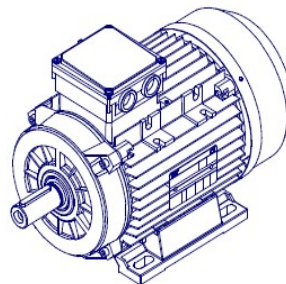
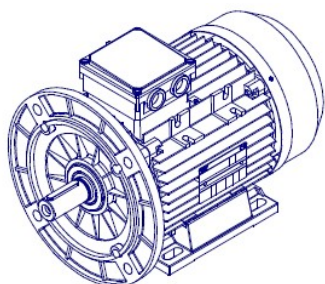


Gama noastra de motoare elctrice cuprinde:

- Motoare electrice de joasa tensiune cu una sau doua viteze (seria TM)
- Motoare electrice cu frana de siguranta in curent continuu (seria TMS)
- Motoare electrice cu frana in curent continuu (seria TMK)
- Motoare electrice servoventilate (seria TMV)
- Motoare electrice monofazice cu o viteza (seria TMM)
- Motoare electrice speciale pentru constructii
- Motoare electrice in constructie Antiex.



Motoare Asincrone Trifazice

Date generale

Motoarele electrice din seria "TM" sunt motoare asincrone trifazice cu autoventilatie externa si cu rotor in forma de colivie de veverita. Se construiesc in diferite gabarite de la 63 pana la 160 si, 180 pana la 200, constructie B3 si B5.

Acestea sunt disponibile si in varianta cu servoventilatie externa sau cu servoventilatie externa plus encoder.

Norme specifice

Motoarele din seria "TM" sunt in conformitate cu normele nationale si internationale, respectiv:

- prescrierile internationale generale pentru masinile electrice rotative; IEC 60034-1
- dimensiuni si corelari ale puterilor pentru masini electrice rotative, nationale EN60072-1.

Conformitati specifice

Motoarele din seria "TM" sunt in conformitate cu urmatoarele directive:

- 2004/108/CE privind Compatibilitatea electromagnetica
- 2004/95/CE privind Joasa tensiune.

Date mecanice

Seria de motoare "TM" au grad de protectie IP55 in acord cu EN 60034-5.

Racirea

Motoarele sunt racite printr-o sursa externa de suprafata. Motoarele standard au ventilatorul cu palete radiale si pot sa functioneze in ambele sensuri de rotatie.

Norme de referinta: EN 60034-6

Capacul de ventilator din tabla de otel zincat este vopsit cu albastru RAL 5010 sau alb zincat .

Bobinajul statorului

Realizat cu fir de cupru dublu emailat in clasa H, celelalte materiale sunt in clasa H sau F pentru obtinerea unui sistem de izolatie in clasa F. Materialele si tipul de impregnare permit folosirea acestora in mediu tropical fara alte tratamente.

Echilibrare

Motoarele sunt echilibrate dinamic cu jumatate de pana aplicata la extremitatea rotorului conform normei: EN 60034-14

La cerere se pot livra motoare speciale cu vibratie redusa .

In tabelul urmator veti gasi limitele recomandate de vibratie pentru diferite dimensiuni.

S.C. Proconsil Grup SRL

Grad de vibratie Quality grade	Viteza de rotatie Speed Giri-1' - rpm	Valori maxime eficace a vitezei de vibratie in functie de gabaritul H in mm Maximum rms-values of the vibration velocity for the shaft height H in mm (mm/sec)	
		63 ≤ H ≤ 132	160 ≤ H ≤ 200
N (normale-normal)	600 ÷ 3600	1.6	2.2
R (redus-reduced)	600 ÷ 3600	0.7	1.1

Forme constructive

In conformitate cu EN 60034-7.

Toleranta

In conformitate cu EN 60034-1.

Date electrice

Tensiune si frecventa

Motoarele pot functiona la putere nominala alimentate de la retea electrica cu variatie de tensiune de $\pm 5\%$. Supraincalzirea prevazuta de norme se refera la valorile nominale ale tensiunii.

Pentru o functionare in limite, de exemplu cu +5% sau -5% ale tensiunii, normele, este permisa o crestere a temperaturii de 10°K. Motoarele pot fi furnizate cu tensiuni cuprinse intre 220-690V 50 si 60 Hz.

