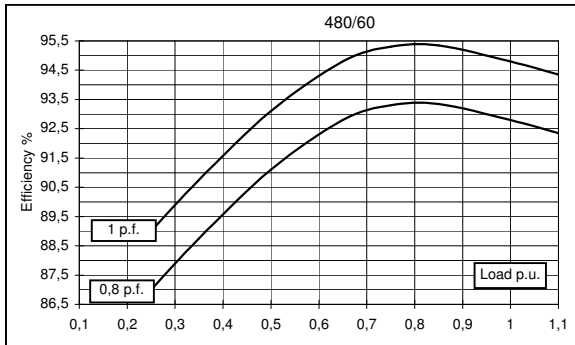
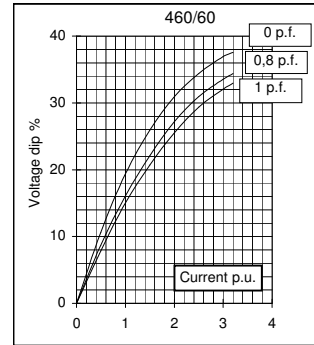
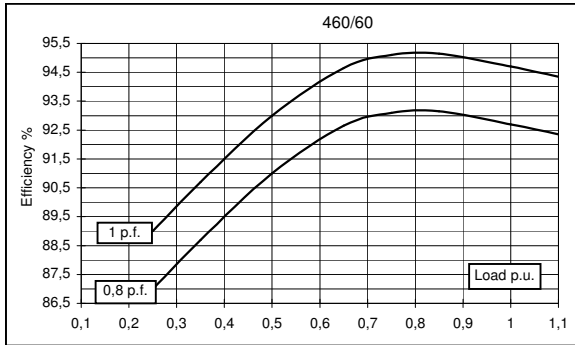
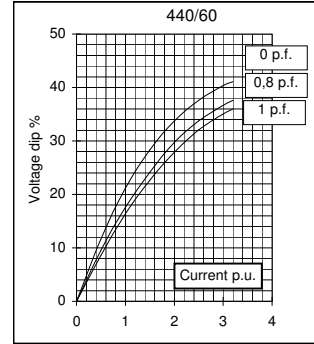
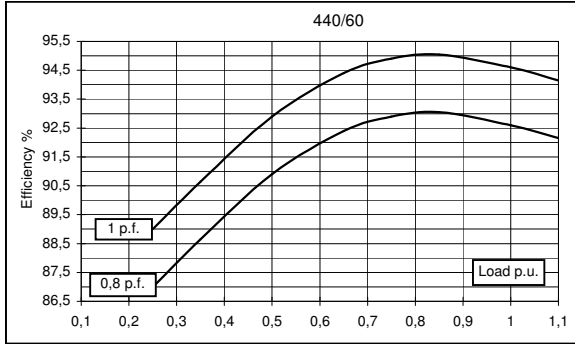
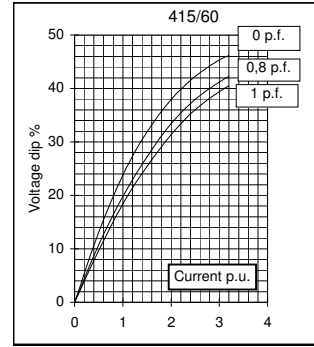
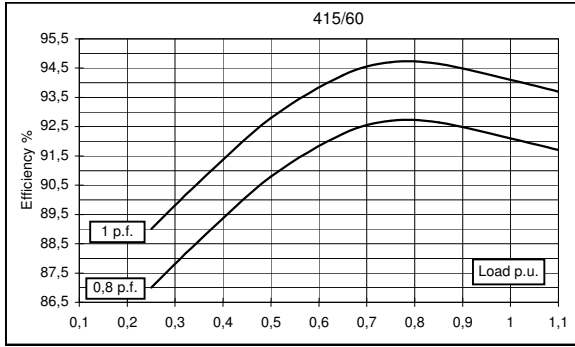


