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BORCHE



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Wechat

May 2017

BS-III Servo Series

Versatility • Energy Efficiency

BORCHE BS-III



ONE MACHINE REALIZES DIVERSE DEMANDS

BS-III Servo Series are featured with adequate power system, high-precision control, stable performance, high versatility and three sizes of screw barrel, which satisfies different production requirement.

ADVANCED TECHNIQUE REALIZES HIGH EFFICIENCY AND ENERGY SAVING

BS-III Servo Series adopt multi-pump control system, which cooperating with CAN BUS and running flexibly with real-time production demands, can produce small size plastic parts with a single pump and produce big size plastic parts with multi-pump. Lower energy consumption as well as higher-efficient productivity provides a competent and economical solution to satisfy customer requirements.

BS-III Servo Series are accredited as National First Grade Energy Saving and the best application only reach 60% of first grade consumption level. Compared with traditional hydraulic system, BS-III Servo Series can save 20%-80% energy. Servo motor proportionally delivers hydraulic oil based on actual needs, avoiding extra heating and temperature rise, ensures water saving.

Patent

- Plastic injection molding machine
Patent No.: 201130029746.2
- Plastic injection molding machine supporting base (BS3-80)
Patent No.: 201230576854.6
- One type special designed anti-abrasion strip
Patent No.: 201320520057.5
- One type brake control of hydraulic circuit
Patent No.: 201511022175.3
- One type slider foot and slider foot supported moving platen structure
Patent No.: 201620416972.3
- One type new assembly structure for hydraulic pump of injection molding machine
Patent No.: 201620625514.0
- Plastic injection molding machine nozzle protection cover
Patent No.: 201621127665.X
- Injection molding machine with movable hopper
Patent No.: 201621259117.2



BS-III Three Main Features

High Versatility

BS-III Servo Series are featured with adequate power system, high-precision control, stable performance, high versatility and 3 sizes of screw barrel, which satisfies different production requirement.

Energy Efficiency and Environmental Protection

Advanced energy saving: 20%-80% energy saving compared with traditional hydraulic system. Low noise and environmental protection: Low noise during machine operation;Servo motor proportionally delivers hydraulic oil based on actual needs, avoiding extra heating and temperature rise, ensures water saving.

CALCULATION OF ENERGY SAVING EFFECT (EXAMPLE)

