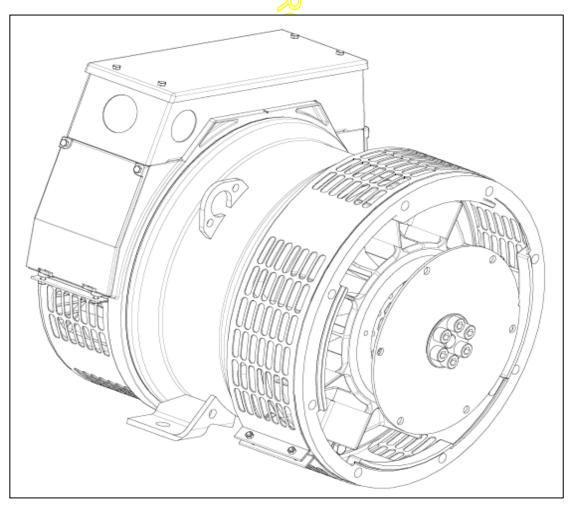
STAMFORD

PM042F - Winding 05
Technical Data Sheet



PM042F

STAMFORD

SPECIFICATIONS & OPTIONS

STANDARDS

Marine generators may be certified to Lloyds, DnV, Bureau Veritas, ABS, Germanischer-Lloyd or RINA.

Other standards and certifications can be considered on request.

VOLTAGE REGULATOR

AS480 AVR

With this self-excited system the main stator provides power via the AVR to the exciter stator. The high efficiency semi-conductors of the AVR ensure positive build-up from initial low levels of residual voltage.

The exciter rotor output is fed to the main rotor through a three-phase full-wave bridge rectifier. The rectifier is protected by a surge suppressor against surges caused, for example, by short circuit or out-of-phase paralleling. The AS480 will support limited accessories, RFI suppession remote voltage trimmer and for the P1 range only a 'droop' Current Transformer (CT) to permit parallel operation with other ac generators.

The AVR can be fitted to either side of the generator in its own housing in the non-drive end bracket.

Excitation Boost System (EBS)

The EBS is a single, self-contained unit, attached to the non-drive end of the generator.

The EBS unit consists of the Excitation Boost Controller (EBC) and an Excitation Boost Generator (EBG). Under fault conditions, or when the generator is subjected to a large impact load such as a motor starting, the generator voltage will drop. The EBC senses the drop in voltage and engages the output power of the EBG. This additional power feeds the generator's excitation system, supporting the load until breaker discrimination can remove the fault or enable the generator to pick up a motor and drive the voltage recovery.

WINDINGS & ELECTRICAL PERFORMANCE

All generator stators are wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th ...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches, when in parallel with the mains. A fully connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

TERMINALS & TERMINAL BOX

Dedicated Single Phase generators have 4 ends brought out to the terminals, which are mounted at the non-drive end of the generator. A sheet steel terminal box contains provides ample space for the customers' wiring and gland arrangements. Alternative terminal boxes are available for customers who want to fit additional components in the terminal box.

SHAFT & KEYS

All generator rotors are dynamically balanced to better than BS6861:Part 1 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.

INSULATION / IMPREGNATION

The insulation system is class 'H'.

All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

QUALITY ASSURANCE

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

The stated voltage regulation may not be maintained in the presence of certain radio transmitted signals. Any change in performance will fall within the limits of Criteria B' of EN 61000-6-2:2001. At no time will the steady-state voltage regulation exceed 2%.

DE RATES

All values tabulated on page 6 are subject to the following reductions

5% when air inlet filters are fitted.

3% for every 500 metres by which the operating altitude exceeds 1000 metres above mean sea level.

3% for every 5°C by which the operational ambient temperature exceeds 50°C.

Note: Requirement for operating in an ambient exceeding 60°C must be referred to the factory.

5% For reverse rotation

(Standard rotation CW when viewed from DE)

NB Continuous development of our products entitles us to change specification details without notice, therefore they must not be regarded as binding.

