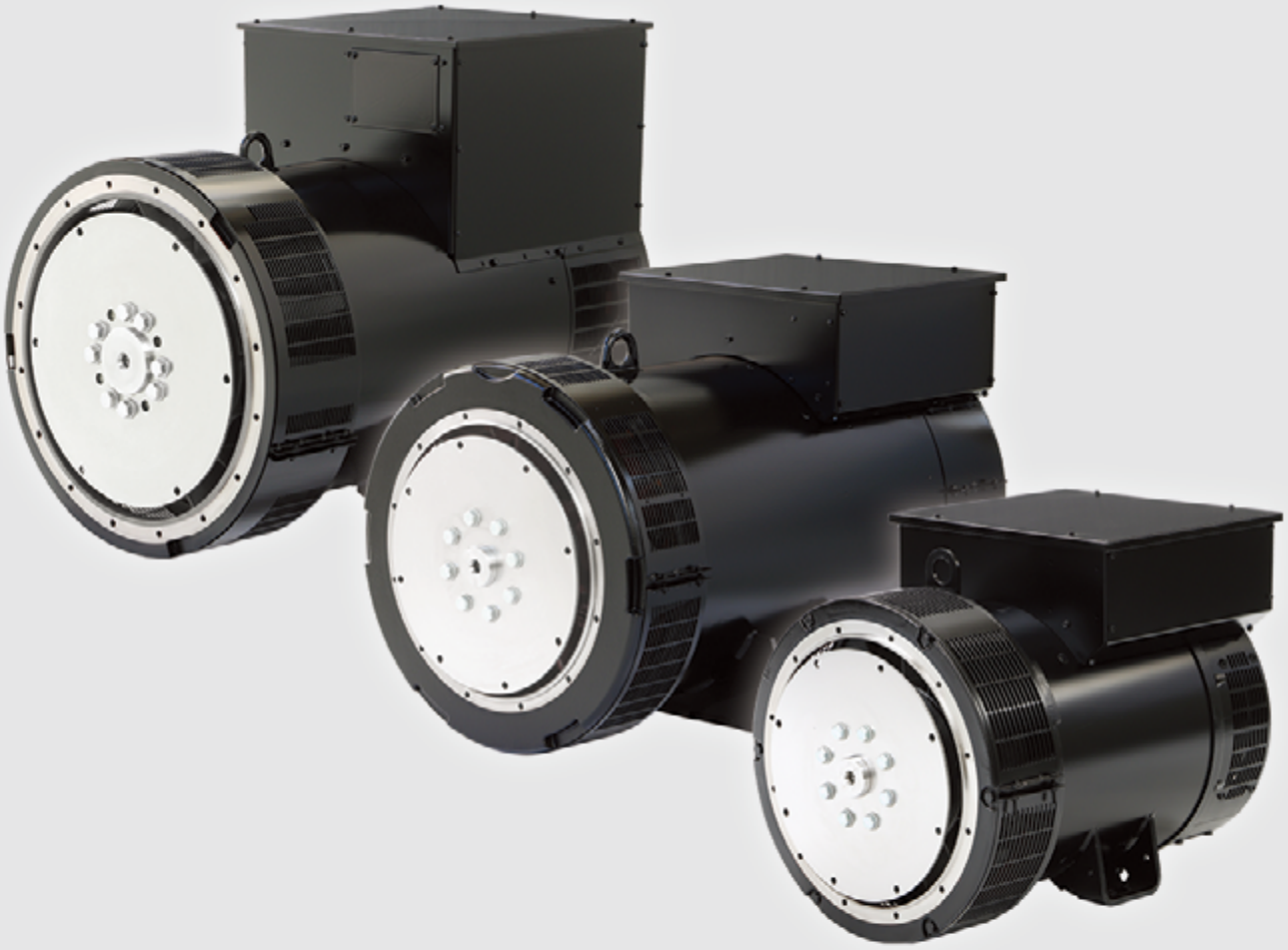


# Low Voltage Alternators - 4 pole

## TAL A46 - TAL A47 - TAL A49

230 to 1000 kVA - 50 Hz / 288 to 1250 kVA - 60 Hz

Electrical and Mechanical data

LEROY-SOMER™

Nidec

All for dreams

# Low Voltage Alternators - 4 pole
## TALA46 - TALA47 - TALA49

### Adapted to needs

The TAL alternator range is designed to meet the specific needs of telecommunications, commercial & industrial markets, as well as prime and stand-by power applications.

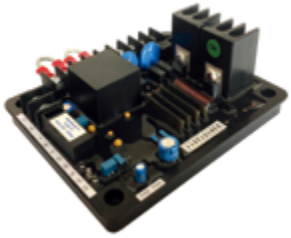


### Compliance with internationally recognized standards

4 Pole Altemators are in compliance to the main international standards and regulations:
-IEC 60034, NEMA MG 1.32-33, BS 5000 Part 99, VDE 0530, ISO 8528/3, UL 1446, UL 1004 on request and depending on voltages, marin regulations, etc. It can be integrated into a CE marked generator.
Alternators are designed, manufactured and marketed in an ISO 9001 and ISO14001 environments.

### Electrical design

- Class H insulation
- Low voltage winding
- 6-terminal plate (adapted plate for 6 & 12 wires machine)
- Possibility of star and delta connection
- Optimized performance

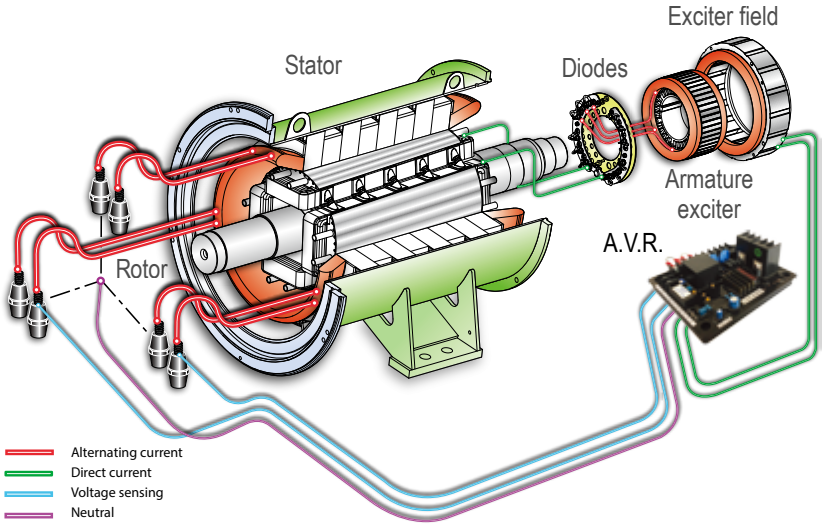


### Robust design

- Compact and rugged assembly to withstand engine vibrations
- Steel frame
- Cast iron flanges and shields
- Single bearing design to be suitable with most diesel engines
- Sealed for life bearing
- Direction of rotation clockwise

