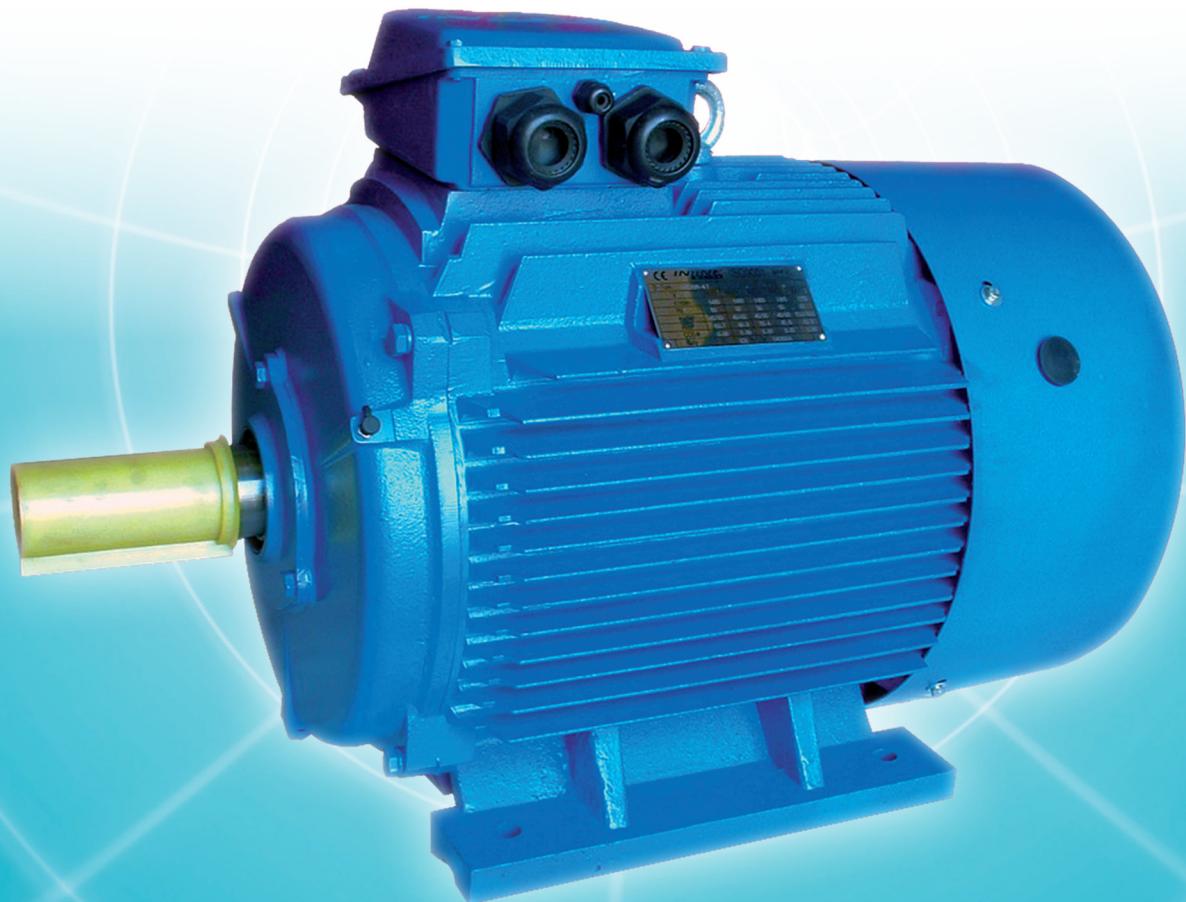




มอเตอร์ไฟฟ้าชนิด 3 สาย
IEC Standard IP55 Class F



Frame Size 56 to 450
Power from 0.09KW to 900KW
Foot, Flange, Face available

Certificated By



ISO 9001:2000

ISO14001



ຈຸດເຕັນບວງ ມາໂຕວຣີຟຟ້າ

INLINE
MOTOR

ດ້ວຍຄວາມໄສໃຈຕ່ອປະໄຍືນໃຫ້ສອຍແລະຍືດອາຍຸກາຮົາໃຫ້ຈຳນວນມອເຕອຮີໃຫ້ຍາວນານ ຮວມທັງຄວາມສະດວກໃນການ
ນຳຮູ້ຮັກຂາແລກກາຮົາຕິດຕັ້ງ ເຮົາຈຶ່ງເພີ່ມເຕີມຄຸນລັກຊະນະຂອງມອເຕອຮີໄຟຟ້າ **INLINE** ໃຫ້ເໜາະສມີ່ງຂຶ້ນ

IP55 ກັນນັກັນຝູນໄດ້ດັກວ່າ
Class F ກນຄວາມຮອນສູງສຸດ 155 Degree



ຮອດຈາຮປໍລະຮູດຕ່າຍຈາບປັບ

ມອເຕອຮີຕັ້ງແຕ່ Frame 180 ຂຶ້ນໄປ ຈະໃຫ້ຄຸບລູກປິບນິດປົດ
ມີຢູ່ອົດຈາບປັບ ແລະຮູ້ຖ່າຍຈາບປັບ ເພື່ອໃຫ້ສາມາດພິມເຕີມແລະປັບປຸງ
ຕ່າຍຈາບປັບ ທີ່ທຳເຫັນດີລັບລູກປິບນິດ ມີອາຍຸກາຮົາໃຫ້ຈຳນວນຍາວນານກ່າວ