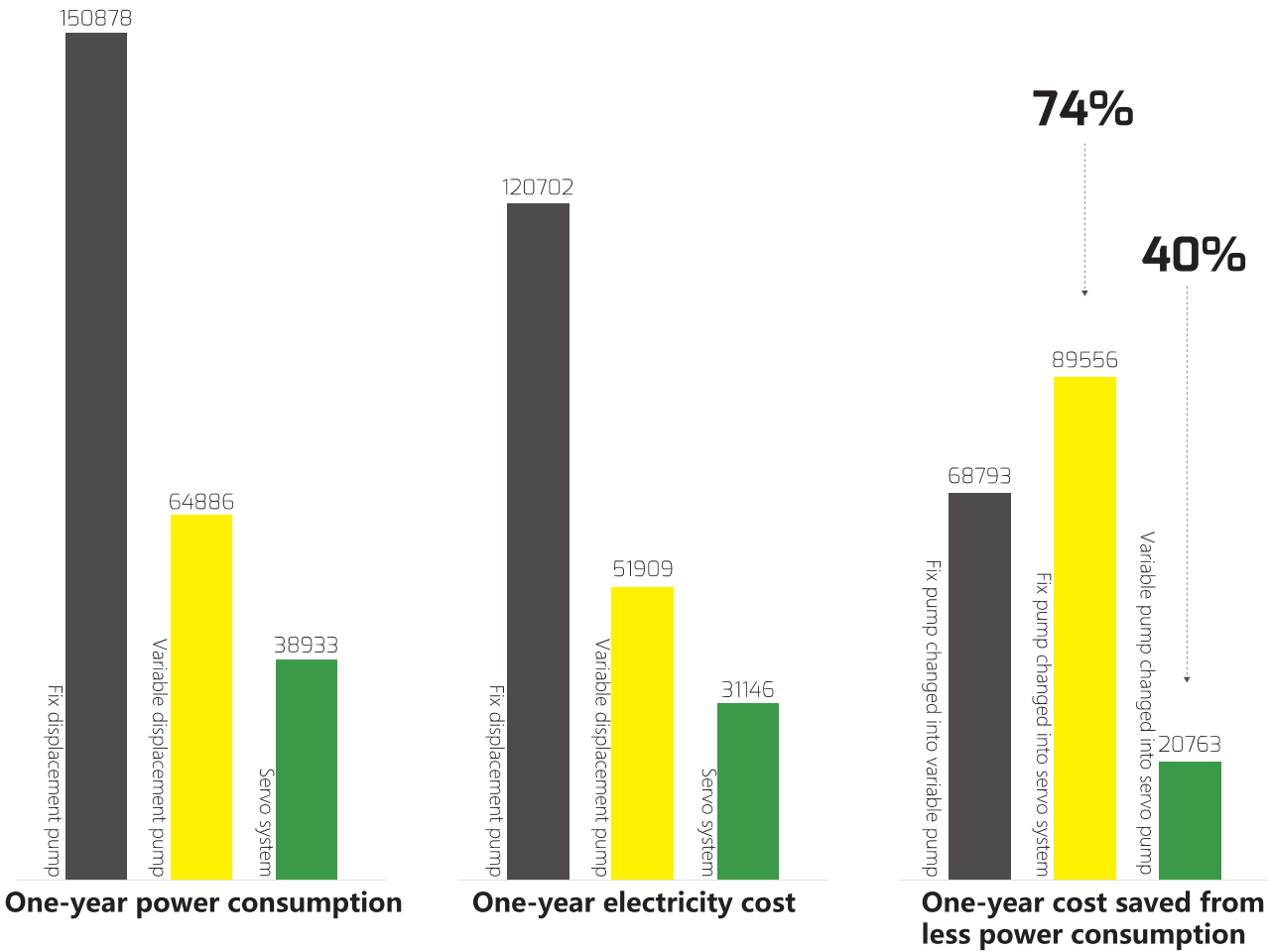
LOAD			
Movement	Time (Sec)	Flow (L/min)	Pressure (Mpa)
High speed mold close	1.0	80	5.0
Low speed mold close	1.0	10	1.0
Injection	2.0	80	10.0
Holding	4.0	5	17.5
Charging	4.0	50	10.0
Cooling	4.0	0	0
Low speed mold open	1.0	10	10.0
High speed mold open	1.0	80	5.0
Ejector forward	1.0	50	10.0
Ejector backward	1.0	50	10.0

- According to actual test, AC Servo Power Saving Injection Molding Machin can save 54.8%-80% power comparing with conventional fixed displacement pump injection molding machines.

CALCULATION OF OTHER COST SAVING

Item	Type	RMB	Calculation Conditions
Low heating	Equipment saving	2200	200L~60L only for hydraulic oil
Low noise	Acoustic insulation cost	1500	Cost for acoustic insulation(acoustic material and labor cost)

- Calculation conditions: BS120 365working days, 24 hours/day(8760 hours/year)
Electricity charge at RMB 0.8/kwh, molding conditions as the table below



BORCHE BS-III

Advanced Technology



Automatic Control

Servo Series adopt Austria made KEBA controller

Movable Hopper Support

Machines up to 650T featured with movable hopper support (≥ 800T featured with feeding platform) .

Liner Guider Rail

Linear guide rail adopted injection unit and built in carriage cylinder make fast speed and stable movement.



Ejection Space

European technical standards are introduced to further improve platen rigidity, can satisfy requirements of high-strength, high-load and high-precision production. Ejection rod can be used for euromap mold.



Anti-Abrasion Strip

Standard featured with anti-abrasion strip, long life of guide rail, easier maintenance.

- Machine is designed in accordance with ergonomics to enable human-oriented operation.
- Integral optimism improves rigidity of machine structure.
- Open space below clamping unit enables three direction produce removal by belt conveyer.
- Transparent front cover makes movement monitoring available.
- Humanized design of more than 20 nameplates reminds operator keep safety in mind always.
- Double-carriage cylinder is adopted to ensure stable injection.

