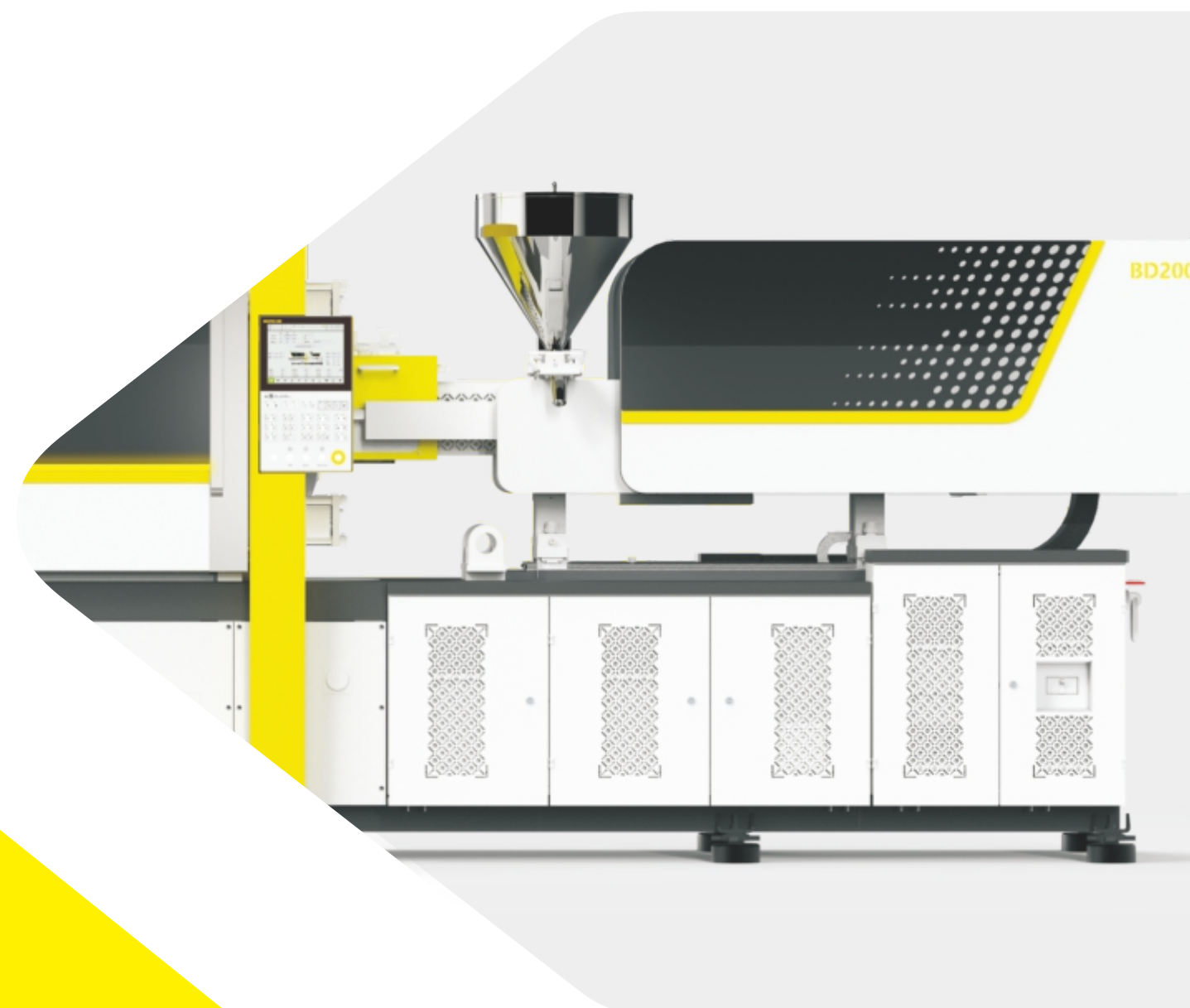


All information in the brochures is general ones, which is not contractual contents.
Borche reserves the right of any change without prior notice.



goher
equipos eléctricos



Jul 2025

BORCH MACHINERY CO., LTD.

No.9 Xinxiang Road, Zengcheng Economic & Technological
Development District, Guangzhou, Guangdong Province, P.R.C.
www.borche.cn 400-655-9488



Website



Wechat

BD Superior Electric IMM

Leads the International Advanced Level

Leads the International Advanced Level **BD Superior Electric IMM**



Patents

- An adjustable injection unit
- A design of direct drive servo motor system to injection unit
- A new type of electric direct drive injection motor device
- A design of motor direct drive structure for mold clamping unit
- A structure of charging system with electric drive system
- Cross head zero position calibration mechanism and method for mold open and close



Borsche's BD series adopts unique direct drive structure. The mold clamping unit, ball screw of injection unit and motor spindle are integrated as whole, which can greatly improve transmission efficiency and motor response speed. The advanced four-in-one control technology can meet various application needs.

Direct drive technology for mold open and close

The ball screw is directly used as the rotor and shaft of servo motor, making the transmission more accurate and the transmission efficiency up to 99.99%. No synchronous belt, free maintenance and low noise.

Four-in-one control technology

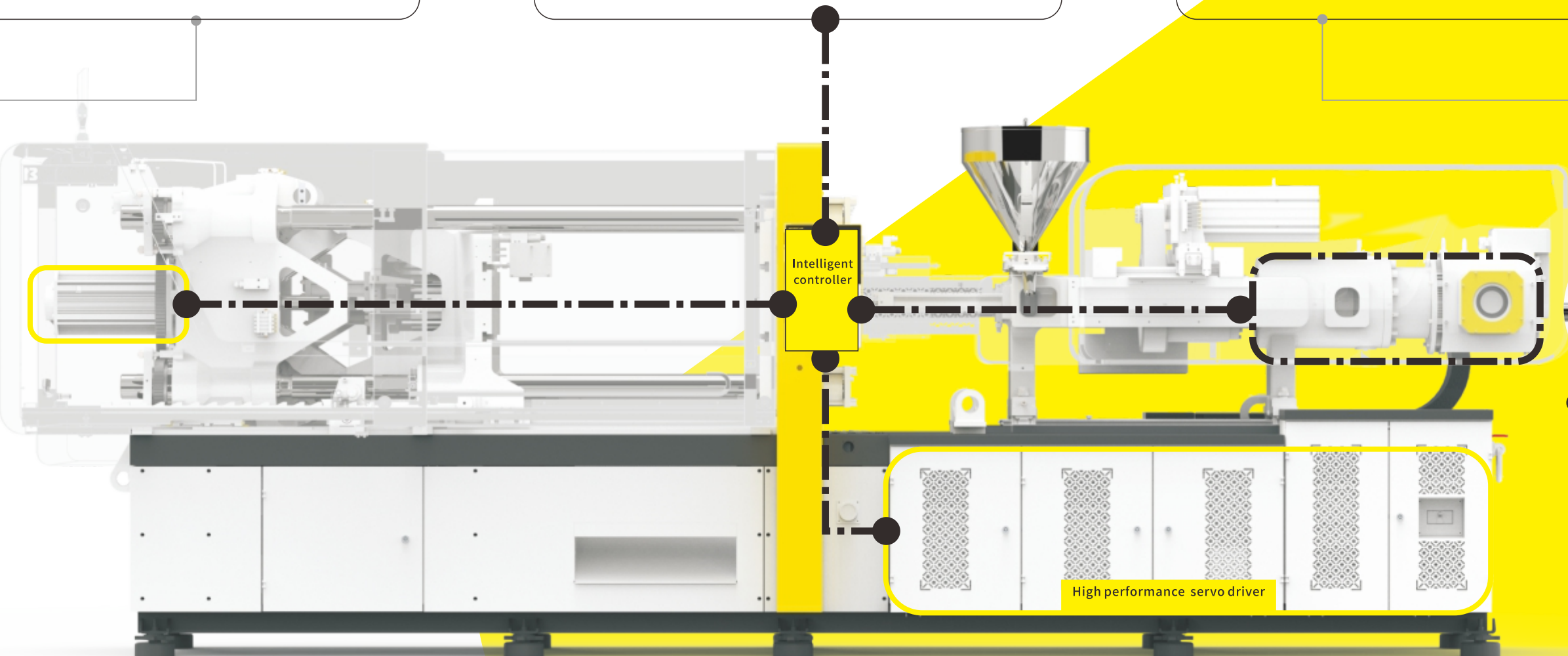
Quick response servo motor with full independent intellectual property rights, high performance servo driver, new generation of intelligent controller and Borche's unique intelligent electronic control technology, can better meet various injection molding application needs.

Direct drive technology for injection

The ball screw is directly used as the rotor spindle of servo motor, leaving out the connection of the intermediate parts making the consistency of the action reach 100%, and reducing the inertia of the motor to improve the motor injection response speed.

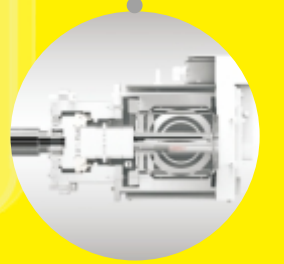


Quick response
servo motor



Intelligent
controller

High performance servo driver



Quick response
servo motor

Bigger opening stroke better for deep-cavity products and automatic production

No contact between moving platen and tie-bar makes a more clear mold open and close area

Optimized design
Higher platen rigidity
Less platen deformation

Temperature sensors on hopper throat and transmission throat

The injection unit adopts the integrated frame structure to improve the overall rigidity, which ensures the coaxiality of the screw and the high accuracy of plasticizing and injection

The moving parts of mold opening and closing are guided by linear guide rail, with low friction resistance and more energy saving, which can reduce the wear rate and improve the parallel and vertical accuracy of platens.

Increased tie-bar distance for big molds

T-slot with hole-threaded platen makes mold loading and unloading more easy.

The moving parts of injection unit are guided by linear guide rail with low friction resistance, which can improve the system response speed and back pressure control precision

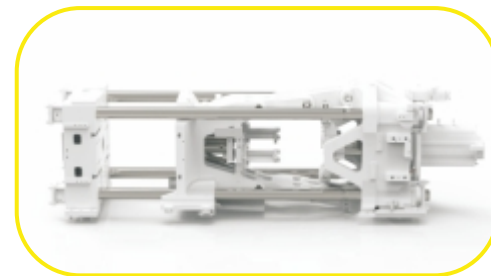
Intelligent

Intelligent connection

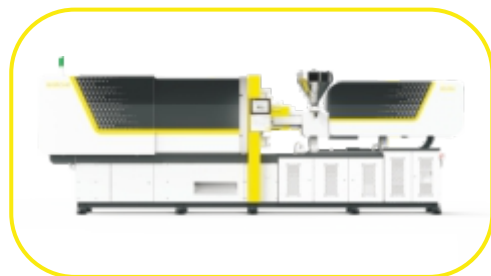
Fast Double Efficiency



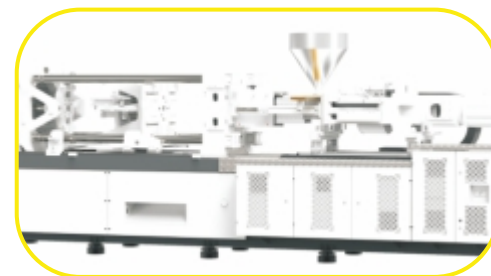
Quick response: injection response time less than **50ms**



Fast mold open & close: **500mm/s**



Overlapped movement: production time shortened by **30%**



Fast cycle time: dry cycle decreased by **20%**

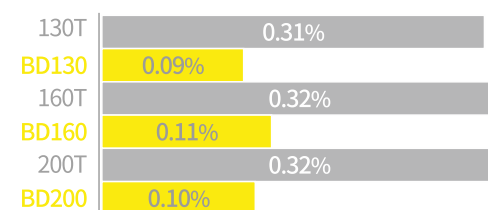


BD series machine can interconnect with injection molding machine and the peripherals via Plascloud, complete two-way data communication, and realize the information and digital management of injection molding plants.