ຕໍລັບລູກປິບນິດບັນບປົດ ອັນເປັນກາຮົາດຳຈຳນວນຄັ້ງໃນກາຮົາດຳ
ປັບປຸງຕໍລັບລູກປິບນິດປົດ



ເລືອກໃຫ້ຕັລັບລູກປິບ SKFເກົ່ານັ້ນ
ເພົະເປັນຍິ່ງກັບກີ່ເຊື່ອດົກໄດ້ກີ່ສຸດໃນໂລດ



Cable Gland

1 Unit ສໍາໜັບມອເຕອຮີຂາດ 3KW ລົງມາ
2 Units ສໍາໜັບມອເຕອຮີ 4KW ຂຶ້ນໄປ
ແລະພິເຕະ Cable Gland ສໍາໜັບ Thermistor
ໃນງຸ່ນທີ່ມີກາຮົາຕິດຕັ້ງ Thermistor (Frame 160)



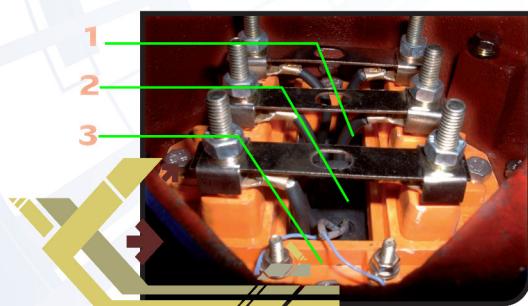
ກລ່ອງຕ່ອໄວ Terminal Box

ກລ່ອງຕ່ອໄວໄຟຟ້າອອກແບບໃໝ່ມີລັກຂະນະຕັດເຈີ່ງ ເພື່ອເພີ່ມພື້ນທີ່
ໃນກາຮົາສອດມີເຂົ້າໄປກ່າວມາຮ່ວມທັງອອກແບບໃໝ່ມີລັກຂະນະຄວບ
ທັບກລ່ອງຕ່ອໄວໄຟຟ້າເພື່ອໃຫ້ສາມາດກັນນ້ຳໄດ້ຍິ່ງຂຶ້ນ



ເພົາ

ເພົາໄດ້ຖຸກອອກແບບໃໝ່ສະດວກຕ່ອກກາຮົາໃຫ້ຈຳນວນ
ແລະແຂັງແກ່ງທັນຕ່ອງໜັກນ້ຳສາມາດຄອດ-ໄສໄດ້ຈ່າຍ ແລະໃໝ່ຈຳນວນປັບປຸງ



