electronica
Plastic Machines

Futura Series

energy efficient

60 Ton – 650 Ton

Injection Molding Machines

INDUSTRY 4.0 Ready

Servo

...The energy efficient molding solution

A Proud Member of

PMMAI

We Shape Plastics...

"FUTURA" SERIES INJECTION MOLDING MACHINES - TECHNICAL SPECIFICATIONS

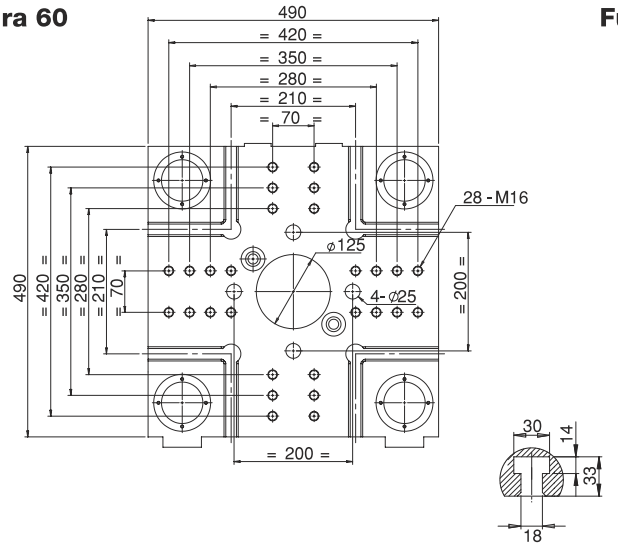
MODEL		Fu 60-121-14 STD.			Fu 60-128-15			Fu 60-207-14			Fu 60-214-18			Fu 90-121-14		
International code		600H-121			600H-128			600H-207			600H-214			900H-121		
Injection unit number		121			128			207			214			121		
Injection Unit		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	28	31	35	28	31	35	31	35	40	31	35	40	28	31	35
Screw Length	L/D	21	19	17	21	19	17	22	19	17	22	19	17	21	19	17
Stroke Volume	$cm^3$3	68	83	106	68	83	106	102	130	170	102	130	170	68	83	106
Injection Weight max. (PS)**	g	64	79	100	64	79	100	97	123	161	97	123	161	64	79	100
Injection Rate #	cm^3/s	93	114	146	105	129	164	77	98	128	99	126	164	93	114	146
Plasticizing Rate #	g/s	8.5	10.4	13.3	9.6	11.8	15.1	9.1	11.6	15.1	11.8	15.0	19.6	8.5	10.4	13.3
Screw Stroke	mm	110			110			135			135			110		
Injection Pressure	Bar	1786	1457	1143	1897	1548	1214	2029	1592	1219	2097	1645	1259	1786	1457	1143
Screw RPM	-	314			354			212			271			314		
Clamping Unit																
Clamping Force	kN	600			600			600			600			900		
Mold Opening Stroke	mm	300			300			300			300			320		
Dist Bet.Tie Bars, H x V	mm	320 x 320			320 x 320			320 x 320			320 x 320			360 x 360		
Mold Thickness,min/max.	mm	100-320			100-320			100-320			100-320			100-350		
Max. Daylight	mm	620			620			620			620			670		
Platen Diamensions, H x V	mm	490 x 490			490 x 490			490 x 490			490 x 490			535 x 535		
Ejector Stroke	mm	100			100			100			100			100		
Ejector Force	kN	31.4			33.4			29.4			30.4			31.4		
Ejector Number	pcs	5			5			5			5			5		
General Data																
Pump Drive	kW	12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)		
Installed Heating Capacity	kW	6.46			6.46			7.65			7.65			6.46		
Total Connected Power	kW	18.46 (14.66)			18.46 (14.66)			19.65 (15.85)			19.65 (15.85)			18.46 (14.66)		
Machine Dimensions (LxWxH)	M	3.7 x 1.5 x 1.7			3.7 x 1.5 x 1.7			3.7 x 1.5 x 1.7			3.7 x 1.5 x 1.7			3.8 x 1.6 x 1.8		
Oil Tank Capacity	lit	140			140			140			140			190		
Net Weight (without Oil)	t	3.1			3.1			3.1			3.1			3.9		

NOTE : # Achieved in air injection. * Theoretical value; actual value may vary depending on material, melt density & residence time · Specifications are subject to change due to continuos improvements ·

