



NIIGATA MACHINERY

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MV

ALL ELECTRIC INJECTION MOLDING MACHINE



NIIGATA
NIIGATA MACHINERY CO., LTD.

MV Series Specifications

Item			Unit	MV600						MV900										
Injection Unit	LP Specification	Injection Unit		-	80			120			120			160			210			
		Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	AA	A	B	C
			Diameter	mm	19	22	26	22	26	30	22	26	30	26	28	30	26	28	32	36
		Injection stroke		mm	75	95	95	95	110	110	95	110	110	110	110	110	115	115	125	125
		Injection volume (theoretical) ※1		cm³	21	36	50	36	58	77	36	58	77	58	67	77	61	70	100	127
		Injection weight (PS) ※2		g	19.1	32.8	45.5	32.8	52	70	32.8	52	70	52	61	70	55	64	91	115
		Injection pressure ※3		MPa	260	220	157	280	220	165	280	220	165	260	220	192	280	260	200	160
		Holding pressure ※3		MPa	208	175	125	220	160	120	220	160	120	160	138	120	224	206	160	126
	Injection speed ※4		mm/s	200			200			200			200			200				
	Injection rate (PS)		g/s	49	66	92	66	92	123	66	92	123	92	107	123	92	107	140	177	
	Standard Style	Injection Unit		-	80h			120h			120h			160h			210h			
		Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	AA	A	B	C
			Diameter	mm	19	22	26	22	26	30	22	26	30	26	28	30	26	28	32	36
		Injection stroke		mm	75	95	95	95	110	110	95	110	110	110	110	110	115	115	125	125
		Injection volume (theoretical) ※1		cm³	21	36	50	36	58	77	36	58	77	58	67	77	61	70	100	127
		Injection weight (PS) ※2		g	19.1	32.8	45.5	32.8	52	70	32.8	52	70	52	61	70	55	64	91	115
		Injection pressure ※3		MPa	260	220	157	280	220	165	280	220	165	260	220	192	280	260	200	160
		Holding pressure ※3		MPa	208	175	125	220	160	120	220	160	120	160	138	120	224	206	160	126
	Injection speed ※4		mm/s	350			350			350			350			350				
	Injection rate (PS)		g/s	86	116	162	116	162	216	116	162	216	162	188	216	162	188	245	311	
	High-speed Specification	Injection Unit		-	80hs			120hs			120hs			160hs			210hs			
		Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	AA	A	B	C
			Diameter	mm	19	22	26	22	26	30	22	26	30	26	28	30	26	28	32	36
		Injection stroke		mm	75	95	95	95	110	110	95	110	110	110	110	110	115	115	125	125
		Injection volume (theoretical) ※1		cm³	21	36	50	36	58	77	36	58	77	58	67	77	61	70	100	127
		Injection weight (PS) ※2		g	19.1	32.8	45.5	32.8	52	70	32.8	52	70	52	61	70	55	64	91	115
		Injection pressure ※3		MPa	260	220	157	280	220	165	280	220	165	260	220	192	280	260	200	160
		Holding pressure ※3		MPa	208	175	125	220	160	120	220	160	120	160	138	120	224	206	160	126
		Injection speed ※4		mm/s	500			500			500			500			500			
		Injection rate (PS)		g/s	123	166	231	166	231	308	166	231	308	231	268	308	231	268	351	444
		Screw Rotating Speed		min ⁻¹	400			400			400			400			400			
		Plasticizing rate (GPPS) ※5		g/s	3.8	6.0	8.0	6.0	8.8	13	6.0	8.8	13	8.8	11	13	8.5	11	16	19.4
		Nozzle Stroke		mm	290			290			300			300			315			
	Nozzle contact force		kN	9.8			14.7			14.7			19.6			19.6				
	Temp. Zones	Nozzle/Heating Cylinder	-	4			4			4			6			6				
		Hopper Base	-	1			1			1			1			1				
	Heating power		kW	4.5	5.7	5.7	6.0	7.8	7.8	6.0	7.8	7.8	7.5	7.5	7.5	6.9	7.8	9.2	9.2	
Clamping Unit	Clamping way		-	Twin toggle						Twin toggle										
	Clamping force		kN	600						900										
	Dist. Between tie-bars		mm	370×370						420×420										
	Size of mold platen		mm	510×510						580×580										
	Mold dimension min. ※6		mm	240×240						270×270										
	Mold opening stroke		mm	270						320										
	Mold height (min./max.)		mm	150/370						150/410										
	Total daylight max.		mm	640						730										
	Ejector stroke		mm	80						80										
Ejector force ※7		kN	19.6						19.6											
Others	Connection power ※8		kW/A	80:11/19 80h:13/22 80hs:16/28			120:12/21 120h:16/28 120hs:19/33			120:12/21 120h:16/28 120hs:19/33			160:14/24 160h:18/30 160hs:24/41			210:16/26 210h:21/36 210hs:29/48				
	Supply voltage ※9		-	AC460V/3P/60Hz						AC460V/3P/60Hz										
	Machine weight		ton	3			3.05			3.64			3.65			3.7				
	Machine dimension (L×W×H)	Length	m	4.09			4.09			4.33			4.33			4.39				
		Width	m	1.19			1.19			1.23			1.23			1.23				
		Height ※10	m	1.96			1.96			2.03			2.03			2.03				
	Hopper capacity (OP)		L	15			15			15			15			25				
Cooling water dosage (min.) ※11		L/min	3.3			5			5			5			5					

● Above specification is subject to change due to continuous improvement. The mark of this "OP." shows optional specification.

※1.Injection capacity is shown by "maximum injection pressure"×"calculated injection volume".

※2.Calculated injection volume is determined by multiplying screw cross sectional area and screw stroke.

※3.Injection weight is for polystyrene and 92% of calculated injection volume.

※4.Maximum injection pressure and maximum holding pressure may be limited by molding conditions.

※5.Plasticizing capacity is for polystyrene.

※6.Do not use a mold that is smaller than this size to prevent machine damage.

※7.Ejector force shown is theoretical value.

※8.Total machine power does not include ancillary equipment power. If an equipment shall be installed to the machine, their power should be added to the machine power.

※9.Voltage fluctuation should not exceed more than 10% or fail 10% less than rated power. Voltage should always be the rated value and fluctuation should be allowed only for a short time.

※10.The machine height does not include leveling pads or signal tower.

※11.Water is used for hopper base cooling below 28°C and it should maintain it's pressure between 0.4~0.6Mpa.