Accuracy Quality Guarantee

Repeatability precision of product weight increased by 3 times

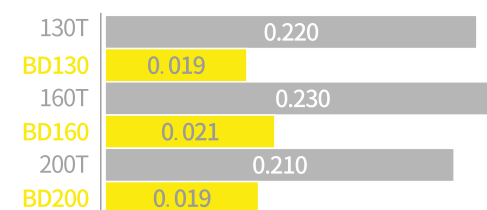
Weight repeatability



Hvdraulic servo ■ BD Series ■

Repeatability precision of injection position increased by 10 times

Repeatability of injection position



Hvdraulic servo ■ BD Series ■

*The above parameters are obtained via internal test for reference only.

Energy Saving

Energy saving by 30%

Low water consumption

Raw material saving: low product defects

Low oil consumption, 80% less than hydraulic machine



Model	UNIT	BD60						BD90						BD130						BD160						BD200																	
International Class No.		80		190		80		190		330		190		330		480		330		480		690		480		690		960															
INJECTION UNIT																																											
Screw Diameter	mm	18	22	25	25	28	30	18	22	25	25	28	30	30	35	40	25	28	30	30	35	40	35	40	45	30	35	40	35	40	45	40	45	50	35	40	45	40	45	50	45	50	55
Screw L/D Ratio	L/d	21.0	22.0	19.4	23.0	20.5	19.1	21.0	22.0	19.4	23.0	20.5	19.1	24.0	20.5	18.0	23.0	20.5	19.1	24.0	20.5	18.0	23.5	20.5	18.0	24.0	20.5	18.0	23.0	20.5	18	23.5	20.5	18.0	23.0	20.5	18	23.0	20.5	18.5			
Injection Stroke	mm	95	95	95	120	120	120	95	95	95	120	120	120	170	170	170	120	120	120	170	170	170	190	190	190	170	170	170	190	190	190	215	215	215	190	190	190	215	215	215	245	245	245
Short Volume	cm³	24	36	47	59	74	85	24	36	47	59	74	85	120	164	214	59	74	85	120	164	214	183	239	302	120	164	214	183	239	302	270	342	422	183	239	302	270	342	422	390	481	582
Shot Weight(PS)	g	22	33	42	54	67	77	22	33	42	54	67	77	109	149	194	54	67	77	109	149	194	166	217	275	109	149	194	166	217	275	246	311	384	166	217	275	246	311	384	355	438	530
Shot Weight(PS)	oz	0.8	1.2	1.5	1.9	2.4	2.7	0.8	1.2	1.5	1.9	2.4	2.7	3.9	5.3	6.9	1.9	2.4	2.7	3.9	5.3	6.9	5.9	7.7	9.7	3.9	5.3	6.9	5.9	7.7	9.7	8.7	11.0	13.6	5.9	7.7	9.7	8.7	11.0	13.6	12.5	15.4	18.7
Injection Pressure	Mpa	290	220	170	290	250	218	290	220	170	290	250	218	272	200	153	290	250	218	272	200	153	261	200	158	272	200	153	261	200	158	253	200	162	261	200	158	253	200	162	247	200	165
Holding Pressure	Mpa	232	176	136	232	200	174	232	176	136	232	200	174	218	160	123	232	200	174	218	160	123	209	160	126	218	160	123	209	160	126	203	160	130	209	160	126	203	160	130	198	160	132
Plasticizing rate(PS)	g/s	3.8	6.0	8.0	8.3	11.7	13.8	3.8	6.0	8.0	8.3	11.7	13.8	13.8	20.8	29.9	8.3	11.7	13.8	13.8	20.8	29.9	20.8	29.9	41.3	13.8	20.8	29.9	20.8	29.9	41.3	26.2	36.1	48.3	20.8	29.9	41.3	26.2	36.1	48.3	33.0	44.2	57.6
Injection Speed	mm/s	350		250		350		250		350		250		250		250		250		250		250		250		250		250		200		250		200		200							
Screw Rotary Speed max.	rpm	400		400		400		400		400		400		400		400		400		400		400		400		400		400		350		400		350		320							
Nozzle Contact Force	kN	26		35		26		35		35		35		35		35		35		35		35		35		35		35		50		35		50		65							
CLAMPING UNIT																																											
Clamping Force	kN	600						900						1300						1600						2000																	
Opening Stroke	mm	270						330						380						430						510																	
Platen Size	mmxmm	545x545						615x615						690x690						770x770						840x840																	
Space btw. Tie Bars	mmxmm	370x370						430x430						470x470						530x530						580x580																	
Daylight max.	mm	640						740						860						950						1070																	
max Mold Thickness	mm	370						410						480						520						560																	
min Mold Thickness	mm	150						150						150						180						200																	
Ejection Stroke	mm	80						80						110						125						150																	
Ejector Force	kN	24.5						34.4						34.4						42						50																	
Ejector Pin Hole Count	Unit	4+1						4+1						4+1						4+4+1						4+4+1																	
POWER UNIT																																											
System Pressure	Mpa	17.5						17.5						17.5						17.5						17.5																	
Connection power	kW/A	15.7/27		23.6/40		15.7/27		23.6/40		30/51		23.6/40		30/51		39.3/66		30/51		39.3/66		30/51		39.3/66		39.3/66		39.3/66		39.3/66		39.3/66		39.3/66		44/74							
Heating power	kW	4.4	5.6	5.6	6.54		4.4	5.6	5.6	6.54		8.9		6.5		8.9		11.8		8.9		11.8		12.3		11.8		12.3		18.4													
No.of Heater Zones	Unit	4		4		4		4		4		4		4		4		4		4		4		5		4		5		5													
GENERAL UNIT																																											
Oil Tank	L	90		90		90		90		90		100		100		100		100		100		100		100		100		100		100		100		100		100							
Machine Dimensions	mxmxm	4.45*1.30*2.01		4.77*1.30*2.01		4.79*1.36*2.09		5.03*1.36*2.09		5.24*1.36*2.09		5.4*1.39*2.17		5.7*1.39*2.17		5.85*1.39*2.17		5.92*1.53*2.29		6.10*1.53*2.27		6.49*1.53*2.27		6.37*1.53*2.37		6.76*1.53*2.37		7.10*1.53*2.37															
Machine Weight	kg	4206		4290		5100		5220		5310		6150		6235		6285		7200		7250		7750		8700		9220		9390															

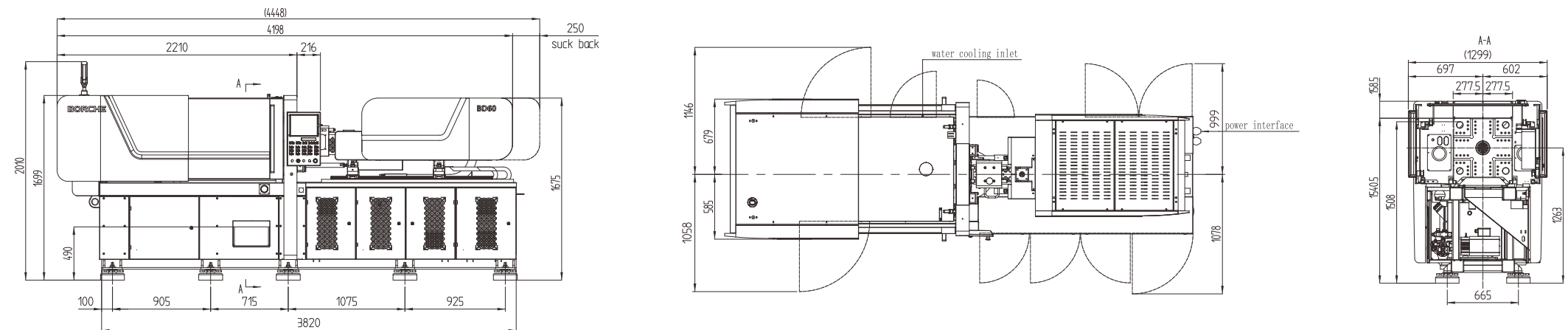
Model	UNIT	BD240									BD300									BD380									BD460								
International Class No.		690			960			1440			960			1440			1940			1440			1940			2430			1940			2430					
INJECTION UNIT																																					
Screw Diameter	mm	40	45	50	45	50	55	55	60	65	45	50	55	55	60	65	60	65	70	55	60	65	60	65	70	65	70	75	60	65	70	65	70	75			
Screw L/D Ratio	L/d	23.0	20.5	18	23.0	20.5	18.5	22.7	21.0	19.5	23.0	20.5	18.5	22.7	21.0	19.5	24.5	22.7	21.0	22.7	21.0	19.5	24.5	22.7	21.0	22.7	21.0	19.6	24.5	22.7	21.0	22.7	21.0	19.6			
Injection Stroke	mm	215	215	215	245	245	245	300	300	300	245	245	245	300	300	300	325	325	325	300	300	300	325	325	325	350	350	350	325	325	325	350	350	350			
Short Volume	cm³	270	342	422	390	481	582	713	848	995	390	481	582	713	848	995	919	1078	1251	713	848	995	919	1078	1251	1161	1347	1546	919	1078	1251	1161	1347	1546			
Shot Weight(PS)	g	246	311	384	355	438	530	649	772	906	355	438	530	649	772	906	836	981	1138	649	772	906	836	981	1138	1057	1226	1407	836	981	1138	1057	1226	1407			
Shot Weight(PS)	oz	8.7	11.0	13.6	12.5	15.4	18.7	22.9	27.2	32.0	12.5	15.4	18.7	22.9	27.2	32.0	29.5	34.6	40.1	22.9	27.2	32.0	29.5	34.6	40.1	37.3	43.2	49.6	29.5	34.6	40.1	37.3	43.2	49.6			
Injection Pressure	Mpa	253	200	162	247	200	165	202	170	145	247	200	165	202	170	145	211	180	155	202	170	145	211	180	155	209	180	157	211	180	155	209	180	157			
Holding Pressure	Mpa	203	160	130	198	160	132	162	136	116	198	160	132	162	136	116	169	144	124	162	136	116	169	144	124	167	144	125	169	144	124	167	144	125			
Plasticizing rate(PS)	g/s	26.2	36.1	48.3	33.0	44.2	57.6	54.0	66.1	83.0	33.0	44.2	57.6	54.0	66.1	83.0	55.0	69.1	83.3	54.0	66.1	83.0	55.0	69.1	83.3	60.9	73.4	105.3	55.0	69.1	83.3	60.9	73.4	105.3			
Injection Speed	mm/s	200			200			160			200			160			160			160			160			160			160			160			160		
Screw Rotary Speed max.	rpm	350			320			300			320			300			250			300			250			220			250			220					
Nozzle Contact Force	kN	50			65			80			65			80			80			80			80			80			80			80			80		
CLAMPING UNIT																																					
Clamping Force	kN	2400									3000									3800									4600								
Opening Stroke	mm	570									630									730									820								
Platen Size	mmxmm	930x930									1060x1060									1190x1190									1340x1340								
Space btw. Tie Bars	mmxmm	630x630									730x730									830x830									930x930								
Daylight max.	mm	1180									1300									1460									1670								
max Mold Thickness	mm	610									670									730									850								
min Mold Thickness	mm	220									240									250									320								
Ejection Stroke	mm	180									180									180									180								
Ejector Force	kN	77.3									83									100									111								
Ejector Pin Hole Count	Unit	8+4+1									8+4+1									4+8+4+1									8+8+4+1								
POWER UNIT																																					
System Pressure	Mpa	15									15									17.5									17.5								
Connection power	kW/A	39.3/66			44/74			54.2/92			44/74			54.2/92			59.1/100			54.2/92			59.1/100			68.5/116			69.1/117			69.1/117					
Heating power	kW	12.3			18.4			24.5			18.4			24.5			34.3			24.5			34.3			38.1			34.3			38.1					
No.of Heater Zones	Unit	5			5			6			5			6			6			6			6			6			6			6					
GENERAL UNIT																																					
Oil Tank	L	200			200			200			200			200			200			200			200			200			200			200			200		
Machine Dimensions	mxmxm	7.10*1.66*2.4			7.39*1.66*2.4			7.39*1.66*2.4			7.56*1.79*2.43			7.77*1.79*2.43			8.27*1.79*2.43			8.35*1.97*2.45			8.83*1.97*2.45			8.92*1.97*2.45			9.15*2.08*2.55			9.24*2.08*2.55					
Machine Weight	kg	11100			11260			11555			13895			14565			15037			18710			19182			19894			23151			23863					