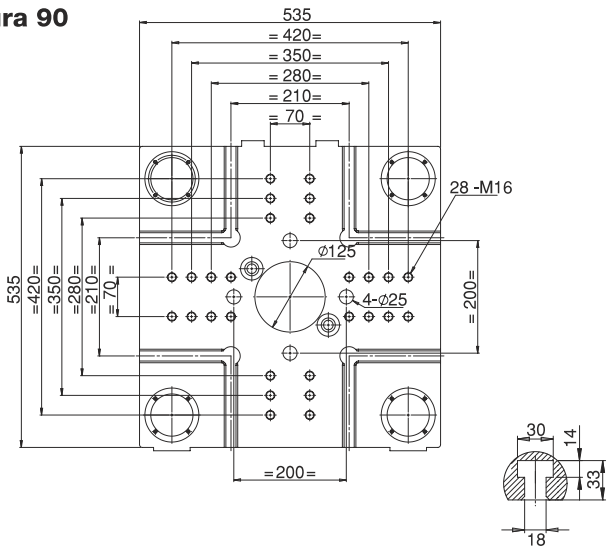
Platen Dimensions

Moving platen

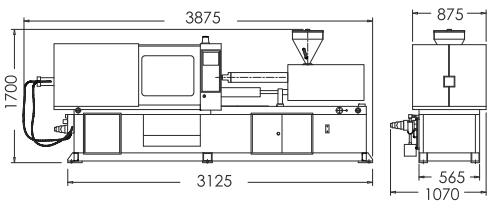
Futura 60

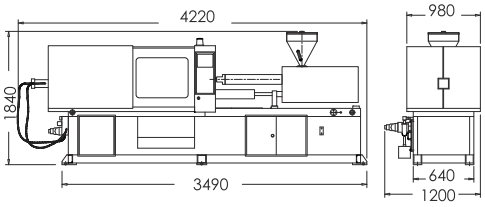


Futura 90



Machine Dimensions

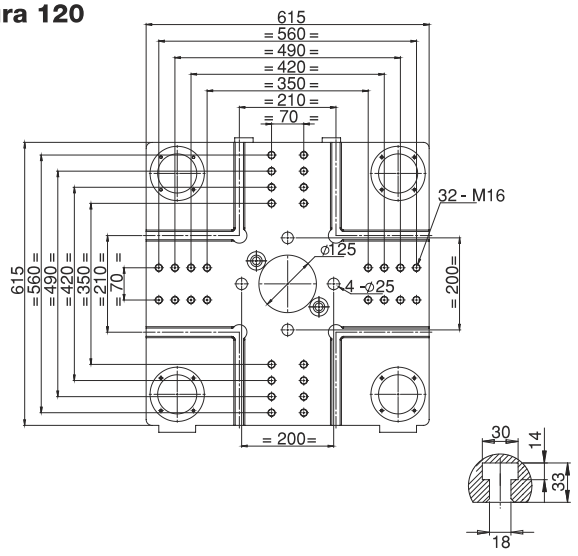


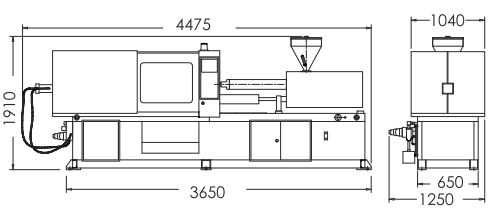


Fu 90-128-15			Fu 90-207-14 STD.			Fu 90-214-18			Fu 90-437-14			Fu 90-451-18			Fu 120-207-14		
900H-128			900H-207			900H-214			900H-437			900H-451			1200H-207		
	128			207			214			437			451			207	
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
28	31	35	31	35	40	31	35	40	40	45	50	40	45	50	31	35	40
21	19	17	22	19	17	22	19	17	20	18	16	20	18	16	22	19	17
68	83	106	102	130	170	102	130	170	203	258	318	203	258	318	102	130	170
64	79	100	97	123	161	97	123	161	193	245	302	193	245	302	97	123	161
105	129	164	77	98	128	99	126	164	74	94	116	95	120	148	77	98	128
9.6	11.8	15.1	9.1	11.6	15.1	11.8	15.0	19.6	12.9	16.4	20.2	16.9	21.4	26.4	9.1	11.6	15.1
	110			135			135			162			162			135	
1897	1548	1214	2029	1592	1219	2097	1645	1259	2147	1697	1374	2218	1752	1419	2029	1592	1219
	354			212			271			180			231			212	
	900			900			900			900			900			1200	
	320			320			320			320			320			400	
	360 x 360			360 x 360			360 x 360			360 x 360			360 x 360			410 x 410	
	100-350			100-350			100-350			100-350			100-350			160-400	
	670			670			670			670			670			800	
	535 x 535			535 x 535			535 x 535			535 x 535			535 x 535			615 x 615	
	100			100			100			100			100			110	
	33.4			29.4			30.4			29.9			30.9			29.4	
	5			5			5			5			5			5	
	12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)	
	6.46			7.65			7.65			10.30			10.30			7.65	
	18.46 (14.66)			19.65 (15.85)			19.65 (15.85)			22.30 (18.50)			22.30 (18.50)			19.65 (15.85)	
	3.8 x 1.6 x 1.8			3.8 x 1.6 x 1.8			3.8 x 1.6 x 1.8			3.8 x 1.6 x 1.8			3.8 x 1.6 x 1.8			4.3 x 1.7 x 2.0	
	190			190			190			190			190			250	
	3.9			3.9			3.9			3.9			3.9			4.3	

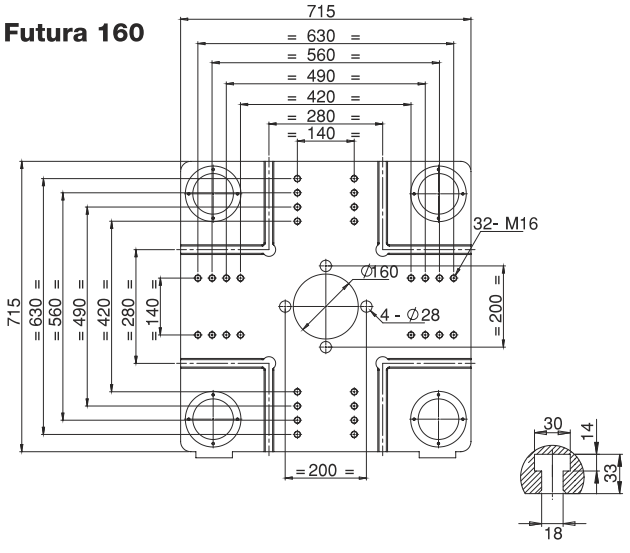
To be used strictly under standard electrical supply conditions of 415V± 5% MAX., 50 Hz, 3 Phase + N.

