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# ZE-F

## FAST CYCLING INJECTION MOLDING MACHINE

1,500 – 4,500 kN

ZF-20210804-IV



# TECHNICAL DATA ZE1500F

		ZE1500F					
CLAMPING UNIT	Clamping force	kN	1500				
	Mold opening stroke	mm	420				
	Mold height min.	mm	180				
	Mold height max.	mm	520				
	Max. daylight	mm	940				
	Dist. between tie bars (HxV)	mm	520x520				
	Min. mold dimension	mm	335x335				
	Ejector stroke	mm	120				
	Ejector force	kN	33				
	Size of mold platen (HxV)	mm	770x770				
		A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
Screw diameter	mm	36	40	45	40	45	50
Screw L/D ratio	L/D	25	25	25	25	25	25
Injection volume (theoretical)	cm <sup>3</sup>	173	213	270	252	319	394
Screw speed	rpm		400			350	
Plasticizing rate (HDPE) <sup>1</sup>	g/s	43	54	68.6	47.3	60	74.4
Nozzle contact force	kN		63.7			63.7	
Heating power	kW	18.1	19.9	21.7	20.7	24.9	26.3
<b>INJECTION UNIT</b>			<b>430</b>			<b>640</b>	
Injection speed	mm/s		200			160	
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	204	251	318	201	254	314
Injection pressure	MPa	247	200	158	253	200	162
	bar	2470	2000	1580	2530	2000	1620
<b>INJECTION UNIT</b>			<b>430h</b>			<b>640h</b>	
Injection speed	mm/s		350			350	
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	356	439	556	439	556	687
Injection pressure	MPa	247	200	158	253	200	162
	bar	2470	2000	1580	2530	2000	1620
Connection power	kW/A		430h:37/63 430:31/51			640h:46/77 640:33/56	
Pressure	MPa		17.5			17.5	
Flow	l/min		45			45	
Oil tank	l		93			93	
Hopper capacity	l		25			25	
Machine dimension	m		6.1x1.5x2.2			6.3x1.5x2.2	
Machine weight	t		7.7			7.8	

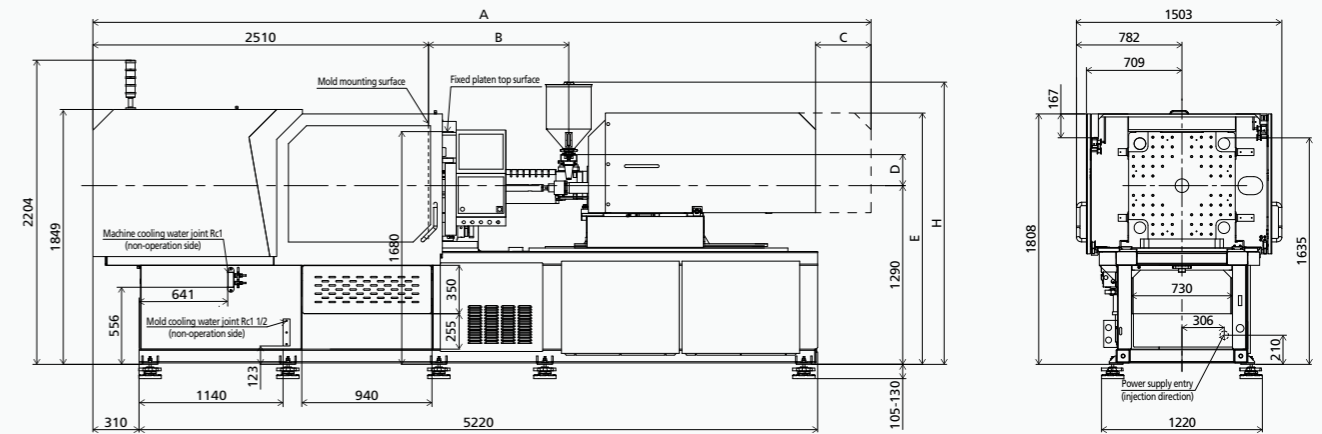
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

<sup>2</sup> Theoretical value at max. injection speed.

<sup>3</sup> Op means optional plasticizing assembly.

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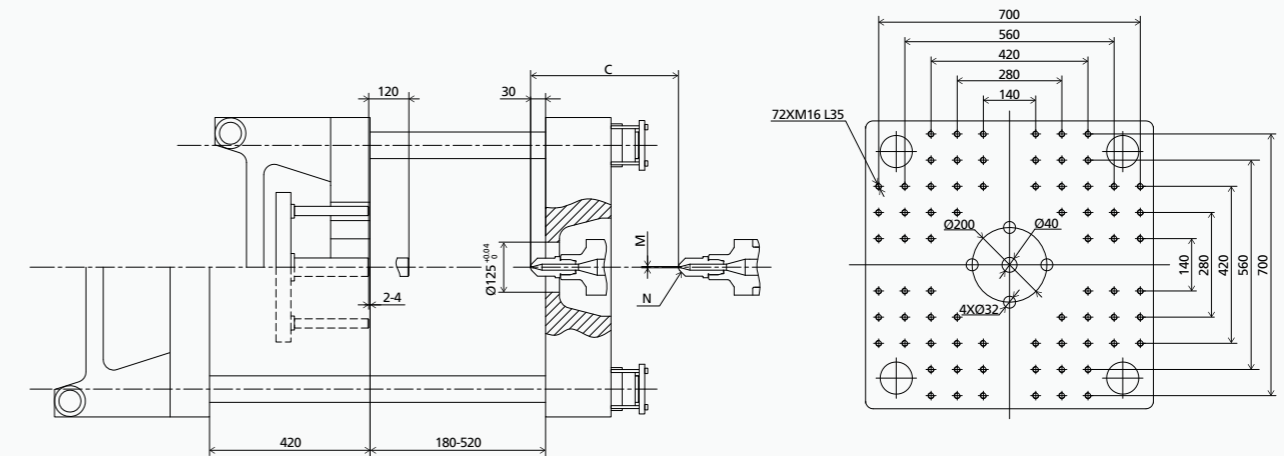
## MACHINE DIMENSIONS



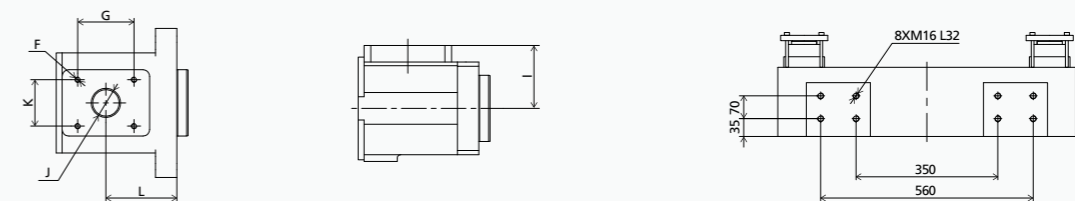
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
430,430h	5785/5902/6022	1093/1210/1330	400	224	1815	4xM8 L15	85	2038	135	Ø50	70	99	Ø4	SR10
640,640h	5943/6108/6220	1211/1376/1488	400	214	1815	4xM8 L15	85	2038	125	Ø50	70	138	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



## OTHERS DIMENSIONS



# TECHNICAL DATA ZE1900F

## ZE1900F

		ZE1900F						
CLAMPING UNIT	Clamping force	kN	1900					
	Mold opening stroke	mm	470					
	Mold height min.	mm	200					
	Mold height max.	mm	550					
	Max. daylight	mm	1020					
	Dist. between tie bars (HxV)	mm	570x570					
	Min. mold dimension	mm	370x370					
	Ejector stroke	mm	150					
	Ejector force	kN	55					
	Size of mold platen (HxV)	mm	840x840					
			A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
Screw diameter	mm	40	45	50	45	50	55	
Screw L/D ratio	L/D	25	25	25	25	25	25	
Injection volume (theoretical)	cm <sup>3</sup>	252	319	394	333	412	498	
Screw speed	rpm		350			320		
Plasticizing rate (HDPE) <sup>1</sup>	g/s	47.3	60	74.4	55	68	86	
Nozzle contact force	kN		63.7			88.2		
Heating power	kW	20.7	24.9	26.3	27.1	32	34.1	
<b>INJECTION UNIT</b>			<b>640</b>			<b>830</b>		
Injection speed	mm/s		160			160		
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	201	254	314	254	314	380	
Injection pressure	MPa	253	200	162	247	200	165	
	bar	2530	2000	1620	2470	2000	1650	
<b>INJECTION UNIT</b>			<b>640h</b>			<b>830h</b>		
Injection speed	mm/s		350			350		
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	439	556	687	556	687	831	
Injection pressure	MPa	253	200	162	247	200	165	
	bar	2530	2000	1620	2470	2000	1650	
Connection power	kW/A		640h:46/77 640:33/56			830h:56/95 830:42/70		
Pressure	MPa		17.5			17.5		
Flow	l/min		74			74		
Oil tank	l		115			115		
Hopper capacity	l		25			50		
Machine dimension	m		6.6x1.7x2.3			6.9x1.7x2.3		
Machine weight	t		9.1			9.7		