ກາຍໃນກລ່ອງຕ່ອໄວ

1. ອຸນນັ້ນໜັກສາຍ ໃຫ້ວັດຄຸນຄວາມຮັບອັນຂັ້ນໜຶ່ງ
ໄໝເກີດໄຟຮັງແມ່ໄຟຈຳນາມເປັນເລານານປີ
2. ແຜ່ນຍາງຮອງກລ່ອງຕ່ອໄວໄຟຟ້າປົ້ນສິ່ງແປລກປລອມເຂົ້າ
ໄປທີ່ການເສີຍຫາຍາດຕ່ອງດລວດ
3. Thermistor ອູປກຣນີເປົ້າຢືນກັນມອເຕອຮີໄໝໜຶ່ງ
ຕັດກະແສໄຟຟ້າທີ່ທີ່ອຸນໜ່ວມືຂດລວດສູງເກີນ
(ຕັ້ງແຕ່ Frame 160 ຂຶ້ນໄປ)



ປະກາກາຮົາຮັບອັນຄຸນກາງ

ພລິຕາຈາກໃຈງານທີ່ໄດ້ຮັບກາຮົາຮັບອັນມາຕ່າງໆ ISO9001 Version 2000
ໄດ້ຮັບກາຮົາຮັບອັນມາຕ່າງໆ CSA ສໍາໜັບກາຮົາສິ່ງອອກໄປຢັ້ງແຄນາດາແລະອມເວົາກາ

ໄດ້ຮັບກາຮົາຮັບອັນມາຕ່າງໆ CE ສໍາໜັບກາຮົາສິ່ງອອກໄປຢັ້ງໃນປະເທດຢູ່ໂລປ

ປະເທດຢູ່ໂລປ ດີກາຮົາຮັບອັນມາຕ່າງໆ EFF2 ອີ່ຍ່າງແທ້ຈົງ

ມາຕ່າງໆ ກາຮົາຮັບອັນມາຕ່າງໆ ISO 14001

ຮັບປະກັນຄຸນກາພານນ 18 ເດືອນ



Three – Phase Induction Motor

Totally Enclosed, externally ventilated, protection IP55, insulation class F with temperature rise class B, - Continuous operation – S1, Cage – type rotor in die-cast aluminum or cast iron frame.

Mechanical and Construction Characteristics

A motor described in this catalogue are dimensioned according to IEC Standard.

- Casing : Our motor casings from size 63 to 355 are in die cast iron. The aluminum frame is upon request. Painting is blue.
- Rotor : Cage rotor are made of aluminum (pressure die – cast method). The rotors are dynamically balanced (with the key inserted on shaft), in accordance with vibration rating N (IEC 34-14 Standard).
- Stator Windings : The stators, assembled from magnetic sheet metal, are wound with copper wire insulated with a double coating to class F standard. Windings are subjected to a special impregnation treatment with insulating paint, increase compactness and heat dispersion coefficients.
- Ventilation : External and surface ventilation is provided by radial bi – directional fan blades installed on the opposite end of drive shaft, inside a fan cover made.
- Bearings :

Frame	Poles	Bearing#(DE/NDE)	Bearing Type
63	2, 4, 6, 8	6201/6201	closed
71	2, 4, 6, 8	6202/6202	closed
80	2, 4, 6, 8	6204/6204	closed
90	2, 4, 6, 8	6205/6205	closed
100	2, 4, 6, 8	6206/6206	closed
112	2, 4, 6, 8	6206/6206	closed
132	2, 4, 6, 8	6208/6208	closed
160	2	6209/6209	closed
160	4, 6, 8	6309/6209	closed
180	2	6211/6211	opened
180	4, 6, 8	6311/6211	opened
200	2	6212/6212	opened
200	4, 6, 8	6312/6212	opened
225	2	6312/6312	opened
225	4, 6, 8	6313/6312	opened
250	2	6313/6313	opened
250	4, 6, 8	6314/6313	opened
280	2	6314/6314	opened
280	4, 6, 8	6317/6314	opened
315	2	6317/6317	opened
315	4, 6, 8, 10	N319/6319	opened
355	2	6319/6319	opened
355	4, 6, 8, 10	N322/6322	opened
Y3-355	2	N219+6219/N219	opened
Y3-355	4, 6, 8, 10	N224+6224/N224	opened
Y3-400	2	N219+6219/N219	opened
Y3-400	4, 6, 8, 10	N226+6226/N226	opened
Y3-450	2	N222+6222/N222	opened
Y3-450	4, 6, 8, 10	N228+6228/N228	opened