MV Series Specifications

Item			Unit	MV1200														MV1500																
Injection Unit	LP Specification	Injection Unit		-	160			210				300				430			210				300				430			640				
		Screw	Type	-	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	A	B	C		
			Diameter	mm	26	28	30	26	28	32	36	30	32	36	40	36	40	45	26	28	32	36	30	32	36	40	36	40	45	40	45	50		
		Injection stroke		mm	110	110	110	115	115	125	125	145	145	145	145	170	170	170	115	115	125	125	145	145	145	145	170	170	170	201	201	201		
		Injection volume (theoretical) ※1		cm³	58	67	77	61	70	100	127	102	116	147	182	173	213	270	61	70	100	127	102	116	147	182	173	213	270	252	319	394		
		Injection weight (PS) ※2		g	52	61	70	55	64	91	115	92	106	134	165	157	194	246	55	64	91	115	92	106	134	165	157	194	246	229	290	358		
		Injection pressure ※3		MPa	260	220	192	280	260	200	160	280	253	200	162	247	200	158	280	260	200	160	280	253	200	162	247	200	158	253	200	162		
		Holding pressure ※3		MPa	160	138	120	224	206	160	126	224	202	160	130	197	160	126	224	206	160	126	224	202	160	130	197	160	126	202	160	130		
		Injection speed ※4		mm/s	200			200				200				200			200				200				200			200			160	
	Injection rate (PS)		g/s	92	107	123	92	107	140	177	123	140	177	219	177	219	277	92	107	140	177	123	140	177	219	177	219	277	175	222	274			
	Standard Style	Injection Unit		-	160h			210h				300h				430h			210h				300h				430h			640h				
		Screw	Type	-	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	A	B	C		
			Diameter	mm	26	28	30	26	28	32	36	30	32	36	40	36	40	45	26	28	32	36	30	32	36	40	36	40	45	40	45	50		
		Injection stroke		mm	110	110	110	115	115	125	125	145	145	145	145	170	170	170	115	115	125	125	145	145	145	145	170	170	170	201	201	201		
		Injection volume (theoretical) ※1		cm³	58	67	77	61	70	100	127	102	116	147	182	173	213	270	61	70	100	127	102	116	147	182	173	213	270	252	319	394		
		Injection weight (PS) ※2		g	52	61	70	55	64	91	115	92	106	134	165	157	194	246	55	64	91	115	92	106	134	165	157	194	246	229	290	358		
		Injection pressure ※3		MPa	260	220	192	280	260	200	160	280	253	200	162	247	200	158	280	260	200	160	280	253	200	162	247	200	158	253	200	162		
		Holding pressure ※3		MPa	160	138	120	224	206	160	126	224	202	160	130	197	160	126	224	206	160	126	224	202	160	130	197	160	126	202	160	130		
		Injection speed ※4		mm/s	350			350				300				300			350				300				300			250				
	Injection rate (PS)		g/s	162	188	216	162	188	245	311	185	210	266	329	266	329	416	162	188	245	311	185	210	266	329	266	329	416	274	347	428			
	High-speed Specification	Injection Unit		-	160hs			210hs				300hs				430hs			210hs				300hs				430hs			640hs				
		Screw	Type	-	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	AA	A	B	C	AA	A	B	C	A	B	C	A	B	C		
			Diameter	mm	26	28	30	26	28	32	36	30	32	36	40	36	40	45	26	28	32	36	30	32	36	40	36	40	45	40	45	50		
		Injection stroke		mm	110	110	110	115	115	125	125	145	145	145	145	170	170	170	115	115	125	125	145	145	145	145	170	170	170	201	201	201		
		Injection volume (theoretical) ※1		cm³	58	67	77	61	70	100	127	102	116	147	182	173	213	270	61	70	100	127	102	116	147	182	173	213	270	252	319	394		
		Injection weight (PS) ※2		g	52	61	70	55	64	91	115	92	106	134	165	157	194	246	55	64	91	115	92	106	134	165	157	194	246	229	290	358		
		Injection pressure ※3		MPa	260	220	192	280	260	200	160	280	253	200	162	247	200	158	280	260	200	160	280	253	200	162	247	200	158	253	200	162		
		Holding pressure ※3		MPa	160	138	120	224	206	160	126	224	202	160	130	197	160	126	224	206	160	126	224	202	160	130	197	160	126	202	160	130		
		Injection speed ※4		mm/s	500			500				500				500			500				500				500			350				
		Injection rate (PS)		g/s	231	268	308	231	268	351	444	308	351	444	548	444	548	694	231	268	351	444	308	351	444	548	444	548	694	384	486	600		
		Screw Rotating Speed		min ⁻¹	400			400				400				400			400				400				400			350				
		Plasticizing rate (GPPS) ※5		g/s	8.8	11	13	8.5	11	16	19.4	13.3	16.6	20.1	27.7	22	30	42	8.5	11	16	19.4	13.3	16.6	20.1	27.7	22	30	42	27	39	50		
		Nozzle Stroke		mm	300			315				340				360			315				340				360			390				
		Nozzle contact force		kN	19.6			19.6				24.5				29.4			19.6				24.5				29.4			39.2				
		Temp. Zones	Nozzle/Heating Cylinder	-	6			6				6				6			6				6				6			6				
Hopper Base			-	1			1				1				1			1				1				1			1					
Heating power		kW	7.5	7.5	7.5	6.9	7.8	9.2	9.2	10.3	11.9	11.9	11.9	13.5			6.9	7.8	9.2	9.2	10.3	11.9	11.9	11.9	13.5			14.8						
Clamping Unit	Clamping way		-	Twin toggle														Twin toggle																
	Clamping force		kN	1200														1500																
	Dist. Between tie-bars		mm	470×470														520×520																
	Size of mold platen		mm	640×640														740×740																
	Mold dimension min. ※6		mm	305×305														335×335																
	Mold opening stroke		mm	360														420																
	Mold height (min./max.)		mm	150/480														180/520																
	Total daylight max.		mm	840														940																
	Ejector stroke		mm	100														120																
Ejector force ※7		kN	29.4														34.3																	
Others	Connection power ※8		kW/A	160:14/24 160h:18/30 160hs:24/41			210:16/26 210h:21/36 210hs:29/48				300:20/34 300h:26/43 300hs:37/61				430:27/45 430h:31/52 430hs:48/81			210:16/26 210h:21/36 210hs:29/48				300:20/34 300h:26/43 300hs:37/61				430:27/45 430h:31/52 430hs:48/81			640:28/47 640h:32/53 640hs:49/82					
	Supply voltage ※9		-	AC460V/3P/60Hz														AC460V/3P/60Hz																
	Machine weight		ton	4.6			4.65				4.8			5.15			5.8				6				6.3			6.35						
	Machine dimension (L×W×H)	Length	m	4.81			4.81				4.83			5.28			5.26				5.26				5.58			5.71						
		Width	m	1.36			1.36				1.36			1.36			1.41				1.41				1.41			1.41						
		Height ※10	m	2.11			2.11				2.11			2.11			2.21				2.21				2.21			2.21						
Hopper capacity (OP)		L	15			25				25			25			25				25				25			25							
Cooling water dosage (min.) ※11		L/min	5			5				5			5			5				5				5			6.7							

MV Series Specifications

Item			Unit	MV1900												MV2300												
LP Specification	Injection Unit		-	300				430			640			830			430			640			830			1100		
	Screw	Type	-	AA	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
		Diameter	mm	30	32	36	40	36	40	45	40	45	50	45	50	55	36	40	45	40	45	50	45	50	55	50	55	60
	Injection stroke		mm	145	145	145	145	170	170	170	201	201	201	210	210	210	170	170	170	201	201	201	210	210	210	240	240	240
	Injection volume (theoretical) ※1		cm³	102	116	147	182	173	213	270	252	319	394	333	412	498	173	213	270	252	319	394	333	412	498	471	570	678
	Injection weight (PS) ※2		g	92	106	134	165	157	194	246	229	290	358	304	375	454	157	194	246	229	290	358	304	375	454	428	518	617
	Injection pressure ※3		MPa	280	253	200	162	247	200	158	253	200	162	247	200	165	247	200	158	253	200	162	247	200	165	218	180	151
	Holding pressure ※3		MPa	224	202	160	130	197	160	126	202	160	130	197	160	132	197	160	126	202	160	130	197	160	132	194	160	134
	Injection speed ※4		mm/s	200				200			160			160			200			160			160			160		
Injection rate (PS)		g/s	123	140	177	219	177	219	277	175	222	274	222	274	332	177	219	277	175	222	274	222	274	332	274	332	395	
Standard Style	Injection Unit		-	300h				430h			640h			830h			430h			640h			830h			1100h		
	Screw	Type	-	AA	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
		Diameter	mm	30	32	36	40	36	40	45	40	45	50	45	50	55	36	40	45	40	45	50	45	50	55	50	55	60
	Injection stroke		mm	145	145	145	145	170	170	170	201	201	201	210	210	210	170	170	170	201	201	201	210	210	210	240	240	240
	Injection volume (theoretical) ※1		cm³	102	116	147	182	173	213	270	252	319	394	333	412	498	173	213	270	252	319	394	333	412	498	471	570	678
	Injection weight (PS) ※2		g	92	106	134	165	157	194	246	229	290	358	304	375	454	157	194	246	229	290	358	304	375	454	428	518	617
	Injection pressure ※3		MPa	280	253	200	162	247	200	158	253	200	162	247	200	165	247	200	158	253	200	162	247	200	165	218	180	151
	Holding pressure ※3		MPa	224	202	160	130	197	160	126	202	160	130	197	160	132	197	160	126	202	160	130	197	160	132	194	160	134
	Injection speed ※4		mm/s	300				300			250			250			300			250			250			250		
Injection rate (PS)		g/s	185	210	266	329	266	329	416	274	347	428	347	428	518	266	329	416	274	347	428	347	428	518	428	518	617	
High-speed Specification	Injection Unit		-	300hs				430hs			640hs			830hs			430hs			640hs			830hs			1100hs		
	Screw	Type	-	AA	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
		Diameter	mm	30	32	36	40	36	40	45	40	45	50	45	50	55	36	40	45	40	45	50	45	50	55	50	55	60
	Injection stroke		mm	145	145	145	145	170	170	170	201	201	201	210	210	210	170	170	170	201	201	201	210	210	210	240	240	240
	Injection volume (theoretical) ※1		cm³	102	116	147	182	173	213	270	252	319	394	333	412	498	173	213	270	252	319	394	333	412	498	471	570	678
	Injection weight (PS) ※2		g	92	106	134	165	157	194	246	229	290	358	304	375	454	157	194	246	229	290	358	304	375	454	428	518	617
	Injection pressure ※3		MPa	280	253	200	162	247	200	158	253	200	162	247	200	165	247	200	158	253	200	162	247	200	165	218	180	151
	Holding pressure ※3		MPa	224	202	160	130	197	160	126	202	160	130	197	160	132	197	160	126	202	160	130	197	160	132	194	160	134
	Injection speed ※4		mm/s	500				500			350			350			500			350			350			350		
	Injection rate (PS)		g/s	308	351	444	548	444	548	694	384	486	600	486	600	726	444	548	694	384	486	600	486	600	726	600	726	864
	Screw Rotating Speed		min ⁻¹	400				400			350			320			400			350			320			320		
	Plasticizing rate (GPPS) ※5		g/s	13.3	16.6	20.1	27.7	22	30	42	27	39	50	35	46	60	22	30	42	27	39	50	35	46	60	52	64	75
	Nozzle Stroke		mm	360				390			390			450			390			400			450			520		
	Nozzle contact force		kN	24.5				29.4			39.2			49			29.4			39.2			49			54		
	Temp. Zones	Nozzle/Heating Cylinder		-	6				6			6			6			6			6			6			6	
Hopper Base		-	1				1			1			1			1			1			1			1			
Heating power		kW	10.3	11.9	11.9	11.9	13.5			14.8			20.2			13.5			14.8			20.2			23			
Clamping Unit	Clamping way		-	Twin toggle												Twin toggle												
	Clamping force		kN	1900												2300												
	Dist. Between tie-bars		mm	570×570												620×620												
	Size of mold platen		mm	800×800												880×880												
	Mold dimension min. ※6		mm	370×370												400×400												
	Mold opening stroke		mm	470												550												
	Mold height (min./max.)		mm	200/550												220/600												
	Total daylight max.		mm	1020												1150												
	Ejector stroke		mm	130												150												
Ejector force ※7		kN	44.1												49													
Others	Connection power ※8		kW/A	300:20/34 300h:26/43 300hs:37/61				430:27/45 430h:31/52 430hs:49/81			640:28/47 640h:32/53 640hs:49/82			830:34/58 830h:38/65 830hs:58/98			430:27/45 430h:31/52 430hs:48/81			640:28/47 640h:32/53 640hs:49/82			830:34/58 830h:38/65 830hs:58/98			1100:44/74 1100h:44/74 1100hs:69/116		
	Supply voltage ※9		-	AC460V/3P/60Hz												AC460V/3P/60Hz												
	Machine weight		ton	7.25				7.45			7.5			8.2			9.56			9.61			10.35			10.5		
	Machine dimension (L×W×H)	Length	m	5.9				5.9			5.99			6.3			6.15			6.15			6.44			6.71		
		Width	m	1.52				1.52			1.52			1.64			1.64			1.64			1.64			1.64		
		Height ※10	m	2.29				2.29			2.29			2.29			2.39			2.39			2.39			2.39		
Hopper capacity (OP)		L	25				25			25			50			25			25			50			50			
Cooling water dosage (min.) ※11		L/min	5				5			6.7			6.7			5			6.7			6.7			6.7			

● Above specification is subject to change due to continuous improvement. The mark of this "OP." shows optional specification.