### Compact terminal box

- Easy access to AVR and terminals
- Standard terminal box with possibility of mounting Measuring/ protection CT (Please consult Leroy Somer for CT type)
- Possibility of current transformer for parallel operation




### Environment and protection

- The alternators are IP 23
- Standard winding protection for non-harsh environments with relative humidity ≤ 95%

### Available options

- AREP & PMG
- 12-lead
- Customized painting
- Space heater
- Droop kit for alternator paralleling
- CE mark
- Stator sensors
- Measuring/Protection CT (Please consult Leroy Somer for CT type)
- Voltage trimmer
- Winding protection for harsh environments and relative humidity greater than 95% (system 2 - 4): De-rating ratio according to 3%

## General characteristics

| | |
|---|---|
| Insulation class | H |
| Winding pitch | 2/3 (wind.6S - 6-wire / wind.6 - 12-wire) |
| Number of wires | 6-wire (12-wire option) |
| Protection | IP 23 |
| Altitude | ≤ 1000 m |
| Overspeed | 2250 R.P.M. |
| Air flow ($m^3/s$) | 0.48 |
| Air flow ($m^3/s$) | 0.58 |
| AREP Short-circuit current = 2.7 In: 5 second | |

| | | |
|---|---|---|
| Excitation system 6-wire | SHUNT | AREP / PMG |
| AVR type | R150 | R180 |
| Excitation system 12-wire (option) | SHUNT | AREP / PMG |
| AVR type | R250 | R180 |
| Voltage regulation (*) | ± 1 % | |
| Total Harmonic Distortion THD (**) in no-load | < 2.5 % | |
| Total Harmonic Distortion THD (**) in linear load | < 5 % | |
| Waveform: NEMA = TIF (**) | < 50 | |
| Waveform: I.E.C. = THF (**) | < 2% | |

(*) Steady state (**) Total harmonic distortion between phases, no-load or on-load (non-distorting)

## Ratings 50 Hz - 1500 R.P.M.

**kVA / kW - P.F. = 0.8**

| Duty / T° C | | Continuous / 40 °C | | | | | Continuous / 40 °C | | | | | Stand-by / 40 °C | | | | | Stand-by / 27 °C | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class / T° K | | H / 125° K | | | | | F / 105° K | | | | | H / 150° K | | | | | H / 163° K | | | | |
| Phase | | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. |
| **Y** | | 380V | 400V | 415V | 440V | | 380V | 400V | 415V | 440V | | 380V | 400V | 415V | 440V | | 380V | 400V | 415V | 440V | |
| Δ | | 220V | 230V | 240V | | 230V | 220V | 230V | 240V | | 230V | 220V | 230V | 240V | | 230V | 220V | 230V | 240V | | 230V |
| YY (*) | | | 200V | | 220V | | | 200V | | 220V | | | 200V | | 220V | | | 200V | | 220V | |
| ΔΔ (*) | | | | | | 230V | | | | | 230V | | | | | 230V | | | | | 230V |
| **TAL A46 C** | kVA | 230 | **230** | 230 | 219 | 138 | 209 | **209** | 209 | 199 | 126 | 244 | **244** | 244 | 232 | 146 | 253 | **253** | 253 | 241 | 152 |
| | *kW* | *184* | *184* | *184* | *175* | *110* | *167* | *167* | *167* | *159* | *101* | *195* | *195* | *195* | *186* | *117* | *202* | *202* | *202* | *193* | *122* |
| **TAL A46 D** | kVA | 240 | **250** | 250 | 238 | 150 | 218 | **228** | 228 | 217 | 137 | 254 | **265** | 265 | 252 | 159 | 264 | **275** | 275 | 262 | 165 |
| | *kW* | *192* | *200* | *200* | *190* | *120* | *175* | *182* | *182* | *174* | *110* | *204* | *212* | *212* | *202* | *127* | *211* | *220* | *220* | *210* | *132* |
| **TAL A46 E** | kVA | 275 | **275** | 275 | 261 | 165 | 250 | **250** | 250 | 238 | 150 | 292 | **292** | 292 | 277 | 175 | 303 | **303** | 303 | 287 | 182 |
| | *kW* | *220* | *220* | *220* | *209* | *132* | *200* | *200* | *200* | *190* | *120* | *234* | *234* | *234* | *222* | *140* | *242* | *242* | *242* | *230* | *146* |
| **TAL A46 F** | kVA | 290 | **300** | 300 | 285 | 180 | 264 | **273** | 273 | 259 | 164 | 307 | **318** | 318 | 302 | 191 | 319 | **330** | 330 | 314 | 198 |
| | *kW* | *232* | *240* | *240* | *228* | *144* | *211* | *218* | *218* | *207* | *131* | *246* | *254* | *254* | *242* | *153* | *255* | *264* | *264* | *251* | *158* |
| **TAL A46 G** | kVA | 325 | **325** | 325 | 309 | 195 | 296 | **296** | 296 | 281 | 177 | 345 | **345** | 345 | 328 | 207 | 360 | **360** | 360 | 340 | 215 |
| | *kW* | *260* | *260* | *260* | *247* | *156* | *237* | *237* | *237* | *225* | *142* | *276* | *276* | *276* | *262* | *166* | *288* | *288* | *288* | *272* | *172* |
| **TAL A46 H** | kVA | 350 | **365** | 365 | 347 | 210 | 318 | **332** | 332 | 316 | 191 | 371 | **387** | 387 | 368 | 223 | 385 | **400** | 400 | 382 | 231 |
| | *kW* | *280* | *292* | *292* | *278* | *168* | *255* | *266* | *266* | *253* | *153* | *297* | *310* | *310* | *294* | *178* | *308* | *320* | *320* | *306* | *185* |

(*) 12-wire option

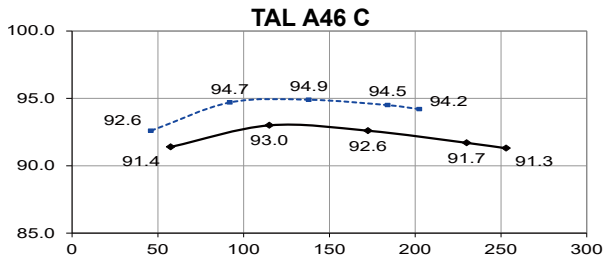
## Ratings 60 Hz - 1800 R.P.M.