TENSIUNE ETICHETATA PE MOTOR... 50Hz MOTOR WOUND FOR 50Hz	TENSIUNE ALIMENTATA 60Hz CONNECTION FOR 60Hz	PUTERE NOMINALA RATED POWER	Giri-1' rpm	CURENT DE PORNIRE CURENT NOMINAL LOCKED ROTOR CURR. RATED CURRENT	CUPLU DE PORNIRE CUPLU NOMINAL LOCKED ROTOR TORQ. RATED TORQUE	CUPLU MAXIM CUPLU NOMINAL PULL OUT TORQUE RATED TORQUE
230	220	0.95	1.2	0.78	0.78	0.78
230	230	1	1.2	0.83	0.83	0.83
230	240	1.05	1.2	0.86	0.86	0.86
230	260	1.15	1.2	0.95	0.95	0.95
230	280	1.2	1.2	1	1	1
400	380	0.95	1.2	0.78	0.78	0.78
400	400	1	1.2	0.83	0.83	0.83
400	440	1.1	1.2	0.91	0.91	0.91
400	460	1.15	1.2	0.96	0.96	0.96
400	480	1.2	1.2	1	1	1

Putere

In tabelul urmatoar sunt indicate caracteristicile normale in serviciu continuu, cu alimentare la tensiune nominala si frecventa de 50 Hz; temperature ambientala maxima de 40°C si altitudine de pana la 1000 m. Pentru conditii de mediu diferite, puterile variaza si se vor obtine aplicand factorii corectivi specificati in tabel.

TEMPERATURA AMBIENTALA °C COOLANT TEMPERATURE °C	PUTEREA IN % A VALORII NOMINALE PERMISSIBLE OUTPUT AS A PERCENTAGE OF THE RATED VALUE	ALTITUDINE m ALTITUDE ABOVE SEA LEVEL	PUTEREA IN % A VALORII NOMINALE PERMISSIBLE OUTPUT AS A PERCENTAGE OF THE RATED VALUE
40	100	1000	100
45	96.5	1500	98
50	93	2000	94.5
55	90	2500	92
60	86.5	3000	89
70	79	3500	86.5
		4000	83.5

Date electrice

Serviciu

Puterile mentionate in acest catalog se refera la modalitatea de serviciu S1, adica o functionare continua la putere constanta, S3 – o functionare intrerupta periodic si, serviciu S6 pentru o functionare intrerupta periodic cu incarcare intermitenta.

Randamentul si factorul de putere

Valorile de randament si factorii de putere pentru puterea nominala sunt prezentate in tabelele cu date tehnice pentru fiecare tip de motor. Valorile pentru alte puteri se pot estima folosind urmatoarele tabele :

RANDAMENT % - EFFICIENCY % AT					FACTOR DE PUTERE - POWER FACTOR% AT				
5/4	4/4	3/4	2/4	1/4	5/4	4/4	3/4	2/4	1/4
PUTERE MAXIMA - OF RATED LOAD					IN PLINA SARCINA - OF RATED LOAD				
96	96	96	94.5	90	0.94	0.94	0.92	0.88	0.74
95	95	95	93.5	88	0.94	0.93	0.92	0.87	0.68
94	94	93.5	92	86	0.92	0.92	0.89	0.84	0.65
93	93	93	91	85	0.91	0.91	0.88	0.82	0.64
92	92	92	90	84	0.90	0.90	0.87	0.80	0.63
91	91	91	89	82	0.89	0.89	0.86	0.79	0.60
90	90	90	87	80	0.88	0.88	0.85	0.78	0.58
89	89	89	86	79	0.88	0.87	0.84	0.77	0.57
88	88	88	85.5	78.5	0.87	0.86	0.83	0.75	0.55
86	87	87	85	78	0.86	0.85	0.82	0.73	0.53
85	86	86	84.5	77.5	0.86	0.84	0.81	0.72	0.51
84	85	85	84	77	0.85	0.83	0.80	0.70	0.49
83	84	84	83	76	0.85	0.82	0.78	0.67	0.47
82	83	83	81	74	0.83	0.81	0.76	0.66	0.45
81	82	82	80.5	73	0.82	0.80	0.75	0.65	0.43
79	81	81	80	72	0.82	0.79	0.73	0.63	0.42
78	80	80	79	70	0.79	0.78	0.73	0.60	0.41
77	79	79	78	69.5	0.78	0.77	0.72	0.59	0.40
76	78	78	76	69	0.78	0.76	0.70	0.58	0.38
75	77	77	75	68	0.77	0.75	0.69	0.56	0.36
74	76	76	74	67	0.76	0.74	0.67	0.54	0.36
73	75	75	73	66	0.75	0.73	0.66	0.52	0.35
72	74	74	72	64	0.74	0.72	0.65	0.51	0.34
71	73	73	71	63	0.73	0.71	0.64	0.50	0.34
70	72	72	69	61	0.72	0.70	0.63	0.48	0.33
69	71	71	68	59	0.71	0.69	0.62	0.47	0.33
68	70	70	67	58	0.70	0.68	0.61	0.45	0.32
67	69	69	66	57	0.69	0.67	0.60	0.43	0.30