※1.Injection capacity is shown by "maximum injection pressure"×"calculated injection volume".

※2.Calculated injection volume is determined by multiplying screw cross sectional area and screw stroke.

※3. Injection weight is for polystyrene and 92% of calculated injection volume.

※4.Maximum injection pressure and maximum holding pressure may be limited by molding conditions.

✖5. Plasticizing capacity is for polystyrene.

※6.Do not use a mold that is smaller than this size to prevent machine damage.

※7.Ejector force shown is theoretical value.

※8.Total machine power does not include ancillary equipment power. If an equipment shall be installed to the machine, their power should be added to the machine power.

※9.Voltage fluctuation should not exceed more than 10% or fall 10% less than rated power. Voltage should always be the rated value and fluctuation should be allowed only for a short time

※10.The machine height does not include leveling pads or signal tower.

※11. Water is used for hopper base cooling below 28°C and it should maintain it's pressure between 0.4~0.6Mpa.

MV Series Specifications

Item			Unit	MV3000												MV3600												
LP Specification	Injection Unit		-	830			1100			1400			1700			1100			1400			1700			2250			
	Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
		Diameter	mm	45	50	55	50	55	60	55	60	65	60	65	70	50	55	60	55	60	65	60	65	70	65	70	80	
	Injection stroke		mm	210	210	210	240	240	240	260	260	260	280	280	280	240	240	240	260	260	260	280	280	280	322	322	322	
	Injection volume (theoretical) ※1		cm³	333	412	498	471	570	678	617	735	862	791	929	1077	471	570	678	617	735	862	791	929	1077	1068	1239	1618	
	Injection weight (PS) ※2		g	304	375	454	428	518	617	562	668	785	720	845	980	428	518	617	562	668	785	720	845	980	972	1127	1472	
	Injection pressure ※3		MPa	247	200	165	218	180	151	214	180	153	210	180	155	218	180	151	214	180	153	210	180	155	210	180	138	
	Holding pressure ※3		MPa	197	160	132	194	160	134	190	160	136	187	160	138	194	160	134	190	160	136	187	160	138	190	162	124	
	Injection speed ※4		mm/s	160			160			160			160			160			160			160			160			
Injection rate (PS)		g/s	222	274	332	274	332	395	332	395	463	395	463	537	274	332	395	332	395	463	395	463	537	463	537	702		
Standard Style	Injection Unit		-	830h			1100h			1400h			1700h			1100h			1400h			1700h			2250h			
	Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	
		Diameter	mm	45	50	55	50	55	60	55	60	65	60	65	70	50	55	60	55	60	65	60	65	70	65	70	80	
	Injection stroke		mm	210	210	210	240	240	240	260	260	260	280	280	280	240	240	240	260	260	260	280	280	280	322	322	322	
	Injection volume (theoretical) ※1		cm³	333	412	498	471	570	678	617	735	862	791	929	1077	471	570	678	617	735	862	791	929	1077	1068	1239	1618	
	Injection weight (PS) ※2		g	304	375	454	428	518	617	562	668	785	720	845	980	428	518	617	562	668	785	720	845	980	972	1127	1472	
	Injection pressure ※3		MPa	247	200	165	218	180	151	214	180	153	210	180	155	218	180	151	214	180	153	210	180	155	210	180	138	
	Holding pressure ※3		MPa	197	160	132	194	160	134	190	160	136	187	160	138	194	160	134	190	160	136	187	160	138	190	162	124	
	Injection speed ※4		mm/s	250			250			250			250			250			250			250			250			
Injection rate (PS)		g/s	347	428	518	428	518	617	518	617	724	617	724	840	428	518	617	518	617	724	617	724	840	723	839	1097		
High-speed Specification	Injection Unit		-	830hs			1100hs			1400hs			1700hs			1100hs			1400hs			1700hs						
	Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C				
		Diameter	mm	45	50	55	50	55	60	55	60	65	60	65	70	50	55	60	55	60	65	60	65	70				
	Injection stroke		mm	210	210	210	240	240	240	260	260	260	280	280	280	240	240	240	260	260	260	280	280	280				
	Injection volume (theoretical) ※1		cm³	333	412	498	471	570	678	617	735	862	791	929	1077	471	570	678	617	735	862	791	929	1077				
	Injection weight (PS) ※2		g	304	375	454	428	518	617	562	668	785	720	845	980	428	518	617	562	668	785	720	845	980				
	Injection pressure ※3		MPa	247	200	165	218	180	151	214	180	153	210	180	155	218	180	151	214	180	153	210	180	155				
	Holding pressure ※3		MPa	197	160	132	194	160	134	190	160	136	187	160	138	194	160	134	190	160	136	187	160	138				
	Injection speed ※4		mm/s	350			350			350			350			350			350			350						
	Injection rate (PS)		g/s	486	600	726	600	726	864	726	864	1014	864	1014	1176	600	726	864	726	864	1014	864	1014	1176				
	Screw Rotating Speed		min ⁻¹	320			320			300			260			320			300			260			240			
	Plasticizing rate (GPPS) ※5		g/s	35	46	60	52	64	75	54	64	71	57	68	72	52	64	75	54	64	71	57	68	72	62	71	80	
Nozzle Stroke		mm	450			520			520			560			520			520			560			610				
Nozzle contact force		kN	49			54			54			54			54			54			54			85				
Temp. Zones	Nozzle/Heating Cylinder		-	6			6			6			6			6			6			6			7			
	Hopper Base		-	1			1			1			1			1			1			1			1			
Heating power		kW	20.2			23			29.3			33.1			23			29.3			33.1			36.1				
Clamping Unit	Clamping way		-	Twin toggle												Twin toggle												
	Clamping force		kN	3000												3600												
	Dist. Between tie-bars		mm	730×730												820×820												
	Size of mold platen		mm	1000×1000												1140×1140												
	Mold dimension min. ※6		mm	470×470												540×540												
	Mold opening stroke		mm	600												730												
	Mold height (min./max.)		mm	280/650												320/710												
	Total daylight max.		mm	1250												1440												
	Ejector stroke		mm	160												160												
	Ejector force ※7		kN	58.8												58.8												
Others	Connection power ※8		kW/A	830:34/58 830h:38/65 830hs:58/98			1100:44/74 1100h:44/74 1100hs:69/116			1400:52/87 1400h:65/109 1400hs:69/115			1700:58/98 1700h:74/125 1700hs:83/139			1100:44/74 1100h:44/74 1100hs:69/116			1400:52/87 1400h:65/109 1400hs:69/115			1700:58/98 1700h:74/125 1700hs:83/139			2250:65/109 2250h:89/150			
	Supply voltage ※9		-	AC460V/3P/60Hz												AC460V/3P/60Hz												
	Machine weight		ton	13.15			13.3			13.3			14			16.08			16.08			16.78			18.36			
	Machine dimension (L×W×H)	Length		m	6.67			6.95			7.03			7.51			7.27			7.35			7.83			7.57		
		Width		m	1.9			1.9			1.9			1.9			1.99			1.99			1.99			1.99		
		Height ※10		m	2.42			2.42			2.42			2.42			2.48			2.48			2.48			2.48		
	Hopper capacity (OP)		L	50			50			50			50			50			50			50			50			
Cooling water dosage (min.) ※11		L/min	6.7			6.7			6.7			6.7			6.7			6.7			6.7			10				

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※1.Injection capacity is shown by "maximum injection pressure"×"calculated injection volume".

※2.Calculated injection volume is determined by multiplying screw cross sectional area and screw stroke.

※3.Injection weight is for polystyrene and 92% of calculated injection volume.

※4.Maximum injection pressure and maximum holding pressure may be limited by molding conditions.

※5. Plasticizing capacity is for polystyrene.

※6.Do not use a mold that is smaller than this size to prevent machine damage.

※7.Ejector force shown is theoretical value.

※8.Total machine power does not include ancillary equipment power. If an equipment shall be installed to the machine, their power should be added to the machine power.

※9.Voltage fluctuation should not exceed more than 10% or fall 10% less than rated power. Voltage should always be the rated value and fluctuation should be allowed only for a short time

※10.The machine height does not include leveling pads or signal tower.

※11. Water is used for hopper base cooling below 28°C and it should maintain it's pressure between 0.4~0.6Mpa.