The specification above is theoretical data for reference.Borche reserves the right of change in specification resulting from technical upgrading

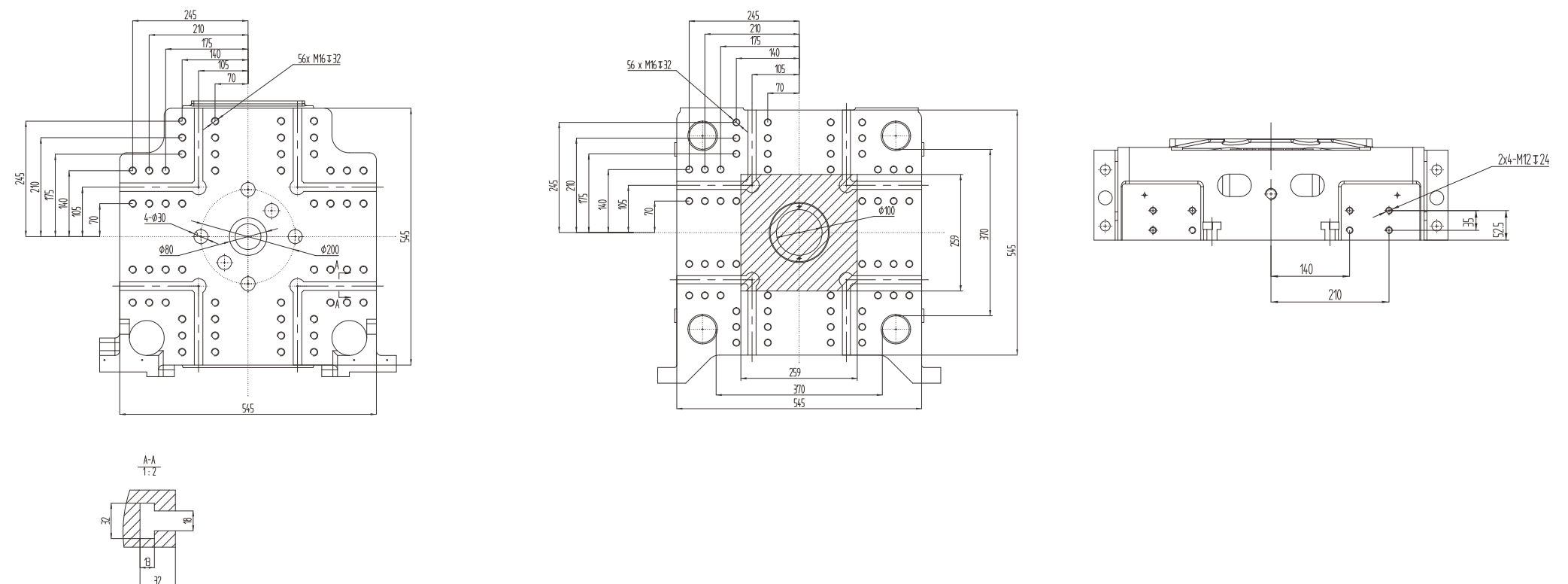
Specification

Model	UNIT	BD60					
International Class No.		80			190		
INJECTION UNIT							
Screw Diameter	mm	18	22	25	25	28	30
Screw L/D Ratio	L/d	21.0	22.0	19.4	23.0	20.5	19.1
Injection Stroke	mm	95	95	95	120	120	120
Short Volume	cm ³	24	36	47	59	74	85
Shot Weight(PS)	g	22	33	42	54	67	77
Shot Weight(PS)	oz	0.8	1.2	1.5	1.9	2.4	2.7
Injection Pressure	Mpa	290	220	170	290	250	218
Holding Pressure	Mpa	232	176	136	232	200	174
Plasticizing rate(PS)	g/s	3.8	6.0	8.0	8.3	11.7	13.8
Injection Speed	mm/s	350			250		
Screw Rotary Speed max.	rpm	400			400		
Nozzle Contact Force	kN	26			35		
CLAMPING UNIT							
Clamping Force	kN	600					
Opening Stroke	mm	270					
Platen Size	mmxmm	545x545					
Space btw. Tie Bars	mmxmm	370x370					
Daylight max.	mm	640					
max Mold Thickness	mm	370					
min Mold Thickness	mm	150					
Ejection Stroke	mm	80					
Ejector Force	kN	24.5					
Ejector Pin Hole Count	Unit	4+1					
POWER UNIT							
System Pressure	Mpa	17.5					
Connection power	kW/A	15.7/27			23.6/40		
Heating power	kW	4.4	5.6	5.6	6.54		
No.of Heater Zones	Unit	4			4		
GENERAL UNIT							
Oil Tank	L	90			90		
Machine Dimensions	mxmxm	4.45*1.30*2.01			4.77*1.30*2.01		
Machine Weight	kg	4206			4290		

Appearance and Tnstallation Dimensions



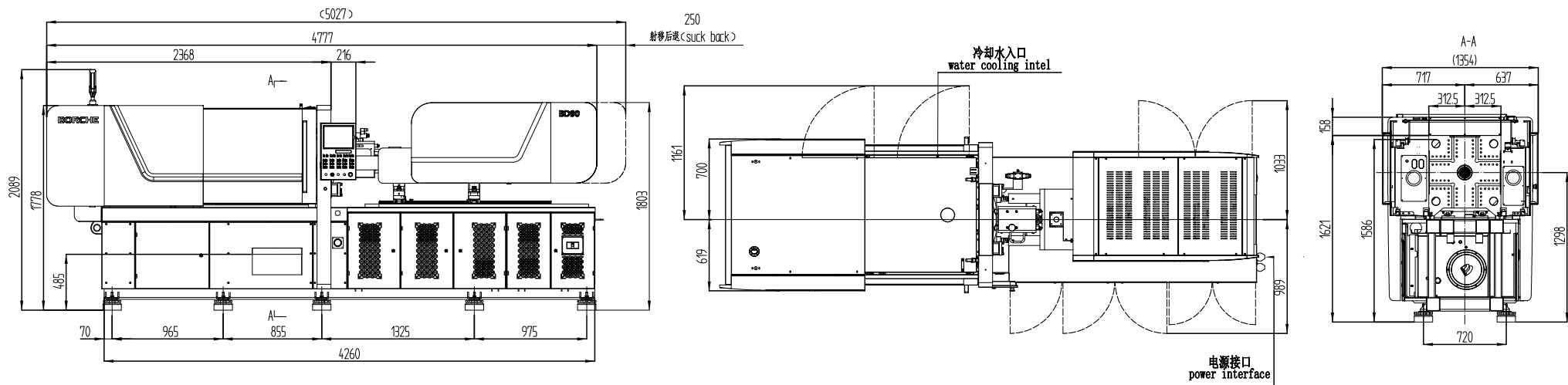
Mold Platen Drawing



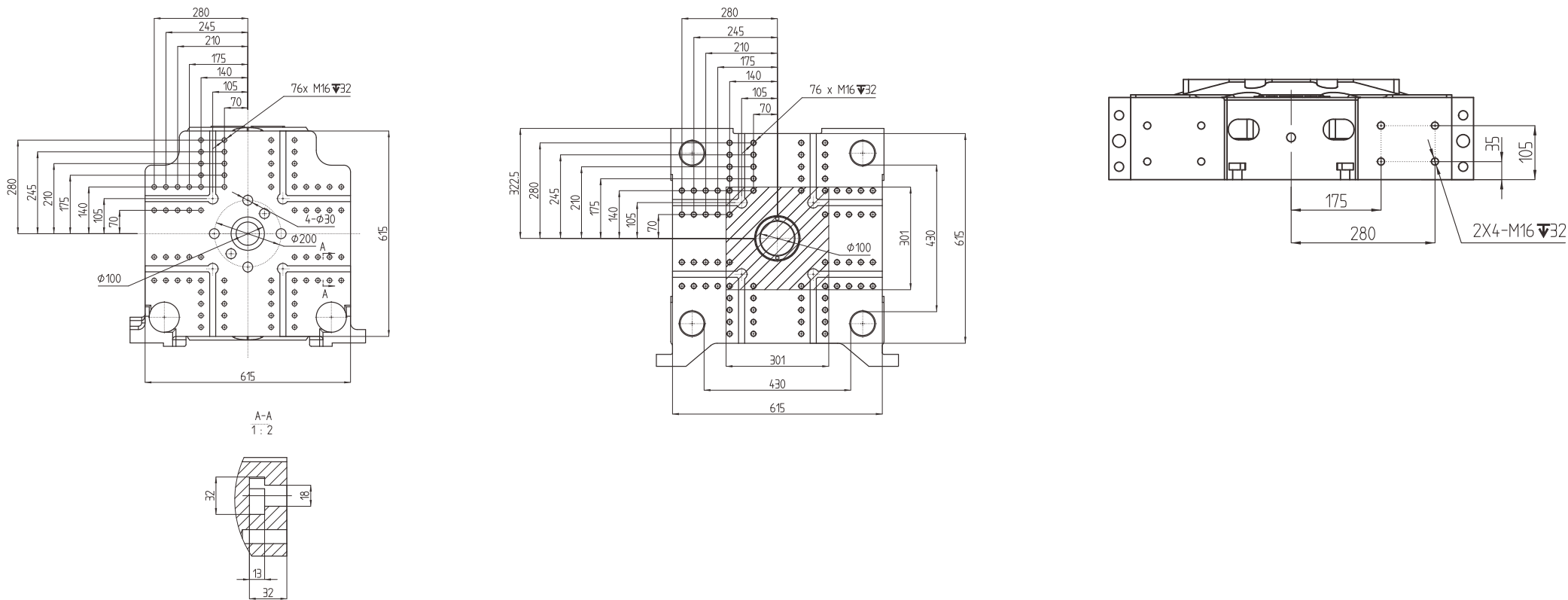
Specification

Model	UNIT	BD90								
International Class No.		80			190			330		
INJECTION UNIT										
Screw Diameter	mm	18	22	25	25	28	30	30	35	40
Screw L/D Ratio	L/d	21.0	22.0	19.4	23.0	20.5	19.1	24.0	20.5	18.0
Injection Stroke	mm	95	95	95	120	120	120	170	170	170
Short Volume	cm ³	24	36	47	59	74	85	120	164	214
Shot Weight(PS)	g	22	33	42	54	67	77	109	149	194
Shot Weight(PS)	oz	0.8	1.2	1.5	1.9	2.4	2.7	3.9	5.3	6.9
Injection Pressure	Mpa	290	220	170	290	250	218	272	200	153
Holding Pressure	Mpa	232	176	136	232	200	174	218	160	123
Plasticizing rate(PS)	g/s	3.8	6.0	8.0	8.3	11.7	13.8	13.8	20.8	29.9
Injection Speed	mm/s	350			250			250		
Screw Rotary Speed max.	rpm	400			400			400		
Nozzle Contact Force	kN	26			35			35		
CLAMPING UNIT										
Clamping Force	kN	900								
Opening Stroke	mm	330								
Platen Size	mmxmm	615x615								
Space btw. Tie Bars	mmxmm	430x430								
Daylight max.	mm	740								
max Mold Thickness	mm	410								
min Mold Thickness	mm	150								
Ejection Stroke	mm	80								
Ejector Force	kN	34.4								
Ejector Pin Hole Count	Unit	4+1								
POWER UNIT										
System Pressure	Mpa	17.5								
Connection power	kW/A	15.7/27			23.6/40			30/51		
Heating power	kW	4.4	5.6	5.6	6.54			8.9		
No.of Heater Zones	Unit	4			4			4		
GENERAL UNIT										
Oil Tank	L	90			90			90		
Machine Dimensions	mxmxm	4.79*1.36*2.09			5.03*1.36*2.09			5.24*1.36*2.09		
Machine Weight	kg	5100			5220			5310		