Description

BORCHE

Description	UNIT	B560-III	B580-III	B5120-III	B5150-III	B5200-III	B5260-III	B5320-III	B5400-III	B5500-III	B5560-III	B5650-III	B5800-III	B51000-III	B51300-III	B51600-III	B51800-III
International Class NO.		153/60	252/80	388/120	634/150	849/200	1367/260	2239/320	3266/400	3925/500	4156/560	4453/650	5700/800	7550/1000	11500/1300	13500/1600	16600/1800

INJECTION UNIT																																																
Screw Diameter	mm	25	28	30	35	40	35	40	45	40	45	50	45	50	60	50	60	70	60	70	80	70	80	90	75	85	95	80	85	95	80	90	100	90	100	105	100	105	115	105	115	130	115	130	140	130	140	150
Short Volume	cm³	68	86	120	163	213	182	238	302	270	341	422	389	481	692	589	848	1154	989	1346	1759	1539	2010	2544	1877	2411	3012	2262	2554	3190	2261	2862	3534	3181	3927	4329	4123	4546	5453	5195	6232	7964	6751	8628	10006	9291	10776	12370
Shot Weight(PS)	g	60	78	113	153	199	171	225	283	254	321	397	365	452	650	552	800	1085	928	1266	1652	1446	1890	2366	1764	2267	2830	2058	2323	2902	2125	2690	3321	2987	3687	4065	3871	4268	5120	4727	5671	7247	6144	7851	9105	8455	9806	11257
Shot Weight(PS)	OZ	2.1	2.8	4	5.4	7	6	8	10	9	11.3	14	12.9	16	23	19.5	28.3	38.3	32.8	44.7	58.4	51.1	66.8	82.5	62.3	80.1	100	72.6	81.9	102.4	75.1	95.1	117.3	105.5	130.3	143.6	136.8	150.8	181	167	200	256	216.7	246.9	321.2	298.2	345.9	397.1
Injection Pressure	MPa	223	178	209	154	118	212	162	128	235	185	150	218	176	123	232	161	118	226	166	127	212	162	128	209	163	130	184	163	130	197	156	126	181	147	133	180	163	136	222	185	145	200	156	135	191	164	143
Screw L/D Ratio	L/d	22	22	24	20.5	18	23.5	20.5	18	23	20.5	18.5	23	21	17	25	21	18	24.5	21	18.5	24	21	19	24	21	19	22.3	21	19	23.5	21	19	25	22.5	21.4	23	22	20	24	22	19.5	25	22	20.4	24	22	20
Injection Stroke	mm	140		170			190			215			245			300			350			400			425			450			450			500			525			600			650			700		
Screw Rotary Speed max	rpm	280		250			222			240			175			143			166			140			144			144			120			117			112			110			90			85		
Nozzle Contact Force	KN	30		30			30			30			30			40			70			80			80			80			80			200			200			200			200			200		
Nozzle Stroke	mm	205		250			250			250			280			350			360			395			450			450			510			560			560			750			750			920		

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POWER UNIT																	
System Pressure	MPa	14.5	14.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Pump Motor	KW	8.6	11	11	15	18.5	22	37	45	22+30	22+30	30x2	37x2	45x2	45+37x2	45x2+37	45X3
Heating Capacity	KW	4.8	6.5	8.8	9.6	10.4	16.2	18.5	24.5	31.7	31.7	33.5	40.9	47.1	55.2	78	78.5
No.of Heater Zones	unit	4	4	4	5	5	6	6	6	6	6	6	8	8	9	9	9

GENERAL UNIT																	
Oil Tank Capacity	L	160	160	180	230	300	500	870	1200	1300	1300	1300	1400	1400	1850	1850	2400
Machine Dimensions	mxmxm	3.74x1.35x1.75	4.22x1.33x1.7	4.5x1.38x1.73	4.85x1.42x1.94	5.43x1.63x1.99	6.33x1.73x2.03	7.02x1.88x2.23	8.4x2.18x2.24	8.81x2.15x2.21	9.09x2.18x2.21	9.53x2.22x2.47	10.53x2.39x3.03	11.18x2.6x3.13	12.7x2.77x3.1	13.9x3.17x3.36	15.1x3.28x3.4
Machine Weight	KG	2600	3000	3500	4300	5900	8300	11000	15500	18500	21000	24000	35500	48000	64500	93500	100000

The specification above is only for reference. No further notice of any change in specification resulting from technical upgrading.