MV Series Specifications

Item			Unit	MV4500												MV5500																			
LP Specification	Injection Unit		-	1400			1700			2250			3350			1400			1700			2250			3350										
	Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C											
		Diameter	mm	55	60	65	60	65	70	65	70	80	75	80	90	55	60	65	60	65	70	65	70	80	75	80	90								
	Injection stroke		mm	260	260	260	280	280	280	322	322	322	370	370	370	260	260	260	280	280	280	322	322	322	370	370	370								
	Injection volume (theoretical) ※1		cm³	617	735	862	791	929	1077	1068	1239	1618	1634	1859	2353	617	735	862	791	929	1077	1068	1239	1618	1634	1859	2353								
	Injection weight (PS) ※2		g	562	668	785	720	845	980	972	1127	1472	1487	1692	2141	562	668	785	720	845	980	972	1127	1472	1487	1692	2141								
	Injection pressure ※3		MPa	214	180	153	210	180	155	210	180	138	205	180	142	214	180	153	210	180	155	210	180	138	205	180	142								
	Holding pressure ※3		MPa	190	160	136	187	160	138	190	162	124	185	162	128	190	160	136	187	160	138	190	162	124	185	162	128								
	Injection speed ※4		mm/s	160			160			160			160			160			160			160			160										
Injection rate (PS)		g/s	332	395	463	395	463	537	463	537	702	617	702	889	332	395	463	395	463	537	463	537	702	617	702	889									
Standard Style	Injection Unit		-	1400h			1700h			2250h						1400h			1700h			2250h													
	Screw	Type	-	A	B	C	A	B	C	A	B	C				A	B	C	A	B	C	A	B	C											
		Diameter	mm	55	60	65	60	65	70	65	70	80				55	60	65	60	65	70	65	70	80											
	Injection stroke		mm	260	260	260	280	280	280	322	322	322				260	260	260	280	280	280	322	322	322											
	Injection volume (theoretical) ※1		cm³	617	735	862	791	929	1077	1068	1239	1618				617	735	862	791	929	1077	1068	1239	1618											
	Injection weight (PS) ※2		g	562	668	785	720	845	980	972	1127	1472				562	668	785	720	845	980	972	1127	1472											
	Injection pressure ※3		MPa	214	180	153	210	180	155	210	180	138				214	180	153	210	180	155	210	180	138											
	Holding pressure ※3		MPa	190	160	136	187	160	138	190	162	124				190	160	136	187	160	138	190	162	124											
	Injection speed ※4		mm/s	250			250			250						250			250			250													
Injection rate (PS)		g/s	518	617	724	617	724	840	723	839	1097				518	617	724	617	724	840	723	839	1097												
High-speed Specification	Injection Unit		-	1400hs			1700hs									1400hs			1700hs																
	Screw	Type	-	A	B	C	A	B	C							A	B	C	A	B	C														
		Diameter	mm	55	60	65	60	65	70							55	60	65	60	65	70														
	Injection stroke		mm	260	260	260	280	280	280							260	260	260	280	280	280														
	Injection volume (theoretical) ※1		cm³	617	735	862	791	929	1077							617	735	862	791	929	1077														
	Injection weight (PS) ※2		g	562	668	785	720	845	980							562	668	785	720	845	980														
	Injection pressure ※3		MPa	214	180	153	210	180	155							214	180	153	210	180	155														
	Holding pressure ※3		MPa	190	160	136	187	160	138							190	160	136	187	160	138														
	Injection speed ※4		mm/s	350			350									350			350																
Injection rate (PS)		g/s	726	864	1014	864	1014	1176							726	864	1014	864	1014	1176															
Screw Rotating Speed		min ⁻¹	300			260			240			220			300			260			240			220											
Plasticizing rate (GPPS) ※5		g/s	54	64	71	57	68	72	62	71	88	70	92	105	54	64	71	57	68	72	62	71	88	70	92	105									
Nozzle Stroke		mm	520			560			610			610			560			560			610			720											
Nozzle contact force		kN	54			54			85			85			54			54			85			85											
Temp. Zones	Nozzle/Heating Cylinder		-	6			6			7			7			6			6			7			7										
	Hopper Base		-	1			1			1			1			1			1			1			1										
Heating power		kW	29.3			33.1			36.1			42.6			29.3			33.1			36.1			42.6											
Clamping Unit	Clamping way		-	Twin toggle												Twin toggle																			
	Clamping force		kN	4500												5500																			
	Dist. Between tie-bars		mm	910×910												970×970																			
	Size of mold platen		mm	1250×1250												1320×1320																			
	Mold dimension min. ※6		mm	590×590												630×630																			
	Mold opening stroke		mm	800												900																			
	Mold height (min./max.)		mm	350/810												400/880																			
	Total daylight max.		mm	1610												1780																			
	Ejector stroke		mm	180												180																			
Ejector force ※7		kN	98												137.2																				
Others	Connection power ※8		kW/A	1400:52/87 1400h:65/109 1400hs:69/115				1700:58/98 1700h:74/125 1700hs:83/139				2250:65/109 2250h:89/150				83/138				1400:52/87 1400h:65/109 1400hs:69/115				1700:58/98 1700h:74/125 1700hs:83/139				2250:65/109 2250h:89/150				83/138			
	Supply voltage ※9		-	AC460V/3P/60Hz												AC460V/3P/60Hz																			
	Machine weight		ton	21.8				22.5				24.08				24.17				25.74				26.44				28				28.11			
	Machine dimension (L×W×H)	Length	m	8				8.22				8				8.22				8.48				8.62				8.48							
		Width	m	2.15				2.15				2.15				2.15				2.29				2.29				2.29							
		Height ※10	m	2.51				2.51				2.51				2.51				2.5				2.5				2.5							
Hopper capacity (OP)		L	50				50				50				100				50				50				100								
Cooling water dosage (min.) ※11		L/min	6.7				6.7				10				10				6.7				6.7				10								

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※1.Injection capacity is shown by "maximum injection pressure"×"calculated injection volume".

※2.Calculated injection volume is determined by multiplying screw cross sectional area and screw stroke.

※3.Injection weight is for polystyrene and 92% of calculated injection volume.

※4.Maximum injection pressure and maximum holding pressure may be limited by molding conditions.

✖5. Plasticizing capacity is for polystyrene.

※6.Do not use a mold that is smaller than this size to prevent machine damage.

※7.Ejector force shown is theoretical value.

※8.Total machine power does not include ancillary equipment power. If an equipment shall be installed to the machine, their power should be added to the machine power.

※9.Voltage fluctuation should not exceed more than 10% or fall 10% less than rated power. Voltage should always be the rated value and fluctuation should be allowed only for a short time

※10.The machine height does not include leveling pads or signal tower.

※11. Water is used for hopper base cooling below 28°C and it should maintain it's pressure between 0.4~0.6Mpa.

MV Series Specifications

Item		Unit	MV6500													
Injection Unit	LP Specification	Injection Unit		-	1700			2250			3350			5200		
		Screw	Type	-	A	B	C	A	B	C	A	B	C	A	B	C
			Diameter	mm	60	65	70	65	70	80	75	80	90	80	90	100
		Injection stroke		mm	280	280	280	322	322	322	370	370	370	450	450	450
		Injection volume (theoretical) ※1		cm³	791	929	1077	1068	1239	1618	1634	1859	2353	2261	2862	3534
		Injection weight (PS) ※2		g	720	845	980	972	1127	1472	1487	1692	2141	2058	2605	3216
		Injection pressure ※3		MPa	210	180	155	210	180	138	205	180	142	227	180	145
		Holding pressure ※3		MPa	187	160	138	190	162	124	185	162	128	204	162	131
		Injection speed ※4		mm/s	160			160			160			160		
	Injection rate (PS)		g/s	395	463	537	463	537	702	617	702	889	702	889	1097	
	Standard Style	Injection Unit		-	1700h			2250h								
		Screw	Type	-	A	B	C	A	B	C						
			Diameter	mm	60	65	70	65	70	80						
		Injection stroke		mm	280	280	280	322	322	322						
		Injection volume (theoretical) ※1		cm³	791	929	1077	1068	1239	1618						
		Injection weight (PS) ※2		g	720	845	980	972	1127	1472						
		Injection pressure ※3		MPa	210	180	155	210	180	138						
		Holding pressure ※3		MPa	187	160	138	190	162	124						
		Injection speed ※4		mm/s	250			250								
		Injection rate (PS)		g/s	617	724	840	723	839	1097						
	High-speed Specification	Injection Unit		-	1700hs											
		Screw	Type	-	A	B	C									
			Diameter	mm	60	65	70									
		Injection stroke		mm	280	280	280									
		Injection volume (theoretical) ※1		cm³	791	929	1077									
		Injection weight (PS) ※2		g	720	845	980									
		Injection pressure ※3		MPa	210	180	155									
		Holding pressure ※3		MPa	187	160	138									
		Injection speed ※4		mm/s	350											
		Injection rate (PS)		g/s	864	1014	1176									
		Screw Rotating Speed		min ⁻¹	260			240			220			190		
		Plasticizing rate (GPPS) ※5		g/s	57	68	72	62	71	88	70	92	105	85	107	131
		Nozzle Stroke		mm	560			610			720			720		
		Nozzle contact force		kN	54			85			85			85		
		Temp. Zones	Nozzle/Heating Cylinder	-	6			7			7			6		
			Hopper Base	-	1			1			1			1		
		Heating power		kW	33.1			36.1			42.6			54.3		
Clamping Unit	Clamping way		-	Twin toggle												
	Clamping force		kN	6500												
	Dist. Between tie-bars		mm	1080×1080												
	Size of mold platen		mm	1460×1460												
	Mold dimension min. ※6		mm	700×700												
	Mold opening stroke		mm	1000												
	Mold height (min./max.)		mm	420/1000												
	Total daylight max.		mm	2000												
	Ejector stroke		mm	200												
	Ejector force ※7		kN	196												
Others	Connection power ※8		kW/A	1700:58/98 1700h:74/125 1700hs:83/139			2250:65/109 2250h:89/150			83/138			98/164			
	Supply voltage ※9		-	AC460V/3P/60Hz												
	Machine weight		ton	32.14			33.7			33.8			34.73			
	Machine dimension (L×W×H)	Length	m	9.7			9.7			9.7			9.81			
		Width	m	2.44			2.44			2.44			2.44			
		Height ※10	m	2.7			2.7			2.7			2.7			
	Hopper capacity (OP)		L	50			50			100			100			
Cooling water dosage (min.) ※11		L/min	6.7			10			10			15.2				

● Above specification is subject to change due to continuous improvement. The mark of this "OP." shows optional specification.