Appearance and Tnstallation Dimensions



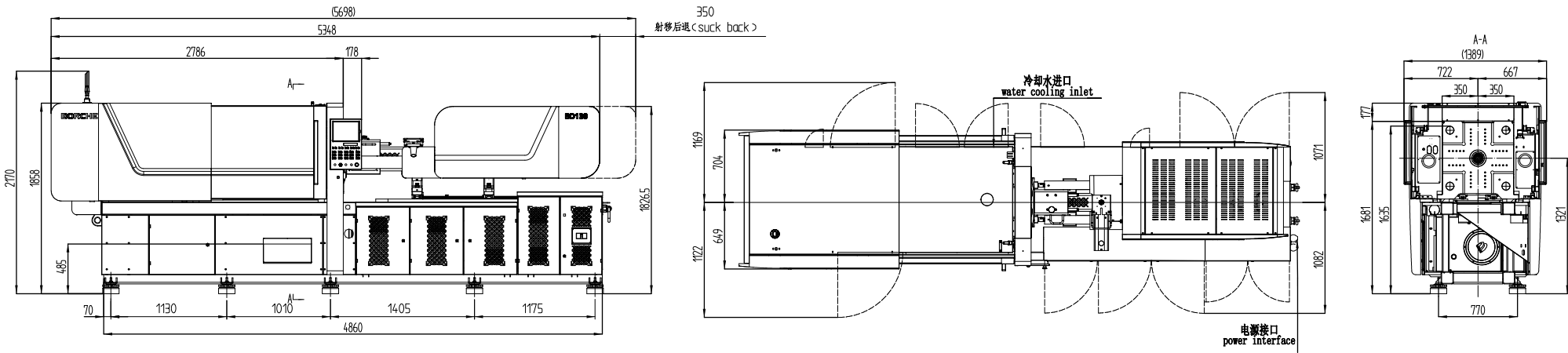
Mold Platen Drawing



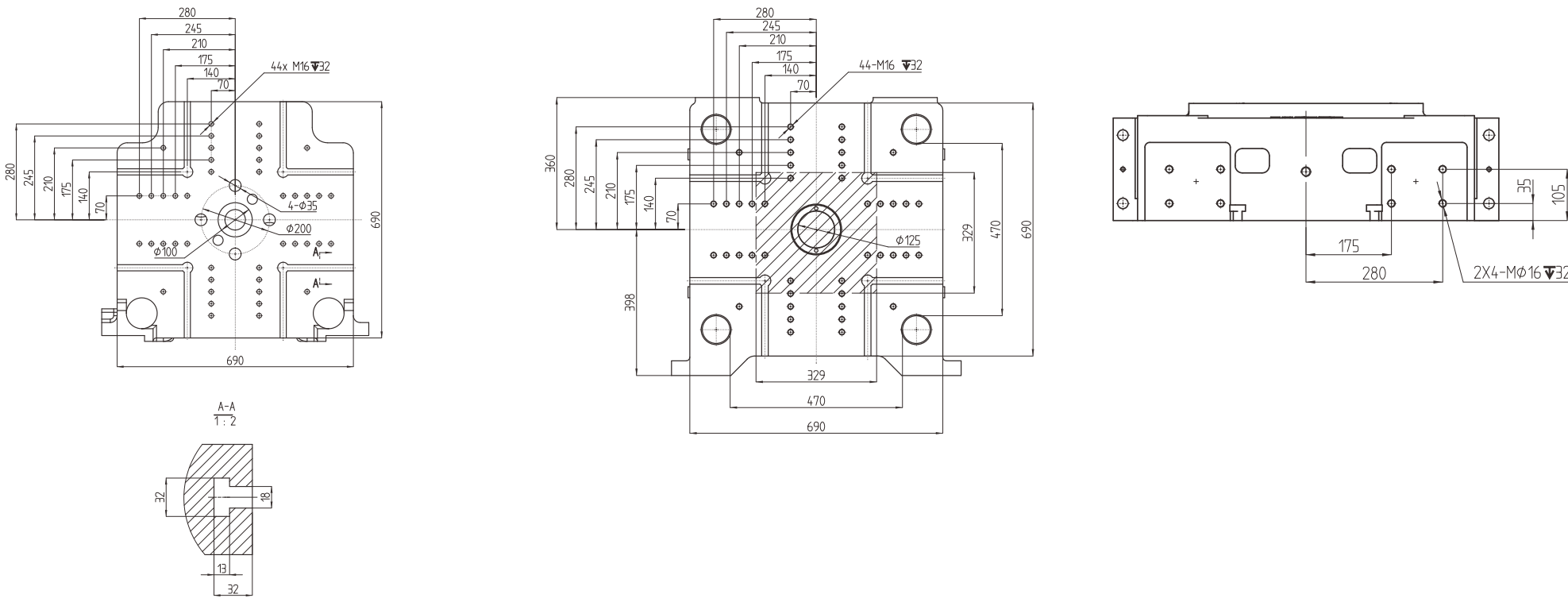
Specification

Model	UNIT	BD130								
International Class No.		190			330			480		
INJECTION UNIT										
Screw Diameter	mm	25	28	30	30	35	40	35	40	45
Screw L/D Ratio	L/d	23.0	20.5	19.1	24.0	20.5	18.0	23.5	20.5	18.0
Injection Stroke	mm	120	120	120	170	170	170	190	190	190
Short Volume	cm³	59	74	85	120	164	214	183	239	302
Shot Weight(PS)	g	54	67	77	109	149	194	166	217	275
Shot Weight(PS)	oz	1.9	2.4	2.7	3.9	5.3	6.9	5.9	7.7	9.7
Injection Pressure	Mpa	290	250	218	272	200	153	261	200	158
Holding Pressure	Mpa	232	200	174	218	160	123	209	160	126
Plasticizing rate(PS)	g/s	8.3	11.7	13.8	13.8	20.8	29.9	20.8	29.9	41.3
Injection Speed	mm/s	250			250			250		
Screw Rotary Speed max.	rpm	400			400			400		
Nozzle Contact Force	kN	35			35			35		
CLAMPING UNIT										
Clamping Force	kN	1300								
Opening Stroke	mm	380								
Platen Size	mmxmm	690x690								
Space btw. Tie Bars	mmxmm	470x470								
Daylight max.	mm	860								
max Mold Thickness	mm	480								
min Mold Thickness	mm	150								
Ejection Stroke	mm	110								
Ejector Force	kN	34.4								
Ejector Pin Hole Count	Unit	4+1								
POWER UNIT										
System Pressure	Mpa	17.5								
Connection power	kW/A	23.6/40			30/51			39.3/66		
Heating power	kW	6.5			8.9			11.8		
No.of Heater Zones	Unit	4			4			4		
GENERAL UNIT										
Oil Tank	L	100			100			100		
Machine Dimensions	mxmxm	5.4*1.39*2.17			5.7*1.39*2.17			5.85*1.39*2.17		
Machine Weight	kg	6150			6235			6285		

Appearance and Tnstallation Dimensions



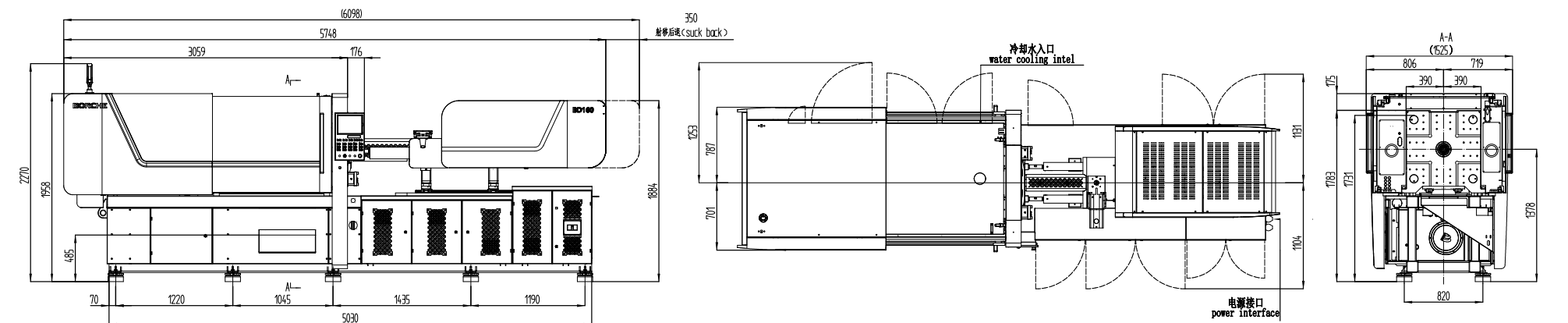
Mold Platen Drawing



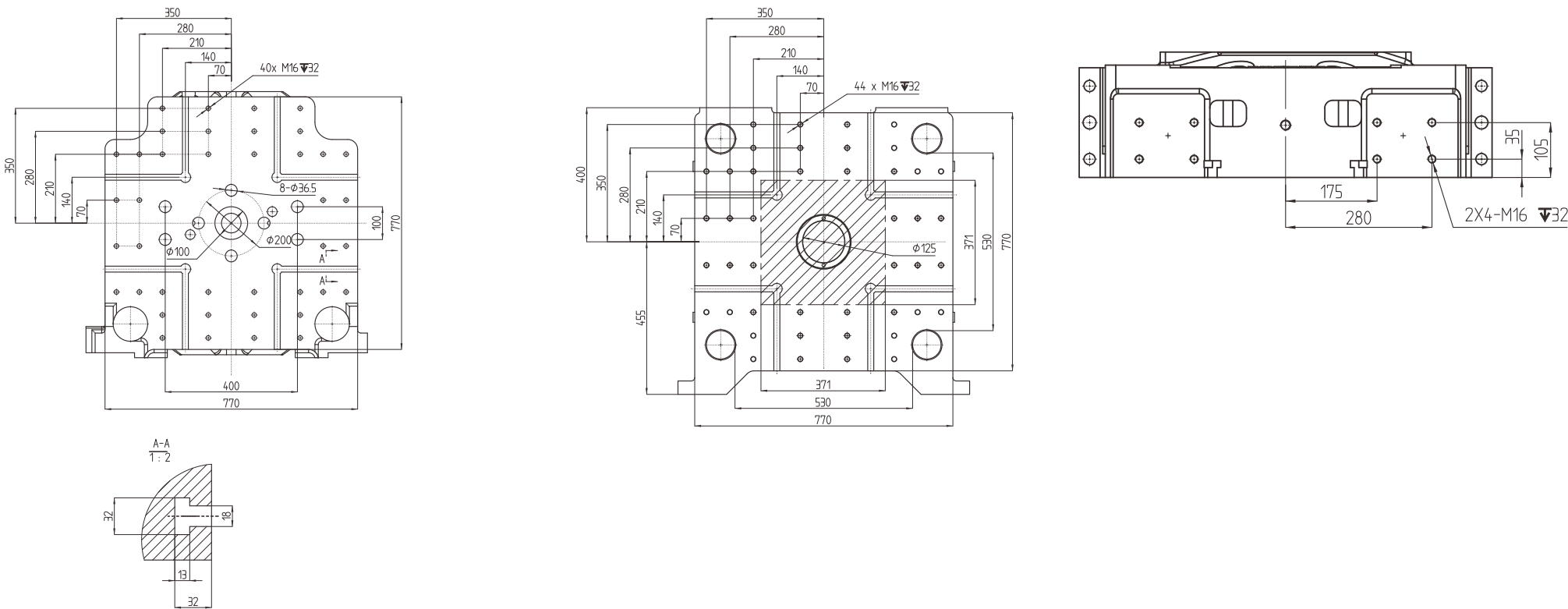
Specification

Model	UNIT	BD160								
International Class No.		330			480			690		
INJECTION UNIT										
Screw Diameter	mm	30	35	40	35	40	45	40	45	50
Screw L/D Ratio	L/d	24.0	20.5	18.0	23.5	20.5	18.0	23.0	20.5	18
Injection Stroke	mm	170	170	170	190	190	190	215	215	215
Short Volume	cm³	120	164	214	183	239	302	270	342	422
Shot Weight(PS)	g	109	149	194	166	217	275	246	311	384
Shot Weight(PS)	oz	3.9	5.3	6.9	5.9	7.7	9.7	8.7	11.0	13.6
Injection Pressure	Mpa	272	200	153	261	200	158	253	200	162
Holding Pressure	Mpa	218	160	123	209	160	126	203	160	130
Plasticizing rate(PS)	g/s	13.8	20.8	29.9	20.8	29.9	41.3	26.2	36.1	48.3
Injection Speed	mm/s	250			250			200		
Screw Rotary Speed max.	rpm	400			400			350		
Nozzle Contact Force	kN	35			35			50		
CLAMPING UNIT										
Clamping Force	kN	1600								
Opening Stroke	mm	430								
Platen Size	mmxmm	770x770								
Space btw. Tie Bars	mmxmm	530x530								
Daylight max.	mm	950								
max Mold Thickness	mm	520								
min Mold Thickness	mm	180								
Ejection Stroke	mm	125								
Ejector Force	kN	42								
Ejector Pin Hole Count	Unit	4+4+1								
POWER UNIT										
System Pressure	Mpa	17.5								
Connection power	kW/A	30/51			39.3/66			39.3/66		
Heating power	kW	8.9			11.8			12.3		
No.of Heater Zones	Unit	4			4			5		
GENERAL UNIT										
Oil Tank	L	100			100			100		
Machine Dimensions	mxmxm	5.92*1.53*2.27			6.10*1.53*2.27			6.49*1.53*2.27		
Machine Weight	kg	7200			7250			7750		