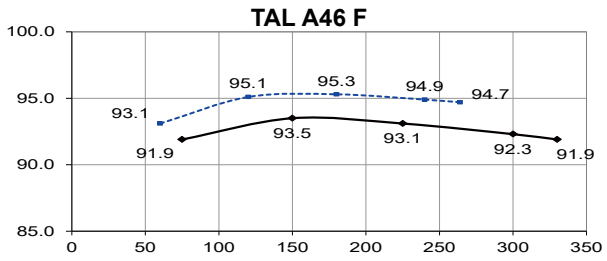
**kVA / kW - P.F. = 0.8**

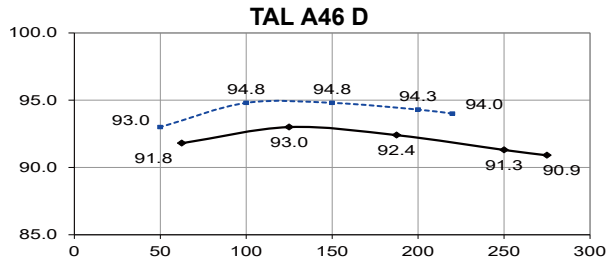
| Duty / T° C | | Continuous / 40 °C | | | | | Continuous / 40 °C | | | | | Stand-by / 40 °C | | | | | Stand-by / 27 °C | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class / T° K | | H / 125° K | | | | | F / 105° K | | | | | H / 150° K | | | | | H / 163° K | | | | |
| Phase | | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. | 3 ph. | | | | 1 ph. |
| **Y** | | 380V | 416V | 440V | 480V | | 380V | 416V | 440V | 480V | | 380V | 416V | 440V | 480V | | 380V | 416V | 440V | 480V | |
| Δ | | 220V | 240V | | | 240V | 220V | 240V | | | 240V | 220V | 240V | | | 240V | 220V | 240V | | | 240V |
| YY (*) | | | 208V | 220V | 240V | | | 208V | 220V | 240V | | | 208V | 220V | 240V | | | 208V | 220V | 240V | |
| ΔΔ (*) | | | | | | 240V | | | | | 240V | | | | | 240V | | | | | 240V |
| **TAL A46 C** | kVA | 226 | 250 | 262 | **288** | 152 | 206 | 228 | 238 | **262** | 138 | 240 | 265 | 278 | **305** | 161 | 250 | 275 | 288 | **316** | 167 |
| | *kW* | *181* | *200* | *210* | *230* | *122* | *165* | *182* | *190* | *210* | *110* | *192* | *212* | *222* | *244* | *129* | *200* | *220* | *230* | *253* | *134* |
| **TAL A46 D** | kVA | 245 | 265 | 280 | **313** | 165 | 223 | 241 | 255 | **285** | 150 | 260 | 281 | 297 | **332** | 175 | 270 | 292 | 308 | **344** | 182 |
| | *kW* | *196* | *212* | *224* | *250* | *132* | *178* | *193* | *204* | *228* | *120* | *208* | *225* | *238* | *266* | *140* | *216* | *234* | *246* | *275* | *146* |
| **TAL A46 E** | kVA | 275 | 300 | 315 | **344** | 182 | 250 | 273 | 287 | **313** | 166 | 292 | 318 | 334 | **365** | 193 | 303 | 330 | 347 | **378** | 200 |
| | *kW* | *220* | *240* | *252* | *275* | *146* | *200* | *218* | *230* | *250* | *133* | *234* | *254* | *267* | *292* | *154* | *242* | *264* | *278* | *302* | *160* |
| **TAL A46 F** | kVA | 290 | 315 | 340 | **360** | 200 | 264 | 287 | 309 | **328** | 182 | 307 | 334 | 360 | **382** | 212 | 320 | 347 | 374 | **400** | 220 |
| | *kW* | *232* | *252* | *272* | *288* | *160* | *211* | *230* | *247* | *262* | *146* | *246* | *267* | *288* | *306* | *170* | *256* | *278* | *299* | *320* | *176* |
| **TAL A46 G** | kVA | 315 | 345 | 365 | **406** | 215 | 287 | 314 | 332 | **369** | 196 | 334 | 366 | 387 | **430** | 228 | 347 | 380 | 402 | **447** | 237 |
| | *kW* | *252* | *276* | *292* | *325* | *172* | *230* | *251* | *266* | *295* | *157* | *267* | *293* | *310* | *344* | *182* | *278* | *304* | *322* | *358* | *190* |
| **TAL A46 H** | kVA | 345 | 375 | 400 | **438** | 231 | 314 | 341 | 364 | **399** | 210 | 366 | 398 | 424 | **464** | 245 | 380 | 413 | 440 | **480** | 254 |
| | *kW* | *276* | *300* | *320* | *350* | *185* | *251* | *273* | *291* | *319* | *168* | *293* | *318* | *339* | *371* | *196* | *304* | *330* | *352* | *384* | *203* |

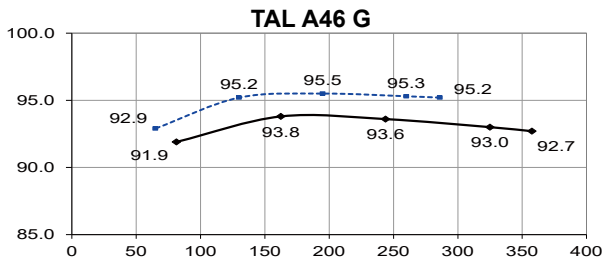
(*) 12-wire option

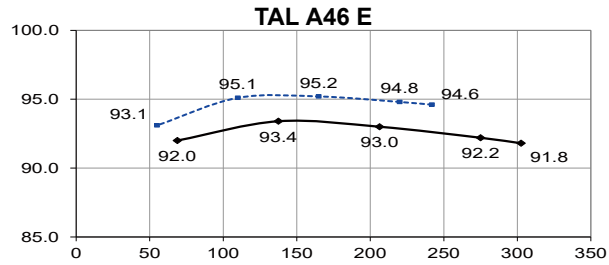
## Efficiencies 400 V - 50 Hz (— P.F.: 0.8) (····· P.F.: 1)