BS60-III

BORCHE

DESCRIPTION

International Class NO. UNIT	153/60
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INJECTION UNIT

Screw Diameter	mm	25	28
Short Volume	cm ³	68	86
Shot Weight(PS)	g	60	78
Shot Weight(PS)	OZ	2. 1	2.8
Injection Pressure	MPa	223	178
Screw L/D Ratio	L/d	22	22
Injection Stroke	mm	140	
Screw Rotary Speed max	rpm	280	
Nozzle Contact Force	KN	30	
Nozzle Stroke	mm	205	

CLAMPING UNIT

Clamping Force	KN	600
Opening Stroke	mm	270
Platen Size	mmxmm	500x500
Space btw. Tie Bars	mmxmm	310x310
Daylight max	mm	570
Mold Thickness(min-max)	mm	130-300
Ejection Stroke	mm	80
Ejector Force	KN	28.5
Ejector Pin	unit	4+1

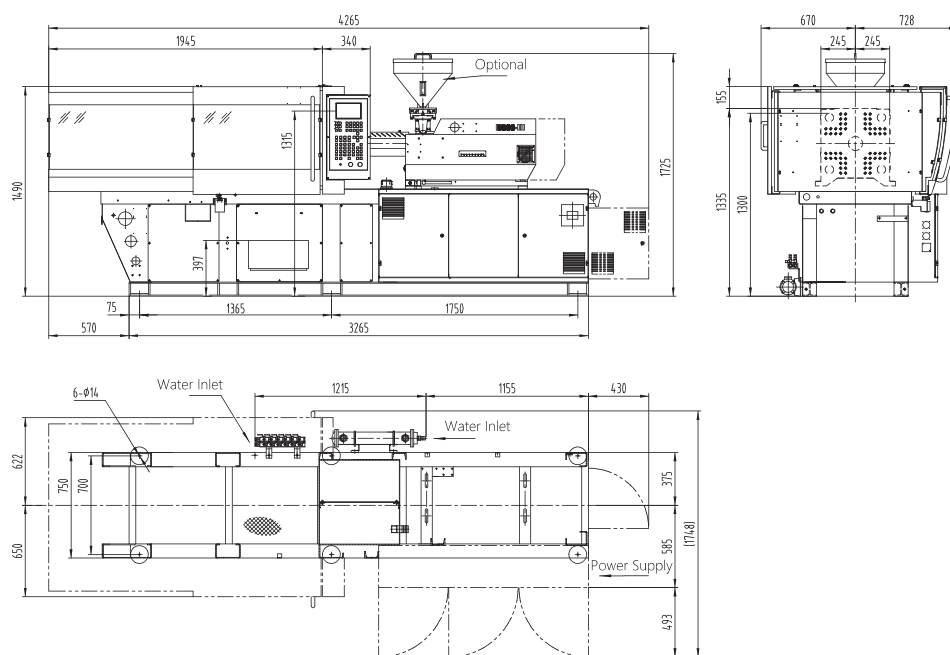
POWER UNIT

System Pressure	MPa	14.5
Pump Motor	KW	8.6
Heating Capacity	KW	4.8
No.of Heater Zones	unit	4

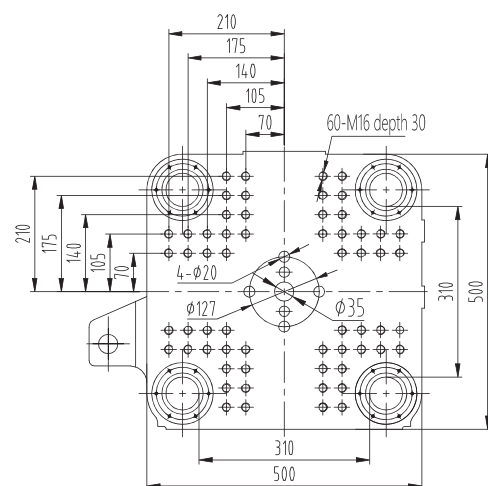
GENERAL UNIT

Oil Tank Capacity	L	160
Machine Dimensions	mxmxm	3.74x1.35x1.75
Machine Weight	KG	2600