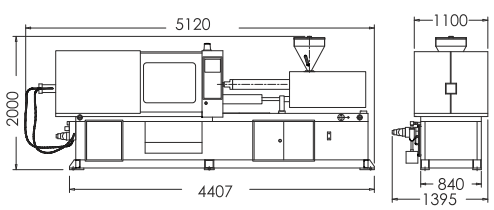
Futura 120





Futura 160





"FUTURA" SERIES INJECTION MOLDING MACHINES - TECHNICAL SPECIFICATIONS

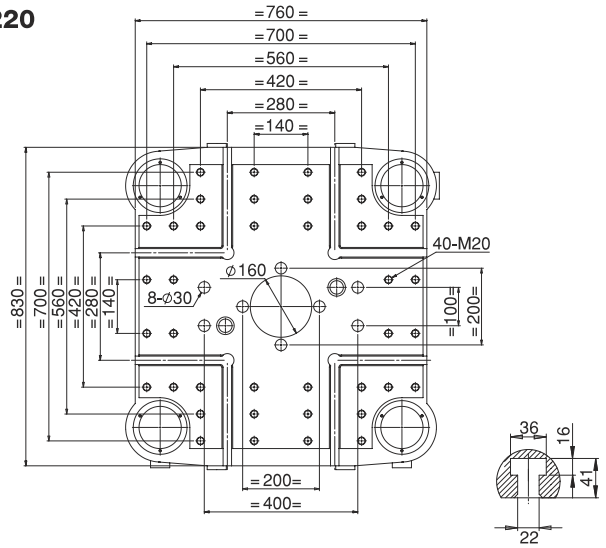
MODEL		Fu 120-214-18			Fu 120-437-14 STD.			Fu 120-451-18			Fu 120-573-18			Fu 120-592-22		
International code		1200H-214			1200H-437			1200H-451			1200H-573			1200H-592		
Injection unit number		214			437			451			573			592		
Injection Unit		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	31	35	40	40	45	50	40	45	50	45	50	55	45	50	55
Screw Length	L/D	22	19	17	20	18	16	20	18	16	21	19	17	21	19	17
Stroke Volume	cm^3	102	130	170	203	258	318	203	258	318	286	353	427	286	353	427
Injection Weight max. (PS)**	g	97	123	161	193	245	302	193	245	302	272	336	406	272	336	406
Injection Rate #	cm^3/s	99	126	164	74	94	116	95	120	148	102	125	152	127	157	190
Plasticizing Rate #	g/s	11.8	15.0	19.6	12.9	16.4	20.2	16.9	21.4	26.4	20.0	25.1	30.4	25.2	31.5	38.1
Screw Stroke	mm	135			162			162			180			180		
Injection Pressure	Bar	2097	1645	1259	2147	1697	1374	2218	1752	1419	2003	1623	1341	2069	1676	1385
Screw RPM	-	271			180			231			206			258		
Clamping Unit																
Clamping Force	kN	1200			1200			1200			1200			1200		
Mold Opening Stroke	mm	400			400			400			400			400		
Dist Bet.Tie Bars, H x V	mm	410 x 410			410 x 410			410 x 410			410 x 410			410 x 410		
Mold Thickness,min/max.	mm	160-400			160-400			160-400			160-400			160-400		
Max. Daylight	mm	800			800			800			800			800		
Platen Diamensions, H x V	mm	615 x 615			615 x 615			615 x 615			615 x 615			615 x 615		
Ejector Stroke	mm	110			110			110			110			110		
Ejector Force	kN	30.4			29.9			30.9			29.9			30.9		
Ejector Number	pcs	5			5			5			5			5		
General Data																
Pump Drive	kW	12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			18.20 (12.40)		
Installed Heating Capacity	kW	7.65			10.30			10.30			13.75			13.75		
Total Connected Power	kW	19.65 (15.85)			22.30 (18.50)			22.30 (18.50)			25.75 (21.95)			31.95 (26.15)		
Machine Dimensions (LxWxH)	M	4.3 x 1.7 x 2.0			4.3 x 1.7 x 2.0			4.3 x 1.7 x 2.0			4.3 x 1.7 x 2.0			4.3 x 1.7 x 2.0		
Oil Tank Capacity	lit	250			250			250			250			250		
Net Weight (without Oil)	t	4.3			4.3			4.3			4.3			4.3		

NOTE : # Achieved in air injection. * Theoretical value; actual value may vary depending on material, melt density & residence time · Specifications are subject to change due to continuos improvements ·

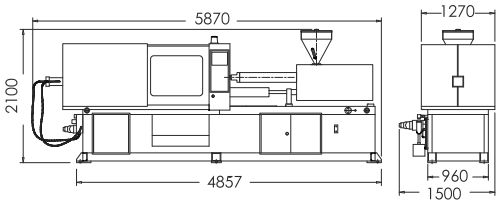
Platen Dimensions

Moving platen

Futura 220



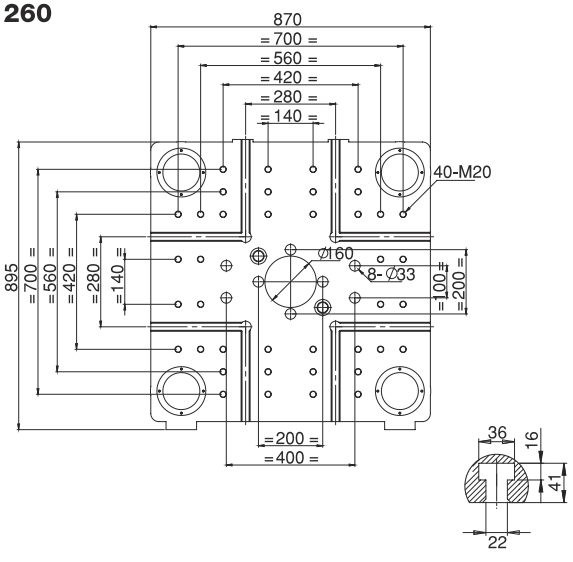
Machine Dimensions

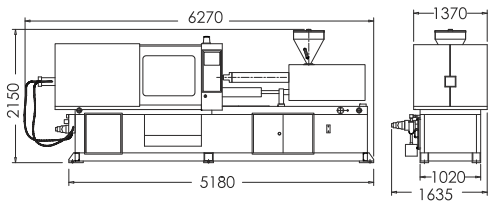


Fu 160-437-14			Fu 160-451-18			Fu 160-573-18 STD.			Fu 160-592-22			Fu 160-851-22			Fu 160-879-27		
1600H-437			1600H-451			1600H-573			1600H-592			1600H-851			1600H-879		
437			451			573			592			851			879		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
40	45	50	40	45	50	45	50	55	45	50	55	50	55	60	50	55	60
20	18	16	20	18	16	21	19	17	21	19	17	21	19	17	21	19	17
203	258	318	203	258	318	286	353	427	286	353	427	396	480	571	396	480	571
193	245	302	193	245	302	272	336	406	272	336	406	377	456	542	377	456	542
74	94	116	95	120	148	102	125	152	127	157	190	118	143	170	148	179	213
12.9	16.4	20.2	16.9	21.4	26.4	20.0	25.1	30.4	25.2	31.5	38.1	23.5	28.4	33.7	29.2	35.3	42.0
162			162			180			180			202			202		
2147	1697	1374	2218	1752	1419	2003	1623	1341	2069	1676	1385	2147	1775	1491	2218	1833	1540
180			231			206			258			200			249		
1600			1600			1600			1600			1600			1600		
450			450			450			450			450			450		
470 x 470			470 x 470			470 x 470			470 x 470			470 x 470			470 x 470		
160-500			160-500			160-500			160-500			160-500			160-500		
950			950			950			950			950			950		
715 x 715			715 x 715			715 x 715			715 x 715			715 x 715			715 x 715		
122			122			122			122			122			122		
47.5			49.1			47.5			49.1			47.5			49.1		
5			5			5			5			5			5		
12.00 (8.20)			12.00 (8.20)			12.00 (8.20)			18.20 (12.40)			18.20 (12.40)			28.30 (19.20)		
10.30			10.30			13.75			13.75			15.90			15.90		
22.30 (18.50)			22.30 (18.50)			25.75 (21.95)			31.95 (26.15)			34.10 (28.30)			44.20 (35.10)		
4.8 x 1.8 x 2.0			4.8 x 1.8 x 2.0			4.8 x 1.8 x 2.0			4.8 x 1.8 x 2.0			4.8 x 1.9 x 2.0			4.8 x 1.9 x 2.0		
300			300			300			300			300			300		
6.4			6.4			6.4			6.4			6.4			6.4		