Appearance and Tnstallation Dimensions



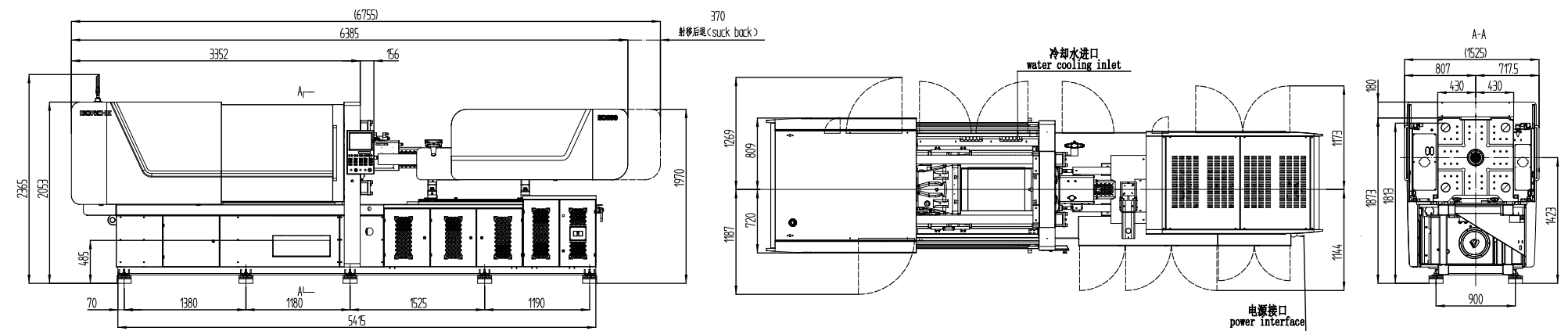
Mold Platen Drawing



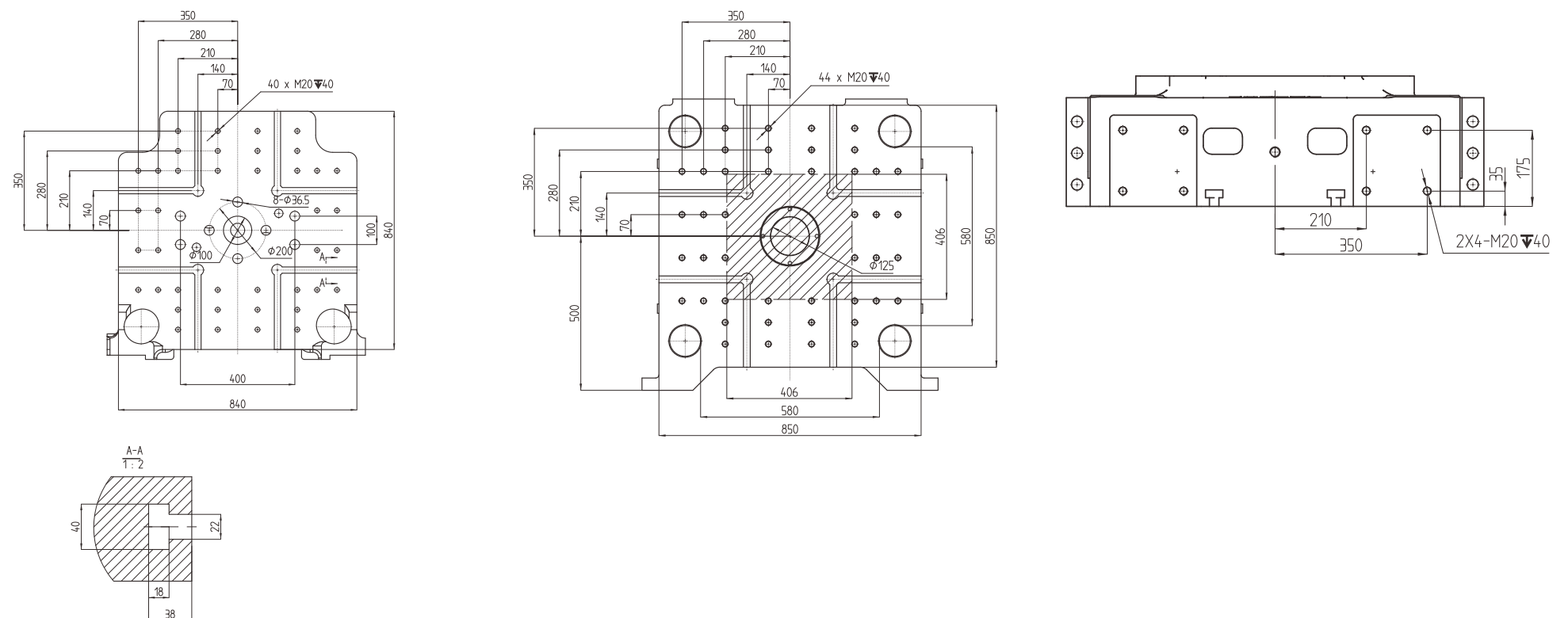
Specification

Model	UNIT	BD200								
International Class No.		480			690			960		
INJECTION UNIT										
Screw Diameter	mm	35	40	45	40	45	50	45	50	55
Screw L/D Ratio	L/d	23.5	20.5	18.0	23.0	20.5	18	23.0	20.5	18.5
Injection Stroke	mm	190	190	190	215	215	215	245	245	245
Short Volume	cm³	183	239	302	270	342	422	390	481	582
Shot Weight(PS)	g	166	217	275	246	311	384	355	438	530
Shot Weight(PS)	oz	5.9	7.7	9.7	8.7	11.0	13.6	12.5	15.4	18.7
Injection Pressure	Mpa	261	200	158	253	200	162	247	200	165
Holding Pressure	Mpa	209	160	126	203	160	130	198	160	132
Plasticizing rate(PS)	g/s	20.8	29.9	41.3	26.2	36.1	48.3	33.0	44.2	57.6
Injection Speed	mm/s	250			200			200		
Screw Rotary Speed max.	rpm	400			350			320		
Nozzle Contact Force	kN	35			50			65		
CLAMPING UNIT										
Clamping Force	kN	2000								
Opening Stroke	mm	510								
Platen Size	mmxmm	840x840								
Space btw. Tie Bars	mmxmm	580x580								
Daylight max.	mm	1070								
max Mold Thickness	mm	560								
min Mold Thickness	mm	200								
Ejection Stroke	mm	150								
Ejector Force	kN	50								
Ejector Pin Hole Count	Unit	4+4+1								
POWER UNIT										
System Pressure	Mpa	17.5								
Connection power	kW/A	39.3/66			39.3/66			44/74		
Heating power	kW	11.8			12.3			18.4		
No.of Heater Zones	Unit	4			5			5		
GENERAL UNIT										
Oil Tank	L	100			100			100		
Machine Dimensions	mxxmxm	6.37*1.53*2.37			6.76*1.53*2.37			7.01*1.53*2.37		
Machine Weight	kg	8700			9220			9390		