note: "DE" means Drive End of the motor

"NDE" means Non-Drive End of motor

Operating Conditions (IEC 34 – 1)

Service: This is the definition of the load to which the motor is subjected, inclusive of starting, electrical braking, rest and loadless times, as well as the sequence are duration of these.

CONSTRUCTION

Types of service:

- S1 = continuous service
- S2 = limited duration service
- S3 = Periodic intermittent service
- S4 = Periodic intermittent service with starting phase
- S5 = Periodic intermittent service with electric braking
- S6 = Periodic intermittent service with intermittent load
- S7 = Periodic interrupted service with electric braking
- S8 = Periodic interrupted service with correlated variations of load and speed
- S9 = Service with non-periodic variations of load and speed

Motors built for general use, as described in this catalogue, are able to operate in **S1** service.

Terminal Box and Cable Gland :

Type	Size of conduit hole	Size of terminal box frame
63-80	M25 x 1.5	92 x 92 x 56
90-100		100 x 100 x 63
112-132	2-M32 x 1.5	116 x 107 x 72
160-180	2-M40 x 1.5	158 x 149 x 85
200-225	2-M50 x 1.5	207 x 188 x 108
250-280	2-M63 x 1.5	245 x 215 x 133
315		317 x 280 x 175
355		340 x 290 x 165
400	3-M72X2	592 x500 x403

Over-temperature and Insulation Ratings:

Considering the full load operation of a motor at maximum ambient temperature of 40 °C,

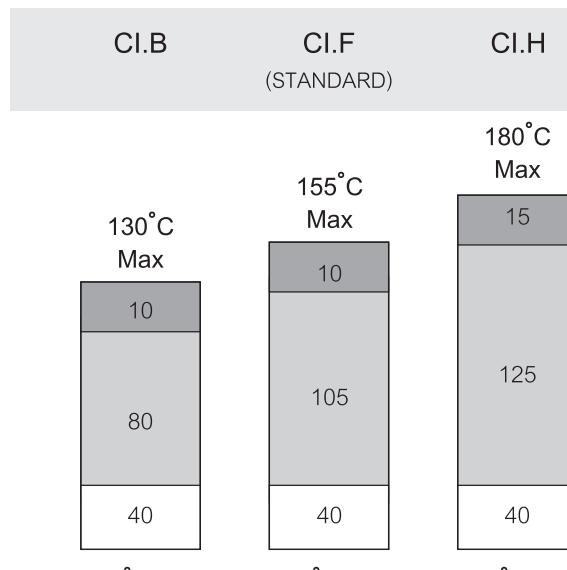
The insulation rating is calculated according to the temperature increase of the motor itself. Normalized power of our motors are based on a temperature rise corresponding to class 'B' insulation, which our motors are constructed with class 'F' insulation

Altitude and Temperature

The power rating shown refer to motors which normally operating conditions, motors characteristics will vary according to the coefficients shown in the chart below.

Ambient Temperature (°C)	% Nominal Power Rating
40	100%
45	96.5%
50	93%
55	90%
60	86.5%
70	79%

Altitude Above Sea Level in Metres	% Nominal Power Rating
1000 m	100%
1500 m	97%
2000 m	94.5%
2500 m	92%
3000 m	89%
4000 m	83.5%



Thermal
 Permissible temperature in rise
 Maximum ambient temperature

Voltage and Frequencies:

Motors are normally supplied with 50Hz frequency unless specified otherwise. 50Hz motor can be used at 60Hz. The following table indicates the coefficients required to obtain new performance levels with reference to difference voltages.