GENERATOR TYPE ECO 32-2L/4

Document : DS009A/3

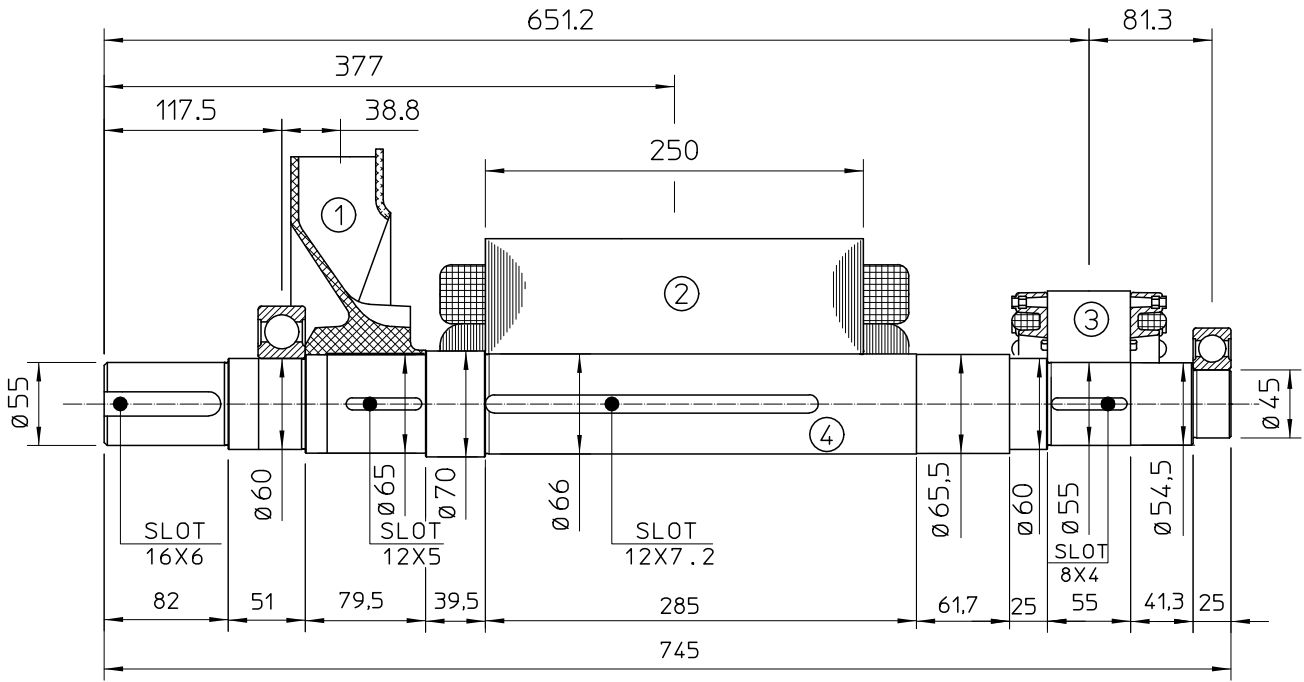
issue 008 date : 13/11/2012

60 Hz



This document is a propriety of Mecc Alte S.p.a.. All rights reserved.

