

TECHNOLOGY TO THE POINT



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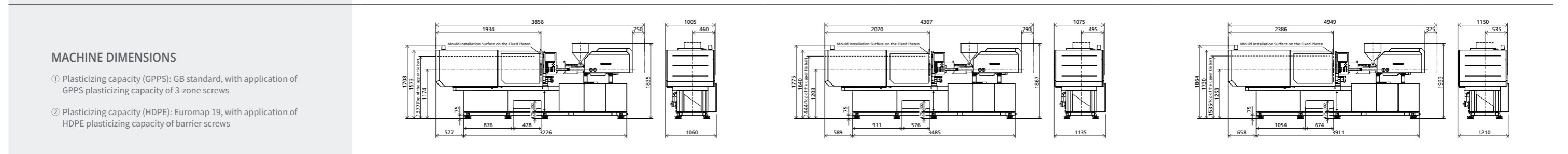
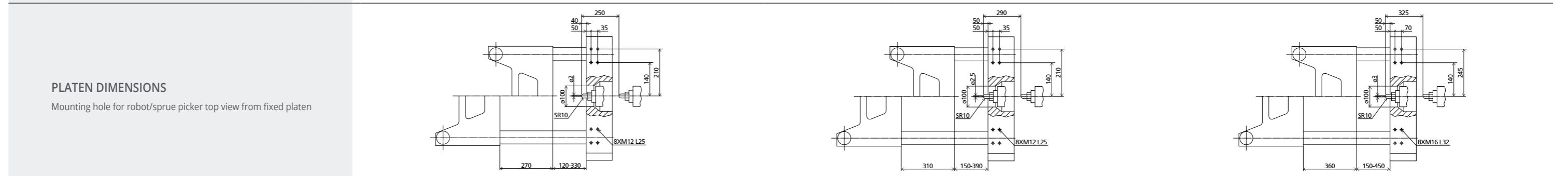
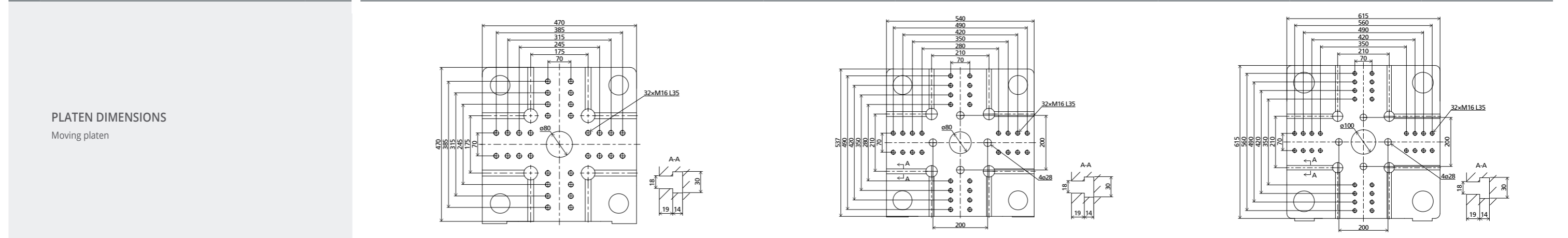
# MARS SERIES