Appearance and Tnstallation Dimensions



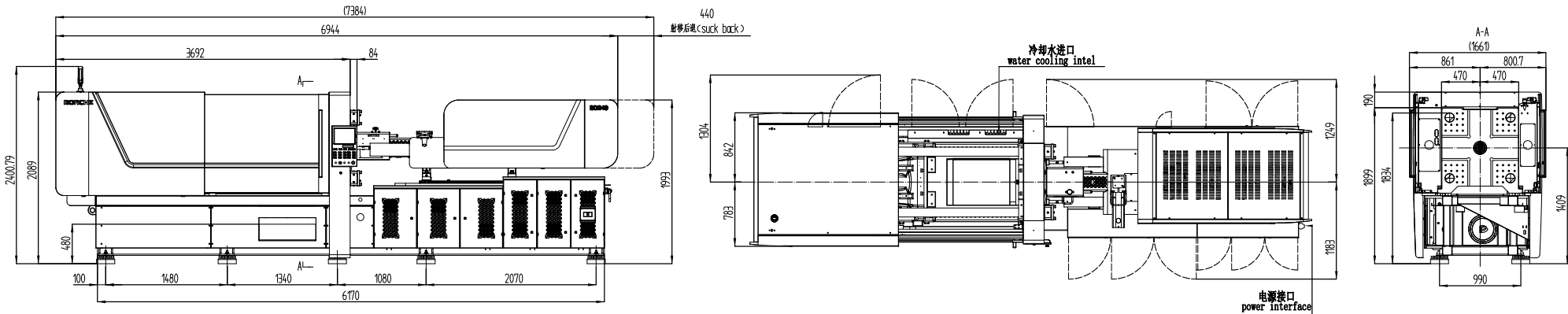
Mold Platen Drawing



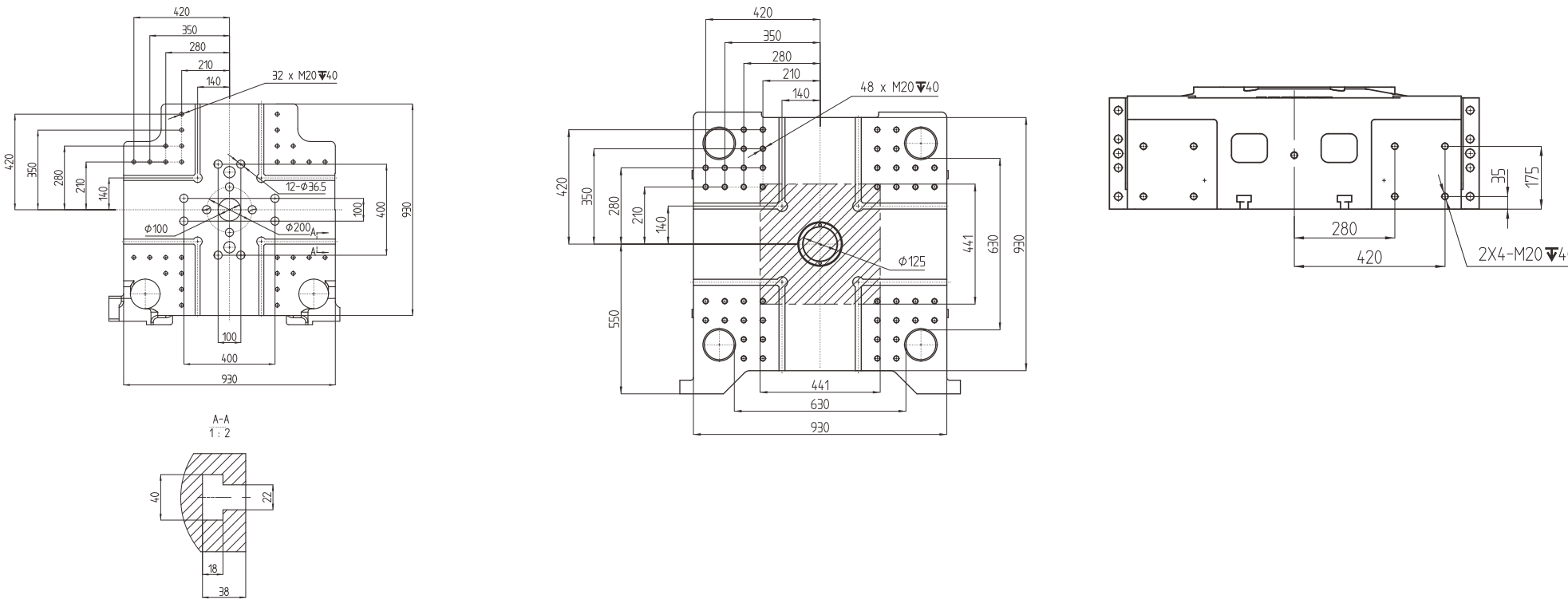
Specification

Model	UNIT	BD240								
International Class No.		690			960			1440		
INJECTION UNIT										
Screw Diameter	mm	40	45	50	45	50	55	55	60	65
Screw L/D Ratio	L/d	23.0	20.5	18	23.0	20.5	18.5	22.7	21.0	19.5
Injection Stroke	mm	215	215	215	245	245	245	300	300	300
Short Volume	cm³	270	342	422	390	481	582	713	848	995
Shot Weight(PS)	g	246	311	384	355	438	530	649	772	906
Shot Weight(PS)	oz	8.7	11.0	13.6	12.5	15.4	18.7	22.9	27.2	32.0
Injection Pressure	Mpa	253	200	162	247	200	165	202	170	145
Holding Pressure	Mpa	203	160	130	198	160	132	162	136	116
Plasticizing rate(PS)	g/s	26.2	36.1	48.3	33.0	44.2	57.6	54.0	66.1	83.0
Injection Speed	mm/s	200			200			160		
Screw Rotary Speed max.	rpm	350			320			300		
Nozzle Contact Force	kN	50			65			80		
CLAMPING UNIT										
Clamping Force	kN	2400								
Opening Stroke	mm	570								
Platen Size	mmxmm	930x930								
Space btw. Tie Bars	mmxmm	630x630								
Daylight max.	mm	1180								
max Mold Thickness	mm	610								
min Mold Thickness	mm	220								
Ejection Stroke	mm	180								
Ejector Force	kN	77.3								
Ejector Pin Hole Count	Unit	8+4+1								
POWER UNIT										
System Pressure	Mpa	15								
Connection power	kW/A	39.3/66			44/74			54.2/92		
Heating power	kW	12.3			18.4			24.5		
No.of Heater Zones	Unit	5			5			6		
GENERAL UNIT										
Oil Tank	L	200			200			200		
Machine Dimensions	mxmxm	7.10*1.66*2.4			7.39*1.66*2.4			7.60*1.66*2.4		
Machine Weight	kg	11100			11260			11555		

Appearance and Tnstallation Dimensions



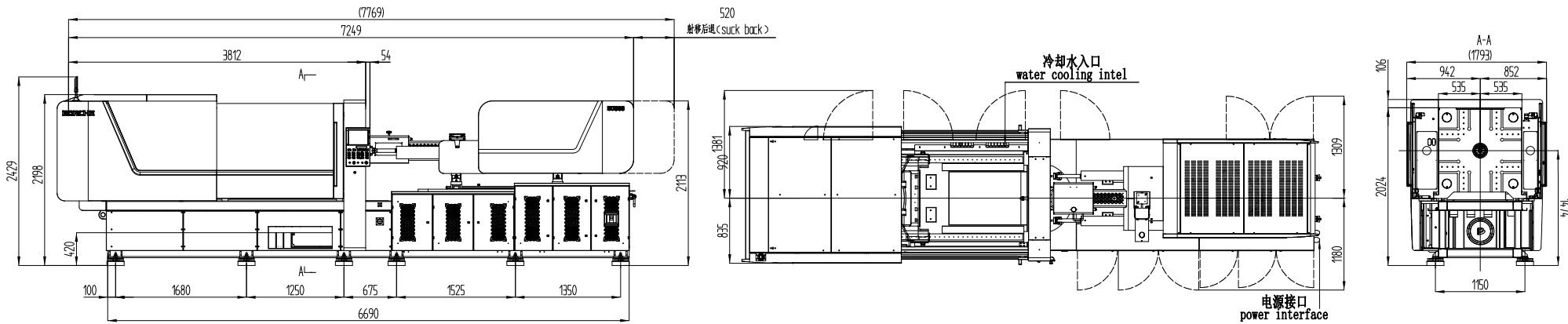
Mold Platen Drawing



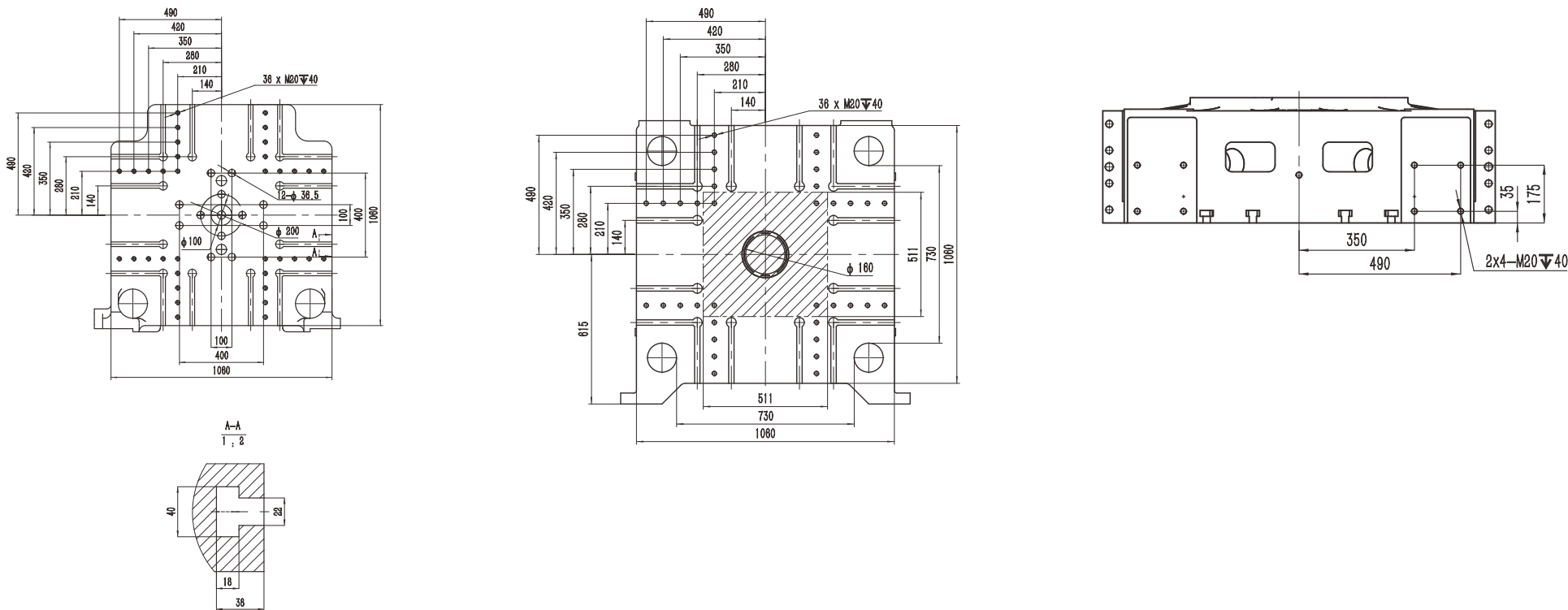
Specification

Model	UNIT	BD300								
International Class No.		960			1440			1940		
INJECTION UNIT										
Screw Diameter	mm	45	50	55	55	60	65	60	65	70
Screw L/D Ratio	L/d	23.0	20.5	18.5	22.7	21.0	19.5	24.5	22.7	21.0
Injection Stroke	mm	245	245	245	300	300	300	325	325	325
Short Volume	cm³	390	481	582	713	848	995	919	1078	1251
Shot Weight(PS)	g	355	438	530	649	772	906	836	981	1138
Shot Weight(PS)	oz	12.5	15.4	18.7	22.9	27.2	32.0	29.5	34.6	40.1
Injection Pressure	Mpa	247	200	165	202	170	145	211	180	155
Holding Pressure	Mpa	198	160	132	162	136	116	169	144	124
Plasticizing rate(PS)	g/s	33.0	44.2	57.6	54.0	66.1	83.0	55.0	69.1	83.3
Injection Speed	mm/s	200			160			160		
Screw Rotary Speed max.	rpm	320			300			250		
Nozzle Contact Force	kN	65			80			80		
CLAMPING UNIT										
Clamping Force	kN	3000								
Opening Stroke	mm	630								
Platen Size	mmxmm	1060x1060								
Space btw. Tie Bars	mmxmm	730x730								
Daylight max.	mm	1300								
max Mold Thickness	mm	670								
min Mold Thickness	mm	240								
Ejection Stroke	mm	180								
Ejector Force	kN	83								
Ejector Pin Hole Count	Unit	8+4+1								
POWER UNIT										
System Pressure	Mpa	15								
Connection power	kW/A	44/74			54.2/92			59.1/100		
Heating power	kW	18.4			24.5			34.3		
No.of Heater Zones	Unit	5			6			6		
GENERAL UNIT										
Oil Tank	L	200			200			200		
Machine Dimensions	mxmxm	7.56*1.79*2.43			7.77*1.79*2.43			8.27*1.79*2.43		
Machine Weight	kg	13895			14565			15037		