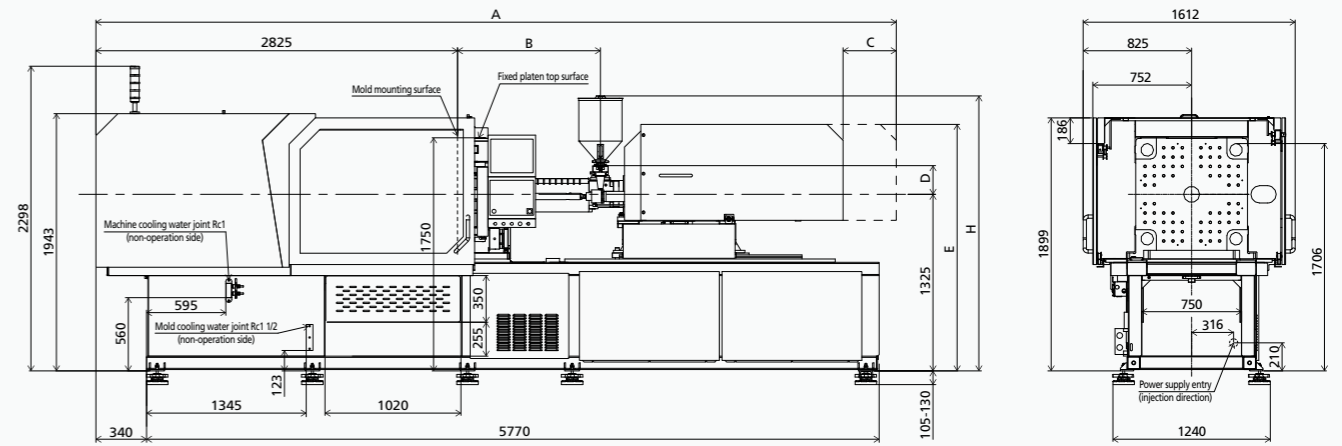
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

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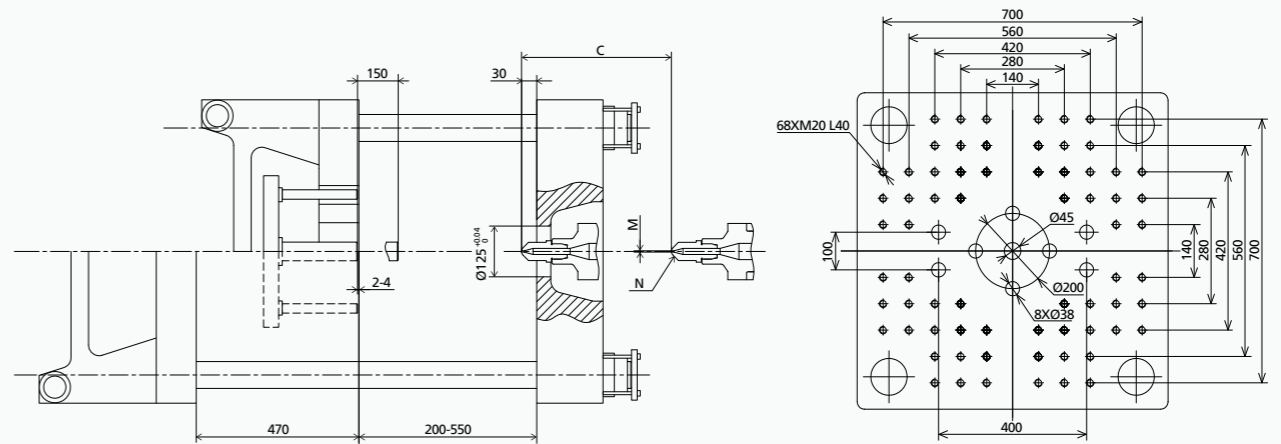
## MACHINE DIMENSIONS



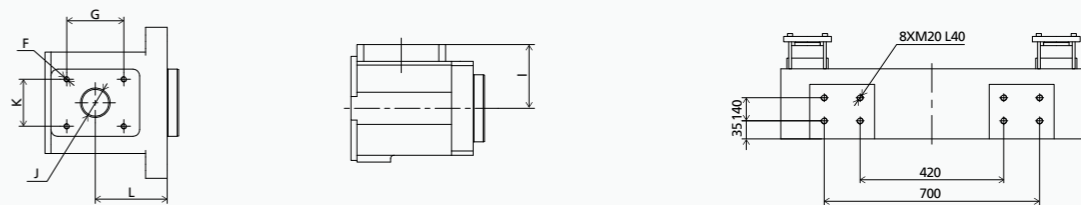
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
640,640h	6257/6422/6534	1211/1376/1488	400	214	1850	4xM8 L15	85	2063	125	Ø50	70	138	Ø4	SR10
830,830h	6546/6716/6813	1332/1502/1599	430	255	2019	4xM10 L20	115	2183	153	Ø60	115	122.5	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



## OTHERS DIMENSIONS



# TECHNICAL DATA ZE2300F

## ZE2300F

		ZE2300F						
CLAMPING UNIT	Clamping force	kN	2300					
	Mold opening stroke	mm	550					
	Mold height min.	mm	220					
	Mold height max.	mm	600					
	Max. daylight	mm	1150					
	Dist. between tie bars (HxV)	mm	620x620					
	Min. mold dimension	mm	400x400					
	Ejector stroke	mm	150					
	Ejector force	kN	55					
	Size of mold platen (HxV)	mm	920x920					
			A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
Screw diameter	mm	45	50	55	50	55	60	
Screw L/D ratio	L/D	25	25	25	25	25	25	
Injection volume (theoretical)	cm <sup>3</sup>	333	412	498	471	570	678	
Screw speed	rpm		320		320			
Plasticizing rate (HDPE) <sup>1</sup>	g/s	55	68	86	68	86	117.3	
Nozzle contact force	kN		88.2		88.2			
Heating power	kW	27.1	32	34.1	33.7	40.7	44.2	
<b>INJECTION UNIT</b>			<b>830</b>			<b>1100</b>		
Injection speed	mm/s		160		160			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	254	314	380	314	380	452	
Injection pressure	MPa	247	200	165	230	190	159	
	bar	2470	2000	1650	2300	1900	1590	
<b>INJECTION UNIT</b>			<b>830h</b>			<b>1100h</b>		
Injection speed	mm/s		350		350			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	556	687	831	687	831	989	
Injection pressure	MPa	247	200	165	230	190	159	
	bar	2470	2000	1650	2300	1900	1590	
Connection power	kW/A		830h:56/95 830:42/70			1100h:70/117 1100:51/86		
Pressure	MPa		17.5			17.5		
Flow	l/min		74			74		
Oil tank	l		122			122		
Hopper capacity	l		50			50		
Machine dimension	m		7.0x1.8x2.4			7.3x1.8x2.4		
Machine weight	t		12.9			12.9		

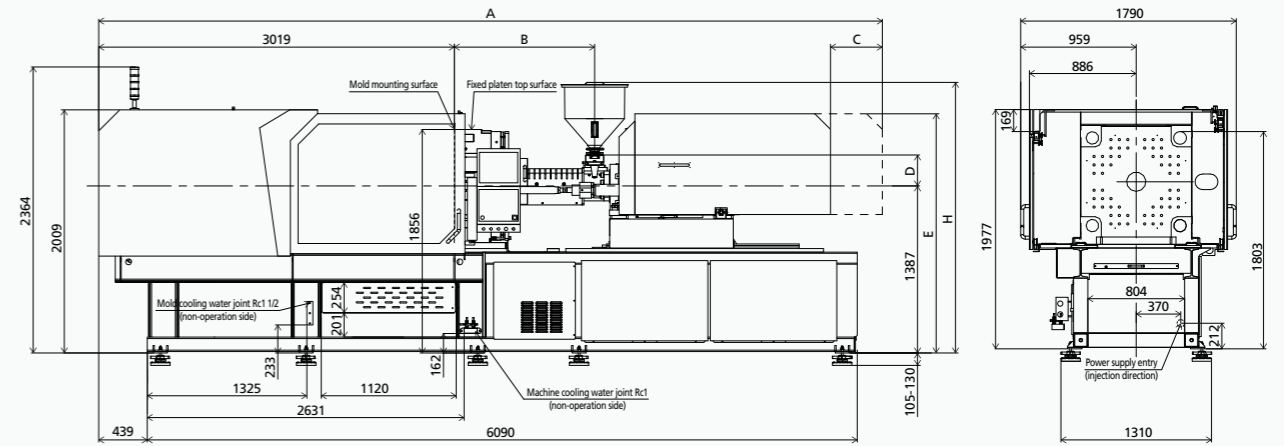
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

<sup>2</sup> Theoretical value at max. injection speed.

<sup>3</sup> Op means optional plasticizing assembly.