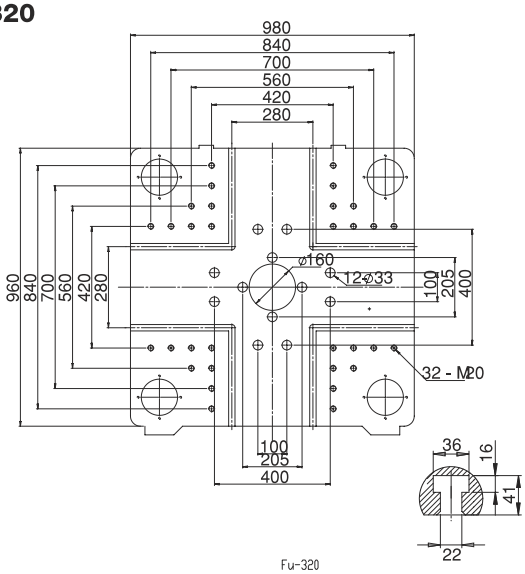
To be used strictly under standard electrical supply conditions of 415V± 5% MAX., 50 Hz, 3 Phase + N.

Futura 260

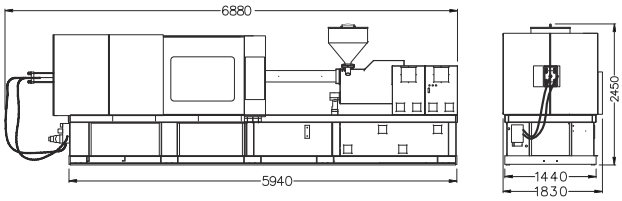




Futura 320



Fu-320



"FUTURA" SERIES INJECTION MOLDING MACHINES - TECHNICAL SPECIFICATIONS

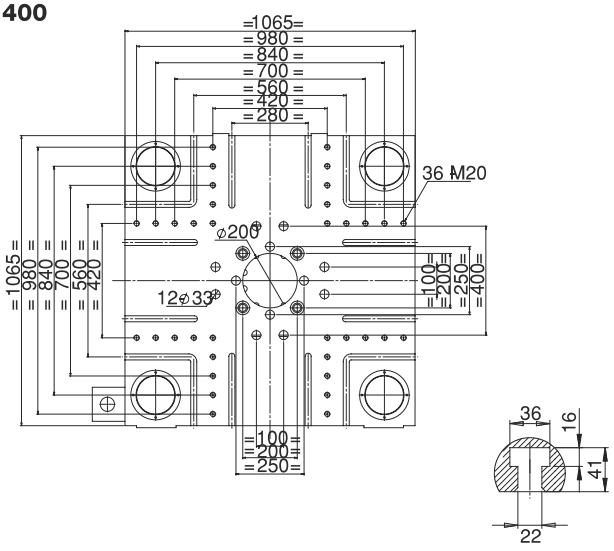
MODEL		Fu 220-573-18			Fu 220-592-22			Fu 220-851-22 STD.			Fu 220-879-27			Fu 220-957-27		
International code		2200H-573			2200H-592			2200H-851			2200H-879			2200H-957		
Injection unit number		573			592			851			879			957		
Injection Unit		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	45	50	55	45	50	55	50	55	60	50	55	60	55	60	67
Screw Length	L/D	21	19	17	21	19	17	21	19	17	21	19	17	21	19	17
Stroke Volume	$cm^3$3	286	353	427	286	353	427	396	480	571	396	480	571	539	642	800
Injection Weight max. (PS)**	g	272	336	406	272	336	406	377	456	542	377	456	542	512	609	760
Injection Rate #	cm^3/s	102	125	152	127	157	190	118	143	170	148	179	213	179	213	266
Plasticizing Rate #	g/s	20.0	25.1	30.4	25.2	31.5	38.1	23.5	28.4	33.7	29.2	35.3	42.0	33.9	40.4	47.4
Screw Stroke	mm	180			180			202			202			227		
Injection Pressure	Bar	2003	1623	1341	2069	1676	1385	2147	1775	1491	2218	1833	1540	1775	1491	1196
Screw RPM	-	206			258			200			249			206		
Clamping Unit																
Clamping Force	kN	2200			2200			2200			2200			2200		
Mold Opening Stroke	mm	480			480			480			480			480		
Dist Bet.Tie Bars, H x V	mm	535 x 535			535 x 535			535 x 535			535 x 535			535 x 535		
Mold Thickness,min/max.	mm	200-550			200-550			200-550			200-550			200-550		
Max. Daylight	mm	1030			1030			1030			1030			1030		
Platen Diamensions, H x V	mm	760 x 760			760 x 760			760 x 760			760 x 760			760 x 760		
Ejector Stroke	mm	125			125			125			125			125		
Ejector Force	kN	47.5			49.1			47.5			49.1			47.5		
Ejector Number	pcs	9			9			9			9			9		
General Data																
Pump Drive	kW	12.00 (8.20)			18.20 (12.40)			18.20 (12.40)			28.30 (19.20)			28.30 (19.20)		
Installed Heating Capacity	kW	13.75			13.75			15.90			15.90			18.43		
Total Connected Power	kW	25.75 (21.95)			31.95 (26.15)			34.10 (28.30)			44.20 (35.10)			46.73 (37.63)		
Machine Dimensions (LxWxH)	M	5.6 x 1.9 x 2.1			5.6 x 1.9 x 2.1			5.6 x 1.9 x 2.1			5.6 x 1.9 x 2.1			5.6 x 1.9 x 2.1		
Oil Tank Capacity	lit	400			400			400			400			400		
Net Weight (without Oil)	t	7.8			7.8			7.8			7.8			7.8		

NOTE : # Achieved in air injection. * Theoretical value; actual value may vary depending on material, melt density & residence time · Specifications are subject to change due to continuos improvements ·