Appearance and Tnstallation Dimensions



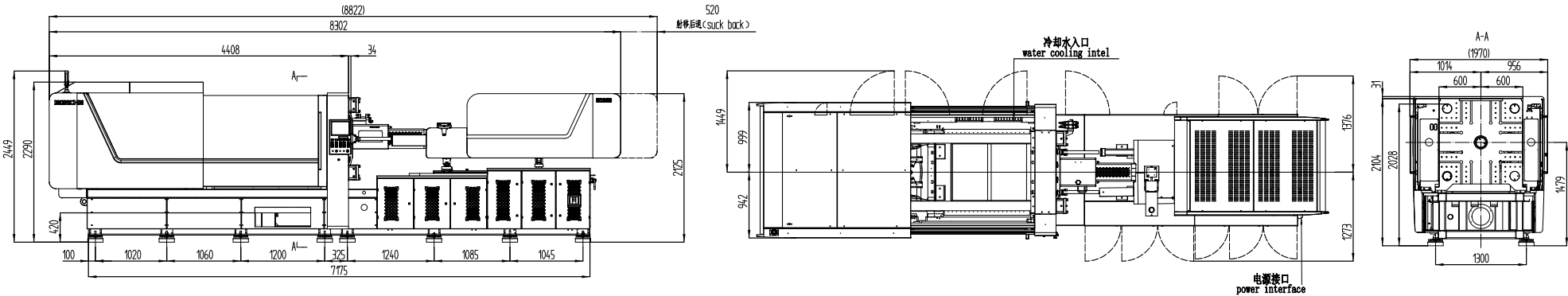
Mold Platen Drawing



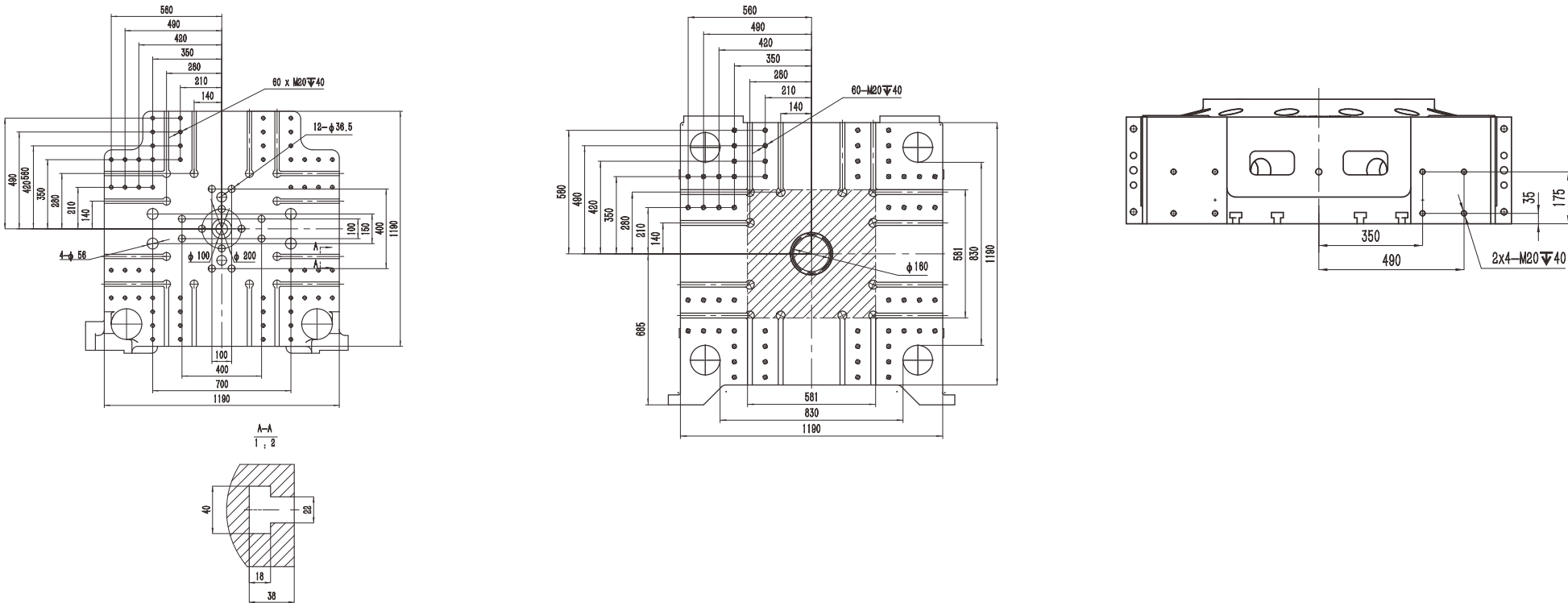
Specification

Model	UNIT	BD380									
International Class No.		1440			1940			2430			
INJECTION UNIT											
Screw Diameter	mm	55	60	65	60	65	70	65	70	75	
Screw L/D Ratio	L/d	22.7	21.0	19.5	24.5	22.7	21.0	22.7	21.0	19.6	
Injection Stroke	mm	300	300	300	325	325	325	350	350	350	
Short Volume	cm ³	713	848	995	919	1078	1251	1161	1347	1546	
Shot Weight(PS)	g	649	772	906	836	981	1138	1057	1226	1407	
Shot Weight(PS)	oz	22.9	27.2	32.0	29.5	34.6	40.1	37.3	43.2	49.6	
Injection Pressure	Mpa	202	170	145	211	180	155	209	180	157	
Holding Pressure	Mpa	162	136	116	169	144	124	167	144	125	
Plasticizing rate(PS)	g/s	54.0	66.1	83.0	55.0	69.1	83.3	60.9	73.4	105.3	
Injection Speed	mm/s	160			160			160			
Screw Rotary Speed max.	rpm	300			250			220			
Nozzle Contact Force	kN	80			80			80			
CLAMPING UNIT											
Clamping Force	kN	3800									
Opening Stroke	mm	730									
Platen Size	mmxmm	1190x1190									
Space btw. Tie Bars	mmxmm	830x830									
Daylight max.	mm	1460									
max Mold Thickness	mm	730									
min Mold Thickness	mm	250									
Ejection Stroke	mm	180									
Ejector Force	kN	100									
Ejector Pin Hole Count	Unit	4+8+4+1									
POWER UNIT											
System Pressure	Mpa	17.5									
Connection power	kW/A	54.2/92			59.1/100			68.5/116			
Heating power	kW	24.5			34.3			38.1			
No.of Heater Zones	Unit	6			6			6			
GENERAL UNIT											
Oil Tank	L	200			200			200			
Machine Dimensions	mxmxm	8.35*1.97*2.45			8.83*1.97*2.45			8.92*1.97*2.45			
Machine Weight	kg	18710			19182			19894			

Appearance and Tnstallation Dimensions



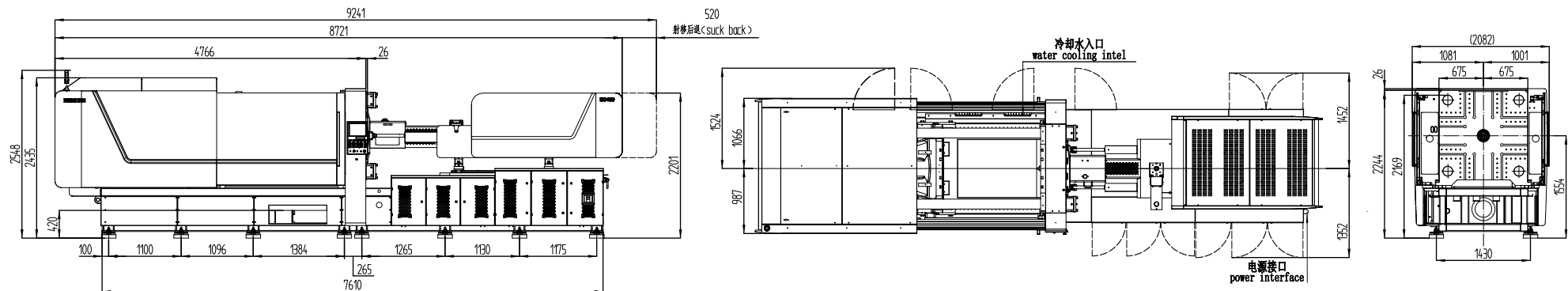
Mold Platen Drawing



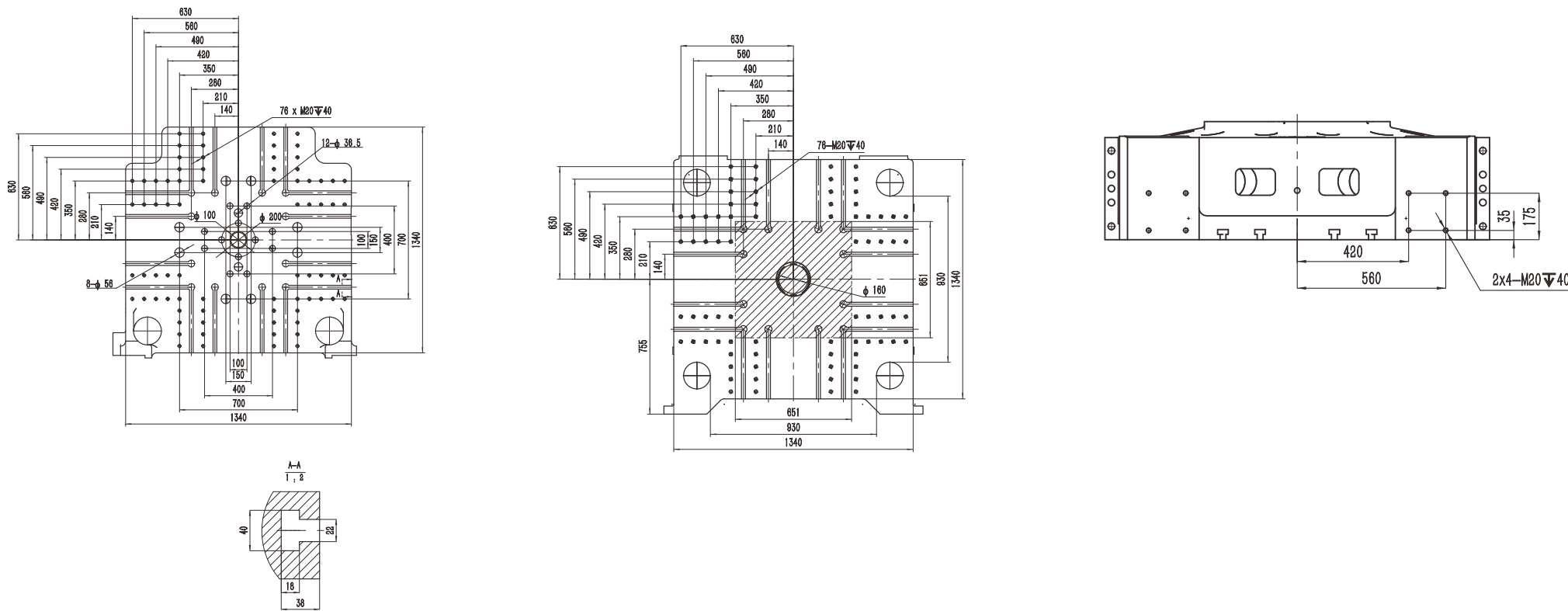
Specification

Model	UNIT	BD460					
International Class No.		1940			2430		
INJECTION UNIT							
Screw Diameter	mm	60	65	70	65	70	75
Screw L/D Ratio	L/d	24.5	22.7	21.0	22.7	21.0	19.6
Injection Stroke	mm	325	325	325	350	350	350
Short Volume	cm³	919	1078	1251	1161	1347	1546
Shot Weight(PS)	g	836	981	1138	1057	1226	1407
Shot Weight(PS)	oz	29.5	34.6	40.1	37.3	43.2	49.6
Injection Pressure	Mpa	211	180	155	209	180	157
Holding Pressure	Mpa	169	144	124	167	144	125
Plasticizing rate(PS)	g/s	55.0	69.1	83.3	60.9	73.4	105.3
Injection Speed	mm/s	160			160		
Screw Rotary Speed max.	rpm	250			220		
Nozzle Contact Force	kN	80			80		
CLAMPING UNIT							
Clamping Force	kN	4600					
Opening Stroke	mm	820					
Platen Size	mmxmm	1340x1340					
Space btw. Tie Bars	mmxmm	930x930					
Daylight max.	mm	1670					
max Mold Thickness	mm	850					
min Mold Thickness	mm	320					
Ejection Stroke	mm	180					
Ejector Force	kN	111					
Ejector Pin Hole Count	Unit	8+8+4+1					
POWER UNIT							
System Pressure	Mpa	17.5					
Connection power	kW/A	69.1/117			69.1/117		
Heating power	kW	34.3			38.1		
No.of Heater Zones	Unit	6			6		
GENERAL UNIT							
Oil Tank	L	200					
Machine Dimensions	mxmxm	9.15*2.08*2.55			9.24*2.08*2.55		
Machine Weight	kg	23151			23863		