※1.Injection capacity is shown by "maximum injection pressure"×"calculated injection volume".

※2.Calculated injection volume is determined by multiplying screw cross sectional area and screw stroke.

※3.Injection weight is for polystyrene and 92% of calculated injection volume.

※4.Maximum injection pressure and maximum holding pressure may be limited by molding conditions.

※5.Plasticizing capacity is for polystyrene.

※6.Do not use a mold that is smaller than this size to prevent machine damage.

※7.Ejector force shown is theoretical value.

※8.Total machine power does not include ancillary equipment power. If an equipment shall be installed to the machine, their power should be added to the machine power.

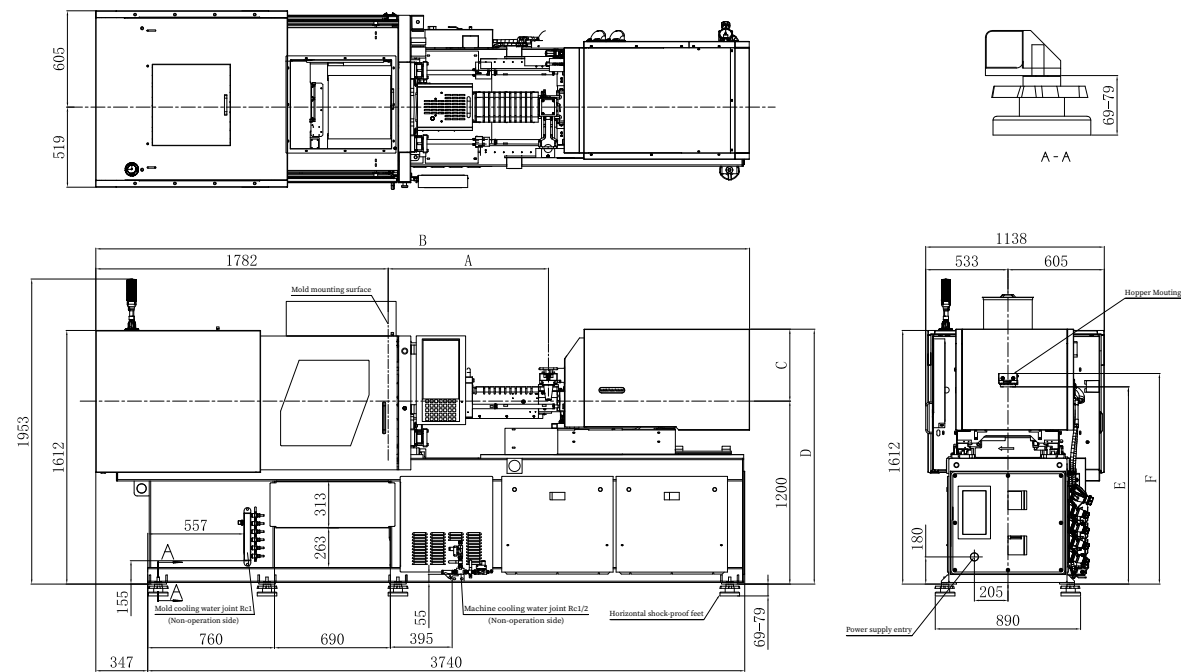
※9.Voltage fluctuation should not exceed more than 10% or fail 10% less than rated power. Voltage should always be the rated value and fluctuation should be allowed only for a short time.

※10.The machine height does not include leveling pads or signal tower.

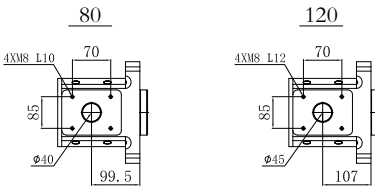
※11.Water is used for hopper base cooling below 28°C and it should maintain it's pressure between 0.4~0.6Mpa.

MV600 Series

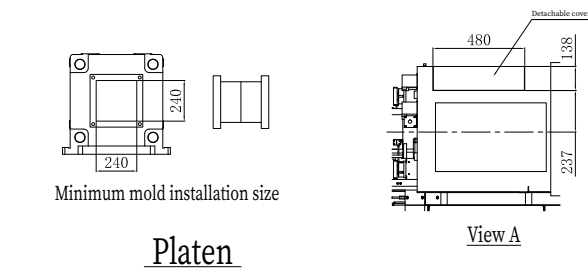
Machine Dimensions



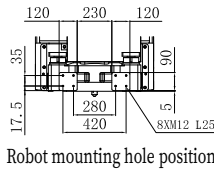
Injection Unit	80			120		
Screw diameter	19	22	26	22	26	30
A	492	579	579	594	691	691
B	3757	3844	3844	3867	3964	3964
C	370			370		
D	1570			1570		
E	1295			1170		
F	1384			1259		



Platen Dimensions

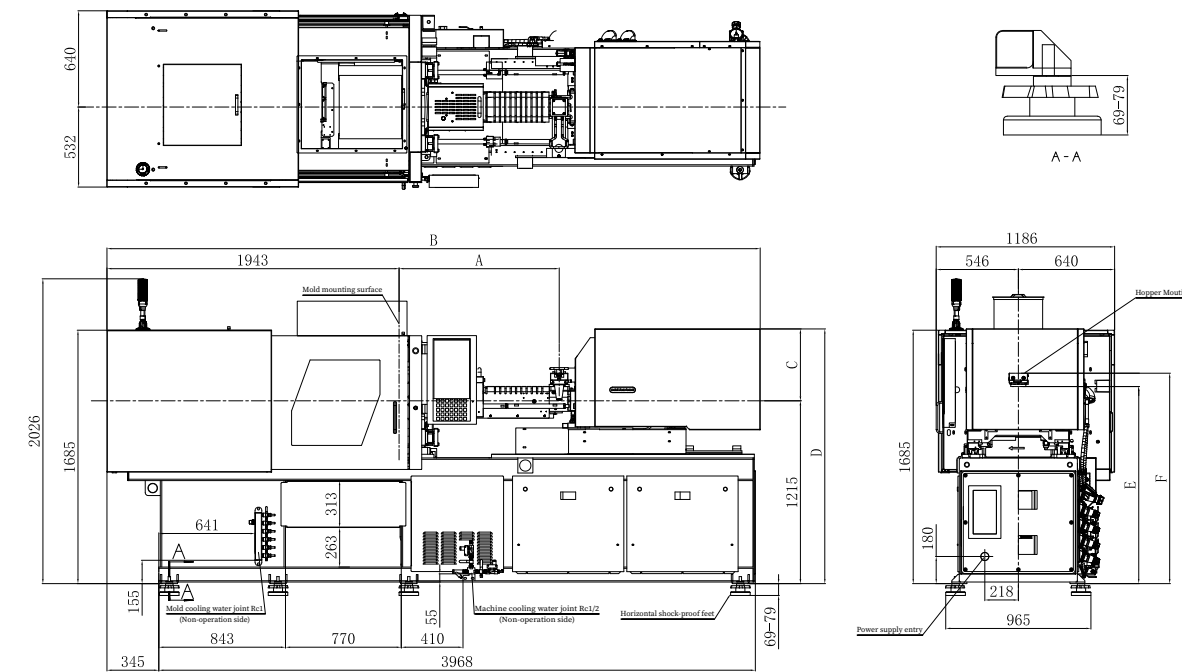


Fixed Platen

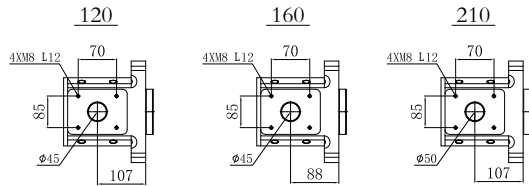


MV900 Series

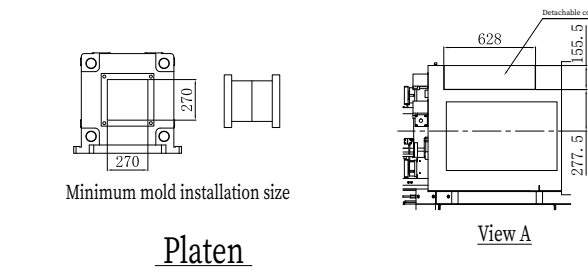
Machine Dimensions



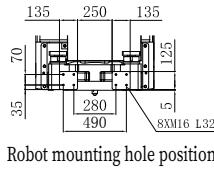
Injection Unit	120			160			210		
Screw diameter	22	26	30	26	28	30	26	28	32
A	594	691	691	691	691	691	656	712	792
B	4038	4135	4135	4251	4251	4251	4250	4306	4386
C	370			478			478		
D	1585			1693			1693		
E	1310			1310			1310		
F	1399			1399			1399		