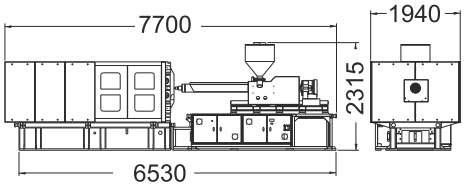
Platen Dimensions

Moving platen

Futura 400



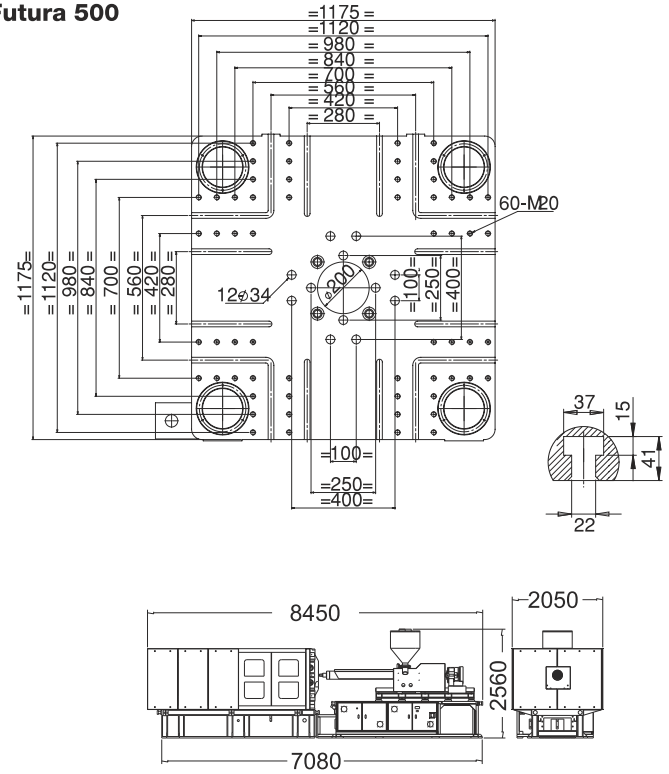
Machine Dimensions



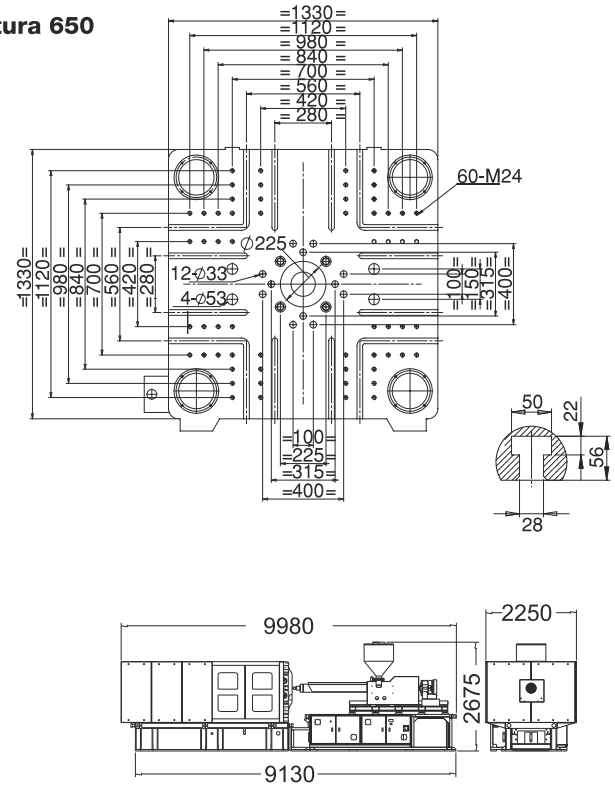
Fu 220-972-32			Fu 260-851-22			Fu 260-879-27			Fu 260-957-27 STD.			Fu 260-972-32			Fu 260-1395-39		
2200H-972			2600H-851			2600H-879			2600H-957			2600H-972			2600H-1395		
972			851			879			957			972			1395		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
55	60	67	50	55	60	50	55	60	55	60	67	55	60	67	62	67	72
21	19	17	21	19	17	21	19	17	21	19	17	21	19	17	22.7	21	19.5
539	642	800	396	480	571	396	480	571	539	642	800	539	642	800	836	976	1127
512	609	760	377	456	542	377	456	542	512	609	760	512	609	760	794	927	1071
211	251	313	118	143	170	148	179	213	179	213	266	211	251	313	272	318	367
40.0	47.6	55.9	23.5	28.4	33.7	29.2	35.3	42.0	33.9	40.4	47.4	40.0	47.6	55.9	43.4	50.6	58.4
227			202			202			227			227			277		
1804	1516	1215	2147	1775	1491	2218	1833	1540	1775	1491	1196	1804	1516	1215	1669	1429	1238
243			200			249			206			243			156		
2200			2600			2600			2600			2600			2600		
480			550			550			550			550			550		
535 x 535			580 x 580			580 x 580			580 x 580			580 x 580			580 x 580		
200-550			200-600			200-600			200-600			200-600			200-600		
1030			1150			1150			1150			1150			1150		
760x760			870 x 870			870 x 870			870 x 870			870 x 870			870 x 870		
125			167			167			167			167			167		
48.3			67.3			69.5			67.3			68.4			68.4		
9			9			9			9			9			9		
28.30 (19.20)			18.20 (12.40)			28.30 (19.20)			28.30 (19.20)			28.30 (19.20)			36.70 (24.90)		
18.43			15.90			15.90			18.43			18.43			21.33		
46.73 (37.63)			34.10 (28.30)			44.20 (35.10)			46.73 (37.63)			46.73 (37.63)			58.03 (46.23)		
5.6 x 1.9 x 2.1			6.1 x 2.1 x 2.2			6.1 x 2.1 x 2.2			6.1 x 2.1 x 2.2			6.1 x 2.1 x 2.2			6.1 x 2.1 x 2.2		
400			490			490			490			490			490		
7.8			9.3			9.3			9.3			9.3			9.3		

To be used strictly under standard electrical supply conditions of 415V± 5% MAX., 50 Hz, 3 Phase + N.