Appearance and Tnstallation Dimensions



Mold Platen Drawing



Standard Features



Optional Features

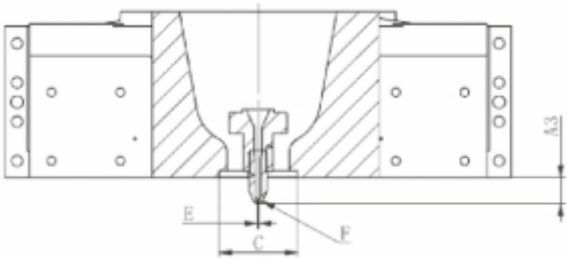


SAFETY UNIT	
1	China new safety standard
2	Full guarding in accordance with the "European Machine Directive"
3	Mechanical safety bar
4	Standard electrical independent security module structure, and reached III - protection requirements
5	Electromagnetic safety door lock (operating side)
6	Double emergency button
7	Standard overload of hydraulic system pressure relief function
INJECTION UNIT	
1	Electric direct drive on injection, electric screw drive
2	High precision and high response pressure sensor
3	Wear-resistant barrel
4	Chrom-plated screw
5	Open type nozzle
6	A/B/C size screw available
7	Hydraulic carriage
8	Injection unit movement control mode
9	Nozzle centering calibration
10	Linear guide for nozzle movement
11	Movable hopper device with slider
12	High power ceramic heating band
13	Nozzle safety guard with electric lock
14	High pressure/temperature tube for cooling ring on hooper throat
15	Stainless steel material cleaning tray
16	Double insulation cover for barrel
17	Low pressure/speed movement control under setup mode
18	Prevent overfilling function
19	Injection curve monitoring function
20	Injection speed response adjustable
21	Injection pressure control mode (conventional, high response)
22	Multiple V/P switches via combination of position, pressure and time
23	Injection compression function
24	Parallel plasticizing function
25	Intrusion function
26	Auto purge function
27	Suck back function
28	PID temperature control on nozzle
29	PID temperature control on barrel
30	Screw cold start prevention
31	Timing heating function
32	Temperature optimization function
33	6 stages control for injection, pressure /speed adjustable
34	5 stages control for holding, pressure /speed adjustable
35	5 stages control for plasticizing, back pressure /speed adjustable
36	4 ways of nozzle backward
37	Temperature monitor of feeding zone
38	Temperature monitor of shaft bearing
39	Screw rotation speed setting and display
40	Injection pressure calibration function
41	Real-time display function of injection pressure
42	Real-time display function of plasticizing back pressure
43	1 set valve gate on program
44	1 set doser signal on program
CLAMPING UNIT	
1	Electric direct drive mold movement
2	Balanced, double, five point toggle locking system
3	Mold platen with T-solt and mounting holes
4	Center - lock clamping unit
5	High rigidity fixed platen
6	Linear guide rail under moving platen
7	Independent location ring for fixing platen
8	Hard chrome plated tie bar
9	Dual ejector cylinders
10	Cooper bush guide for ejector platen
11	Quick change coupling for center platen
12	3 modes of control for ejector
13	Adjustable ejector backward confirmation switch
14	Centralized lubrication system with end sensor

15	Top cover on clamping area (≤200T)
16	Lubrication oil tray under moving platen
17	Robot mounting holes
18	Hydraulic mold adjustment
19	Mold adjustment with limit protection
20	Auto clamping force adjustment
21	Auto mold height adjustment
22	Pre - high pressure relief function
23	5 stages of mold closing, pressure/speed adjustable
24	5 stages of mold opening, pressure/speed adjustable
25	3 stages of ejector control, pressure/speed adjustable
26	2 sets air blow signal without valve
27	2 sets core puller signal without valve
28	Mold ejector function
29	Adjustable mold area lighting function
30	Product drop chute (90T-240T)
31	Ejector during mold open
32	Low pressure mold safety protection
33	Empty recycling operation functions
34	Opening and Closing mode signal
35	Water distributor (60T-200T, 5 x D10 quick plug, 3/4" water connector)
36	Water distributor (240T-300T, 6 x D10quick plug, 3/4" water connector)
37	Water distributor (380T-460T, 9 x D12 quick plug, 1" water connector)
HYDRAULIC UNIT	
1	Servo motor power with multi-term national patents
2	Real-time monitoring of hydraulic system
3	One-way direction valve for carriage
4	Hydraulic oil level indicator and low level alarm
5	Oil temperature monitor and alarm
6	Suction filter
7	Explosion-proof chain for high-press oil pipe
CONTROL UNIT	
1	12 inch intelligent controller
2	Internet connection port
3	Interconnection interfaces
4	Three color alarm light (red/yellow/green)
5	Alarm buzzer
6	2 sets USB ports
7	Electric heating protection by fuse or auto switch
8	5000 sets mould data (external USB drive extension)
9	Data protect lock
10	Real time monitor on servo motor
11	Operation history record
12	Alarm record
13	Switch of international units
14	I/O status display function
15	Multi-language available(CN/EN standard)
16	Self-diagnosis system
17	PDP process data records
18	SPC quality control
19	Process parameter quick setting
20	User permission management function
21	Pre-check and real-time monitor of machine movement
22	Cycle time analysis function
23	Three modes available for touch screen button style
24	Real-time display of servo action curve of mold open and close
25	Parallel movement (mold and core)
26	Parallel movement (injection and core)
27	Plasticizing curve function
28	Real-time display of injection and plasticize curve
29	Auto purge function
30	Timer heating function
31	PID temperature control of barrel heating
32	Production count function
33	Dry cycle function
34	Switch off function
35	Robot interface (include defective products and mold open signal)
36	Mold eject and back protection signal interfaces
OTHER	
1	Borche standard VI color
2	Power socket: 220V13Ax1 ,380V 16Ax1, 380V 32Ax2
3	Adjustable level pads
4	Tool box
5	Standard spare parts

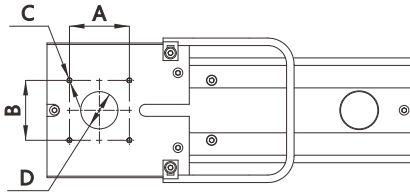
SAFETY UNIT	
1	CE Safety standard
INJECTION UNIT	
1	Bi-metalscrew and barrel
2	PC screw
3	Extended nozzle
4	Self-sealshut-off nozzle(hydraulic/penumatic)
5	Spring type shut-off nozzle
6	Temperature control of hooper feed throat
7	carriage transducer
8	V/P switch over of mold pressure
9	Stainless hopper
CLAMPING UNIT	
1	Multiple sets of hydraulic core pulling
2	Multiple sets of penumatic core pulling
3	Hydraulic unscrewing
4	Electric unscrewing
5	Multiple sets of air blast
6	Enlarged mold thickness
7	Mold locking ring with tailored size
8	Close loop control of mold clamping force
9	Photo sensor for product drop detector
10	Extra water manifold
11	Extra water distributor
12	Mold platen heat insulation board
13	Manual centralized lubrication for rear platen

CONTROL UNIT	
1	Hot runner control by program.comply with EU14
2	Robot interface,comply with EU12/EU67
3	Core pulling electric interface, comply with EU13
4	Quick mold change electric interface comply with Eu70
5	Gas-assistinjection electric interface
6	Mold cavity pressure detect electric interface
7	Energy meter
8	Phase loss or phase failure protection for motor
9	Specified power and voltage
10	External voltage transformer
11	Heater band leakage detection
12	Four color alarm light
13	Extra sockets
14	Power stablizer
15	UPS



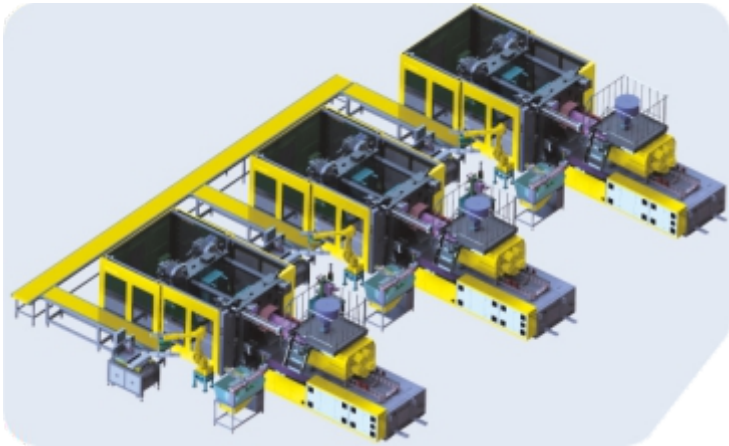
Model	Die positioning hole size C	Nozzle ball radius F	射嘴孔径E	凸出模板面距离A3
BD60	100	10	2.5	30
BD90	100	10	2.5	50
BD130	125	10	3	50
BD160	125	10	3	50
BD200	125	10	3	50
BD240	125	10	3	50
BD300	160	10	3	50
BD380	160	10	3	50
BD460	160	10	5	50

	BD60	BD90	BD130	BD160	BD200	BD240	BD300	BD380	BD460
A/mm	80	80	80	80	90	90	110	110	110
B/mm	80	80	80	80	95	95	110	110	110
C/mm	10	10	8	8	8	8	10	10	10
D/mm	45	45	50	50	60	60	70	70	70



Optional Functions of Intelligent Manufacturing:	
1	With Industry 4.0 on IMM,three-mold can be realized with mold change platform: one-stop automatic mold change,semi-automatic mold change and manual mold change.MM canautomatically identify mold and acquire parameter of mold change. technique and peripherals, The hole of IMM should be tailored to suit that of the mold change platform and hvdraulic camp.IMM will evaluate the safety of above holes. Safety lock is active when matching signal received.IMM plays a responsible role in mold change platform and hydraulic clamp.
2	IMM controller can display all machines'(peripherals included)operation condition and malfunction alarm. There are eight malfunction alarm interfaces for following peripherals: one robot, two mould temperature controllers, one water cooler, one dryer and all-in-one compact dryer. The communication and alarm function of other peripherals are connected to IMM through external connection cabinet so that intelligent interconnection of IMM and peripherals is built.
3	Plug and play, intelligently inter-connected water cooler operated and controlled in IMM with close-loop connection Intelligent interconnection of IMM and chiller can be operated and controlled by IMM controller. Data is close-loop interconnection.
4	Intelligent interconnection of IMM and mould temperature controller can be operated and controlled by IMM controller. All data is close-loop intercon- nection.
5	Intelligent interconnection of IMM and all-in-one compact dryer can be operated and controlled by IMM controller. All data is close-loop interconnection.
6	Compression injection molding technique
7	High speed proportional valve for mold open and close and non-contact maglev linear transducer realize real-time monitor
8	Robot connects with IMM in real-time, which reduces the interference of robot, IMM and mold. Robot can be fixed on the top or side of fixed platen according to parts pick requirements
9	Automation system of IMM and peripherals interact with MES management system 1) Order Monitor 2) CProduction Status Display 3) Alarm Monitor 4) Technique Parameter Management 5) Equipment Management 6) Production Report
10	Intelligent Manufacturing (imec) 1) PlasCloud App, basic version(1-year available) 2) Machiner monitor: status, cycle and output, etc. 3) Human-computer interaction: Provides M2M and M2H connection and interaction functions 4) Process management: View real-time data, historical process, etc 5) Remote support: Share real-time machine operation,set parameters and remote checking to machine status 6) Intelligent examination: The self-developed algorithm is used to predict and visually score the machine's health condition
11	Mold Visual Monitor 1) Low pressure mold protection for higher precision and efficiency 2) Accurate checkup 3) Self-adaption to exterior light change 4) Self-adaption to inaccurate mold open position 5) Real-time record
12	Visual Detective System for surface quality checking 1) Fast detection, detection precision reaches to 0.001mm 2) Defectives check of contamination, color difference, flake, and short injection. 3) Wide application
13	Vision-induced System 1) Accurate positioning 2) Sensitive identification 3) Wide application

01 Factory Layout- Borsche specializes in intelligent IMM factory design.Many intelligent factory cases are carried out worldwide in IMM industry.

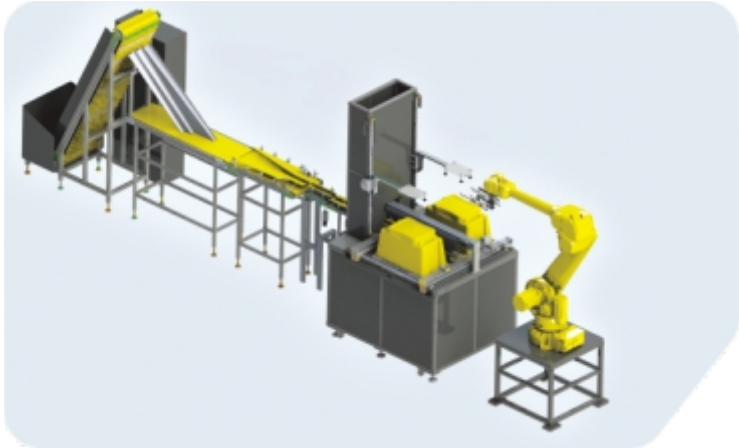


02 Flexible Automation -360° visual detection, robot operation, automatic assembling, parts insert, polishing and deburring...

Visual Detective System



Robot Application (part pick-up, casting insert, assembling, stacking, deburring, degating)



03 Intelligent Logistics- AGV, rolling line, automatic packing, wrapper.