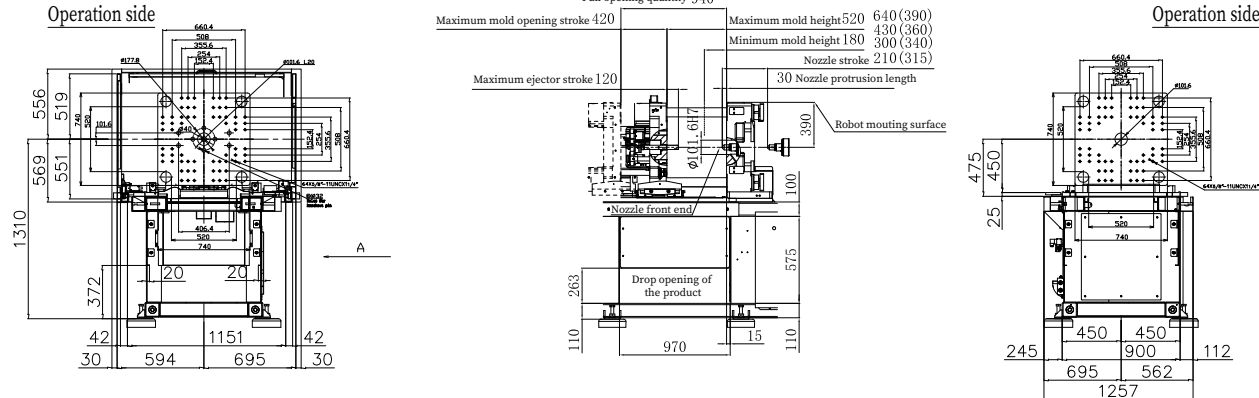
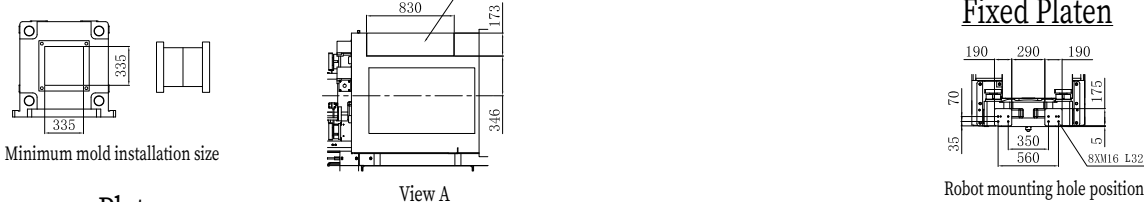
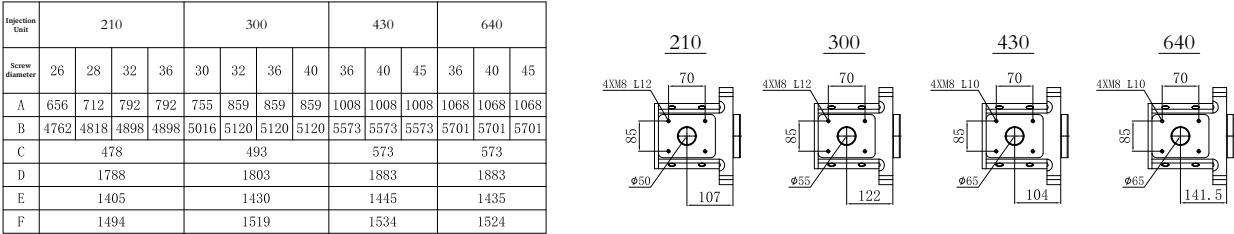
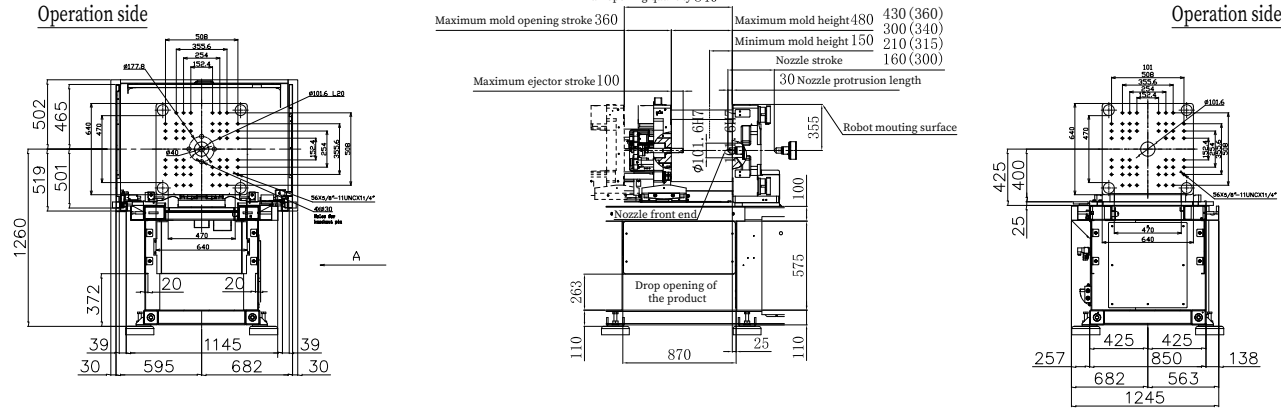
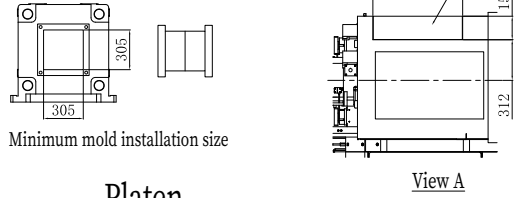
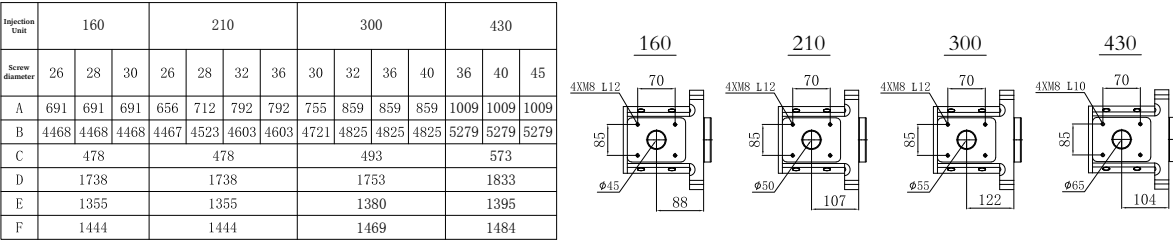


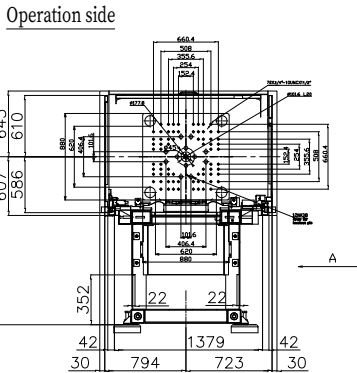
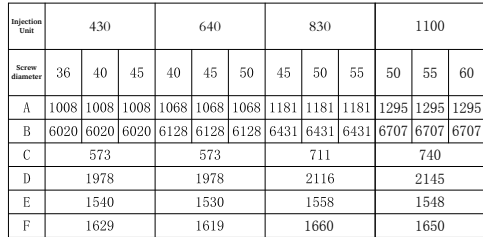
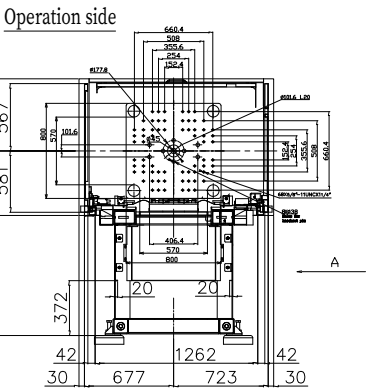
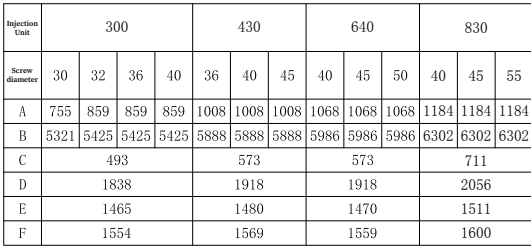
Platen Dimensions