TWO BEARING MOMENTS OF INERTIA

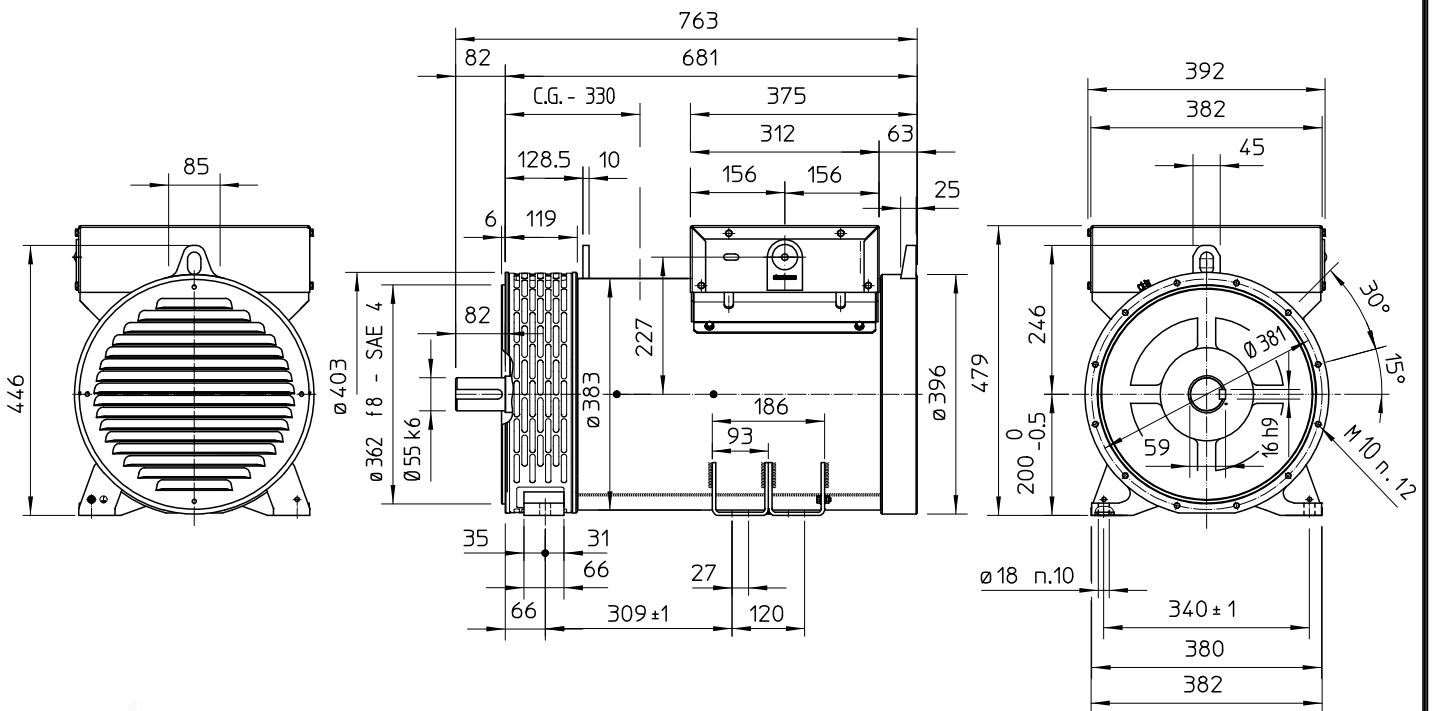


| POS. | COMPONENT | WEIGHT (kg) | J (kgm ²) |
|-------|------------|-------------|-----------------------|
| 1 | FAN | 2.3 | 0.0224 |
| 2 | MAIN ROTOR | 64.5 | 0.4579 |
| 3 | EX. ROTOR | 7 | 0.016 |
| 4 | SHAFT | 17.3 | 0.0067 |
| TOTAL | | 91.1 | 0.503 |