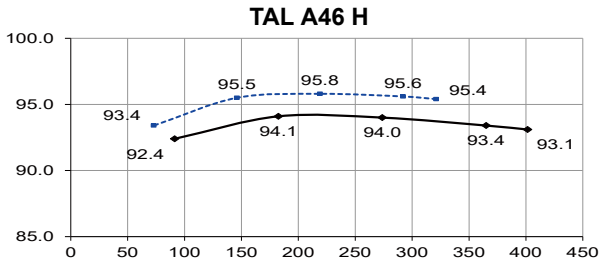



## Reactances (%). Time constants (ms) - Class H / 400 V

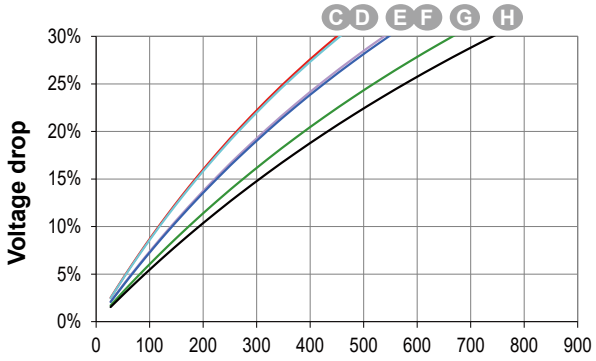
| | | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| **Kcc** | Short-circuit ratio | 0.37 | 0.34 | 0.37 | 0.4 | 0.45 | 0.43 |
| **Xd** | Direct-axis synchro. reactance unsaturated | 340 | 370 | 347 | 335 | 297 | 303 |
| **Xq** | Quadrature-axis synchro. reactance unsaturated | 173 | 188 | 177 | 171 | 151 | 154 |
| **T'do** | No-load transient time constant | 1983 | 1983 | 2018 | 2033 | 2072 | 2093 |
| **X'd** | Direct-axis transient reactance saturated | 17.1 | 18.6 | 17.1 | 16.5 | 14.3 | 14.5 |
| **T'd** | Short-circuit transient time constant | 100 | 100 | 100 | 100 | 100 | 100 |
| **X"d** | Direct-axis subtransient reactance saturated | 13.7 | 14.9 | 13.7 | 13.2 | 11.4 | 11.6 |
| **T"d** | Subtransient time constant | 10 | 10 | 10 | 10 | 10 | 10 |
| **X"q** | Quadrature-axis subtransient reactance saturated | 17.4 | 18.9 | 17.2 | 16.4 | 14.1 | 14.2 |
| **Xo** | Zero sequence reactance | 0.71 | 0.77 | 0.71 | 0.68 | 0.59 | 0.6 |
| **X2** | Negative sequence reactance saturated | 15.6 | 16.9 | 15.5 | 14.8 | 12.8 | 12.9 |
| **Ta** | Armature time constant | 15 | 15 | 15 | 15 | 15 | 15 |

## Other class H / 400 V data

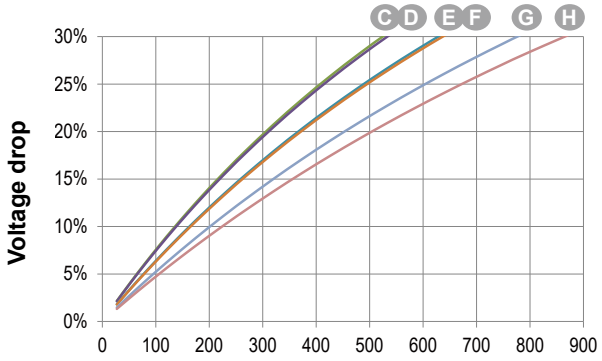
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **io (A)** | No-load excitation current SHUNT/AREP | 1.01 | 1.01 | 1.1 | 1.1 | 1.06 | 1.06 |
| **ic (A)** | On-load excitation current SHUNT/AREP | 3.84 | 4.14 | 3.99 | 3.64 | 3.63 | 3.63 |
| **uc (V)** | On-load excitation voltage SHUNT/AREP | 37.4 | 40.2 | 55.6 | 46.2 | 42.1 | 41.9 |
| **ms** | Response time (ΔU = 20% transient) | 500 | 500 | 500 | 500 | 500 | 500 |
| **kVA** | Start (ΔU = 20% cont. or ΔU = 30% trans.) SHUNT* | 372 | 371 | 444 | 445 | 556 | 618 |
| **kVA** | Start (ΔU = 20% cont. or ΔU = 30% trans.) AREP* | 446 | 447 | 533 | 534 | 667 | 741 |
| **%** | Transient ΔU (on-load 4/4) SHUNT - P.F.: 0.8 $_{LAG}$ | 18 | 19.1 | 18 | 19.1 | 17.4 | 17.4 |
| **%** | Transient ΔU (on-load 4/4) AREP - P.F.: 0.8 $_{LAG}$ | 15.8 | 16.8 | 16.2 | 17.2 | 17.3 | 15.4 |
| **W** | No-load losses | 3297 | 3297 | 3625 | 4013 | 4541 | 4750 |
| **W** | Heat dissipation | 16562 | 18869 | 18504 | 19800 | 19303 | 20484 |

* P.F. = 0.6

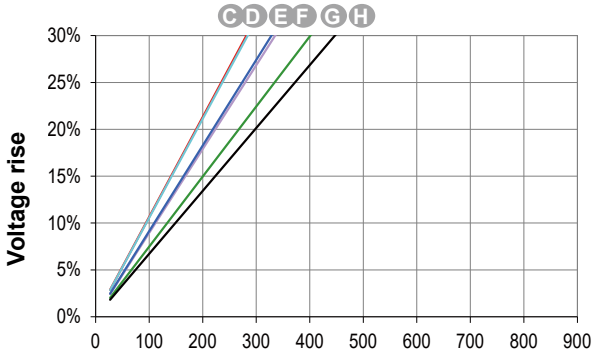
## Transient voltage variation 400 V - 50 Hz