Fixed Platen

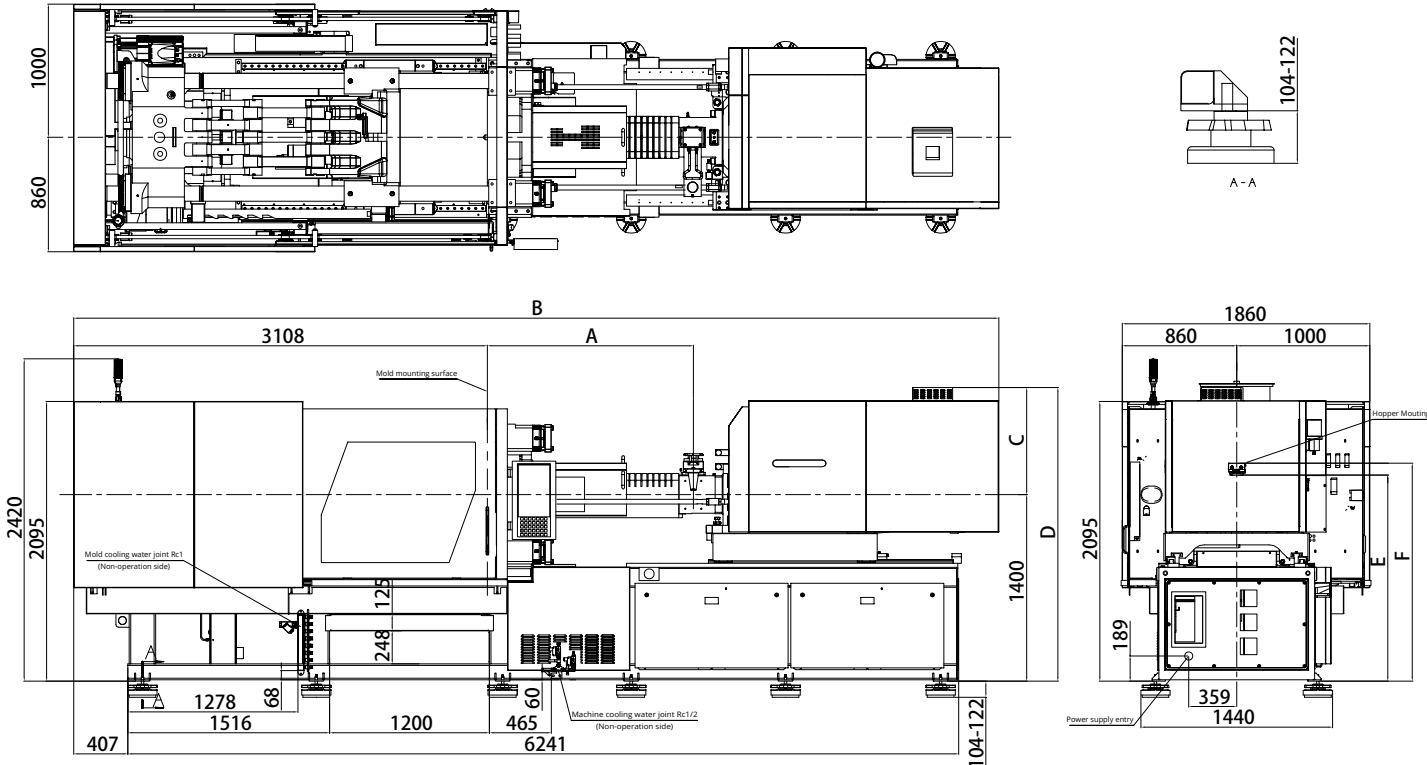




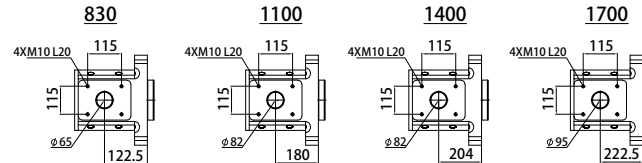


MV3000 系列

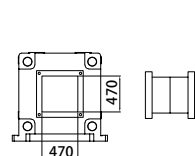
Machine Dimensions



Injection Unit	830			1100			1400			1700		
Screen diameter	45	50	55	50	55	60	55	60	65	60	65	70
A	1181	1181	1181	1295	1295	1295	1383	1383	1383	1543	1543	1543
B	6667	6667	6667	6943	6943	6943	7021	7021	7021	7504	7504	7504
C	1111					740		711				803
D		2111				2140			2111			2203
E		1553				1543			1543			1548
F		1655				1645			1645			1650

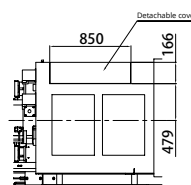
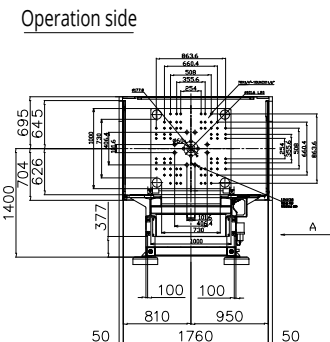


Platen Dimensions



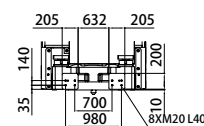
Minimum mold installation size

Platen



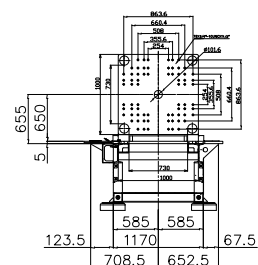
View A

Fixed Platen



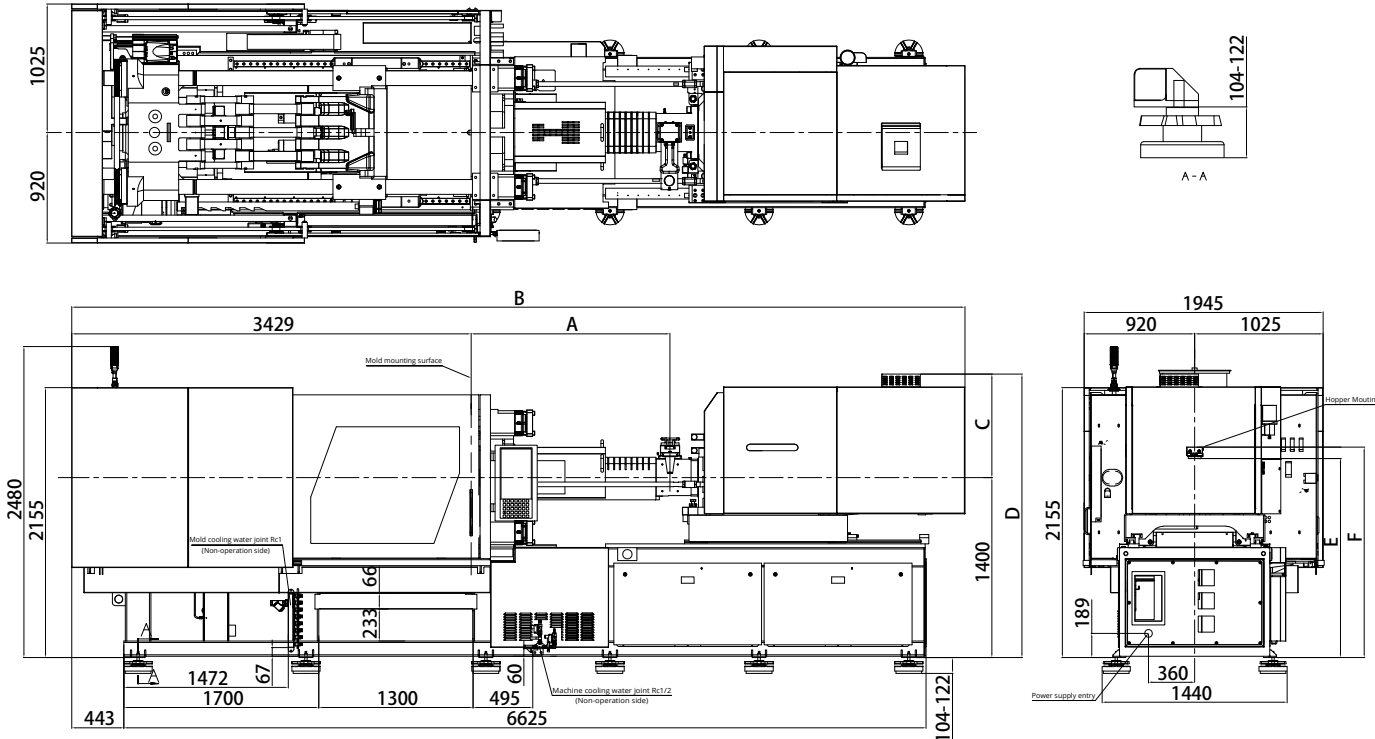
Robot mounting hole position

Operation side



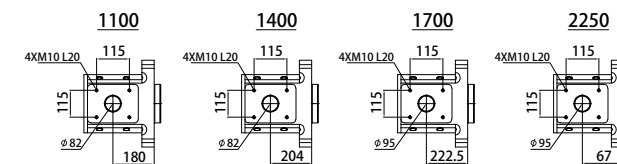
MV3600 系列

Machine Dimensions

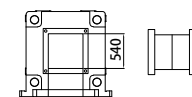


Note: The above machine size does not apply to the 2250 injection unit.

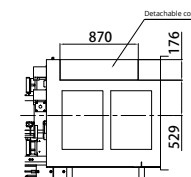
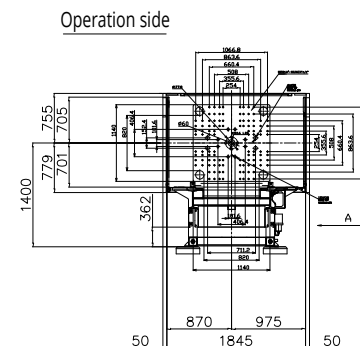
Injection Unit	1100			1400			1700			2250		
Screw Diameter	50	55	60	55	60	65	60	65	70	65	70	80
A	1295	1295	1295	1383	1383	1383	1543	1543	1543	1630	1630	1630
B	7264	7264	7264	7342	7342	7342	7825	7825	7825	7560	7560	7560
C		740			711			803				689
D		2140			2111			2203				2165
E		1543			1543			1548				1701
F		1645			1645			1650				1803



Platen Dimensions

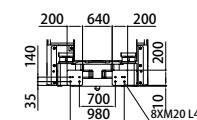


Minimum mold installation size

Platen

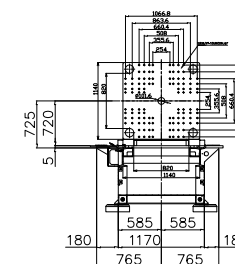
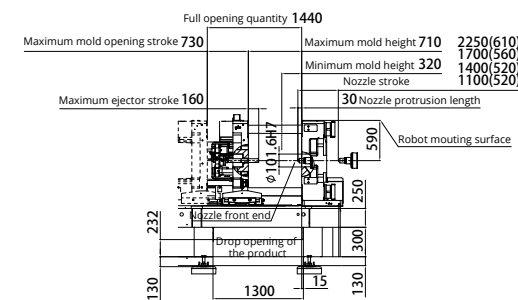
View A