RAD Diesel

021-58437

TWO BEARING DIMENSIONS

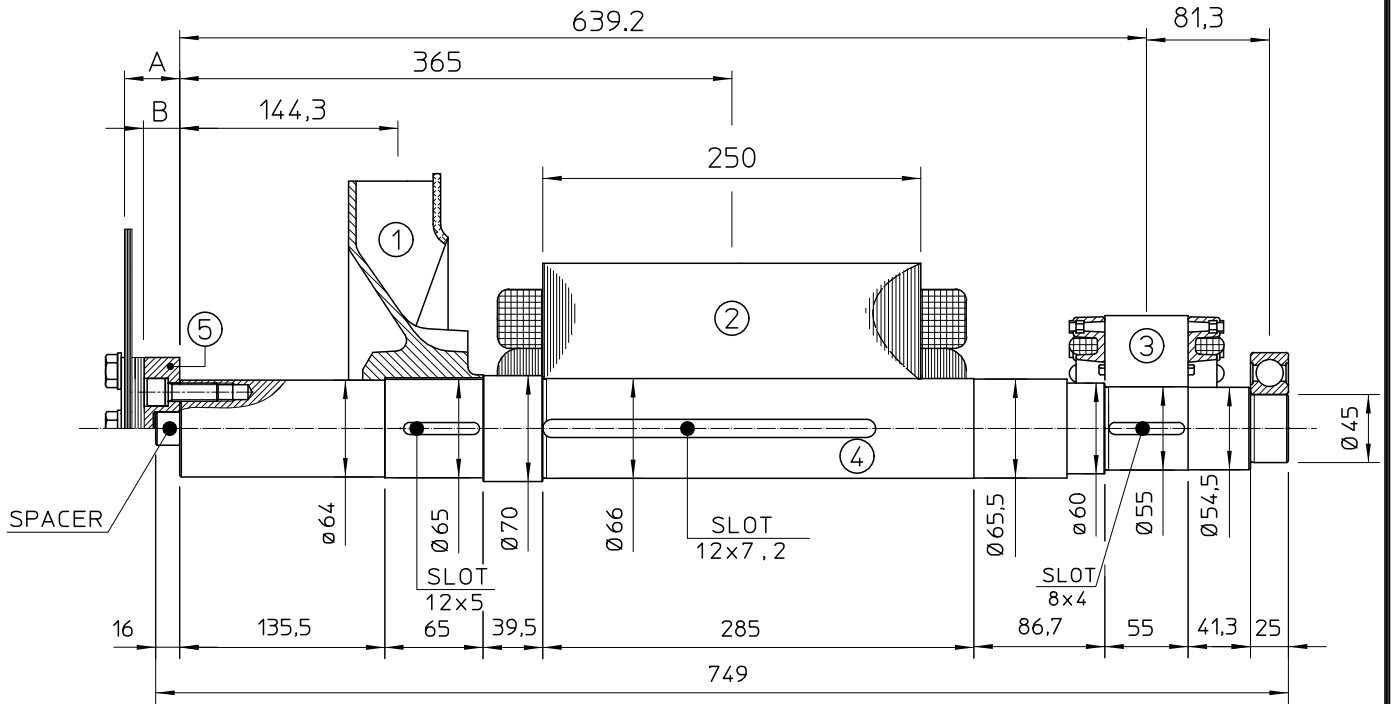


RAD Diesel

021-58437

C.G.= GRAVITY CENTER

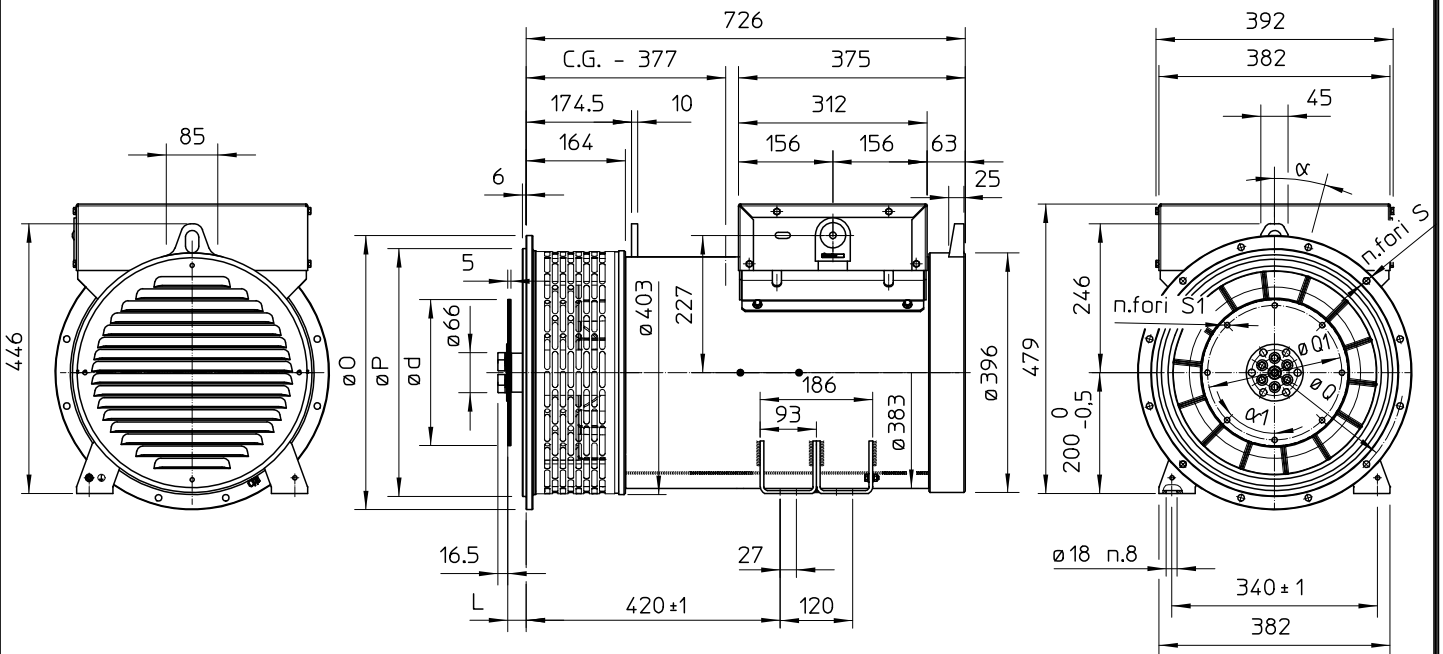
SINGLE BEARING MOMENTS OF INERTIA



| POS. | COMPONENT | WEIGHT (kg) | J (kgm ²) |
|-------|------------|-------------|-----------------------|
| 1 | FAN | 2.3 | 0.0224 |
| 2 | MAIN ROTOR | 64.5 | 0.4579 |
| 3 | EX. ROTOR | 7 | 0.016 |
| 4 | SHAFT | 17.6 | 0.0090 |
| TOTAL | | 91.4 | 0.5053 |

| SAE N° | 5 | | SHAFTS COUPLING FLEX PLATE | |
|--------|------|------|----------------------------|--------------------|
| | A | B | WEIGHT kg | J kgm ² |
| 6.5 | 5 | 2.5 | 1.74 | 0.0084 |
| 7.5 | 5 | 2.5 | 2.1 | 0.013 |
| 8 | 36.6 | 28.1 | 3.9 | 0.02 |
| 10 | 28.6 | 21.6 | 4.47 | 0.038 |
| 11.5 | 15 | 11.5 | 4.51 | 0.059 |

SINGLE BEARING DIMENSIONS