Motor wound for	Motor Feeding	Data Variation depending on voltage				
		KW (HP)	n ₁	A	Nom. Torque	Starting torque
220V 50Hz	220V 60Hz	100%	120%	100%	83%	83%
	260V 60Hz	115%	120%	100%	100%	100%
380V 50Hz	380V 60Hz	100%	120%	100%	83%	83%
	440V 60Hz	115%	120%	100%	100%	100%

Protection Level (IEC 34 – 5)

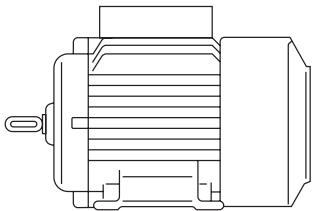
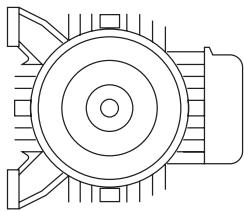
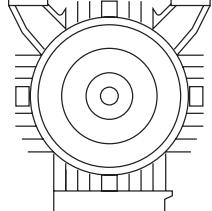
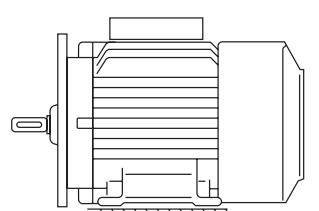
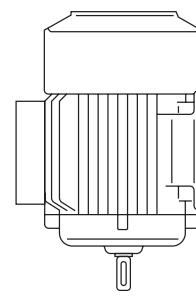
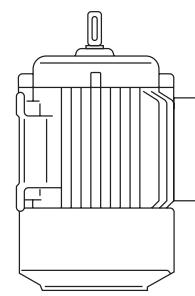
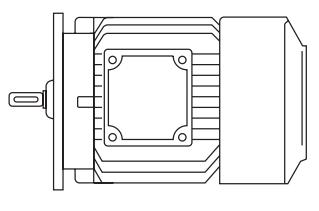
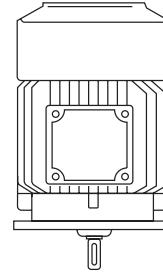
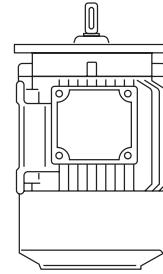
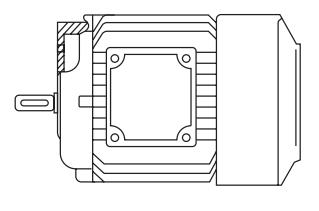
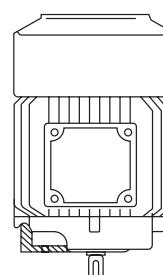
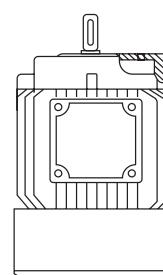
Protection levels against accidental contact and/or against the entrance of foreign bodies and the entrance of water are expressed internationally by a code rating made up of a group of two letters and numbers;

- IP = Reference letters for type of protection;
- 1st number = Protection level against solid objects;
- 2nd number = Protection level against water

	1 st number Protected against	2 nd number Protected against
IP 21		water drop falling vertically must not cause damage
IP 22	Protected against solid objects of over 12 mm (e.g. finger)	water drop falling on the motor from a 15 degree angle direction must not cause damage
IP 23		water falling down from a 60 degree angle direction must not cause damage
IP 44	any contact tools, wire or similar objects of width or diameter exceeding 1mm. with the live or rotating parts inside the casing	water sprinkled on the machine from any direction must not cause damage
IP 45		water ejected by a nozzle on the machine from any direction must not cause damage
IP 54		water sprinkled on the machine from any direction must not cause damage
IP 55*		water ejected by a nozzle on the machine from any direction must not cause damage
IP 56	Protected against dust (no deposits of harmful material)	with troubled waters (sea), water inside the water must not reach damaging quantity
IP 57		damaging quantities of water can not penetrate into the motor, when the water is under water. (The motor is under a specific pressure of depth, and the immersion lasts only for a limited lap on time)
IP 65		water ejected by a nozzle on the machine from any direction must not cause damage
IP66	Totally protected against dust	Protected against strong jets of water e.g. for use on shipdecks - limited ingress permitted
IP 67		Protected against the effects of temporary immersion between 15cm and 1m. Duration of test 30 minutes
IP 68		Protected against long periods of immersion under pressure