Futura 500



Futura 650



"FUTURA" SERIES INJECTION MOLDING MACHINES - TECHNICAL SPECIFICATIONS

MODEL		Fu 260-1440-48			Fu 320-957-27			Fu 320-972-32			Fu 320-1395-39 STD.			Fu 320-1440-48		
International code		2600H-1440			3200H-957			3200H-972			3200H-1395			3200H-1440		
Injection unit number		1440			957			972			1395			1440		
Injection Unit		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	62	67	72	55	60	67	55	60	67	62	67	72	62	67	72
Screw Length	L/D	22.7	21	19.5	21	19	17	21	19	17	22.7	21	19.5	22.7	21	19.5
Stroke Volume	$cm^{3}3$	836	976	1127	539	642	800	539	642	800	836	976	1127	836	976	1127
Injection Weight max. (PS)**	g	794	927	1071	512	609	760	512	609	760	794	927	1071	794	927	1071
Injection Rate #	cm^3/s	340	398	459	179	213	266	211	251	313	272	318	367	340	398	459
Plasticizing Rate #	g/s	54.2	63.3	73.0	40.0	47.6	55.9	40.0	47.6	55.9	43.4	50.6	58.4	54.2	63.3	73.0
Screw Stroke	mm	277			227			227			277			277		
Injection Pressure	Bar	1723	1476	1278	1775	1491	1196	1804	1516	1215	1669	1429	1238	1723	1476	1278
Screw RPM	-	195			206			243			156			195		
Clamping Unit																
Clamping Force	kN	2600			3200			3200			3200			3200		
Mold Opening Stroke	mm	550			640			640			640			640		
Dist Bet.Tie Bars, H x V	mm	580 x 580			670 x 650			670 x 650			670 x 650			670 x 650		
Mold Thickness,min/max.	mm	200-600			250-660			250-660			250-660			250-660		
Max. Daylight	mm	1150			1300			1300			1300			1300		
Platen Diamensions, H x V	mm	870 x 870			980 x 960			980 x 960			980 x 960			980 x 960		
Ejector Stroke	mm	167			167			167			167			167		
Ejector Force	kN	70.7			67.3			68.4			68.4			70.7		
Ejector Number	pcs	9			13			13			13			13		
General Data																
Pump Drive	kW	44.00 (29.90)			28.30 (19.20)			28.30 (19.20)			36.70 (24.90)			44.00 (29.90)		
Installed Heating Capacity	kW	21.33			18.43			18.43			21.33			21.33		
Total Connected Power	kW	65.33 (51.23)			46.73 (37.63)			46.73 (37.63)			58.03 (46.23)			65.33 (51.23)		
Machine Dimensions (LxWxH)	M	6.1 x 2.1 x 2.2			6.9 x 1.6 x 2.5			6.9 x 1.6 x 2.5			6.9 x 1.6 x 2.5			6.9 x 1.6 x 2.5		
Oil Tank Capacity	lit	490			600			600			600			600		
Net Weight (without Oil)	t	9.3			11.3			11.3			11.5			11.5		

NOTE : # Achieved in air injection. * Theoretical value; actual value may vary depending on material, melt density & residence time · Specifications are subject to change due to continuos improvements ·

Futura Series : Clamping force: 600 - 6500 kN

"Futura" series machine is characterized by:

- Enhanced overall injection molding efficiency levels to a great extent.
- It is driven by the most energy efficient servo mechanism resulting in highest energy savings, consistent, repeatable & smoother machine performance.
- About 20 to 60% energy saving compared to a conventional hydraulic machine.

CLAMP

- Sturdy and optimized five-point double toggle system, known for its quick mold open and close movements along with its good mold safety characteristics; is one of the most preferred clamping mechanism in the world.
- Moving platen supported on machine base with adjustable sliding shoes.
- Self-lubricating bushes for toggle mechanism.
- Automatic, motorized mold height / thickness adjustment through Sun and planetary gear mechanism.
- Advanced, progressive type auto grease lubrication with pressure switch feedback & low level sensor.
- Wear resistant stainless steel supporting tracks for moving platen.
- Hard chrome plated, high tensile steel tie bars.
- Stress-relieved sturdy machine base frame.
- Closing and opening speeds, pressures and positions independently settable. Each programmable in 05 stages.
- Linear position transducer for accurate clamp position control.

EJECTOR

- Central hydraulic ejector with multiple stroke feature. Speed, pressure and position independently settable in both directions.
- Pulsating as well as Ejector Hold/ Stay forward function.
- Linear transducer for accurate ejector position control.
- Multi point ejector plate for uniform force distribution provided with multiple ejector rods.

Fu 320-2365-48			Fu 320-2441-55			Fu 400-1395-39			Fu 400-1440-48			Fu 400-2365-48 STD.		
3200H-2365			3200H-2441			4000H-1395			4000H-1440			4000H-2365		
2365			2441			1395			1440			2365		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
70	75	80	70	75	80	62	67	72	62	67	72	70	75	80
21.4	20	18.8	21.4	20	18.8	22.7	21	19.5	22.7	21	19.5	21.4	20	18.8
1396	1603	1824	1396	1603	1824	836	976	1127	836	976	1127	1396	1603	1824
1326	1523	1733	1326	1523	1733	794	927	1071	794	927	1071	1326	1523	1733
336	385	438	381	438	498	272	318	367	340	398	459	336	385	438
60.0	64.5	68.9	68.0	73.0	78.0	43.4	50.6	58.4	54.2	63.3	73.0	60.0	64.5	68.9
363			363			277			277			363		
1694	1476	1297	1749	1523	1339	1669	1429	1238	1723	1476	1278	1694	1476	1297
166			188			156			195			166		
3200			3200			4000			4000			4000		
640			640			700			700			700		
670 x 650			670 x 650			720 x 720			720 x 720			720 x 720		
250-660			250-660			220-730			220-730			220-730		
1300			1300			1430			1430			1430		
980 x 960			980 x 960			1065 x 1065			1065 x 1065			1065 x 1065		
167			167			180			180			180		
68.4			70.7			121.7			125.6			121.7		
13			13			13			13			13		
44.00 (29.90)			67.00 (45.50)			36.70 (24.90)			44.00 (29.90)			44.00 (29.90)		
22.70			22.70			21.33			21.33			22.70		
66.70 (52.60)			89.70 (68.20)			58.03 (46.23)			65.33 (51.23)			66.70 (52.60)		
6.9 x 1.6 x 2.5			6.9 x 1.6 x 2.5			7.5 x 1.6 x 2.31			7.5 x 1.6 x 2.31			7.5 x 1.6 x 2.31		
600			600			720			720			720		
11.8			11.8			16.2			16.2			16.5		

To be used strictly under standard electrical supply conditions of 415V± 5% MAX., 50 Hz, 3 Phase + N.