| SAE N. | FLANGIA / FLANGE BRIDE / FLANSCH | | | | | |
|--------|-------------------------------------|-------|-------|----|------------------|----|
| | O | P | Q | S | N. FORI HOLES N° | α |
| 5 | 356 | 314.3 | 333.4 | 11 | 8 | 45 |
| 4 | 403 | 362 | 381 | 11 | 12 | 30 |
| 3 | 451 | 409.6 | 428.6 | 11 | 12 | 30 |
| 2 | 490 | 447.7 | 466.7 | 11 | 12 | 30 |
| 1 | 552 | 511.2 | 530.2 | 11 | 12 | 30 |

| SAE N. | GIUNTI A DISCHI / DISC COUPLING DISCQUE DE MONOPALIER / SCHEIBENKUPPLUNG | | | | | | |
|--------|---|------|--------|----|------------------|----|--|
| | d | L | Q1 | S1 | N. FORI HOLES N° | α1 | |
| 6 1/2 | 215.9 | 30.2 | 200 | 9 | 6 | 60 | |
| 7 1/2 | 241.3 | 30.2 | 222.25 | 9 | 8 | 45 | |
| 8 | 263.52 | 62 | 244.47 | 11 | 6 | 60 | |
| 10 | 314.32 | 53.8 | 295.27 | 11 | 8 | 45 | |
| 11 1/2 | 352.42 | 39.6 | 333.37 | 11 | 8 | 45 | |

C.G.= GRAVITY CENTER