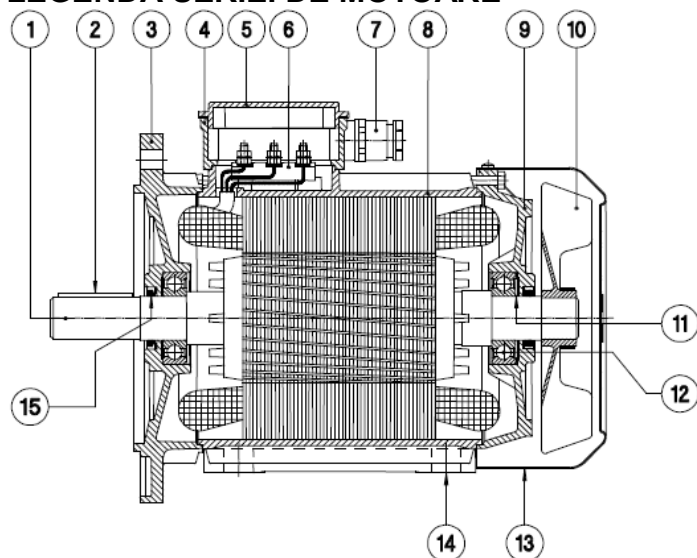
Cuplu

Daca tensiunea variaza in limite admise, cuplul de pornire variaza cu patratul curentului.

Inpamantare

In interiorul cutiei de borne se gaseste surubul pentru legarea la masa.

LEGENDA SERIEI DE MOTOARE



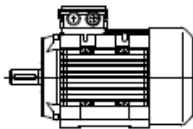
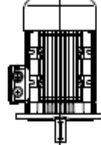
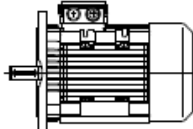
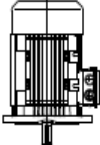
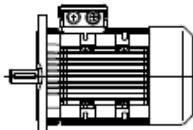
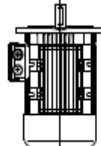
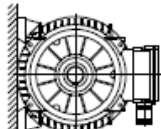
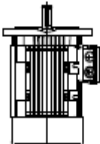
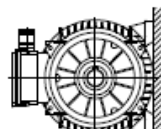
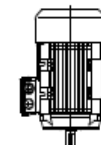
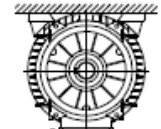
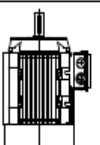
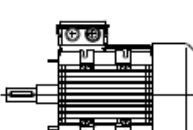
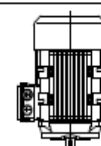
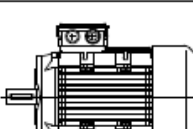
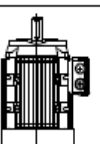
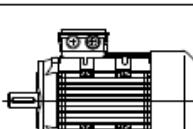
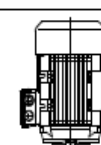
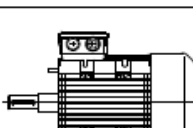
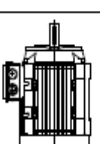
- 1 – Rotor 2 – Pana 3 – Flansa 4 – Capac 5 - Cutie de borne 6 - Sir de cleme
- 7 - Presetupa intrare cabluri 8 - Carcasa motor 9 - Scut posterior 10 - Ventilator de racire
- 11 - Inel de compensare 12 – Rulment 13 - Capac ventilator 14 - Picioare de fixare 15 - Anello V-Ring o Corteco

DIFERITE POZITII POSIBILE ALE CUTIEI DE BORNE

Dimensiuni pentru gabarite cuprinse intre 63 – 200

<p>Versiunea cutie de plastic+ capac de plastic gabarit 63 – 160T si de aluminiu 160 - 200</p>	<p>Version Box + Cover In Plastic Gr. 63-160T and Aluminum 160-200.</p>
<p>Pozitia standard a cutiei de borne este 1 – A, adica cutia deasupra si iesirea cablurilor posterior. Varianta 2 – 3 cu cutia de borne in pozitie laterala, iar iesirea cablurilor in pozitiile B – C si D. Varianta 4 cu cutia de borne spre ventilator, in cazul motoarelor cu bobinaj centrat.</p>	<p>The standard position of the box is 1-A, that is superior terminal block and gone out cables back. _ Variante box in side position 2-3 and gone out cables rotated in the positions B-C and D. _ Variante box terminal block side fan pos. 4, only for motor with centered wrapping.</p>
<p>Versiunea fara cutie de borne</p>	<p>Version Without Box Terminal block With Cables</p>
<p>Pozitia 1 este standard, variante posibile cu cabluri in pozitii laterale 2 – 3 si 4</p>	<p>The standard position is 1, varying with exit cable in side position 2 - 3 and 4.</p>
<p>Versiunea cutie de borne + capac de aluminiu pentru gabarit 63-160T</p>	<p>Version Box + Cover In Aluminum Gr. 63-160T</p>
<p>Pozitia standard a cutiei de borne este 1 – A, adica cutia de borne deasupra si iesirea cablurilor lateral. Varianta cu cutia de borne in pozitie laterala 2 – 3 cu iesirea cablurilor pe deasupra (in jos doar pentru formele B5 si B14) si cutia de borne in pozitia A - A1 – B si C iar iesirea cablurilor prin fata si spre ventilator. Varianta cutiei de borne catre ventilator, pozitia 4, doar pentru motoare cu bobinaul centrat.</p>	<p>The standard position of the box is 1-A., that is superior terminal block and gone out cables side. _ Variante box in side position 2-3 with exit cables upward (in low alone for B5-B14) and box rotated in positions A.-A1-B and C and exit you extract frontal and side fan. _ Variante box terminal block side fan position 4, only for motor with centered wrapping.</p>