*The standard protecting of our motor is IP55, but models with different protection levels are often supplied.

MOUNTING ARRANGEMENTS

<p>IM B3/IM 1001</p>  <p>1) Foot mounted</p>	<p>IM B6/IM 1051</p>  <p>2) Foot wall mounted with feet on left side viewed from DE</p>	<p>IM B8/IM 1071</p>  <p>3) Ceiling mounted with feet above motor</p>
<p>IM B35/IM 2001</p>  <p>4) B5 type flange at DE, with feet</p>	<p>IM V5/IM 1011</p>  <p>5) Vertical feet wall mounted shaft down</p>	<p>IM V6/IM 1031</p>  <p>6. Vertical feet wall mounted shaft up</p>
<p>IM B5/IM 3001</p>  <p>7) B5 type flange at DE, no feet</p>	<p>IM V1/IM 3011</p>  <p>8) B5 type flange at DE, no feet shaft down</p>	<p>IM V3/IM 3031</p>  <p>9) B5 type flange at DE, shaft up no feet</p>
<p>IM B14/IM 3601</p>  <p>10) Face flange B14 at DE, no feet</p>	<p>IM V18/IM 3611</p>  <p>11) Face flange B14 at DE, shaft down, no feet</p>	<p>IM V19/IM 3631</p>  <p>12) Face flange B14 at DE, shaft up, no feet</p>

SPECIFICATION

Frame Size	Rated Output		Rated Current	Full Load Speed	Efficiency (%)	Power Factor (cosø)	Full load Torque (Nm)	DOL Starting Torque Ratio	Pull Out Torque Ratio	DOL Starting Current Ratio	Noise Level dB (A)	Vibration Limit (mm/s)	Moment of Inertia (J) WK in Kgm ²	Weight (Kg)
	KW	HP	FLC 380V (A)	RPM	FL	FL	MN	MA/MN	MK/MN	IA/IN	(mm/s)			