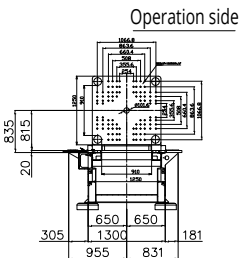
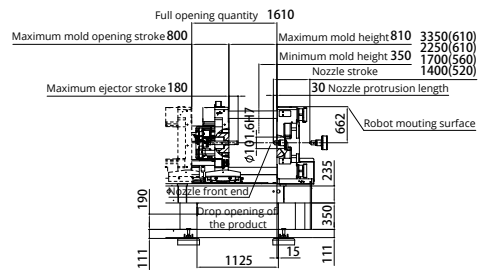
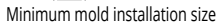
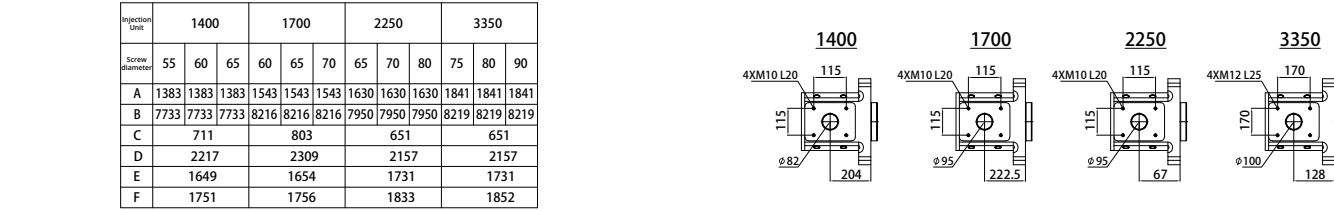
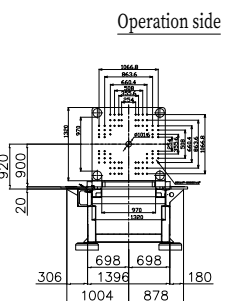
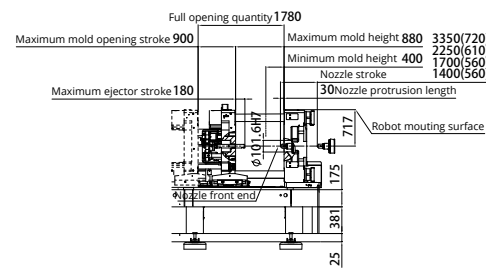
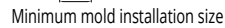
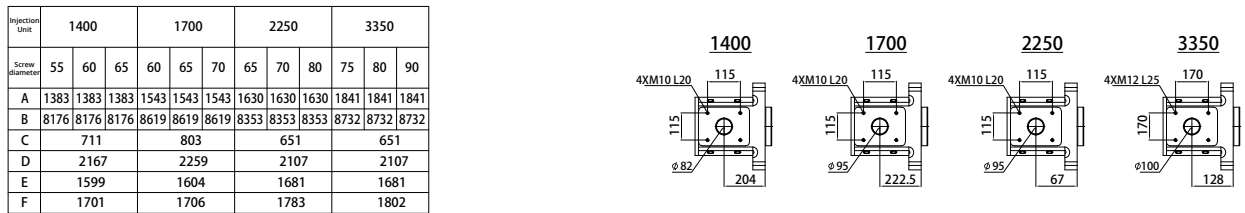
Fixed Platen



Robot mounting hole position

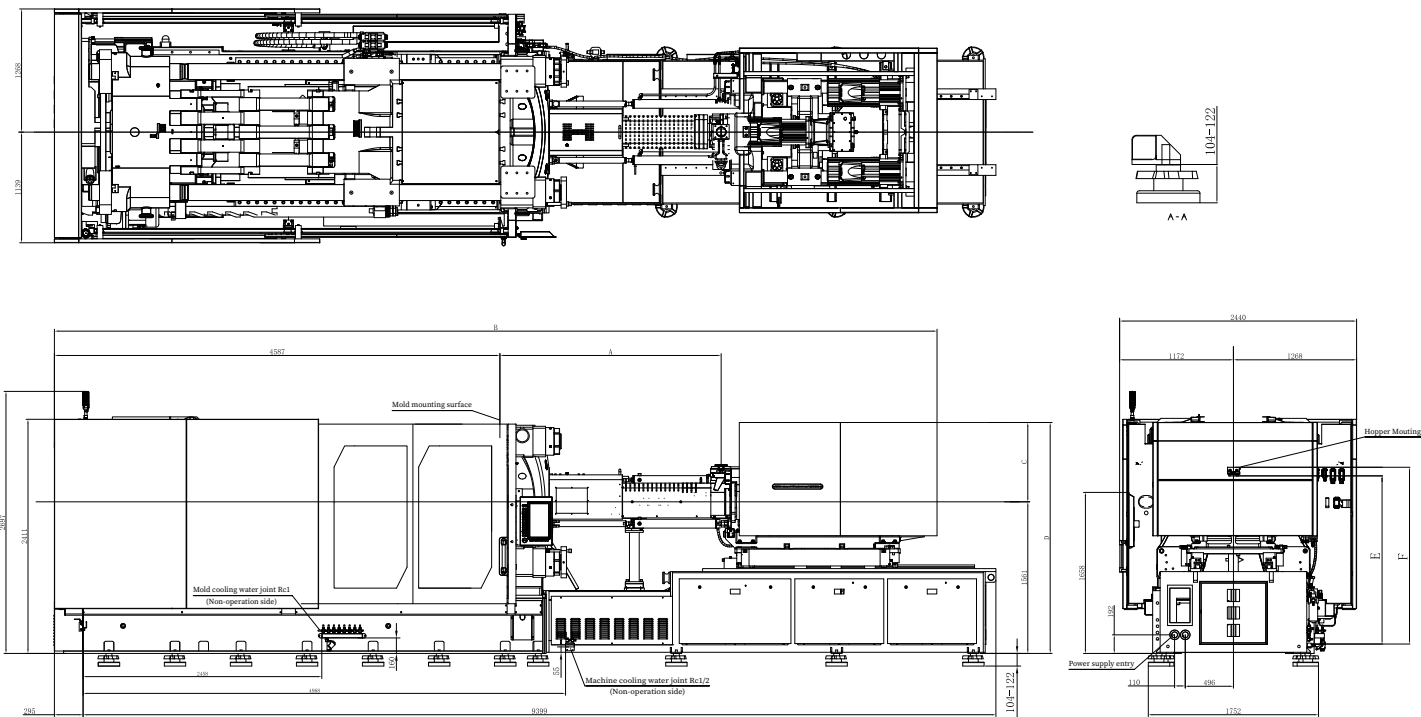
Operation side



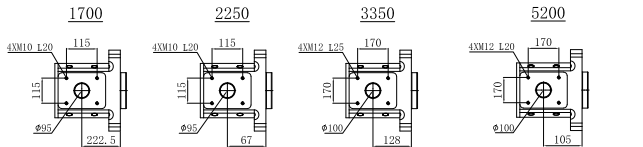
[illegible][illegible]

MV6500 Series

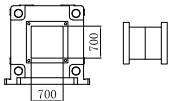
Machine Dimensions



Injection Unit	1700			2250			3350			5200		
Screw diameter	60	65	70	65	70	80	75	80	90	80	90	100
A	1543	1543	1543	1630	1630	1630	1841	1841	1841	2278	2278	2278
B	8983	8983	8983	8717	8717	8717	9096	9096	9096	9808	9808	9808
C	803		651			651			817			
D	2364		2212			2212			2378			
E	1709		1786			1786			1796			
F	1811		1888			1907			1917			



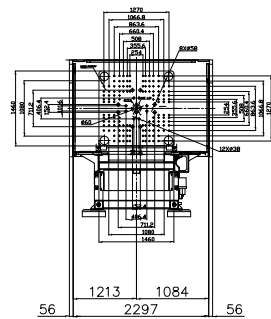
Platen Dimensions



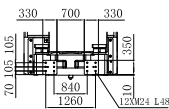
Minimum mold installation size

Platen

Operation side

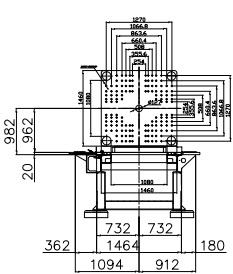


Fixed Platen



Robot mounting hole position

Operation side



MV Series

STANDARD EQUIPMENT LIST

GENERAL EQUIPMENT
1. Basic safety device according to: ANSI/PLASTICS B151.1-2017 NFPA 79:2024 CSA C22.2 NO. 301:23
2. Colors: RAL9010, RAL5003
3. Power supply: AC 460V/3P/60HZ
4. Sigmatek controller, 15.1 inch touch screen
5. Injection, dosing, platen movement driven independently by servo motor, optical encoder position detection
6. LUBE central lubrication

INJECTION UNIT
1. Abrasion-resistant screw set, general version
2. Open nozzle
3. Barrel heating temperature PID control, SSR
4. Extended nozzle, temperature PID control independently
5. Feeding zone temperature closed-loop control
6. Injection speed 6 steps
7. Speed responding mode adjustable
8. Holding pressure 4 steps
9. Pressure responding mode adjustable
10. V/P switch over methods by position/ time/ pressure combinations
11. Dosing rotation speed 3 steps
12. Back pressure 3 steps
13. HPM over-filling protection function
14. Screw retraction before and/or after dosing
15. 15. Auto purge

CLAMPING UNIT
1. 5-point twin toggle mechanism
2. Center pressing platen
3. Clamping force settable at control panel
4. Automatic mold-height adjustment
5. Platen moving speed 6 steps
6. AI mold protection
7. Clamping force pre-release
8. Ejector speed 3 steps
9. Ejector pressure 3 steps
10. Multi ejection function
11. Ejection parallel to mold opening

FUNCTIONS & CONTROLS
1. Multi-language available (Chinese, German, English, Japanese etc.)
2. Metric/Imperial unit selectable
3. Dosing parallel to mold opening
4. Injection compression
5. Production assistant device function
6. Maintenance alert
7. 5000 cycles process data recording
8. Amendment report
9. Alarm record
10. Quality control function
11. Mold profile data memory (up to 200 sets)
12. 2 USB interface
13. USB printer interface
14. Injection speed & pressure curve
15. 1 free programmable I/O
16. Mold ejector protection interface
17. EUROMAP 12 interface for handling device
18. 3 color alarm lamp (red/yellow/green)

OTHERS
1. Tool kit & spare parts package
2. Leveling pads
3. Documents with machine
4. Operating manual