Front cover drawing typical of product range.



PM042F

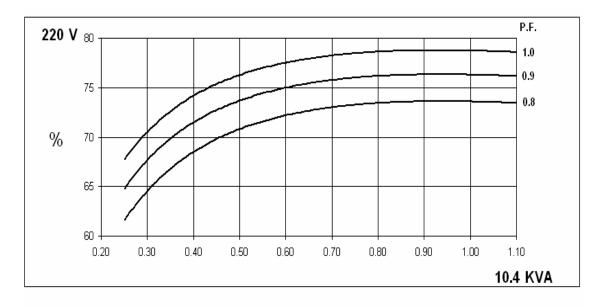
WINDING 05

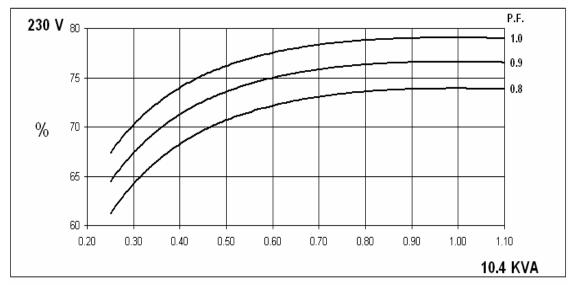
ASABO AND WITH EXCITATION BOOST SYSTEM (EBS) VOLTAGE REGULATION 1.0 %		***	אוטאו	000				
SUSTAINED SHORT CIRCUIT REFER TO SHORT CIRCUIT DECREMENT CURVE (page 5)	CONTROL SYSTEM	AS480 AVR WITH EXCITA	TION BO	OOST SYSTEM (E	BS)			
NSULATION SYSTEM	VOLTAGE REGULATION	± 1.0 %	± 1.0 %					
PROTECTION	SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVE (page 5)						
STATOR WINDING SINGLE LAYER CONCENTRIC	INSULATION SYSTEM		CLASS H					
STATOR WINDING	PROTECTION			IP	23			
WINDING PITCH TWO THIRDS WINDING LEADS 4 STATOR WDG. RESISTANCE 0.311 Ohms AT 22°C SERIES CONNECTED ROTOR WDG. RESISTANCE 0.931 Ohms at 22°C EXCITER STATOR RESISTANCE 13.5 Ohms at 22°C EXCITER ROTOR RESISTANCE 12.9 Ohms at 22°C EBS STATOR RESISTANCE 12.9 Ohms at 22°C EBS STATOR RESISTANCE 12.9 Ohms at 22°C RF.I. SUPPRESSION BS EN 61000-6-2 & BS EN 61000-6-4 VDE 0875G, VDE 0875N. refer to factory for others WAYEFORM DISTORTION NO LOADS 1.5% NON-DISTORTING LINEAR LOAD < 5.0%	RATED POWER FACTOR			0.	8			
### WITH LEBS WITH WOUND STATOR 33.3 kg 33.3 kg	STATOR WINDING			SINGLE LAYER	CONCENTRIC			
STATOR WIDG, RESISTANCE 0.311 Ohms AT 22°C SERIES CONNECTED	WINDING PITCH			TWO T	HIRDS			
ROTOR WDG, RESISTANCE EXCITER STATOR RESISTANCE EXCITER ROTOR RESISTANCE EXCITER ROTOR RESISTANCE EXCITER ROTOR RESISTANCE EXCITER ROTOR RESISTANCE 12.9 Ohms at 22°C 12.9 Ohms at 22°C 12.9 Ohms at 22°C R.F.I. SUPPRESSION BS EN 61000-6-2 & BS EN 61000-6-4 VDE 08756, VDE 0875N, refer to factory for others WAVEFORM DISTORTION MAXIMUM OVERSPEED EXCITER STATOR RESISTANCE R.F.I. SUPPRESSION BS EN 61000-6-2 & BS EN 61000-6-4 VDE 08756, VDE 0875N, refer to factory for others WAVEFORM DISTORTION MAXIMUM OVERSPEED BEARING DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING OND BALL 6306-28 (ISO) BEARING NON-DRIVE END BEARING OND BALL 6306-28 (ISO) BEARING WITH EBS WITHOUT EBS WI	WINDING LEADS			4	1			