2 POLE 3000 RPM

IN63A-2	0.18	0.25	0.53	2720	65.0	0.80	0.614	2.2	2.2	5.5	61	1.8	0.000	8
IN63B-2	0.25	0.33	0.69	2720	68.0	0.81	0.853	2.2	2.2	5.5	61	1.8	0.000	9
IN71A-2	0.37	0.5	0.99	2740	70.1	0.81	1.262	2.2	2.2	6.1	64	1.8	0.000	11
IN71B-2	0.55	0.75	1.4	2740	73.0	0.82	1.875	2.3	2.2	6.1	64	1.8	0.000	12
IN80A-2	0.75	1	1.83	2840	75.0	0.83	2.535	2.3	2.2	6.1	67	1.8	0.001	14
IN80B-2	1.1	1.5	2.58	2840	77.0	0.84	3.718	2.3	2.2	7	67	1.8	0.001	15
IN90S-2	1.5	2	3.43	2840	79.0	0.84	5.044	2.3	2.2	7	72	1.8	0.001	21
IN90L-2	2.2	3	4.85	2840	81.0	0.85	7.398	2.3	2.2	7	72	1.8	0.001	24
IN100L-2	3	4	6.31	2860	83.0	0.87	9.948	2.3	2.2	7.5	76	1.8	0.003	35
IN112M-2	4	5.5	8.1	2880	85.0	0.88	13.22	2.3	2.2	7.5	77	1.8	0.006	46
IN132SA-2	5.5	7.5	11	2900	86.0	0.88	18.11	2.3	2.2	7.5	80	1.8	0.011	61
IN132SB-2	7.5	10	14.9	2900	87.0	0.88	24.7	2.3	2.2	7.5	80	1.8	0.013	66
IN160MA-2	11	15	21.3	2930	88.0	0.89	35.85	2.3	2.2	7.5	86	2.8	0.038	107
IN160MB-2	15	20	28.8	2930	89.0	0.89	48.89	2.3	2.2	7.5	86	2.8	0.045	117
IN160L-2	18.5	25	34.7	2930	90.0	0.90	60.09	2.3	2.2	7.5	86	2.8	0.055	137
IN180M-2	22	30	41	2940	90.5	0.90	71.46	2.3	2.0	7.5	89	2.8	0.075	170
IN200LA-2	30	40	55.5	2950	91.2	0.90	97.12	2.3	2.0	7.5	92	2.8	0.124	230
IN200LB-2	37	50	67.9	2950	92.0	0.90	119.8	2.3	2.0	7.5	92	2.8	0.139	246
IN225M-2	45	60	82.3	2960	92.3	0.90	144.7	2.3	2.0	7.5	92	2.8	0.233	310
IN250M-2	55	75	101	2965	92.5	0.90	176.9	2.3	2.0	7.5	93	3.5	0.312	395
IN280S-2	75	100	134	2970	93.2	0.91	241.2	2.3	2.0	7.5	94	3.5	0.597	560
IN280M-2	90	125	160	2970	93.8	0.91	289.4	2.3	2.0	7.5	94	3.5	0.675	611
IN315S-2	110	150	195	2975	94.0	0.91	352.5	2.2	1.8	7.1	96	3.5	1.18	925
IN315M-2	132	175	233	2975	94.5	0.91	423	2.2	1.8	7.1	96	3.5	1.82	1040
IN315LA-2	160	220	279	2975	94.6	0.92	512.8	2.2	1.8	7.1	99	3.5	2.08	1130
IN315LX-2	185	250	322	2975	94.6	0.92	592.9	2.2	1.8	7.1	99	3.5	2.47	1212
IN315LB-2	200	270	348	2975	94.8	0.92	640.9	2.2	1.8	7.1	99	3.5	2.47	1215
IN355MA-2	220	300	383	2980	94.8	0.92	705	2.2	1.6	7.1	103	3.5	2.9	1570
IN355MB-2	250	350	433	2980	95.3	0.92	801	2.2	1.6	7.1	103	3.5	4	1705
IN355L-2	315	425	544	2980	95.6	0.92	1009	2.2	1.6	7.1	103	3.5	4.8	2050
INY3 3551-2	355	480	622	2980	96.4	0.90	1138	2.5	1.3	6.5	104	3.5	5.3	2410
INY3 3552-2	400	550	700	2980	96.4	0.90	1282	2.5	1.3	6.5	104	3.5	6.5	2590
INY3 3553-2	450	600	788	2980	96.4	0.90	1442	2.5	1.6	6.5	108	3.5	6.6	2680
INY3 4001-2	450	600	788	2983	96.4	0.90	1441	2.5	1.3	6.5	108	3.5	10.6	3360
INY3 4002-2	500	700	876	2983	96.4	0.90	1601	2.5	1.3	6.5	108	3.5	11.6	3560
INY3 4003-2	560	750	969	2983	96.5	0.91	1793	2.5	1.2	6.5	109	3.5	13.9	3840
			FLC 660V (A)											
INY3 4501-2	560	750	558	2985	96.5	0.91	1792	2.5	1.2	6.5	109	3.5	16.0	4130
INY3 4502-2	630	845	628	2985	96.5	0.91	2016	2.5	1.2	6.5	109	3.5	16.6	4400
INY3 4503-2	710	950	700	2985	96.6	0.92	2272	2.5	1.2	6.5	109	3.5	19.8	4450
INY3 4504-2	800	1070	790	2985	96.6	0.92	2559	2.5	1.2	6.5	109	3.5	20.6	4780