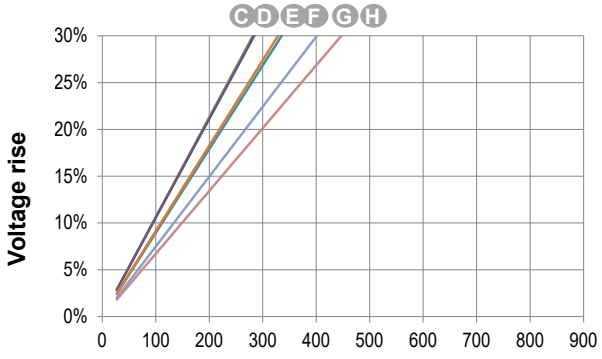

**Phase loading (SHUNT) - kVA at P.F. = 0.8**



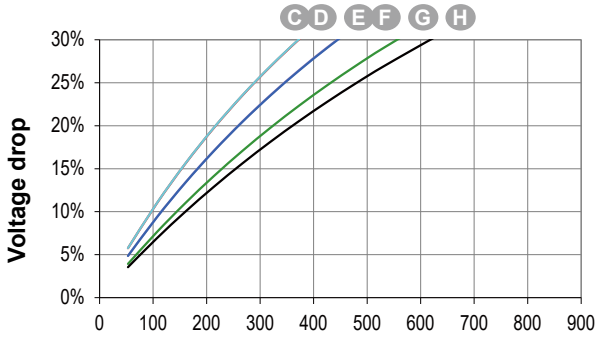

**Phase loading (AREP) - kVA at P.F. = 0.8**



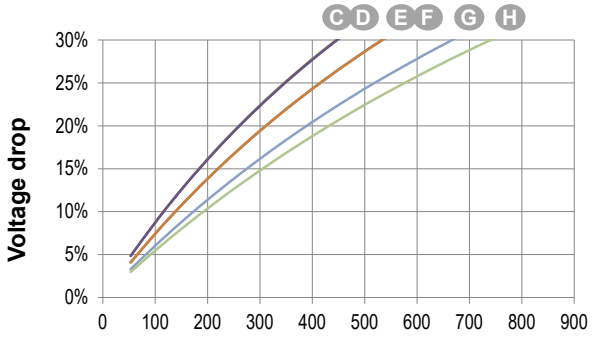

**Load shedding (SHUNT) - kVA at P.F. = 0.8**




**Load shedding (AREP) - kVA at P.F. = 0.8**



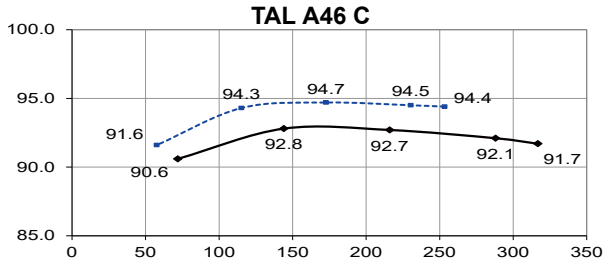

**Motor starting (SHUNT)**
**Locked rotor kVA at P.F. = 0.6**

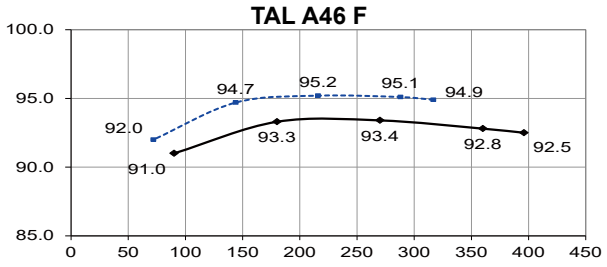


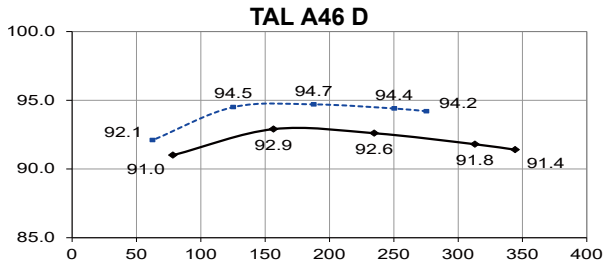

**Motor starting (AREP)**
**Locked rotor kVA at P.F. = 0.6**

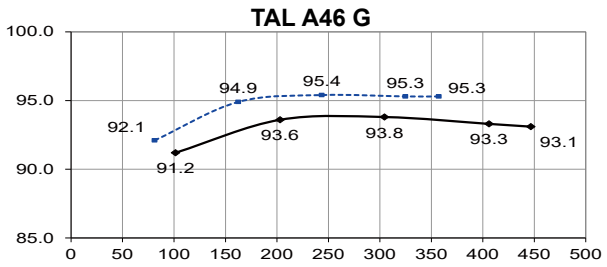
1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by K = Sine P.F. / 0.8
2) For voltages other than 400V (Y), 230V (Δ) at 50 Hz, then kVA must be multiplied by $(400/U)^2$ or $(230/U)^2$.

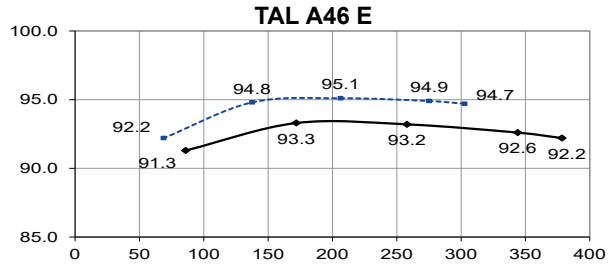
## Efficiencies 480 V - 60 Hz (— P.F.: 0.8) (····· P.F.: 1)