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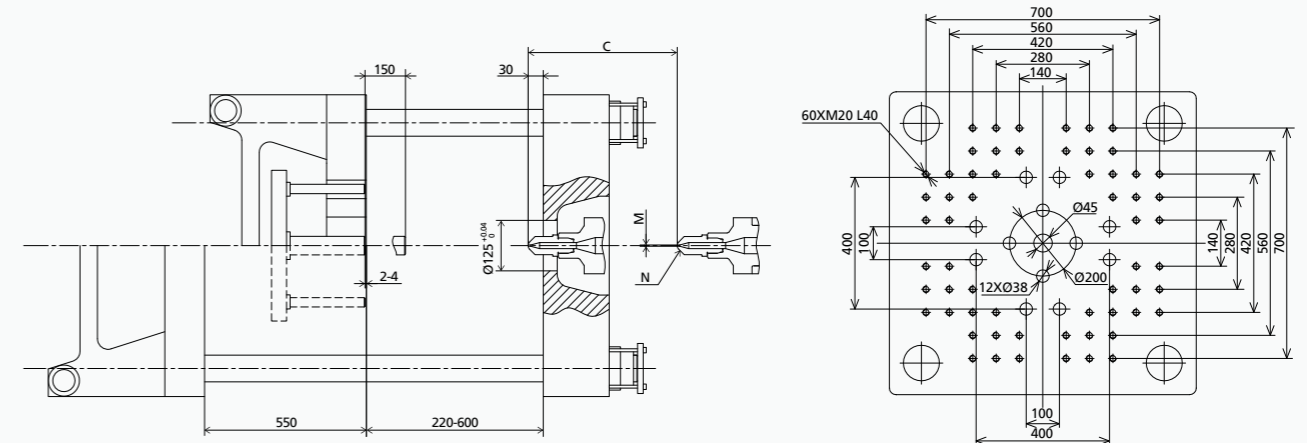
## MACHINE DIMENSIONS



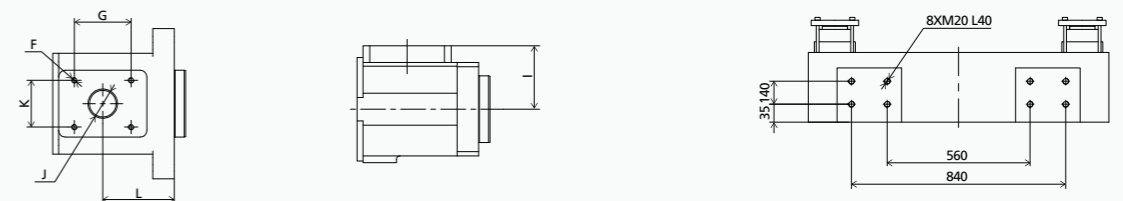
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
830,830h	6738/6908/7005	1330/1500/1597	430	255	2081	4xM10 L20	115	2245	153	Ø60	115	122.5	Ø4	SR10
1100,1100h	6930/7110/7223	1465/1645/1758	430	245	2081	4xM10 L20	115	2235	143	Ø60	115	180	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



## OTHERS DIMENSIONS



# TECHNICAL DATA ZE3000F

## ZE3000F

		ZE3000F									
CLAMPING UNIT	Clamping force	kN	3000								
	Mold opening stroke	mm	600								
	Mold height min.	mm	250								
	Mold height max.	mm	650								
	Max. daylight	mm	1250								
	Dist. between tie bars (HxV)	mm	670x670								
	Min. mold dimension	mm	435x435								
	Ejector stroke	mm	160								
	Ejector force	kN	68.6								
	Size of mold platen (HxV)	mm	1000x1000								
INJECTION UNIT			A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
	Screw diameter	mm	50	55	60	55	60	65	60	65	70
	Screw L/D ratio	L/D	25	25	25	25	25	25	25	25	25
	Injection volume (theoretical)	cm <sup>3</sup>	471	570	678	617	735	862	791	929	1077
	Screw speed	rpm	320			300			250		
	Plasticizing rate (HDPE) <sup>1</sup>	g/s	68	86	117.3	80.6	110	144	91.7	120	155
	Nozzle contact force	kN	88.2			88.2			88.2		
	Heating power	kW	33.7	40.7	44.2	41.5	47.2	51.1	47.1	51.2	55.1
	<b>INJECTION UNIT</b>		<b>1100</b>			<b>1400</b>			<b>1700</b>		
	Injection speed	mm/s	160			160			160		
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	314	380	452	380	452	530	452	530	615	
Injection pressure	MPa	230	190	159	230	193	164	210	180	155	
	bar	2300	1900	1590	2300	1930	1640	2100	1800	1550	
<b>INJECTION UNIT</b>		<b>1100h</b>			<b>1400h</b>			<b>1700h</b>			
Injection speed	mm/s	350			350			350			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	687	831	989	831	989	1161	989	1161	1346	
Injection pressure	MPa	230	190	159	230	193	164	210	180	155	
	bar	2300	1900	1590	2300	1930	1640	2100	1800	1550	
Connection power	kW/A	1100h:70/117 1100:51/86			1400h:77/130 1400:62/104			1700h:93/156 1700:64/108			
Pressure	MPa	17.5			17.5			17.5			
Flow	l/min	90			90			90			
Oil tank	l	135			135			135			
Hopper capacity	l	50			50			50			
Machine dimension	m	7.7x2.0x2.5			8.2x2.0x2.5			8.4x2.0x2.5			
Machine weight	t	15.8			16.6			16.6			

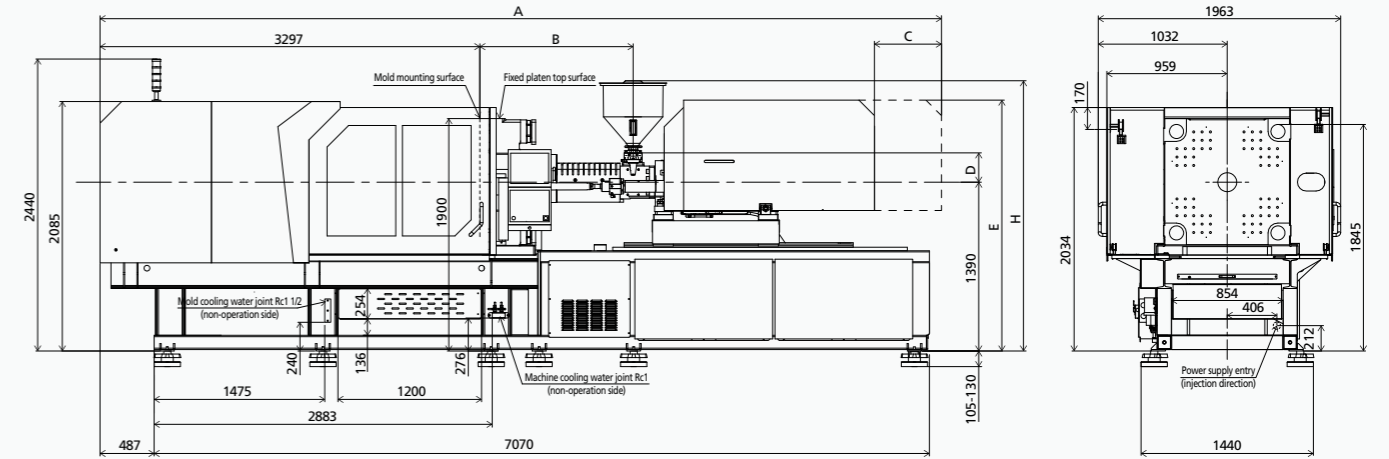
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

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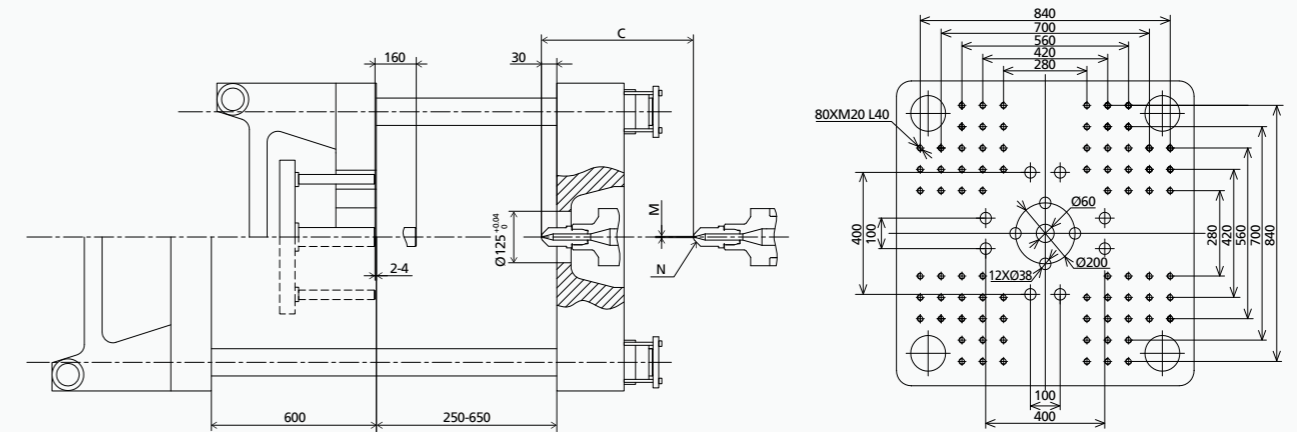
## MACHINE DIMENSIONS