Appearance and Installation Dimensions



Mold Platen Drawing



BS80-III

BORCHE

DESCRIPTION

International Class NO. UNIT 252/80

INJECTION UNIT

Screw Diameter	mm	30	35	40
Short Volume	cm ³	120	163	213
Shot Weight(PS)	g	113	153	199
Shot Weight(PS)	OZ	4	5.4	7
Injection Pressure	MPa	209	154	118
Screw L/D Ratio	L/d	24	20.5	18
Injection Stroke	mm	170		
Screw Rotary Speed max	rpm	250		
Nozzle Contact Force	KN	30		
Nozzle Stroke	mm	250		

CLAMPING UNIT

Clamping Force	KN	800
Opening Stroke	mm	320
Platen Size	mmxmm	540x540
Space btw. Tie Bars	mmxmm	360x360
Daylight max	mm	680
Mold Thickness(min-max)	mm	130-360
Ejection Stroke	mm	100
Ejector Force	KN	28.5
Ejector Pin	unit	4+1

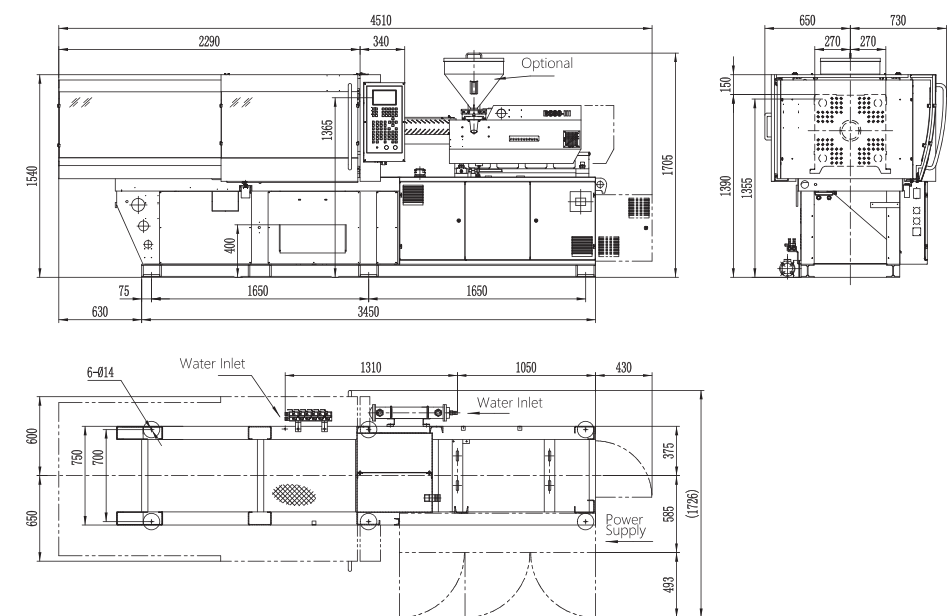
POWER UNIT

System Pressure	MPa	14.5
Pump Motor	KW	11
Heating Capacity	KW	6.5
No. of Heater Zones	unit	4

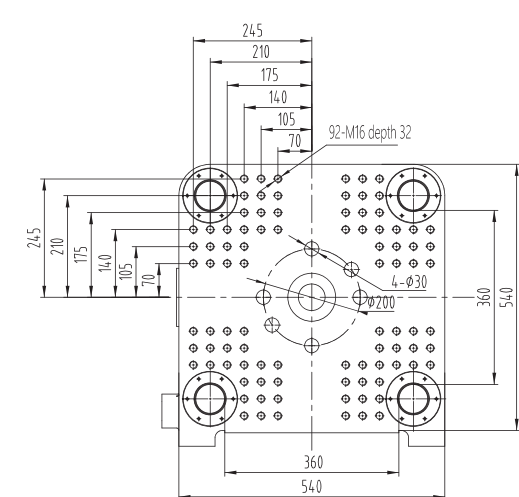
GENERAL UNIT

Oil Tank Capacity	L	160
Machine Dimensions	mxmxm	4.22x1.33x1.7
Machine Weight	KG	3000