INJECTION

- Wide choice of injection units with A/B/C screw/barrel combinations.
- Injection speed and pressure profile programmable in 06, position dependent stages.
- Follow up/hold on pressure profile programmable in 05, time dependent stages.
- Screw speed control profile programmable in 05, position dependent stages.
- Strong & balanced twin cylinder injection unit distributes the load/pressure equally along the screw centerline.
- High torque, low speed direct hydraulic screw drive.
- Proven screw geometry for optimum plasticizing capacities with excellent melt homogeneity.
- Back pressure through controller with profile programmable in position dependent stages.
- Fitted with nitrided screw and nitrided barrel, non-return valve and barrel closure assembly with open nozzle suitable for various thermoplastics.
- Delay feature for commencement of plasticizing to aid processing of engineering plastics.
- Monitoring of melt cushion during the follow-up / hold-on pressure phase.
- Switch over from fill to pack based on position or time.
- Linear position transducer for accurate injection position control.
- Suitable capacity material hopper with easy sliding arrangement.

TEMPERATURE CONTROL

- 4 / 5 self-optimizing temperature control zones / circuits with ceramic heating bands for the barrel and nozzle flange heating system.
- PID controlled barrel heater bands, with solid state relays and fast blowing semi conductor fuses for barrel heating system.
- Adjustable high / low tolerance band for monitoring with alarm for deviation from set point.
- Operating temperature range of up to 450°C.
- Thermo couple break down alarm.

"FUTURA" SERIES INJECTION MOLDING MACHINES - TECHNICAL SPECIFICATIONS

MODEL		Fu 400-2441-55			Fu 400-3190-55			Fu 400-3293-68			Fu 500-2365-48			Fu 500-2441-55		
International code		4000H-2441			4000H-3190			4000H-3293			5000H-2365			5000H-2441		
Injection unit number		2441			3190			3293			2365			2441		
Injection Unit		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw Diameter	mm	70	75	80	75	80	85	75	80	85	70	75	80	70	75	80
Screw Length	L/D	21.4	20	18.8	23.5	22	20.7	23.5	22	20.7	21.4	20	18.8	21.4	20	18.8
Stroke Volume	$cm^3$3	1396	1603	1824	1766	2010	2269	1766	2010	2269	1396	1603	1824	1396	1603	1824
Injection Weight max. (PS)**	g	1326	1523	1733	1678	1909	2155	1678	1909	2155	1326	1523	1733	1326	1523	1733
Injection Rate #	cm^3/s	381	438	498	358	407	459	444	505	570	336	385	438	381	438	498
Plasticizing Rate #	g/s	68.0	73.0	78.0	53.0	56.2	60.1	67.0	71.0	76.0	60.0	64.5	68.9	68.0	73.0	78.0
Screw Stroke	mm	363			400			400			363			363		
Injection Pressure	Bar	1749	1523	1339	1806	1588	1406	1865	1639	1452	1694	1476	1297	1749	1523	1339
Screw RPM	-	188			136			169			166			188		
Clamping Unit																
Clamping Force	kN	4000			4000			4000			5000			5000		
Mold Opening Stroke	mm	700			700			700			770			770		
Dist Bet.Tie Bars, H x V	mm	720 x 720			720 x 720			720 x 720			800 x 800			800 x 800		
Mold Thickness,min/max.	mm	220-730			220-730			220-730			250-800			250-800		
Max. Daylight	mm	1430			1430			1430			1570			1570		
Platen Diamensions, H x V	mm	1065 x 1065			1065 x 1065			1065 x 1065			1175 x 1175			1175 x 1175		
Ejector Stroke	mm	180			180			180			231			231		
Ejector Force	kN	125.6			121.7			125.6			147.2			152.0		
Ejector Number	pcs	13			13			13			13			13		
General Data																
Pump Drive	kW	67.00 (45.50)			67.00 (45.50)			67.00 (45.50)			44.00 (29.90)			67.00 (45.50)		
Installed Heating Capacity	kW	22.70			30.00			30.00			22.70			22.70		
Total Connected Power	kW	89.70 (68.20)			97.00 (75.50)			97.00 (75.50)			66.70 (52.60)			89.70 (68.20)		
Machine Dimensions (LxWxH)	M	7.5 x 1.6 x 2.31			7.5 x 1.7 x 2.31			7.5 x 1.7 x 2.31			8.4 x 1.77 x 2.56			8.4 x 1.77 x 2.56		
Oil Tank Capacity	lit	720			720			720			900			900		
Net Weight (without Oil)	t	16.5			17			17			19.8			19.8		

NOTE : # Achieved in air injection. * Theoretical value; actual value may vary depending on material, melt density & residence time · Specifications are subject to change due to continuos improvements ·

CONTROLS ▶

- Intelligent operator-machine interface with large TFT, multi-color display, with alpha numeric keyboard.
- Actual position measuring / indicating system for moving platen, screw travel and ejector.
- Overview screen with live display for machine operations.
- Continuous process control via monitoring of important process parameters with selectable tolerance band.
- Data storage on USB.
- Internal storage of up to 200 sets of mold data.
- Important parameters as well as hourly production data monitoring.
- Built-in Energy management with live display of voltage, current & energy.
- Live display of instantaneous power with per hour energy monitoring for last 30 days.
- Shot (molding) counter pre-selection with automatic switch off feature.
- Fault diagnostics in the event of machine malfunction or operator error with plain text messages and recording of source of error.
- Regulated power supply 24VDC for controls and actuators.
- I / O diagnosis - analog & digital.

HYDRAULICS ▶

- Highly energy efficient hydraulic drive system with gear pump & servo motor.
- Ergonomically designed easy to access and easy to service hydraulic circuit layout.
- Fast responding hydraulic door safety inter lock.
- Large capacity heat exchanger for hydraulic oil cooling.
- Core pulling control set for hydraulic cores independently programmable.
- All hydraulic manifolds and valves mounted close to the actuators for faster response.
- Energy saving "pump switch off feature" in case of idle running.