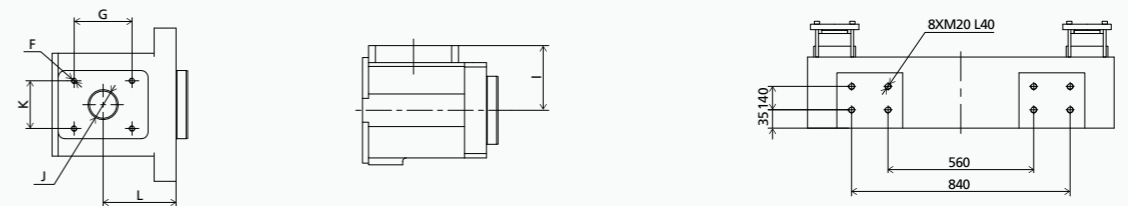
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1100,1100h	7338/7518/7631	1465/1645/1758	560	245	2084	4xM10 L20	115	2238	143	Ø60	115	180	Ø4	SR10
1400,1400h	7903/8064/8185	1614/1775/1896	610	251	2095	4xM10 L20	115	2244	149	Ø80	115	184	Ø4	SR10
1700,1700h	8076/8238/8359	1754/1916/2037	610	250	2095	4xM10 L20	115	2244	148	Ø80	115	217	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



## OTHERS DIMENSIONS



# TECHNICAL DATA ZE3800F

## ZE3800F

		ZE3800F									
CLAMPING UNIT	Clamping force	kN	3800								
	Mold opening stroke	mm	700								
	Mold height min.	mm	300								
	Mold height max.	mm	710								
	Max. daylight	mm	1410								
	Dist. between tie bars (HxV)	mm	770x770								
	Min. mold dimension	mm	500x500								
	Ejector stroke	mm	160								
	Ejector force	kN	68.6								
	Size of mold platen (HxV)	mm	1150x1150								
INJECTION UNIT			A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
	Screw diameter	mm	50	55	60	55	60	65	60	65	70
	Screw L/D ratio	L/D	25	25	25	25	25	25	25	25	25
	Injection volume (theoretical)	cm <sup>3</sup>	471	570	678	617	735	862	791	929	1077
	Screw speed	rpm	320			300			250		
	Plasticizing rate (HDPE) <sup>1</sup>	g/s	68	86	117.3	80.6	110	144	91.7	120	155
	Nozzle contact force	kN	88.2			88.2			88.2		
	Heating power	kW	33.7	40.7	44.2	41.5	47.2	51.1	47.1	51.2	55.1
	INJECTION UNIT		1100			1400			1700		
	Injection speed	mm/s	160			160			160		
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	314	380	452	380	452	530	452	530	615	
Injection pressure	MPa	230	190	159	230	193	164	210	180	155	
	bar	2300	1900	1590	2300	1930	1640	2100	1800	1550	
INJECTION UNIT		1100h			1400h			1700h			
Injection speed	mm/s	350			350			350			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	687	831	989	831	989	1161	989	1161	1346	
Injection pressure	MPa	230	190	159	230	193	164	210	180	155	
	bar	2300	1900	1590	2300	1930	1640	2100	1800	1550	
OTHERS	Connection power	kW/A	1100h:70/117 1100:51/86			1400h:77/130 1400:62/104			1700h:93/156 1700:64/108		
	Pressure	MPa	17.5			17.5			17.5		
	Flow	l/min	90			90			90		
	Oil tank	l	135			135			135		
	Hopper capacity	l	50			50			50		
	Machine dimension	m	8.0x2.1x2.6			8.5x2.1x2.6			8.7x2.1x2.6		
Machine weight	t	20.8			21.6			22.1			

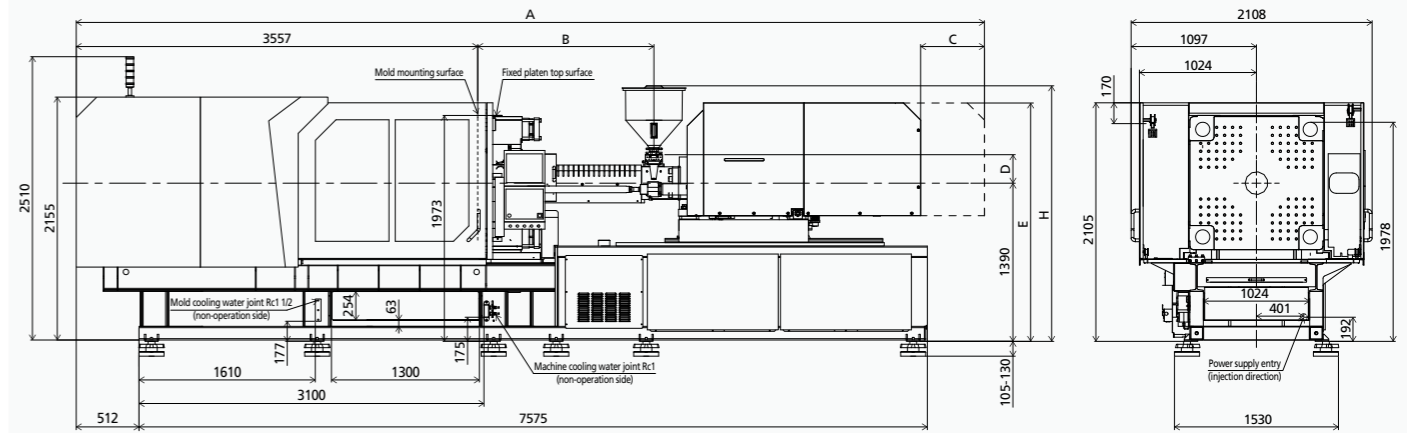
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

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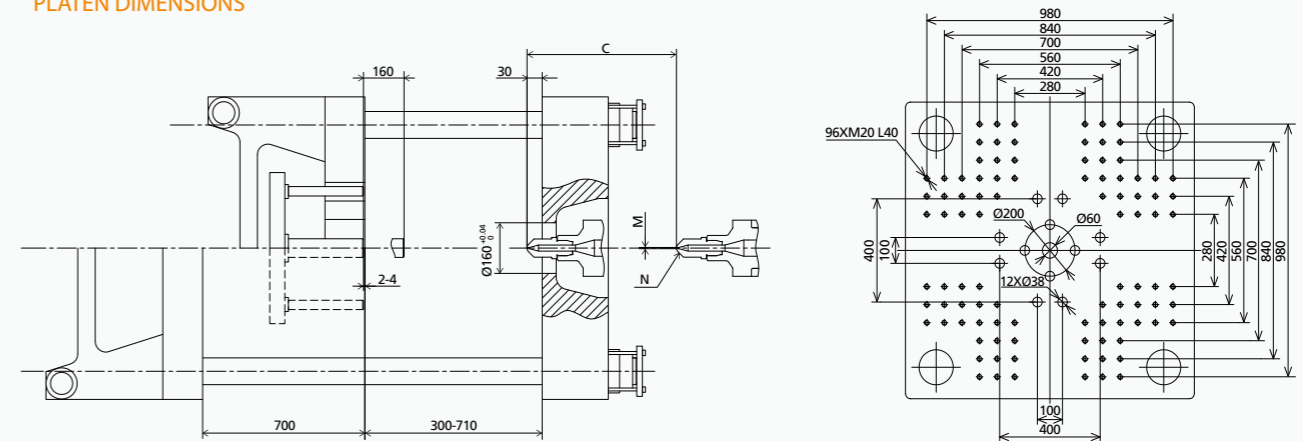
## MACHINE DIMENSIONS



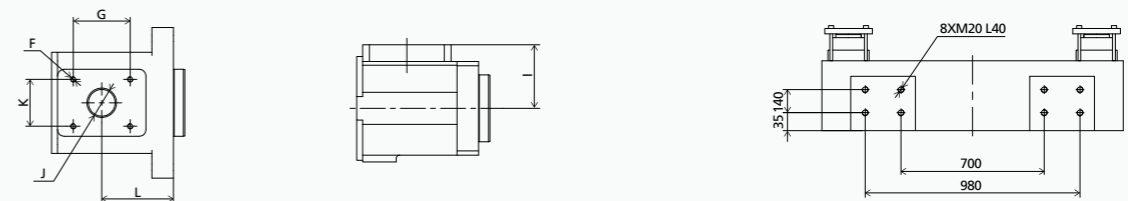
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1100,1100h	7649/7829/7942	1467/1647/1760	610	245	2084	4xM10 L20	115	2238	143	Ø60	115	180	Ø4	SR10
1400,1400h	8163/8324/8445	1615/1776/1897	610	251	2095	4xM10 L20	115	2244	149	Ø80	115	184	Ø4	SR10
1700,1700h	8336/8498/8619	1754/1916/2037	610	250	2095	4xM10 L20	115	2244	148	Ø80	115	217	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