Appearance and Installation Dimensions



Mold Platen Drawing



BS120-III

BORCHE

DESCRIPTION

International Class NO. UNIT	388/120
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INJECTION UNIT

Screw Diameter	mm	35	40	45
Short Volume	cm ³	182	238	302
Shot Weight(PS)	g	171	225	283
Shot Weight(PS)	OZ	6	8	10
Injection Pressure	MPa	212	162	128
Screw L/D Ratio	L/d	23.5	20.5	18
Injection Stroke	mm	190		
Screw Rotary Speed max	rpm	222		
Nozzle Contact Force	KN	30		
Nozzle Stroke	mm	250		

CLAMPING UNIT

Clamping Force	KN	1200
Opening Stroke	mm	340
Platen Size	mmxmm	610x610
Space btw. Tie Bars	mmxmm	410x410
Daylight max	mm	790
Mold Thickness(min-max)	mm	145-450
Ejection Stroke	mm	100
Ejector Force	KN	34.4
Ejector Pin	unit	4+1

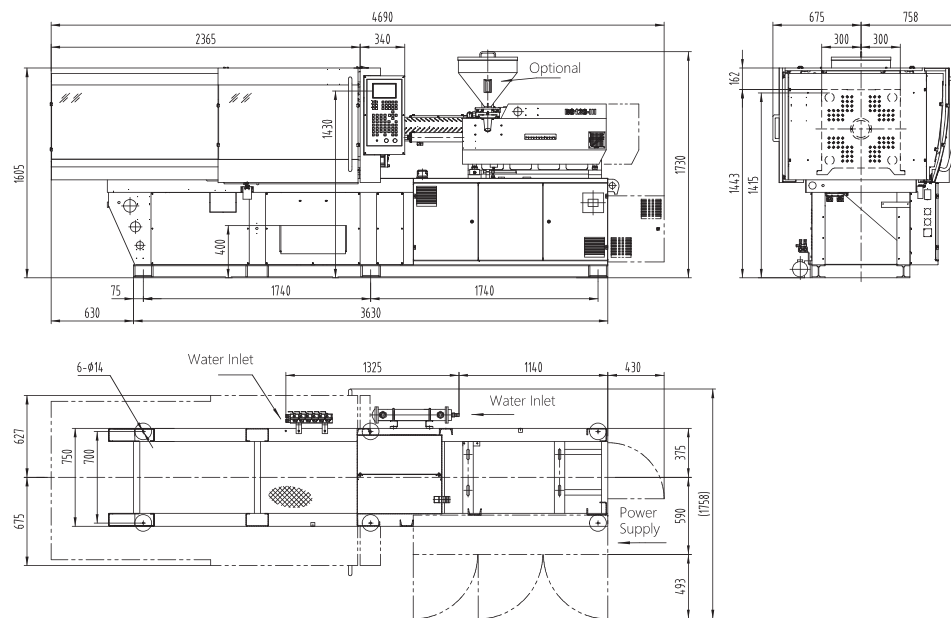
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	11
Heating Capacity	KW	8.8
No.of Heater Zones	unit	4

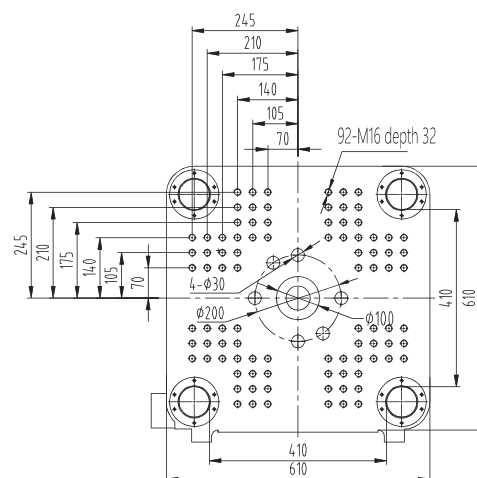
GENERAL UNIT

Oil Tank Capacity	L	180
Machine Dimensions	mxmxm	4.5x1.38x1.73
Machine Weight	KG	3500