SERVO-HYDRAULIC SOLUTION  
TECHNICAL SPECIFICATION  
600 - 12,000 kN



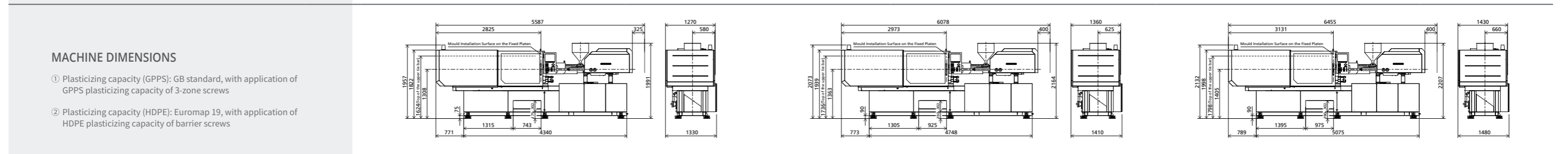
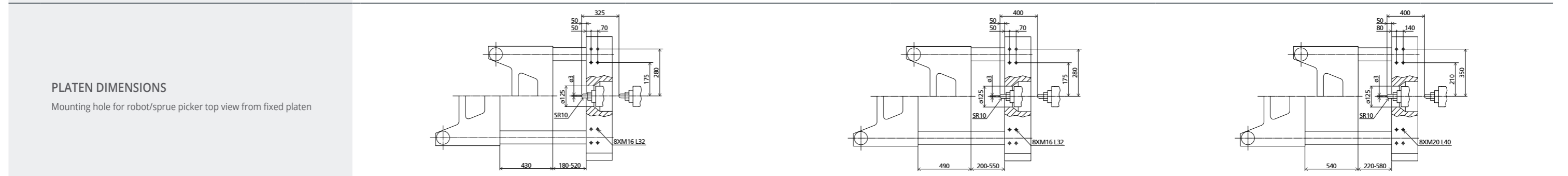
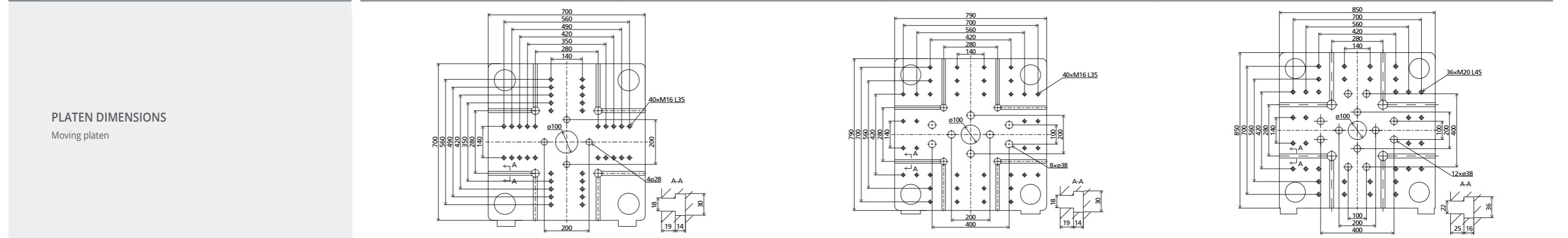
# SPECIFICATION

MACHINE TYPE		MA600 V /130	MA900 V /280	MA1200 V /400						
CLAMPING UNIT	Clamping force	kN	600	900	1200					
	Mold opening stroke	mm	270	310	360					
	Mold height min.	mm	120	150	150					
	Mold height max.	mm	330	390	450					
	Dist. between tie-bars (H×V)	mm	310×310	360×360	410×410					
INJECTION UNIT	Ejector stroke	mm	70	100	120					
	Ejector force	kN	22	33	33					
	Screw diameter	mm	A 24	B 28	A 32	B 36	C 40	A 36	B 40	C 45
	Screw L/D ratio	L/D	23.3	20	22.5	20	18	23.3	21	18.7
	Injection volume (theoretical)	cm <sup>3</sup>	49	67	120	152	188	173	213	270
	Injection weight (PS)	g	45	61	109	138	171	157	194	246
	Injection rate (PS)	g/s	53	72	87	111	137	106	131	166
	Injection rate (ESG)	g/s	56	76	97	123	152	117	145	183
	Injection pressure	MPa	263	193	248	196	158	233	189	149
	Plasticizing rate (GPPS) ①	g/s	6.1	8.8	14.2	18.8	22.7	18.9	23.1	30.6
Plasticizing rate (HDPE) ②	g/s	-	-	-	-	-	-	-	-	
Screw speed	rpm	350	350	350	350	300	350	300	300	
OTHERS	Pump motor power	kW	13	15	18.5					
	Heater power	kW	6.3	8.1	11.75					
	Machine dimension (L×W×H)	m	3.92×1.09×1.84	4.35×1.16×1.87	4.95×1.24×1.94					
	Machine weight	t	2.5	3.1	4.0					
	Hopper capacity	kg	25	25	25					
Oil tank	l	90	120	140						