## OTHERS DIMENSIONS



# TECHNICAL DATA ZE4500F

## ZE4500F

		ZE4500F						
CLAMPING UNIT	Clamping force	kN	4500					
	Mold opening stroke	mm	800					
	Mold height min.	mm	400					
	Mold height max.	mm	820					
	Max. daylight	mm	1620					
	Dist. between tie bars (HxV)	mm	820x820					
	Min. mold dimension	mm	540x540					
	Ejector stroke	mm	180					
	Ejector force	kN	98					
	Size of mold platen (HxV)	mm	1260x1260					
			A	B	C(op) <sup>3</sup>	A	B	C(op) <sup>3</sup>
Screw diameter	mm	55	60	65	60	65	70	
Screw L/D ratio	L/D	25	25	25	25	25	25	
Injection volume (theoretical)	cm <sup>3</sup>	617	735	862	791	929	1077	
Screw speed	rpm		300		250			
Plasticizing rate (HDPE) <sup>1</sup>	g/s	80.6	110	144	91.7	120	155	
Nozzle contact force	kN		88.2		88.2			
Heating power	kW	41.5	47.2	51.1	47.1	51.2	55.1	
<b>INJECTION UNIT</b>			<b>1400</b>			<b>1700</b>		
Injection speed	mm/s		160		160			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	380	452	530	452	530	615	
Injection pressure	MPa	230	193	164	210	180	155	
	bar	2300	1930	1640	2100	1800	1550	
<b>INJECTION UNIT</b>			<b>1400h</b>			<b>1700h</b>		
Injection speed	mm/s		350		350			
Injection rate <sup>2</sup>	cm <sup>3</sup> /s	831	989	1161	989	1161	1346	
Injection pressure	MPa	230	193	164	210	180	155	
	bar	2300	1930	1640	2100	1800	1550	
Connection power	kW/A		1400h:77/130 1400:62/104		1700h:93/156 1700:64/108			
Pressure	MPa		17.5		17.5			
Flow	l/min		132		132			
Oil tank	l		280		280			
Hopper capacity	l		50		50			
Machine dimension	m		8.9x2.3x2.6		9.1x2.3x2.6			
Machine weight	t		27.5		27.5			

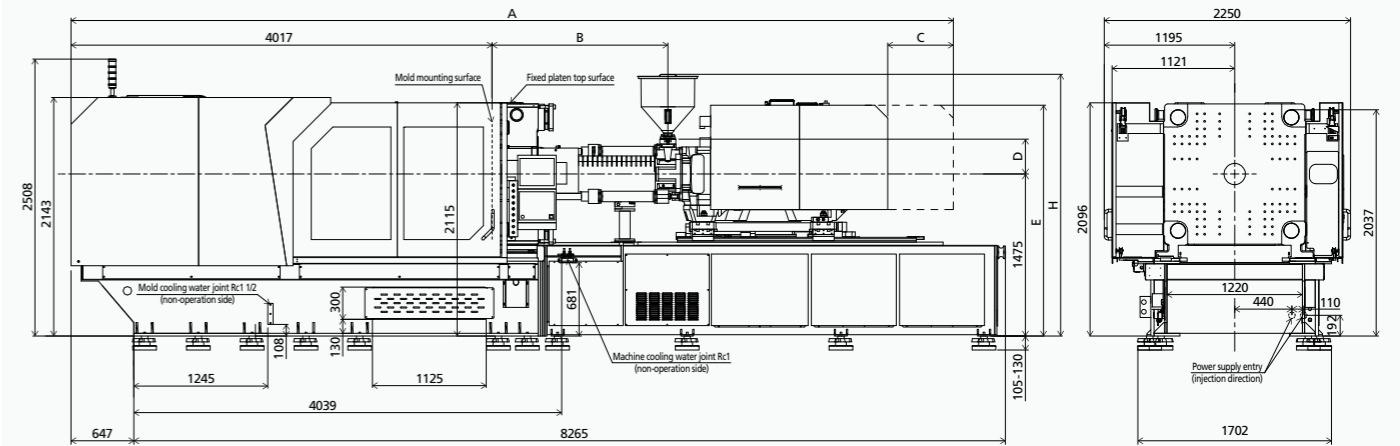
NOTE: <sup>1</sup> Plasticizing capacity (HDPE): with standard packaging screw configuration, tested according to EUROMAP 19.

<sup>2</sup> Theoretical value at max. injection speed.

<sup>3</sup> Op means optional plasticizing assembly.

The above data are only for ZHAFIR standard machines, and the data for customized are slightly different. We reserve the right to make changes as a result of further technical advances.

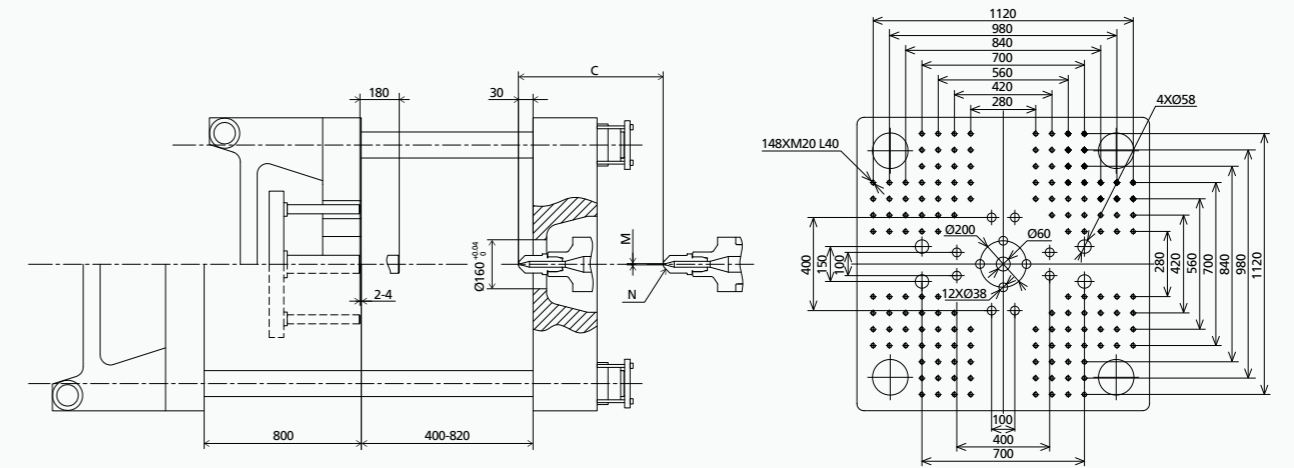
## MACHINE DIMENSIONS



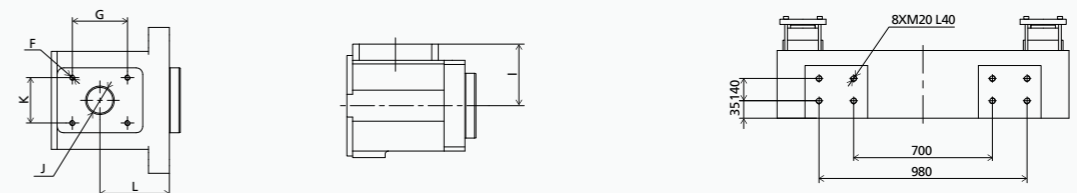
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1400,1400h	8623/8784/8905	1614/1775/1896	610	251	2135	4xM10 L20	115	2329	149	Ø80	115	184	Ø4	SR10
1700,1700h	8796/8958/9079	1754/1916/2037	610	250	2135	4xM10 L20	115	2329	148	Ø80	115	217	Ø4	SR10

Figures at "A,B" refers to the respective size of screw A/B/C on the injection unit.