Appearance and Installation Dimensions



Mold Platen Drawing



BS150-III

BORCHE

DESCRIPTION

International Class NO. UNIT 634/150

INJECTION UNIT

Screw Diameter	mm	40	45	50
Short Volume	cm ³	270	341	422
Shot Weight(PS)	g	254	321	397
Shot Weight(PS)	OZ	9	11.3	14
Injection Pressure	MPa	235	185	150
Screw L/D Ratio	L/d	23	20.5	18.5
Injection Stroke	mm	215		
Screw Rotary Speed max	rpm	240		
Nozzle Contact Force	KN	30		
Nozzle Stroke	mm	250		

CLAMPING UNIT

Clamping Force	KN	1500
Opening Stroke	mm	410
Platen Size	mmxmm	670x670
Space btw. Tie Bars	mmxmm	460x460
Daylight max	mm	910
Mold Thickness(min-max)	mm	160-500
Ejection Stroke	mm	130
Ejector Force	KN	41.6
Ejector Pin	unit	4+1

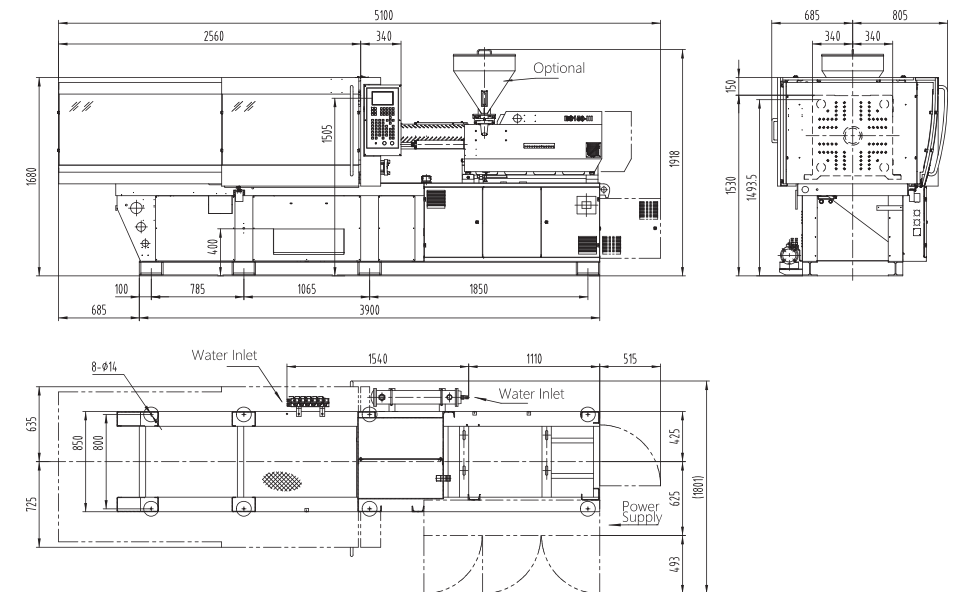
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	15
Heating Capacity	KW	9.6
No.of Heater Zones	unit	5

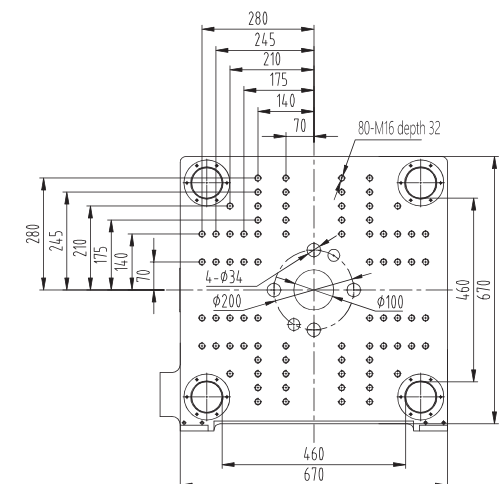
GENERAL UNIT

Oil Tank Capacity	L	230
Machine Dimensions	mxmxm	485x142x194
Machine Weight	KG	4300