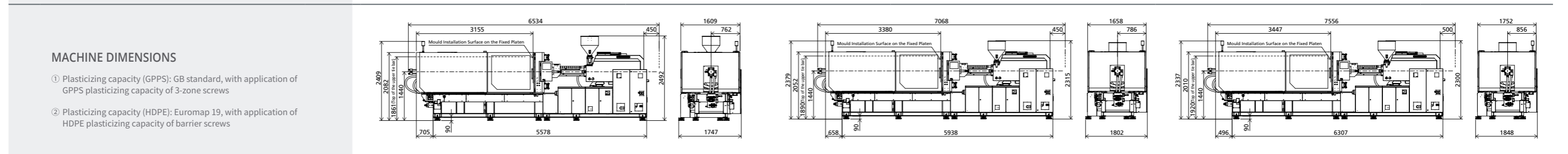
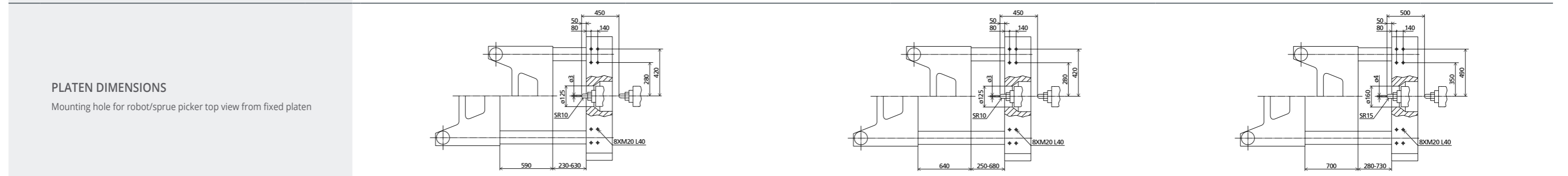
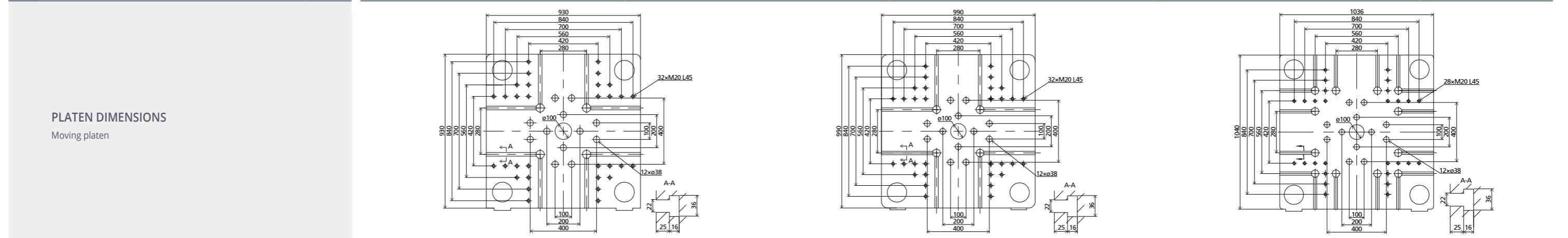
# SPECIFICATION

MACHINE TYPE		MA1600 V /570	MA2000 V /750	MA2500 V /1000	
CLAMPING UNIT	Clamping force	kN	1600	2000	2500
	Mold opening stroke	mm	430	490	540
	Mold height min.	mm	180	200	220
	Mold height max.	mm	520	550	580
	Dist. between tie-bars (H×V)	mm	470×470	530×530	580×580
	Ejector stroke	mm	140	140	150
Ejector force	kN	33	62	62	
INJECTION UNIT	Screw diameter	mm	A 40 B 45 C 50	A 45 B 50 C 55	A 50 B 55 C 60
	Screw L/D ratio	L/D	22.5 20 18	22.2 20 18.2	22 20 18.3
	Injection volume (theoretical)	cm <sup>3</sup>	252 319 394	365 451 546	496 601 715
	Injection weight (PS)	g	229 290 359	332 410 497	452 546 650
	Injection rate (PS)	g/s	131 166 205	166 205 248	196 237 283
	Injection rate (ESG)	g/s	144 183 226	177 219 265	215 261 310
	Injection pressure	MPa	239 189 153	233 189 156	228 189 158
	Plasticizing rate (GPPS) ①	g/s	21.0 27.9 35.0	29.0 36.5 44.6	36.9 45.2 53.5
	Plasticizing rate (HDPE) ②	g/s	- - -	- - -	- - -
Screw speed	rpm	285	270	270	
OTHERS	Pump motor power	kW	22	30	37
	Heater power	kW	11.75	16	19.9
	Machine dimension (L×W×H)	m	5.59×1.36×2.0	6.08×1.44×2.17	6.46×1.51×2.21
	Machine weight	t	5.0	6.7	8.1
	Hopper capacity	kg	25	50	50
	Oil tank	l	165	205	245