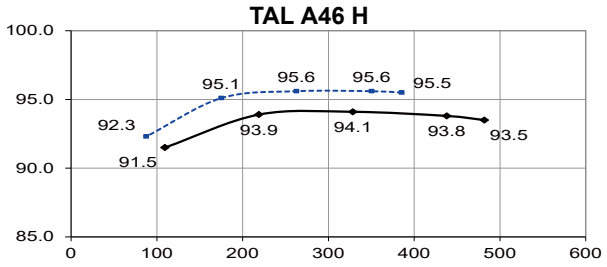


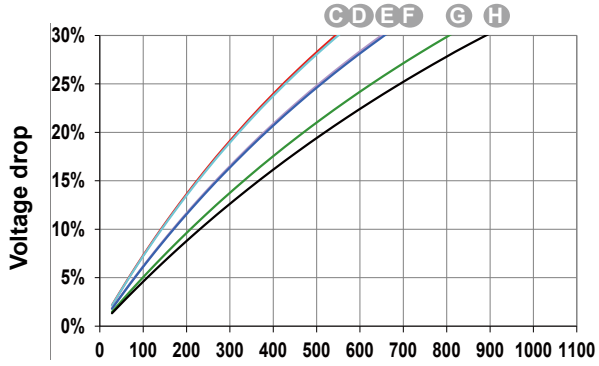




## Reactances (%). Time constants (ms) - Class H / 480 V

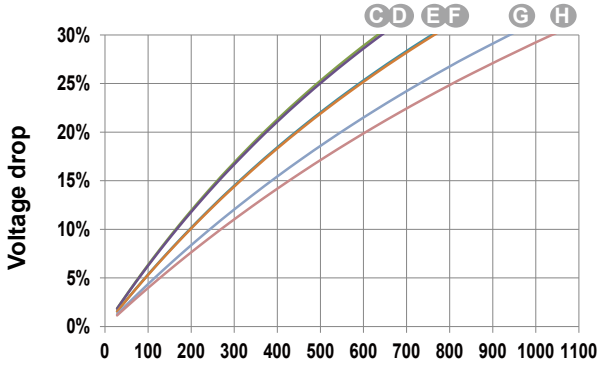
| | | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| **Kcc** | Short-circuit ratio | 0.36 | 0.33 | 0.35 | 0.4 | 0.43 | 0.43 |
| **Xd** | Direct-axis synchro. reactance unsaturated | 355 | 386 | 361 | 335 | 309 | 303 |
| **Xq** | Quadrature-axis synchro. reactance unsaturated | 181 | 197 | 184 | 171 | 157 | 154 |
| **T'do** | No-load transient time constant | 1983 | 1983 | 2018 | 2033 | 2072 | 2093 |
| **X'd** | Direct-axis transient reactance saturated | 17.9 | 19.4 | 17.9 | 16.5 | 14.9 | 14.5 |
| **T'd** | Short-circuit transient time constant | 100 | 100 | 100 | 100 | 100 | 100 |
| **X"d** | Direct-axis subtransient reactance saturated | 14.3 | 15.5 | 14.3 | 13.2 | 1.9 1 | 11.6 |
| **T"d** | Subtransient time constant | 10 | 10 | 10 | 10 | 10 | 10 |
| **X"q** | Quadrature-axis subtransient reactance saturated | 18.1 | 19.7 | 18 | 16.4 | 14.7 | 14.2 |
| **Xo** | Zero sequence reactance | 0.74 | 0.81 | 0.74 | 0.68 | 0.62 | 0.6 |
| **X2** | Negative sequence reactance saturated | 16.2 | 17.6 | 16.2 | 14.8 | 13.3 | 12.9 |
| **Ta** | Armature time constant | 15 | 15 | 15 | 15 | 15 | 15 |
| **Other class H / 480 V data** | | | | | | | |
| **io (A)** | No-load excitation current SHUNT/AREP | 1.01 | 1.01 | 1.03 | 1.1 | 1.1 | 1.06 |
| **ic (A)** | On-load excitation current SHUNT/AREP | 3.91 | 4.21 | 4.03 | 3.91 | 3.69 | 3.56 |
| **uc (V)** | On-load excitation voltage SHUNT/AREP | 38.3 | 41.1 | 56.7 | 45.5 | 42.9 | 41.3 |
| **ms** | Response time (ΔU = 20% transient) | 500 | 500 | 500 | 500 | 500 | 500 |
| **kVA** | Start (ΔU = 20% cont. or ΔU = 30% trans.) SHUNT* | 446 | 448 | 532 | 534 | 665 | 742 |
| **kVA** | Start (ΔU = 20% cont. or ΔU = 30% trans.) AREP* | 537 | 536 | 639 | 640 | 798 | 889 |
| **%** | Transient ΔU (on-load 4/4) SHUNT - P.F.: 0.8 $_{LAG}$ | 18.5 | 19.6 | 18.5 | 19.1 | 17.8 | 17.4 |
| **%** | Transient ΔU (on-load 4/4) AREP - P.F.: 0.8 $_{LAG}$ | 16.3 | 17.3 | 16.7 | 17.2 | 16 | 15.7 |
| **W** | No-load losses | 4958 | 4958 | 5412 | 5935 | 6673 | 6978 |
| **W** | Heat dissipation | 19674 | 22244 | 21910 | 22085 | 23012 | 23141 |

* P.F. = 0.6

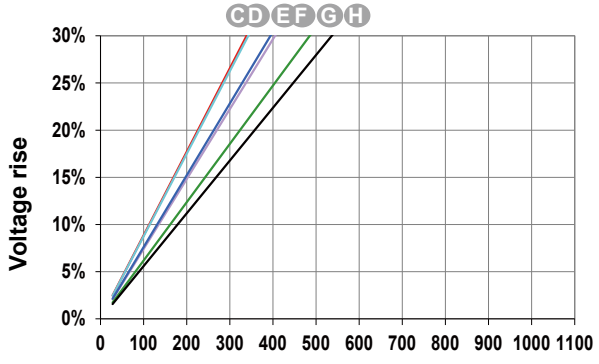
## Transient voltage variation 480 V - 60 Hz



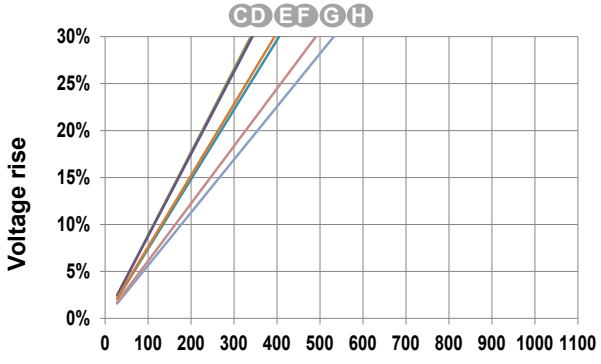

**Phase loading (SHUNT) - kVA at P.F. = 0.8**



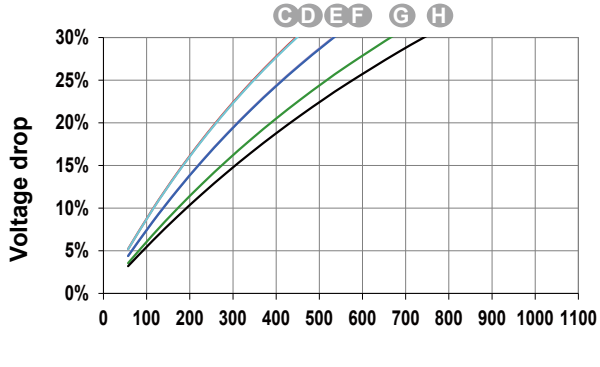

**Phase loading (AREP) - kVA at P.F. = 0.8**



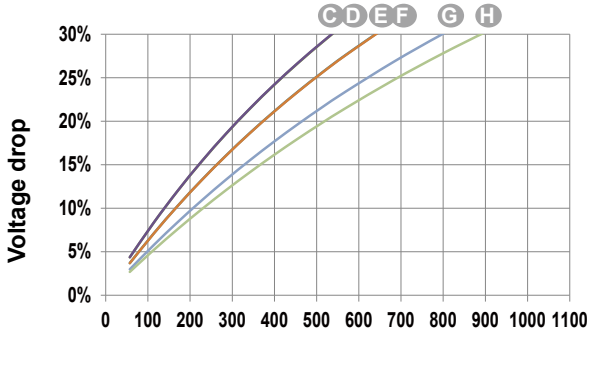

**Load shedding (SHUNT) - kVA at P.F. = 0.8**




**Load shedding (AREP) - kVA at P.F. = 0.8**




**Motor starting (SHUNT)**
**Locked rotor kVA at P.F. = 0.6**



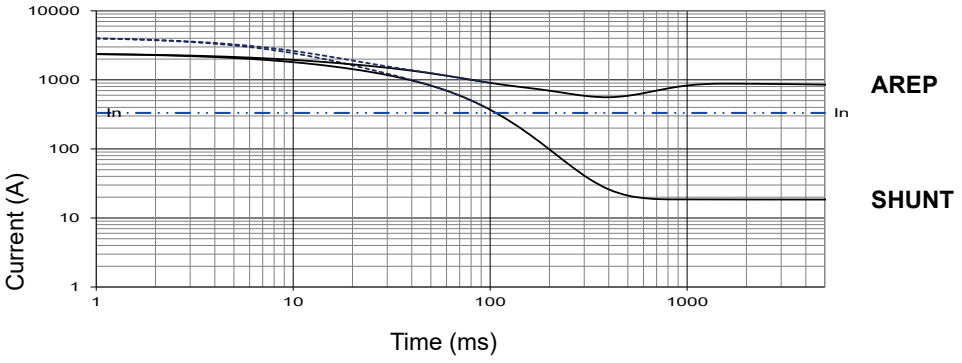

**Motor starting (AREP)**
**Locked rotor kVA at P.F. = 0.6**

**1) For a starting P.F. other than 0.6, the starting kVA must be multiplied by K = Sine P.F. / 0.8**
**2) For voltages other than 480V (Y), 277V (Δ), 240V (YY) at 60 Hz, then kVA must be multiplied by $(480/U)^2$ or $(277/U)^2$ or $(240/U)^2$.**