FORME CONSTRUCTIVE CONFORM NORMELOR UNEL-IEC

IM B3		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare pe pamant - <i>Horizontal foot mounting</i> 	IM V1		<ul style="list-style-type: none"> - Rotor vertical indreptat in jos, flansa cu gauri de fixare - <i>Downward vertical mounting with flange (through holes)</i>
IM B35		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare pe pamant si flansa cu gauri de fixare - <i>Horizontal foot mounting with flange (through holes)</i> 	IM V15		<ul style="list-style-type: none"> - Rotor vertical indreptat in jos, cu picioare de fixare pe perete si flansa cu gauri de fixare - <i>Downward vertical wall foot mounting with flange (through holes)</i>
IM B5		<ul style="list-style-type: none"> - Rotor orizontal si flansa cu gauri de fixare - <i>Horizontal mounting with flange (through holes)</i> 	IM V3		<ul style="list-style-type: none"> - Rotor vertical indreptat in sus, flansa cu gauri de fixare - <i>Upward vertical mounting with flange (through holes)</i>
IM B6		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare la stanga, pe perete, vazut din extremitatea rotorului - <i>Horizontal wall foot mounting at left side viewed from drive-end</i> 	IM V36		<ul style="list-style-type: none"> - Rotor vertical indreptat in sus, cu picioare de fixare pe perete si flansa cu gauri de fixare - <i>Upward vertical wall foot mounting with flange (through holes)</i>
IM B7		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare la dreapta, pe perete, vazut din extremitatea rotorului - <i>Horizontal wall foot mounting at right side viewed from drive-end</i> 	IM V5		<ul style="list-style-type: none"> - Rotor vertical indreptat in jos, picioare cu fixare pe perete - <i>Downward vertical wall foot mounting</i>
IM B8		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare in sus - <i>Horizontal ceiling foot mounting</i> 	IM V6		<ul style="list-style-type: none"> - Rotor vertical indreptat in sus, picioare cu fixare pe perete - <i>Upward vertical wall foot mounting</i>
IM B9		<ul style="list-style-type: none"> - Rotor orizontal fara flansa anterioara cu ax de fixare cu filet - <i>Horizontal mounting without drive-end flange with threaded fixing studs</i> 	IM V18		<ul style="list-style-type: none"> - Rotor vertical indreptat in jos, cu flansa cu gauri de fixare cu filet - <i>Downward vertical mounting with flange (threaded holes)</i>
IM B14		<ul style="list-style-type: none"> - Rotor orizontal cu flansa cu gauri de fixare cu filet - <i>Horizontal mounting with flange (threaded holes)</i> 	IM V19		<ul style="list-style-type: none"> - Rotor vertical indreptat in sus, cu flansa cu gauri de fixare cu filet - <i>Upward vertical mounting with flange (threaded holes)</i>
IM B34		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare pe pamant si flansa cu gauri de fixare cu filet - <i>Horizontal foot mounting with flange (threaded holes)</i> 	IM V58		<ul style="list-style-type: none"> - Rotor vertical indreptat in jos, cu picioare de fixare pe perete si flansa cu gauri de fixare cu filet - <i>Downward vertical wall foot mounting with flange (threaded holes)</i>
IM B15		<ul style="list-style-type: none"> - Rotor orizontal cu picioare de fixare pe pamant si fara flansa anterioara, dar cu ax de fixare cu filet - <i>Horizontal foot mounting without drive-end flange with threaded fixing studs</i> 	IM V69		<ul style="list-style-type: none"> - Rotor vertical indreptat in sus, cu picioare de fixare pe perete si flansa cu gauri de fixare cu filet - <i>Upward vertical wall foot mounting with flange (threaded holes)</i>