EXCITER STATOR RESISTANCE EXCITER ROTOR RESISTANCE EXCITER ROTOR RESISTANCE ESS STATOR RESISTANCE BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875N, refer to factory for others WAVEFORM DISTORTION MAXIMUM OVERSPEED BEARING DRIVE END BEARING DRIVE END BEARING NON-DRIVE E	STATOR WDG. RESISTANCE		0.31	1 Ohms AT 22°C	SERIES CONNECT	ED		
EXCITER ROTOR RESISTANCE EBS STATOR RESISTANCE R.F.I. SUPPRESSION BS EN 61000-6-2 & BS EN 61000-6-4. VDE 0875G, VDE 0875N. refer to factory for others WAVEFORM DISTORTION NO LOADS 1.5% NON-DISTORTING LINEAR LOAD < 5.0% MAXIMUM OVERSPEED BALL. 6309-2RS (ISO) BEARING DRIVE END BEARING DRIVE	ROTOR WDG. RESISTANCE			0.931 Ohm	ns at 22°C			
EBS STATOR RESISTANCE R.F.I. SUPPRESSION BS EN 61000-6-2 & B S EN 61000-6-4, VDE 0875G, VDE 0875N. refer to factory for others WAVEFORM DISTORTION NO LOĀC 1.5% NON-DISTORTING LINEAR LOAD < 5.0% MAXIMUM OVERSPEED BALL. 6306-2RS (ISO) BEARING DRIVE END BALL. 6306-2RS (ISO) BEARING NON-DRIVE END BALL. 6306-2RS (ISO) BEARING NON-DRIVE END 1 BEARING WITH EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WEIGHT WOUND STATOR 90 kg 1 55.06 kg 2 7.81 kg 2 8.3 kg 38.3 kg	EXCITER STATOR RESISTANCE			13.5 Ohm	s at 22°C			
R.F.I. SUPPRESSION BS EN 61000-6-2 & BS EN 61000-6-4, VDE 08750, VDE 0875N. refer to factory for others WAVEFORM DISTORTION NO LOAD 1.5% NON-DISTORTING LINEAR LOAD < 5.0% MAXIMUM OVERSPEED BEARING DRIVE END BEARING NON-DRIVE END BEARING WITH EBS WITHOUT EBS WITH	EXCITER ROTOR RESISTANCE			0.0479 Ohms PEF	R PHASE AT 22°C			
WAVEFORM DISTORTION NO LOAD; 1.5% NON-DISTORTING LINEAR LOAD < 5.0% MAXIMUM OVERSPEED 4500 Rev/Min BEARING DRIVE END BALL. 6309-2RS (ISO) BEARING NON-DRIVE END BALL. 6306-2RS (ISO) BEARING NON-DRIVE END WITH EBS WITH HEBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS WITHOUT EBS BALL 6306-2RS (ISO) 93.3 kg 93.8 kg 93.8 kg	EBS STATOR RESISTANCE			12.9 Ohm	s at 22°C			
MAXIMUM OVERSPEED ■ A500 Rev/Min ■ BEARING DRIVE END ■ BALL. 6309-2RS (ISO) ■ 1.5 BATT (ISD) ■ 1.5 BAT	R.F.I. SUPPRESSION	BS EN 61000-6-2 8	& BS EN	61000-6-4,VDE 0	875G, VDE 0875N.	refer to	factory for others	