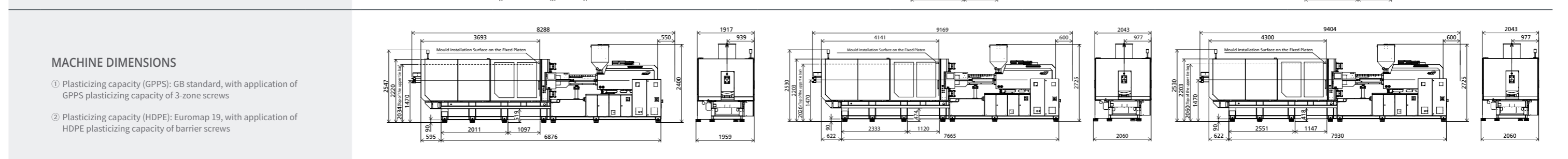
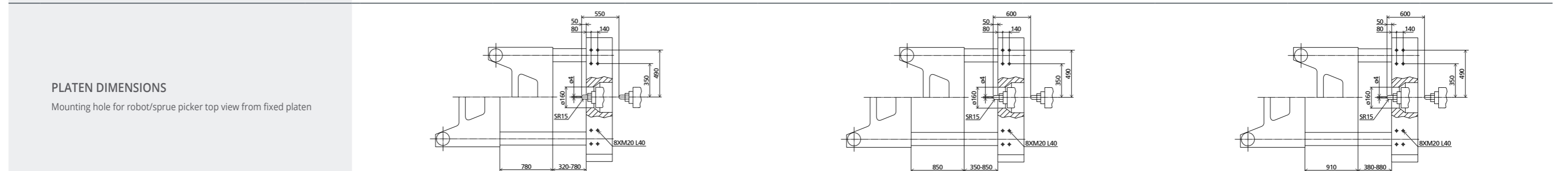
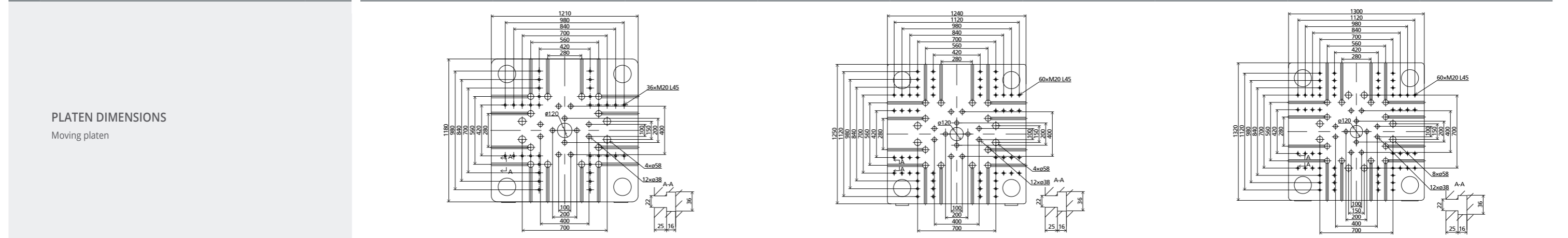
# SPECIFICATION