## 3-phase short-circuit curves at no load and rated speed (star connection Y)

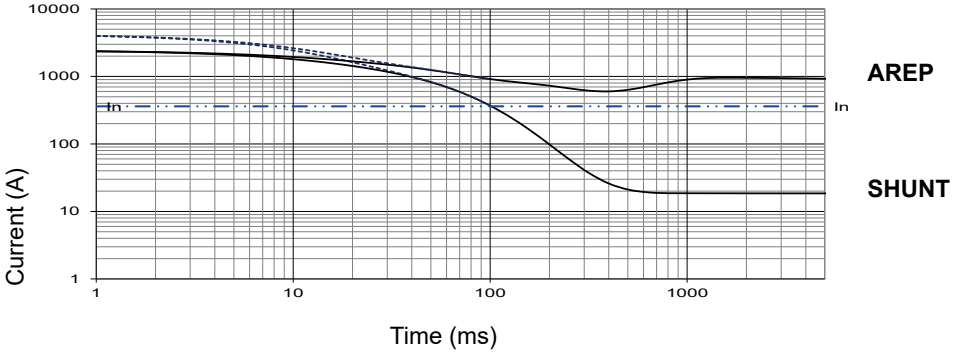
**TAL A46 C**

Symmetrical ——
Asymmetrical - - -



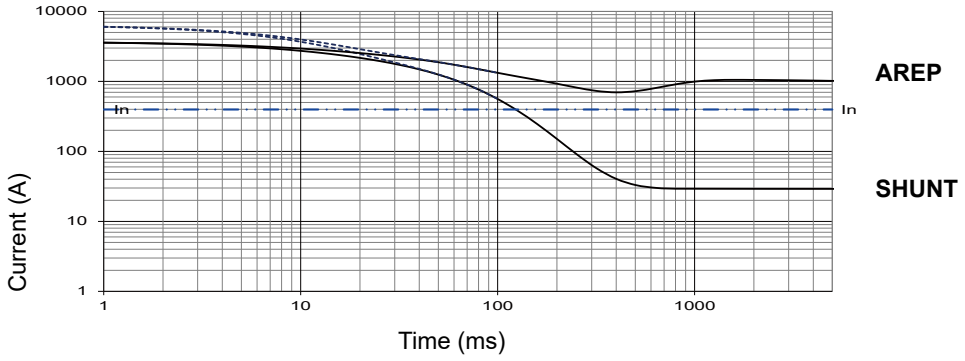

**TAL A46 D**

Symmetrical ——
Asymmetrical - - -




**TAL A46 E**

Symmetrical ——
Asymmetrical - - -

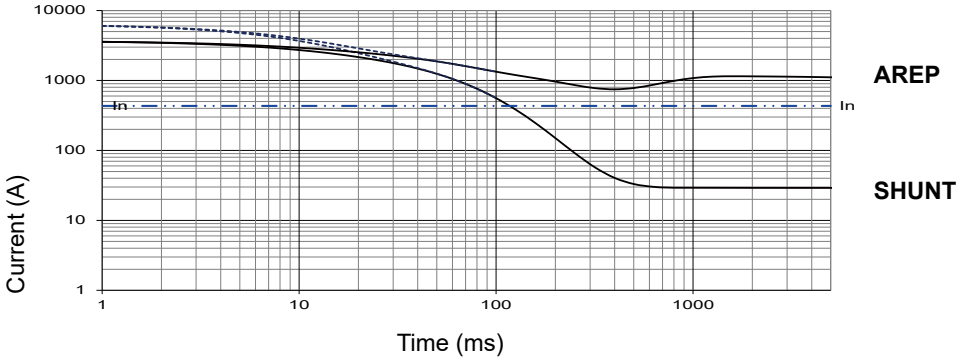



**Influence due to connection**
For (Δ) connection, use the following multiplication factor:
- Current value x 1.732.

## 3-phase short-circuit curves at no load and rated speed (star connection Y)

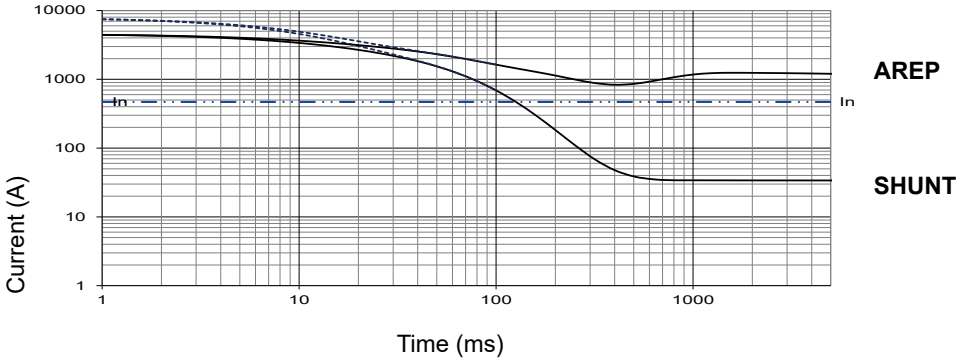
**TAL A46 F**

Symmetrical ——
Asymmetrical - - -




**TAL A46 G**

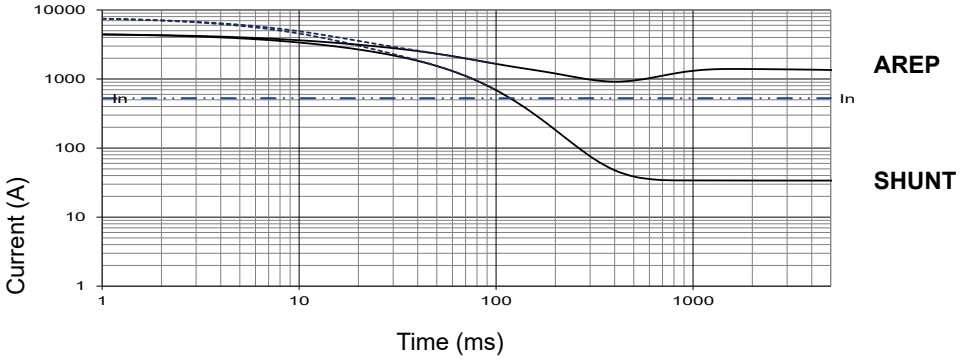
Symmetrical ——
Asymmetrical - - -




**AL A46 H**

Symmetrical ——
Asymmetrical - - -

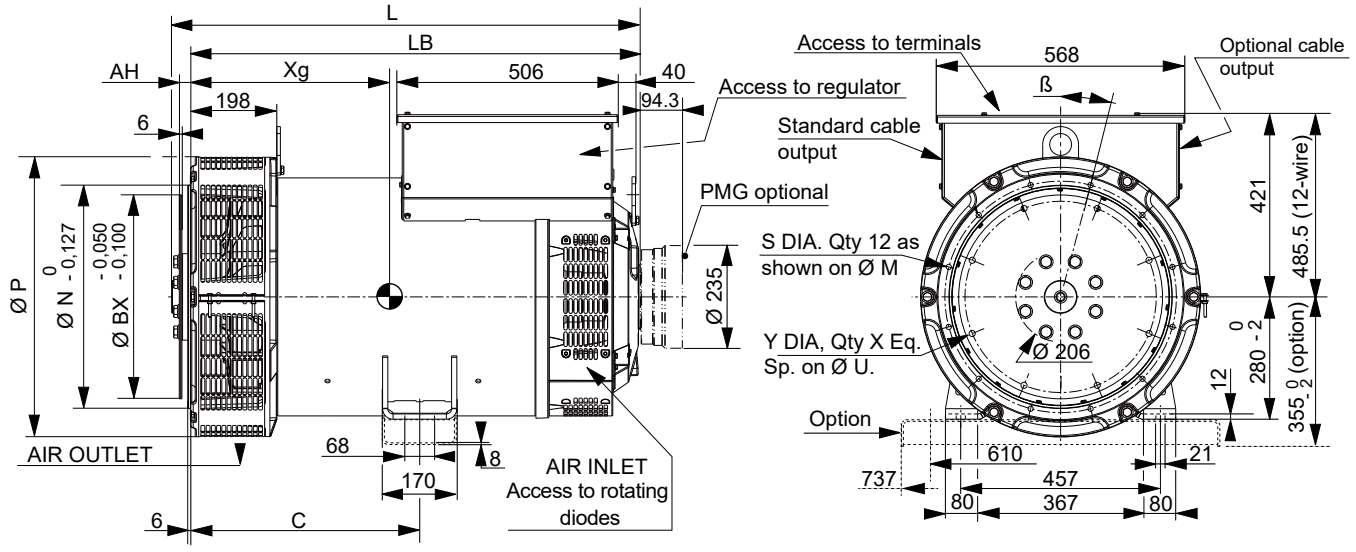
**T**




**Influence due to short-circuit**
Curves are based on a three-phase short-circuit.
For other types of short-circuit,
use the following multiplication factors.

| | 3 - phase | 2 - phase L / L | 1 - phase L / N |
|---|---|---|---|
| Instantaneous (max.) | 1 | 0.87 | 1.3 |
| Continuous | 1 | 1.5 | 2.2 |
| Maximum duration | | 1.5 | |

## Single bearing general arrangement




| Dimensions (mm) and weight | | | | | |
|---|---|---|---|---|---|
| Type | L without PMG | LB | Xg | C | Weight (kg) |
| **TAL A46 C** | 944**/935 | 892 | 423 | 429 | 674 |
| **TAL A46 D** | 944**/935 | 892 | 423 | 429 | 682 |
| **TAL A46 E** | 989**/980 | 937 | 445 | 429 | 754 |
| **TAL A46 F** | 989**/980 | 937 | 445 | 429 | 754 |
| **TAL A46 G*** | 1084**/1075 | 1032 | 493 | 525 | 888 |
| **TAL A46 H*** | 1084**/1075 | 1032 | 493 | 525 | 888 |

| Coupling | | | |
|---|---|---|---|
| Flex plate | 11 1/2 | 14 | 18 |