BEARING DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING NON-DRIVE END BEARING SEARING 1 BEARING 2 BEARING WITH EBS WITHOUT EBS WITH EBS WITHOUT EBS WEIGHT COMP. GENERATOR 90 kg 93 kg 91.3 kg WEIGHT WOUND STATOR 39.3 kg 38.3 kg 38.3 kg 38.3 kg WEIGHT WOUND ROTOR 26.76 kg 25.06 kg 27.81 kg 26.11 kg WR* INERTIA 0.0721 kgm² 0.0704 kgm² 0.0722 kgm² 0.0705 kgm² SHIPPING WEIGHTS in a crate 106 kg 104.3 kg 115 kg 113.3 kg PACKING CRATE SIZE 71 x 51 x 67 (cm) TELEPHONE INTERFERENCE THF	WAVEFORM DISTORTION	NO I	LOAD	1.5% NON-DISTO	ORTING LINEAR LO	AD < 5	5.0%	
BEARING NON-DRIVE END 1 BEARING	MAXIMUM OVERSPEED		70	4500 R	ev/Min			
1 BEARNS	BEARING DRIVE END			BALL. 6309	-2RS (ISO)			
WITH EBS WITHOUT EBS WITH EBS WITHOUT EBS WEIGHT COMP. GENERATOR 90 kg 91.3 kg 91.3 kg WEIGHT WOUND STATOR 38.3 kg 38.3 kg 38.3 kg 38.3 kg 38.3 kg WEIGHT WOUND ROTOR 26.76 kg 25.06 kg 27.81 kg 26.11 kg WR² INERTIA 0.0721 kgm² 0.0704 kgm² 0.0722 kgm² 0.0705 kgm² SHIPPING WEIGHTS In a crate 106 kg 104.3 kg 115 kg 113.3 kg PACKING CRATE SIZE 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) TELEPHONE INTERFERENCE THF<2	BEARING NON-DRIVE END			BALL. 6306	i-2RS (ISO)			
WEIGHT COMP. GENERATOR 90 kg 88.3 kg 93 kg 91.3 kg WEIGHT WOUND STATOR 36.3 kg 36.3 kg 38.3 kg 26.11 kg 27.11 kg 27.11		1 BEA	RING			2 BEA	RING	
WEIGHT WOUND STATOR 38.3 kg 25.06 kg 27.81 kg 26.11 kg 27.11 kg 27.21 kg <		WITH EBS	WH	HOUT EBS	WITH EBS		WITHOUT EBS	
WEIGHT WOUND ROTOR 26.76 kg 25.06 kg 27.81 kg 26.11 kg WR² INERTIA 0.0721 kgm² 0.0704 kgm² 0.0722 kgm² 0.0705 kgm² SHIPPING WEIGHTS in a crate 106 kg 104.3 kg 115 kg 113.3 kg PACKING CRATE SIZE 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) TIF<50	WEIGHT COMP. GENERATOR	90 kg		88.3 kg	93 kg		91.3 kg	
WR² INERTIA 0.0721 kgm² 0.0704 kgm² 0.0722 kgm² 0.0705 kgm² SHIPPING WEIGHTS in a crate 106 kg 104.3 kg 115 kg 113.3 kg PACKING CRATE SIZE 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) TIF<50	WEIGHT WOUND STATOR	38.3 kg		38.3 kg	38.3 kg		38.3 kg	
SHIPPING WEIGHTS in a crate 106 kg 104.3 kg 115 kg 113.3 kg PACKING CRATE SIZE 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) TELEPHONE INTERFERENCE THF-2% TIF-50 COOLING AIR 0.205 m³/sec 434 cfm VOLTAGE SERIES 220 230 240 VOLTAGE PARALLEL 110 115 120 kVA BASE RATING FOR REACTANCE 10.4 10.4 10.4 VALUES 1.66 1.53 1.53 X'd DIR. AXIS SYNCHRONOUS 1.82 1.66 1.53 X'd DIR. AXIS