MACHINE TYPE		MA2800 V /1350			MA3200 V /1700			MA3800 V /2250		
CLAMPING UNIT	Clamping force	2800			3200			3800		
	Mold opening stroke	590			640			700		
	Mold height min.	230			250			280		
	Mold height max.	630			680			730		
	Dist. between tie-bars (H×V)	630×630			680×680			730×730		
	Ejector stroke	150			160			180		
INJECTION UNIT	Ejector force	62			62			110		
	Screw diameter	A	B	C	A	B	C	A	B	C
	Screw L/D ratio	55	60	65	60	65	70	65	70	75
	Injection volume (theoretical)	21.8	20	18.5	21.7	20	18.6	21.5	20	18.7
	Injection volume (PS)	617	735	862	848	995	1154	1068	1239	1422
	Injection weight (PS)	562	668	785	771	905	1050	972	1127	1294
	Injection rate (PS)	248	295	347	308	362	420	317	367	422
	Injection rate (ESG)	277	330	388	330	387	449	344	399	459
	Injection pressure	223	188	160	224	190	164	214	185	161
	Plasticizing rate (GPPS) ①	46.2	54.9	61.0	59.9	66.5	75.5	62.0	71.1	80.4
Plasticizing rate (HDPE) ②	-	-	-	88.4	99	118	93.5	111	125	
Screw speed	270			260			240			
OTHERS	Pump motor power	45			55			55		
	Heater power	21.25			27.05			31.3		
	Machine dimension (L×W×H)	6.54×1.75×2.50			7.07×1.81×2.38			7.56×1.85×2.34		
	Machine weight	11.3			12.2			14.7		
	Hopper capacity	50			50			50		
	Oil tank	400			450			490		



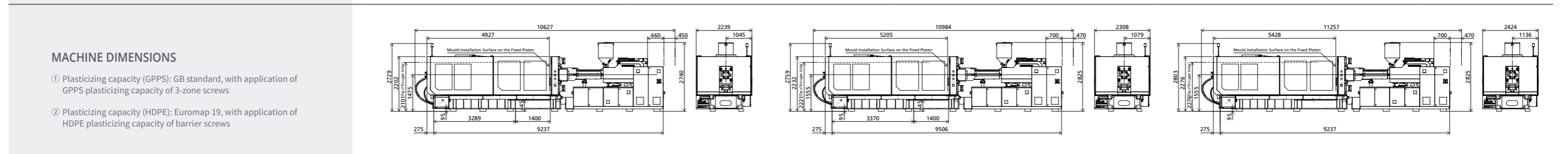
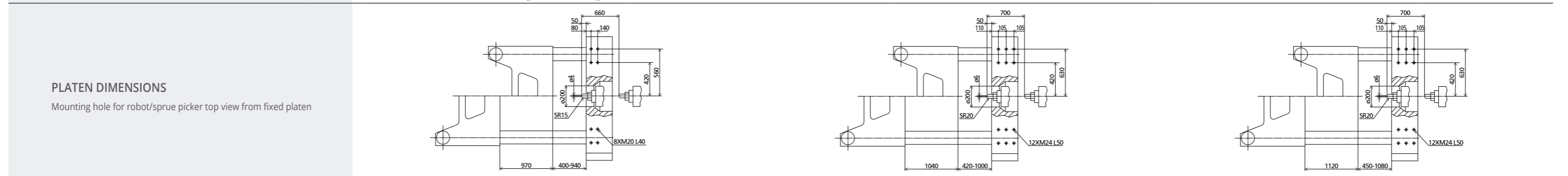
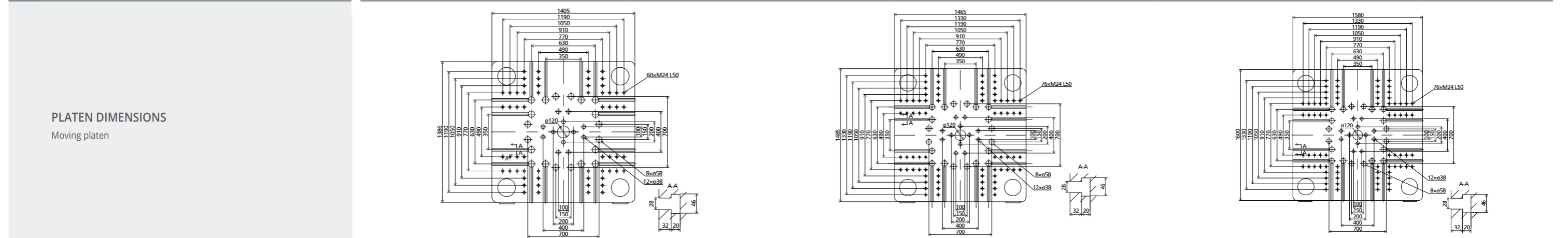
# SPECIFICATION