Fu 500-3190-55 STD.			Fu 500-3293-68			Fu 500-5011-97			Fu 650-3293-68			Fu 650-5011-97 STD.		
5000H-3190			5000H-3293			5000H-5011			6500H-3293			6500H-5011		
3190			3293			5011			3293			5011		
A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
75	80	85	75	80	85	80	90	100	75	80	85	80	90	100
23.5	22	20.7	23.5	22	20.7	24.8	22	19.8	23.5	22	20.7	24.8	22	19.8
1766	2010	2269	1766	2010	2269	2386	3020	3729	1766	2010	2269	2386	3020	3729
1678	1909	2155	1678	1909	2155	2267	2869	3542	1678	1909	2155	2267	2869	3542
358	407	459	444	505	570	524	663	818	444	505	570	524	663	818
53.0	56.2	60.1	67.0	71.0	76.0	72.5	91.8	113.2	67.0	71.0	76.0	72.5	91.8	113.2
400			400			475			400			475		
1806	1588	1406	1865	1639	1452	2100	1659	1344	1865	1639	1452	2100	1659	1344
136			169			144			169			144		
5000			5000			5000			6500			6500		
770			770			770			900			900		
800 x 800			800 x 800			800 x 800			900 x 900			900 x 900		
250-800			250-800			250-800			320-900			320-900		
1570			1570			1570			1800			1800		
1175 x 1175			1175 x 1175			1175 x 1175			1330 x 1330			1330 x 1330		
231			231			231			250			250		
147.2			152.0			142.5			180.9			169.6		
13			13			13			17			17		
67.00 (45.50)			67.00 (45.50)			88.00 (59.80)			67.00 (45.50)			88.00 (59.80)		
30.00			30.00			38.97			30.00			38.97		
97.00 (75.50)			97.00 (75.50)			126.97 (98.77)			97.00 (75.50)			126.97 (98.77)		
8.4 x 1.77 x 2.56			8.4 x 1.77 x 2.56			8.4 x 1.77 x 2.56			9.16 x 2.07 x 2.98			9.16 x 2.07 x 2.98		
900			900			900			1300			1300		
20.3			20.3			21.3			27.5			28.5		

To be used strictly under standard electrical supply conditions of 415V± 5% MAX., 50 Hz, 3 Phase + N.

GENERAL

- Ergonomically designed machine covers and doors for safety, with elegant aesthetics.
- Flexible machine support with anti vibration pads.
- Set of electrical output - single phase (1x16A) & 3 phase (1x32A) sockets.
- Water battery with inlet & outlet temperature indicator.

OPTIONAL FEATURES

- Additional core pulling control set for hydraulic cores, independently programmable for sequential or parallel operation.
- Air blast with pneumatic valve on moving platen.
- Air blast with pneumatic valve on fixed / stationary platen.
- Rotating core (hydraulic un-screwing) interface.
- Electrical un-screwing interface.
- Robotic arm interface. (Std. or Euromap - 12).
- Photo sensor arrangement for molded part drop detection, recommended for single cavity.
- Interface for mold ejector plate backward verification with limit switch.
- Interface for additional nozzle heater band.
- Special screws for better melt homogenization and plasticizing.
- Special design screws for specific engineering polymers like PC, Nylons, PET, RPVC, CPVC, etc.
- Wear resistant / corrosion resistant, bimetallic screw and barrel for processing abrasive / corrosive materials.
- Hydraulic motor for higher plasticizing rates.
- Insulated energy saving heater bands.
- Water battery with flow rate control.
- Accumulator for higher injection rates.
- Built-in 6 zones, HRTC; expandable up to 12 zones.

Nationwide Sales & Service Network

Mumbai Office

Electronica Plastic Machines Ltd.
419, Arcadia, Hiranandani Estate, Patlipada, Ghodbunder Road,
Thane (W), Mumbai – 400607.

Phone : +91 22 41273232
Mobile : +91 93229 27886
e-mail : epml.mum@electronicapmd.com

Goa Office

Mobile : +91 93226 20309
e-mail : epml.goa@electronicapmd.com

Ahmedabad Office

Electronica Plastic Machines Ltd.
78, 2nd Floor, 4D Mall, Opp. Vishwakarma Engineering Collage,
Motera, Sabarmati, Ahmedabad - 380005

Mobile : +91 93741 49033
e-mail : epml.amd@electronicapmd.com

Pune Office

Mobile : +91 93735 69732
e-mail : epml.pun@electronicapmd.com

Kolkata Office

Mobile : +91 93306 89693
e-mail : epml.kol@electronicapmd.com

Bangalore Office

Electronica Plastic Machines Ltd.
KVR Arcade, No. 13, 1st Floor, Above SBM Bank, 1st Main Road,
Goragunte Palya, Yeshwanthpur Ind. Area, Bangalore-560 022.

Mobile : +91 93423 95718
e-mail : epml.blr@electronicapmd.com

Hyderabad Office

Mobile : +91 93905 67909
e-mail : epml.hyd@electronicapmd.com

Chennai & Coimbatore office

Electronica Plastic Machines Ltd.
No. 47, 1st Floor, Kurinji Street
Fathimanagar, Valasaravakkam
Chennai, Tamil Nadu - 600 087

Mobile : +91-9380279289
Email : epml.chn@electronicapmd.com

Delhi Office

Electronica Plastic Machines Ltd.
S-16, 2nd Floor, D.D.A Shopping Centre, Opp. Jeewan Anmol Hospital,
Mayur Vihar, Phase-I, Delhi - 110 091.

Phone : +91 11 22756324 / 22756325 / 22751653
Mobile : +91 93100 62372
e-mail : epml.ncr@electronicapmd.com

Delhi East / Noida / Uttarakhand Office

Mobile : +91 93118 58984
e-mail : epml.edl@electronicapmd.com

Delhi West / Janakpuri Office

Mobile : +91 93103 54075
e-mail : epml.wdl@electronicapmd.com

Faridabad Office

Mobile : +91 93118 58982
e-mail : epml.fbd@electronicapmd.com

Gurgaon Office

Mobile : +91 93132 28931
e-mail : epml.gur@electronicapmd.com

Chandigarh Office

Electronica Plastic Machines Ltd.
Plot No. 809, 1st Floor, Phase-II, Industrial Area, Chandigarh - 160002

Phone : +91 017 25079533
Mobile : +91 93160 37848
e-mail : epml.chd@electronicapmd.com

Ludhiana Office

Mobile : +91 93178 93135
e-mail : epml.chd@electronicapmd.com

Export Office

Electronica Plastic Machines Ltd.
419, Arcadia, Hiranandani Estate, Patlipada, Ghodbunder Road,
Thane (W), Mumbai - 400607. India.

Phone : +91 22 41273232
Mobile : +91 93229 27886
e-mail : epml.exp@electronicapmd.com

electronica
plastic machines

Registered Office & Factory

ELECTRONICA PLASTIC MACHINES LTD.

Gat No. 399, Hissa No. 1 & 2, Bhare, Tal Mulshi, Dist Pune, Pune - 412115. India.
Tel: +91 20 66933535
epml@electronicapmd.com Website: www.elpml.com

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