TRANSIENT 0.18 0.17 0.15 X'd DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS SUBTRANSIENT 0.20 0.83 0.76 X''q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED </td <td>WEIGHT WOUND ROTOR</td> <td>26.76 kg</td> <td></td> <td>25.06 kg</td> <td>27.81 kg</td> <td></td> <td colspan="2">26.11 kg</td>	WEIGHT WOUND ROTOR	26.76 kg		25.06 kg	27.81 kg		26.11 kg	
PACKING CRATE SIZE 71 x 51 x 67 (cm) 71 x 51 x 67 (cm) TELEPHONE INTERFERENCE THF-2½ TIF<50	WR² INERTIA	0.0721 kgm ²	~ 0.)704 kgm ² 0.0722 kgm			0.0705 kgm ²	
TELEPHONE INTERFERENCE THF<22 COOLING AIR 0.205 m³/sec 434 cfm VOLTAGE SERIES 220 230 240 VOLTAGE PARALLEL 110 115 120 kVA BASE RATING FOR REACTANCE VALUES Xd DIR. AXIS SYNCHRONOUS 1.82 1.66 1.53 X'd DIR. AXIS SYNCHRONOUS 1.82 1.66 1.53 X'd DIR. AXIS SUBTRANSIENT 0.18 0.17 0.15 X'd DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X'q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.002 s T'd SUB-TRANSTIME CONST. 0.002 s T'd O.C. FIELD TIME CONST.	SHIPPING WEIGHTS in a crate	106 kg		104.3 kg	115 kg		113.3 kg	
COOLING AIR VOLTAGE SERIES 220 230 240 VOLTAGE PARALLEL 110 115 120 kVA BASE RATING FOR REACTANCE vALUES Xd DIR. AXIS SYNCHRONOUS 1.82 1.66 1.53 X'd DIR. AXIS TRANSIENT 0.18 0.17 0.15 X"d DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X"q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. T'd SUB-TRANSTIME CONST. T'd SUB-TRANSTIME CONST. 0.002 s T'd O.C. FIELD TIME CONST. 0.16 s	PACKING CRATE SIZE	71 x 51 x	67 (cm)		7	1 x 51 x	(67 (cm)	
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VOLTAGE PARALLEL 110 115 120 kVA BASE RATING FOR REACTANCE VALUES 10.4 10.4 10.4 10.4 Xd DIR. AXIS SYNCHRONOUS 1.82 1.66 1.53 X'd DIR. AXIS TRANSIENT 0.18 0.17 0.15 X''d DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X''q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T''d SUB-TRANSTIME CONST. 0.002 s T'do O.C. FIELD TIME CONST. 0.16 s	COOLING AIR			0.205 m³/se	ec 434 cfm			
NA BASE RATING FOR REACTANCE 10.4 10.4 10.4 10.4	VOLTAGE SERIES	220]	23	30	240		
VALUES 10.4 10.5 10.15 10.15 10.10 10.10 10.0	VOLTAGE PARALLEL	110		11	15		120	