MACHINE TYPE		MA4700 V /3200			MA5300 V /4500			MA6000 V /4500		
CLAMPING UNIT	Clamping force	4700			5300			6000		
	Mold opening stroke	780			850			910		
	Mold height min.	320			350			380		
	Mold height max.	780			850			880		
	Dist. between tie-bars (H×V)	820×800			840×830			880×880		
	Ejector stroke	200			220			240		
Ejector force	110			158			158			
INJECTION UNIT	Screw diameter	A	B	C	A	B	C	A	B	C
	Screw L/D ratio	70	80	85	80	85	90	80	85	90
	Injection volume (theoretical)	22.9	20	19.1	23.4	22	20.8	23.4	22	20.8
	Injection volume (PS)	1423	1859	2099	2211	2496	2799	2211	2496	2799
	Injection weight (PS)	1295	1692	1910	2012	2272	2547	2012	2272	2547
	Injection rate (PS)	366	478	539	516	583	654	516	583	654
	Injection rate (ESG)	388	507	572	-	-	-	-	-	-
	Injection pressure	240	183	162	210	186	165	210	186	165
	Plasticizing rate (GPPS) ①	69.8	92	101	80.2	88.7	101	80.2	88.7	101
Plasticizing rate (HDPE) ②	105	141	160	120	133	150	120	133	150	
Screw speed	220			200			200			
OTHERS	Pump motor power	65			85			85		
	Heater power	39.2			48			48		
	Machine dimension (L×W×H)	8.29×1.96×2.55			9.17×2.04×2.73			9.41×2.06×2.73		
	Machine weight	19.3			23.0			25.0		
	Hopper capacity	50			100			100		
	Oil tank	580			720			720		



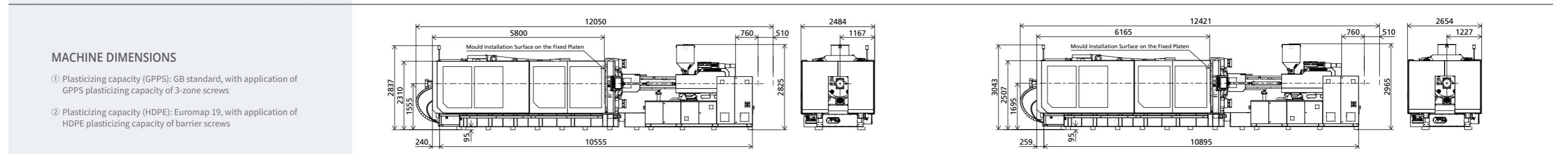
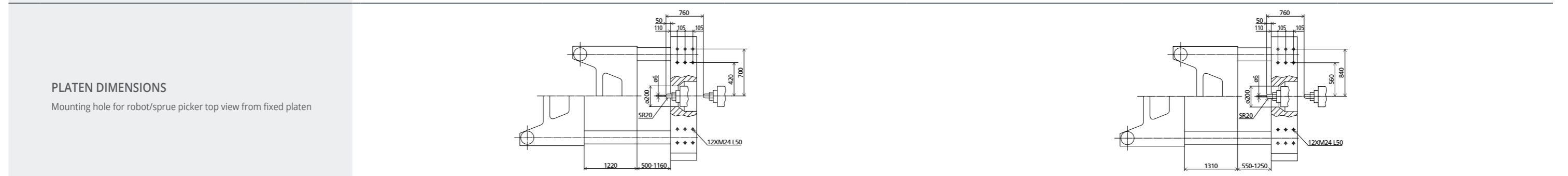
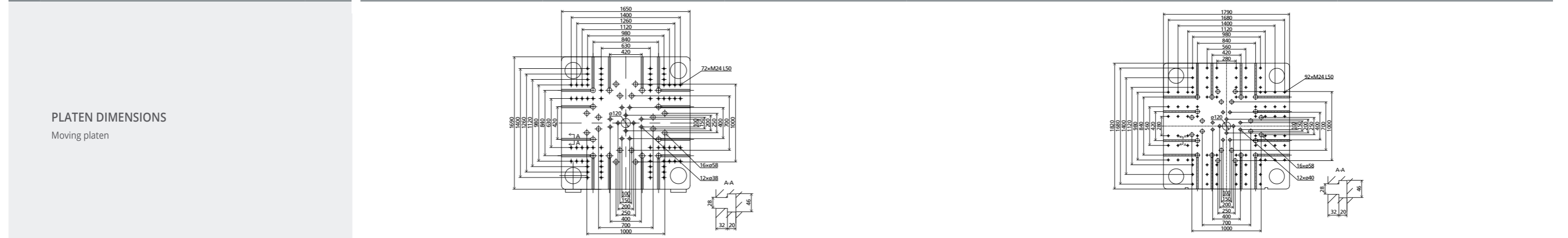
# SPECIFICATION