## PLATEN DIMENSIONS



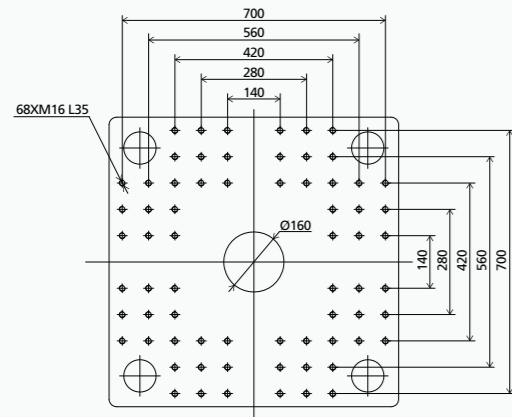
## OTHERS DIMENSIONS



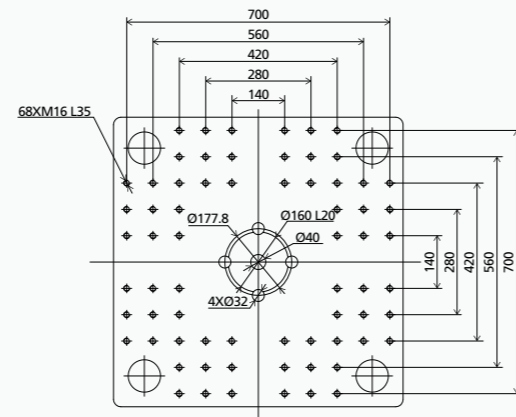
# PLATEN LAYOUT ZE1500F

## EUROPEAN VERSION

FIXED PLATEN

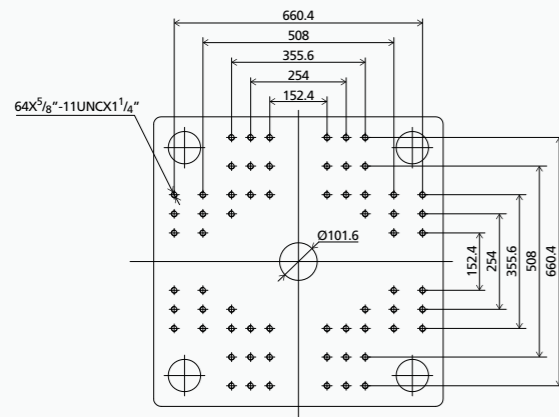


MOVABLE PLATEN

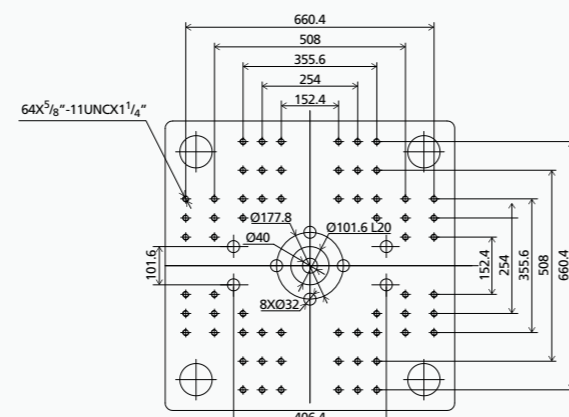


## AMERICAN VERSION

FIXED PLATEN

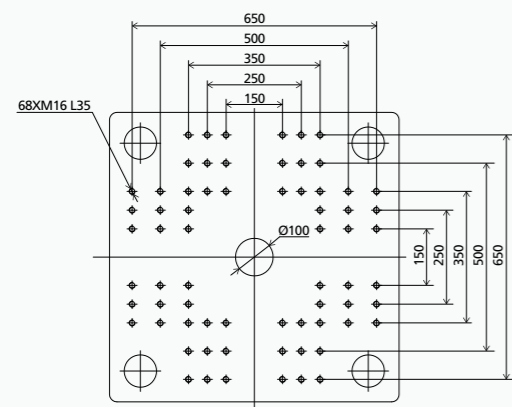


MOVABLE PLATEN

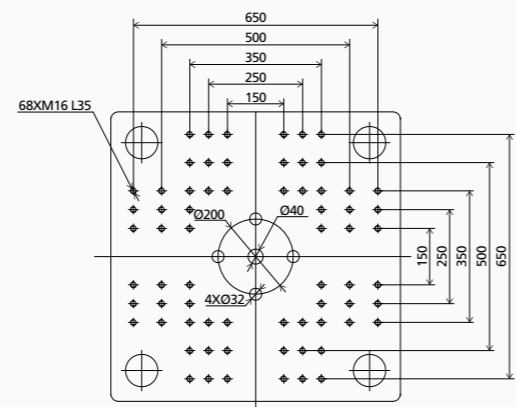


## JAPANESE VERSION

FIXED PLATEN



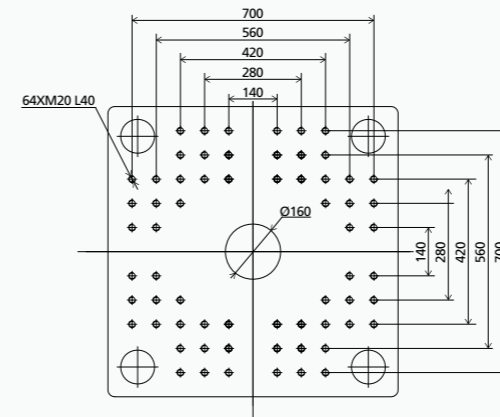
MOVABLE PLATEN



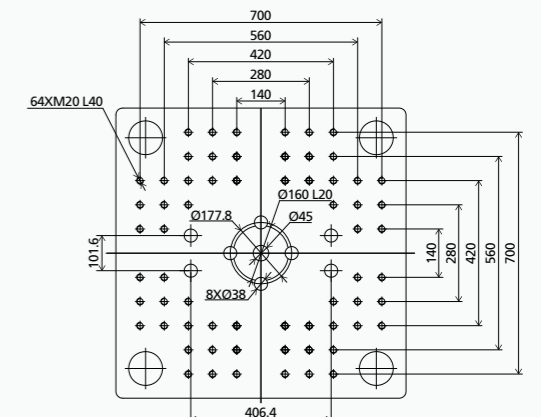
# PLATEN LAYOUT ZE1900F

## EUROPEAN VERSION

FIXED PLATEN

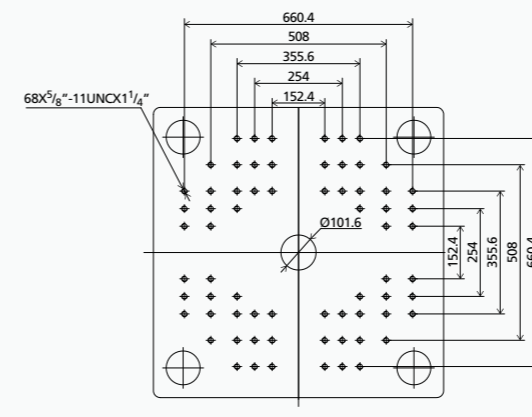


MOVABLE PLATEN

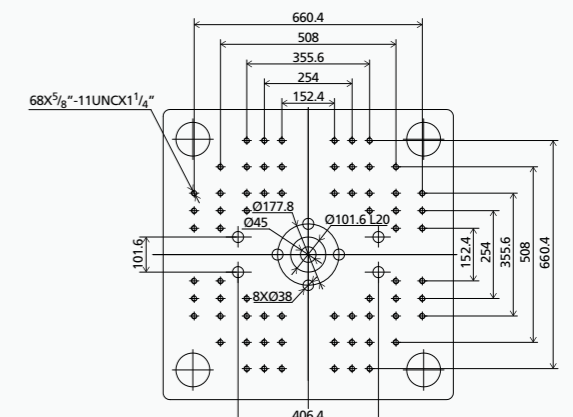


## AMERICAN VERSION

FIXED PLATEN

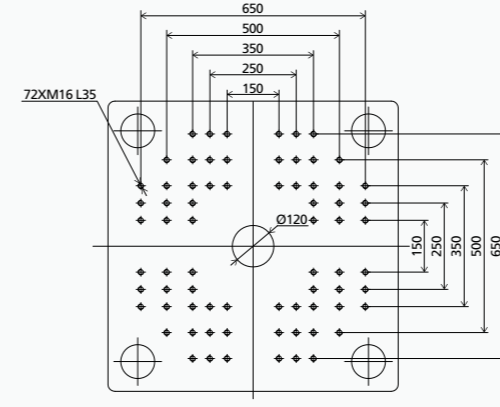


MOVABLE PLATEN

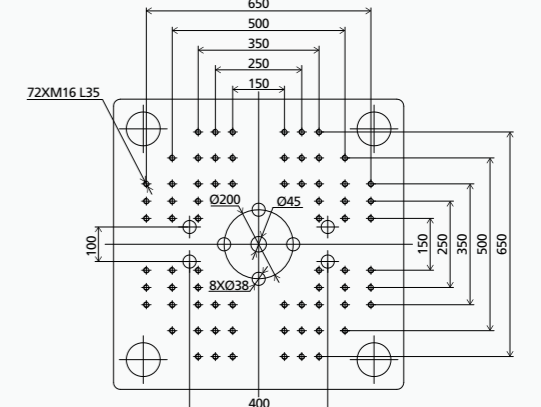


## JAPANESE VERSION

FIXED PLATEN



MOVABLE PLATEN

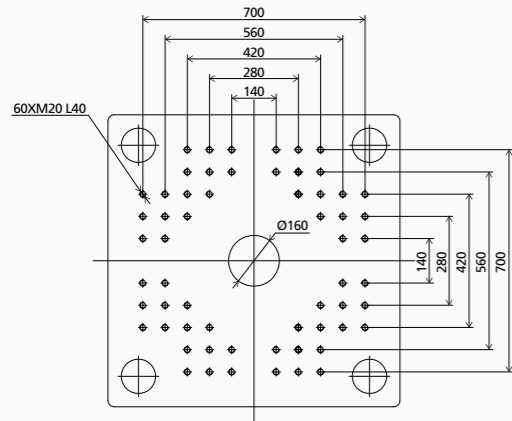


We reserve the right to make changes as a result of further technical advances.