X'd DIR. AXIS TRANSIENT 0.18 0.17 0.15 X''d DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X"q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T'd SUB-TRANSTIME CONST. 0.002 s T'do O.C. FIELD TIME CONST. 0.16 s		10.4	L	10	1.4		10.4	
X"d DIR. AXIS SUBTRANSIENT 0.12 0.11 0.10 Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X"q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T'd SUB-TRANSTIME CONST. 0.002 s T'do O.C. FIELD TIME CONST. 0.16 s	Xd DIR. AXIS SYNCHRONOUS	1.82	<u>u</u>	1.0	36	1.53		
Xq QUAD. AXIS REACTANCE 0.90 0.83 0.76 X"q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T"d TRANSIENT TIME CONST. 0.009 s T"ds SUB-TRANSTIME CONST. 0.002 s T"do O.C. FIELD TIME CONST. 0.16 s	X'd DIR. AXIS TRANSIENT	0.18		0.	17		0.15	
X"q QUAD. AXIS SUBTRANSIENT 0.20 0.19 0.17 XL LEAKAGE REACTANCE 0.07 0.07 0.06 X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T''d SUB-TRANSTIME CONST. 0.002 s T''do O.C. FIELD TIME CONST. 0.16 s	X"d DIR. AXIS SUBTRANSIENT	0.12		0.	11		0.10	
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X2 NEGATIVE SEQUENCE 0.17 0.15 0.14 X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T'd SUB-TRANSTIME CONST. 0.002 s T'do O.C. FIELD TIME CONST. 0.16 s	X"q QUAD. AXIS SUBTRANSIENT	0.20		0.	19	0.17		
X0 ZERO SEQUENCE 0.07 0.07 0.06 REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED T'd TRANSIENT TIME CONST. 0.009 s T''d SUB-TRANSTIME CONST. 0.002 s T''do O.C. FIELD TIME CONST. 0.16 s	XL LEAKAGE REACTANCE	0.07	0.0	07	0.06			
REACTANCES ARE SATURATED T'd TRANSIENT TIME CONST. T'd SUB-TRANSTIME CONST. T'do O.C. FIELD TIME CONST. 0.002 s 0.16 s	X2 NEGATIVE SEQUENCE	0.17 0.15 0.14				0.14		
T'd TRANSIENT TIME CONST. 0.009 s T''d SUB-TRANSTIME CONST. 0.002 s T'do O.C. FIELD TIME CONST. 0.16 s	X ₀ ZERO SEQUENCE	0.07		0.0	07		0.06	
T''d SUB-TRANSTIME CONST. 10.002 s 10.002 s 10.002 s	REACTANCES ARE SATURATED VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED							
T'do O.C. FIELD TIME CONST. 0.16 s	T'd TRANSIENT TIME CONST.			0.00)9 s			
	T"d SUB-TRANSTIME CONST.	0.002 s						
Ta ARMATURE TIME CONST. 0.004 s	T'do O.C. FIELD TIME CONST.	0.16 s						
	Ta ARMATURE TIME CONST. 0.004 s							
SHORT CIRCUIT RATIO 1/Xd	SHORT CIRCUIT RATIO			1/2	Kd			