MACHINE TYPE			MA7000 V /5000			MA8000 V /6800			MA9000 V /6800		
CLAMPING UNIT	Clamping force	kN	7000			8000			9000		
	Mold opening stroke	mm	970			1040			1120		
	Mold height min.	mm	400			420			450		
	Mold height max.	mm	940			1000			1080		
	Dist. between tie-bars (H×V)	mm	960×940			1000×1000			1080×1080		
	Ejector stroke	mm	260			280			300		
Ejector force	kN	186			186			186			
INJECTION UNIT	Screw diameter	mm	A	B	C	A	B	C	A	B	C
	Screw L/D ratio	L/D	80	90	100	90	100	110	90	100	110
	Injection volume (theoretical)	cm <sup>3</sup>	24.8	22	19.8	24.4	22	20	24.4	22	20
	Injection weight (PS)	g	2261	2862	3534	2990	3691	4466	2990	3691	4466
	Injection rate (PS)	g/s	2058	2605	3216	2720	3359	4064	2720	3359	4064
	Injection rate (ESG)	g/s	549	694	857	636	786	951	636	786	951
	Injection pressure	MPa	-	-	-	-	-	-	-	-	-
	Plasticizing rate (GPPS) ①	g/s	237	187	152	230	186	154	230	186	154
	Plasticizing rate (HDPE) ②	g/s	85.0	107	131	103	127	150	103	127	150
Screw speed	rpm	128	162	200	156	185	228	156	185	228	
OTHERS	Pump motor power	kW	65+37			85+30			85+30		
	Heater power	kW	56.8			69.5			69.5		
	Machine dimension (L×W×H)	m	10.47×2.24×2.74			10.99×2.30×2.83			11.26×2.42×2.83		
	Machine weight	t	32.0			37.6			43.0		
	Hopper capacity	kg	100			100			100		
	Oil tank	l	790			900			900		



# SPECIFICATION

MACHINE TYPE			MA10000 V /8400			MA12000 V /8400		
CLAMPING UNIT	Clamping force	kN	10000			12000		
	Mold opening stroke	mm	1220			1310		
	Mold height min.	mm	500			550		
	Mold height max.	mm	1160			1250		
	Dist. between tie-bars (H×V)	mm	1160×1160			1250×1250		
	Ejector stroke	mm	320			320		
Ejector force	kN	215			215			
INJECTION UNIT	Screw diameter	mm	A	B	C	A	B	C
	Screw L/D ratio	L/D	100	110	120	100	110	120
	Injection volume (theoretical)	cm <sup>3</sup>	24.2	22	20.2	24.2	22	20.2
	Injection weight (PS)	g	4005	4846	5767	4005	4846	5767
	Injection rate (PS)	g/s	3645	4410	5248	3645	4410	5248
	Injection rate (ESG)	g/s	771	933	1111	771	933	1111
	Injection pressure	MPa	-	-	-	-	-	-
	Plasticizing rate (GPPS) ①	g/s	223	185	155	223	185	155
	Plasticizing rate (HDPE) ②	g/s	121	145	168	121	145	168
Screw speed	rpm	181	217	247	181	217	247	
OTHERS	Pump motor power	kW	85+45			85+45		
	Heater power	kW	82.8			82.8		
	Machine dimension (L×W×H)	m	12.05×2.49×2.83			12.43×2.66×2.97		
	Machine weight	t	47.0			58.0		
	Hopper capacity	kg	100			100		
	Oil tank	l	1000			1000		



# NOTE

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