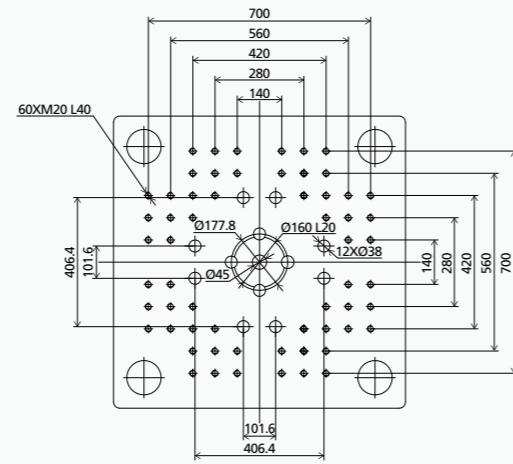
# PLATEN LAYOUT ZE2300F

## EUROPEAN VERSION

FIXED PLATEN

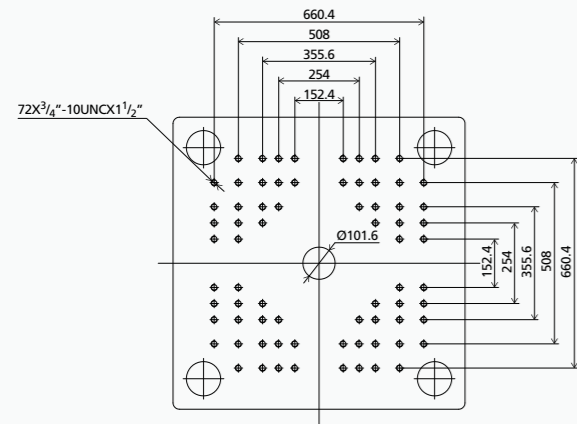


MOVABLE PLATEN

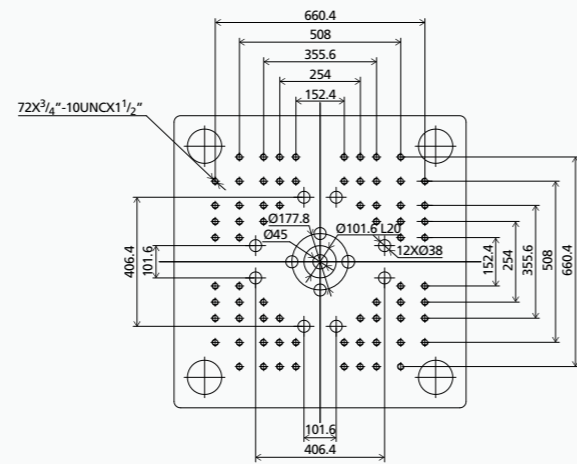


## AMERICAN VERSION

FIXED PLATEN

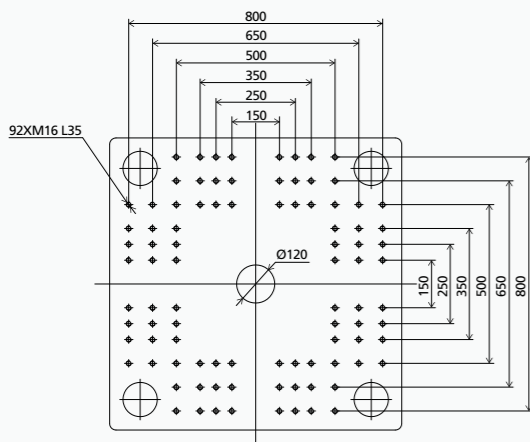


MOVABLE PLATEN

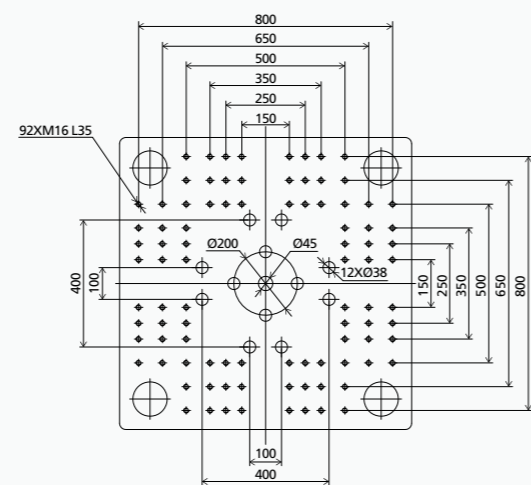


## JAPANESE VERSION

FIXED PLATEN

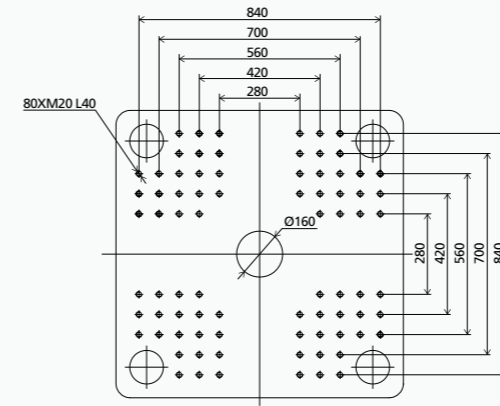


MOVABLE PLATEN

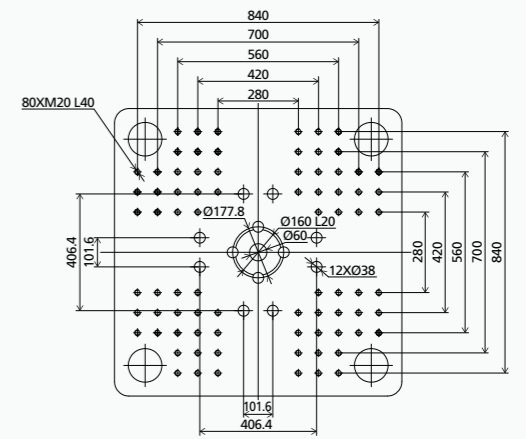


## EUROPEAN VERSION

FIXED PLATEN

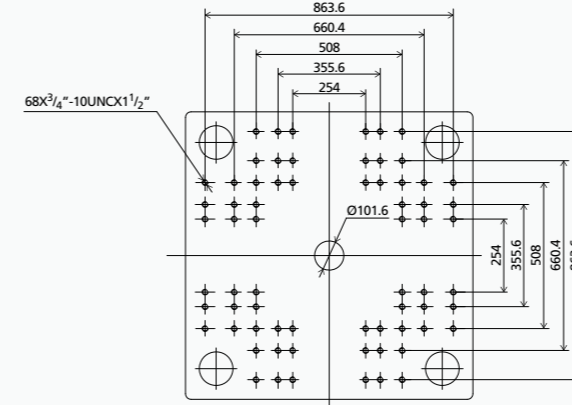


MOVABLE PLATEN

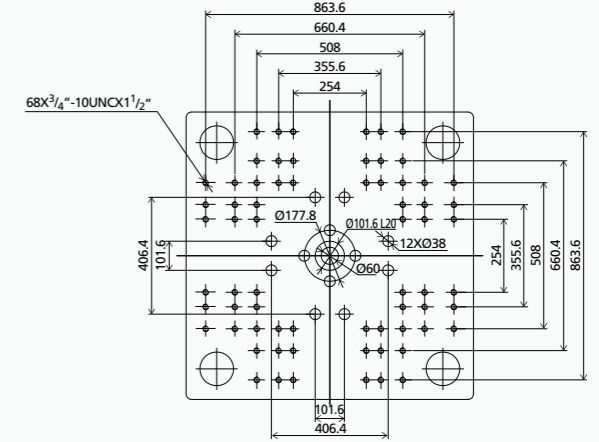


## AMERICAN VERSION

FIXED PLATEN

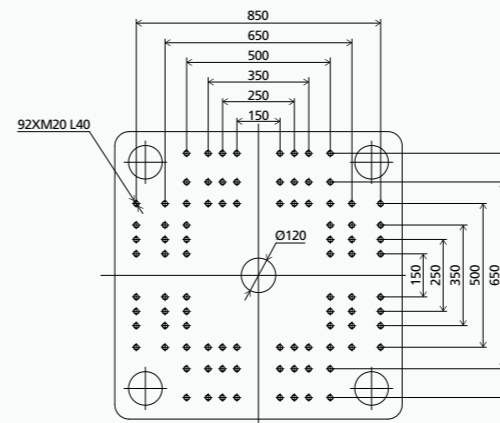


MOVABLE PLATEN

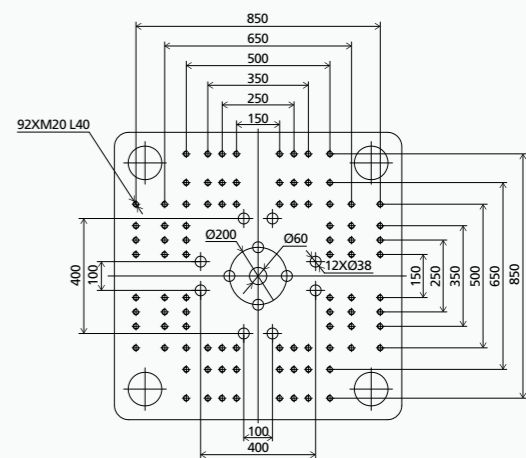


## JAPANESE VERSION

FIXED PLATEN



MOVABLE PLATEN

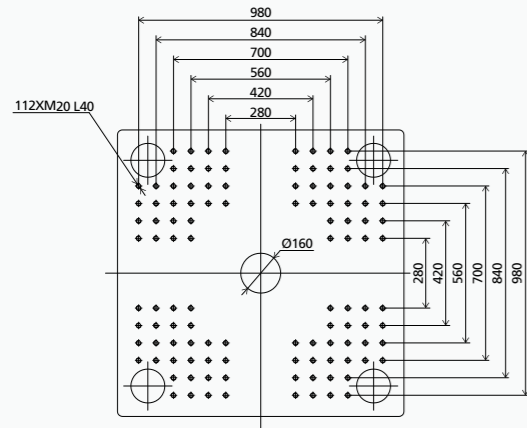


We reserve the right to make changes as a result of further technical advances.