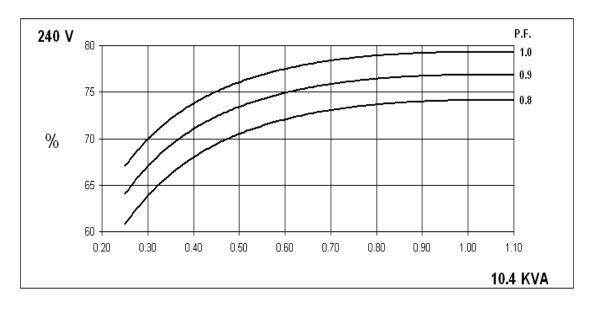


PMO42F Winding 05

SINGLE PHASE EFFICIENCY CURVES

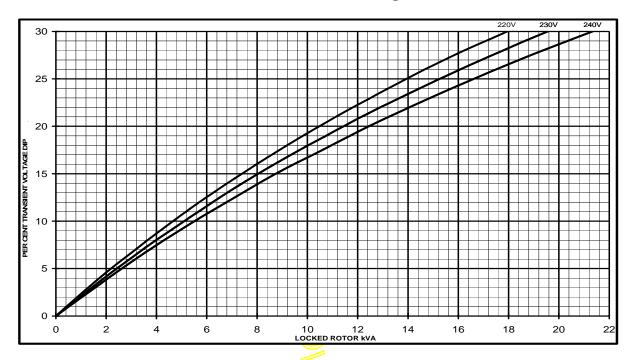




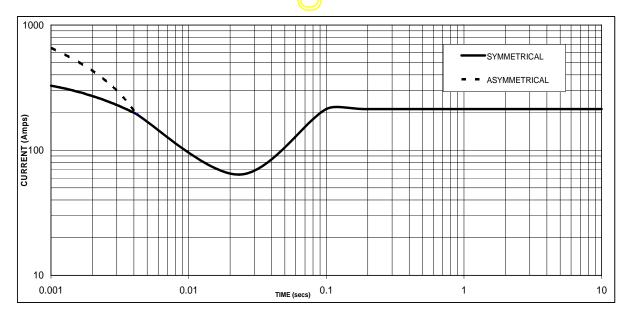




PMO42F
Winding 05
Locked Rotor Motor Starting Curve



Short Circuit Decrement Curve. No-load Excitation at Rated Speed Based on series connection.



Sustained Short Circuit = 213 Amps

Note

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

Voltage	Factor
220V	X 1.00
230V	X 1.05
240V	X 1.09

The sustained current value is constant irrespective of voltage level

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PMO42F Winding 05

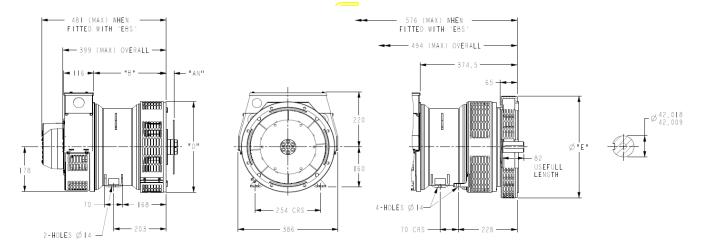
50Hz

RATINGS

Class Tamp Disc	Cont. E - 65/50°C		Cont. B - 70/50°C			Cont. F - 90/50°C			Cont. H - 110/50°C			
Class - Temp Rise		0.8pf			0.8pf			0.8pf			0.8pf	
Series (V)	220	230	240	220	230	240	220	230	240	220	230	240
Parallel (V)	110	115	120	110	115	120	110	115	120	110	115	120
kVA	8.0	8.0	8.0	8.3	8.3	8.3	9.4	9.4	9.4	10.4	10.4	10.4
kW	6.4	6.4	6.4	6.6	6.6	6.6	7.5	7.5	7.5	8.3	8.3	8.3
Efficiency (%)	73.3	73.4	73.5	73.4	73.6	73.6	73.6	73.8	74.0	73.6	73.9	74.1
kW Input	8.7	8.7	8.7	9.0	9.0	9.0	10.2	10.2	10.1	11.3	11.2	11.2

Class Town Disc	Cont. E - 65/50°C		Cont. B 70/50°C		Cont. F - 90/50°C			Cont. H - 110/50°C				
Class - Temp Rise		1.0pf			1. 0 pf			1.0pf			1.0pf	
Series (V)	220	230	240	220	230	240	220	230	240	220	230	240
Parallel (V)	110	115	120	110	115	120	110	115	120	110	115	120
kVA	8.0	8.0	8.0	8.3	8.3	8.3	9.4	9.4	9.4	10.4	10.4	10.4
kW	8.0	8.0	8.0	8.3	8.3	8.3	9.4	9.4	9.4	10.4	10.4	10.4
Efficiency (%)	78.5	78.7	78.8	78.6	<mark>78.8</mark>	78.9	78.7	79.0	79.2	78.7	79.1	79.3
kW Input	10.2	10.2	10.2	10.6	10.5	10.5	11.9	11.9	11.9	13.2	13.1	13.1

DIMENSIONS



COUPLING DISC			
SAE	"AN"		
6.5	30.2		
7.5	30.2		
8	62		
10	53.8		
11.5	39.6		

I-BRG A	DAPTORS
SAE	"D"
5	361
4	405
3	45 I
2	489

8-HOLES	SPACED	AS	12
8-HOLES	SPACED	AS	12

2-BRG ADAPTORS					
SAE	Ø "E"				
5	359				
4	406				
3	455				
2	493				

APPROVED DOCUMENT

STAMFORD

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