| **Flange S.A.E 3** | X | | |
| **Flange S.A.E 2** | X | | |
| **Flange S.A.E 1** | X | X | |
| **Flange S.A.E 1/2** | | X | |
| **Flange S.A.E 0** | | X | X |

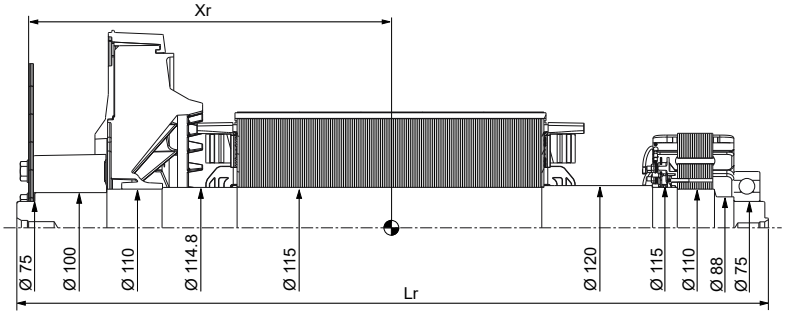
* Shaft height = 355 mm optional
** Dimensions with SAE 11 1/2

| Flange (mm) | | | | | |
|---|---|---|---|---|---|
| S.A.E. | P | N | M | S | ß ° |
| **3** | 641 | 409.575 | 428.625 | 11 | 15° |
| **2** | 641 | 447.675 | 466.725 | 11 | 15° |
| **1** | 641 | 511.175 | 530.225 | 12 | 15° |
| **1/2** | 713 | 584.2 | 619.125 | 14 | 15° |
| **0** | 713 | 647.7 | 679.45 | 14 | 11° 15' |

| Flex plate (mm) | | | | | |
|---|---|---|---|---|---|
| S.A.E. | BX | U | X | Y | AH |
| **11 1/2** | 352.42 | 333.38 | 8 | 11 | 39.6 |
| **14** | 466.72 | 438.15 | 8 | 14 | 25.4 |
| **18*** ** | 571.5 | 542.92 | 6 | 17 | 15.7 |

*** Option

## Torsional data




| Centre of gravity: Xr (mm), Rotor length: Lr (mm), Weight: M (kg), Moment of inertia: J (kgm²): (4J = MD²) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Flex plate S.A.E. 11 ½ | | | | Flex plate S.A.E. 14 | | | |
| Type | Xr | Lr | M | J | Xr | Lr | M | J |
| **TAL A46 C** | 420 | 923 | 255 | 2.64 | 408 | 923 | 256 | 2.8 |
| **TAL A46 D** | 420 | 923 | 255 | 2.64 | 408 | 923 | 256 | 2.8 |
| **TAL A46 E** | 460 | 968 | 304 | 3.28 | 448 | 968 | 305 | 3.44 |
| **TAL A46 F** | 460 | 968 | 304 | 3.28 | 448 | 968 | 305 | 3.44 |
| **TAL A46 G** | 508 | 1063 | 358 | 3.97 | 497 | 1063 | 359 | 4.13 |
| **TAL A46 H** | 508 | 1063 | 358 | 3.97 | 497 | 1063 | 359 | 4.13 |

**NOTE** : Dimensions are for information only and may be subject to modifications. The torsional analysis of the transmission is imperative. All values are available upon request.

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