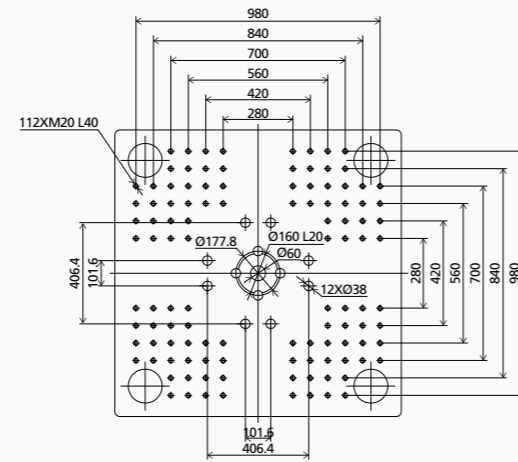
# PLATEN LAYOUT ZE3800F

## EUROPEAN VERSION

FIXED PLATEN

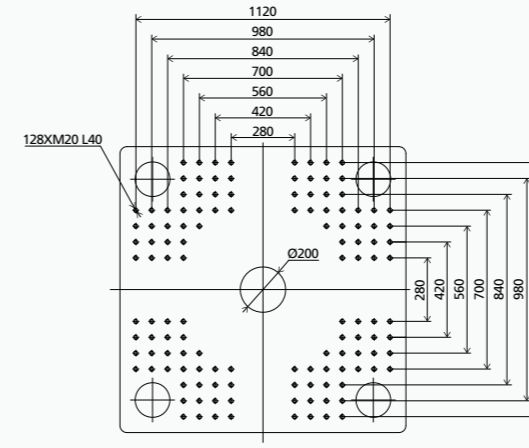


MOVABLE PLATEN

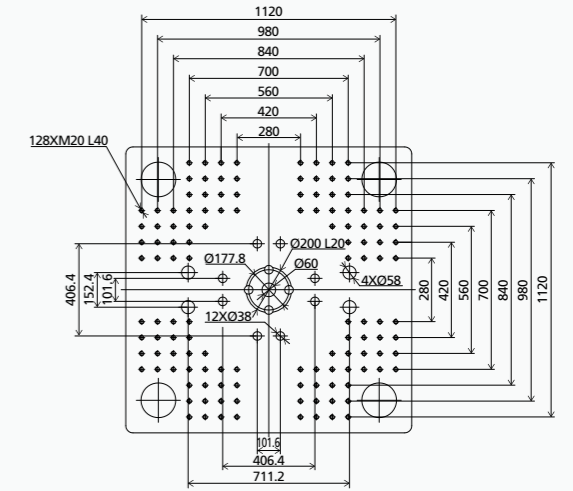


## EUROPEAN VERSION

FIXED PLATEN

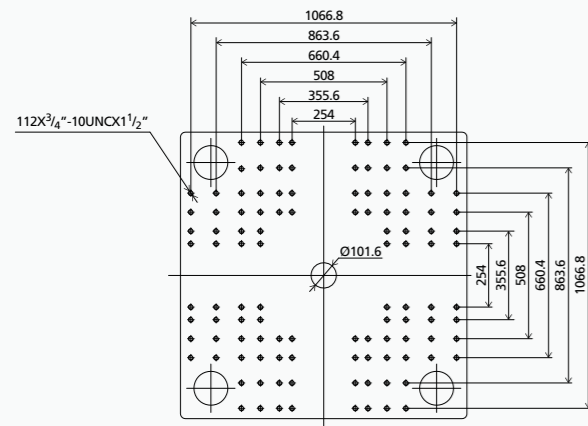


MOVABLE PLATEN

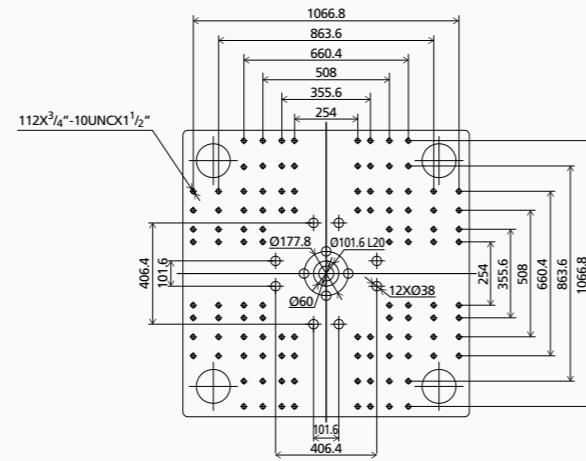


## AMERICAN VERSION

FIXED PLATEN

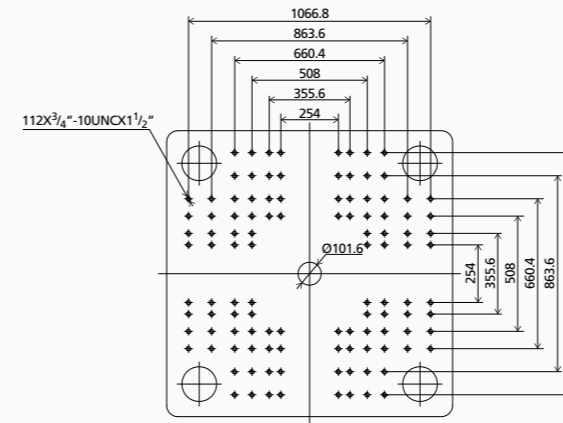


MOVABLE PLATEN

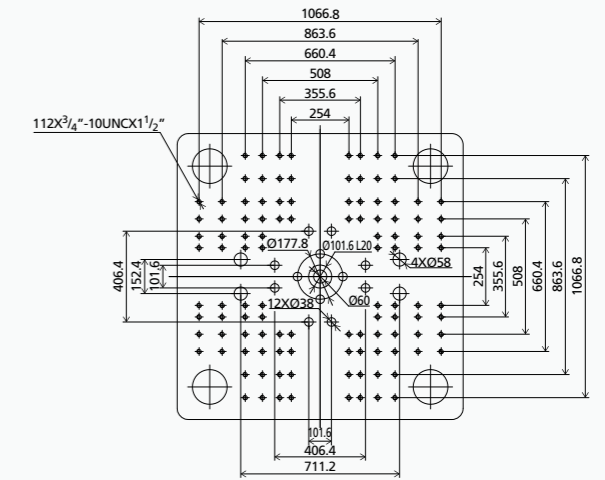


## AMERICAN VERSION

FIXED PLATEN

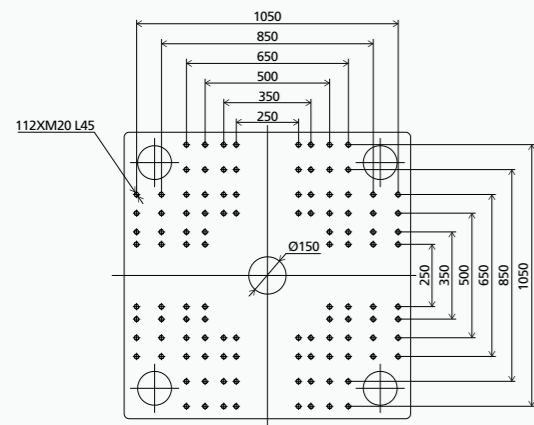


MOVABLE PLATEN

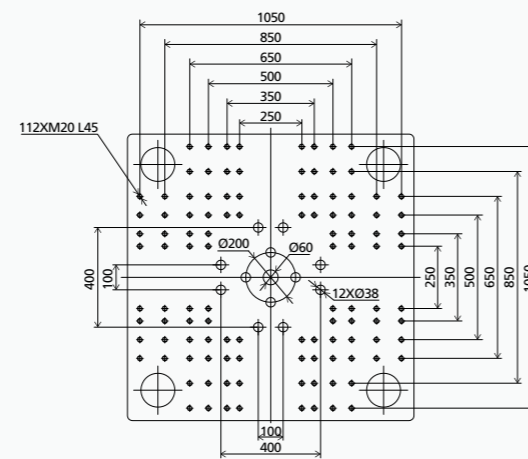


## JAPANESE VERSION

FIXED PLATEN

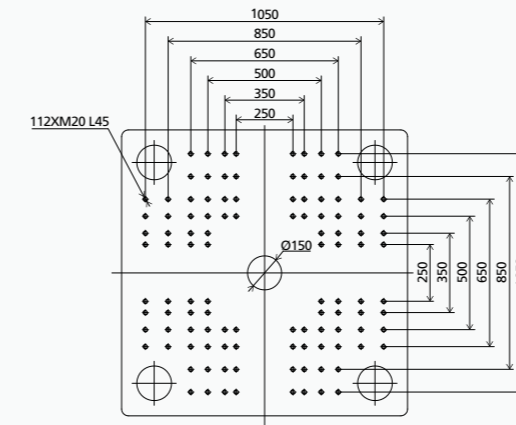


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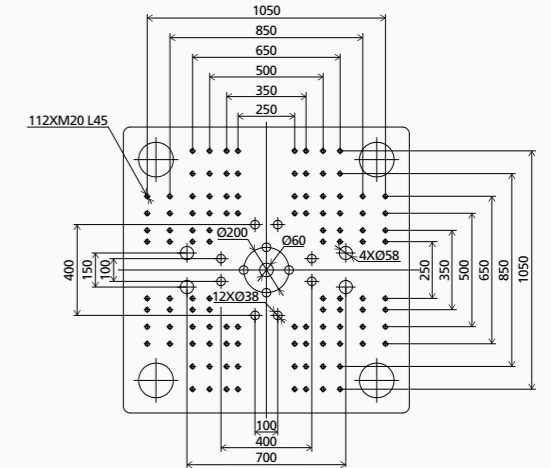


## JAPANESE VERSION

FIXED PLATEN



MOVABLE PLATEN



We reserve the right to make changes as a result of further technical advances.