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	849/200
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INJECTION UNIT

Screw Diameter	mm	45	50	60
Short Volume	cm³	389	481	692
Shot Weight(PS)	g	365	452	650
Shot Weight(PS)	OZ	12.9	16	23
Injection Pressure	MPa	218	176	123
Screw L/D Ratio	L/d	23	21	17
Injection Stroke	mm	245		
Screw Rotary Speed max	rpm	175		

Nozzle Contact Force	KN	30		
Nozzle Stroke	mm	280		

CLAMPING UNIT

Clamping Force	KN	2000		
Opening Stroke	mm	465		

Platen Size	mmxmm	750x750		
Space btw. Tie Bars	mmxmm	510x510		

Daylight max	mm	1015		
Mold Thickness(min-max)	mm	180-550		

Ejecction Stroke	mm	150		
Ejector Force	KN	49.5		
Ejector Pin	unit	4+1		

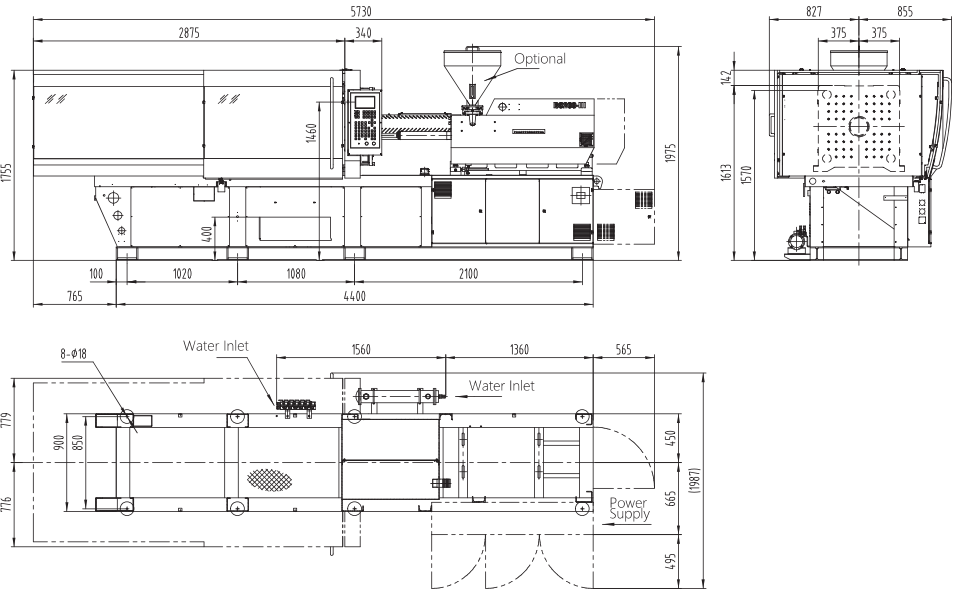
POWER UNIT

System Pressure	MPa	17.5		
Pump Motor	KW	18.5		
Heating Capacity	KW	10.4		
No.of Heater Zones	unit	5		

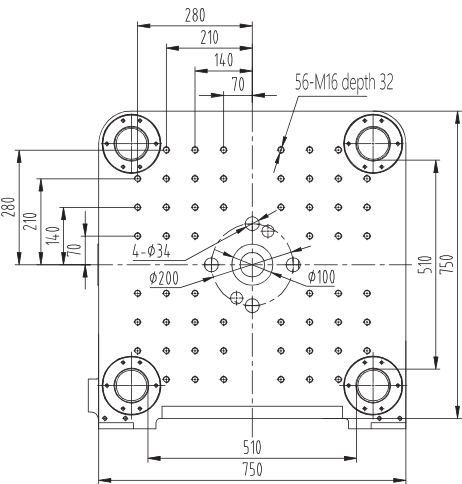
GENERAL UNIT

Oil Tank Capacity	L	300		
Machine Dimensions	mxmxm	5.43x1.63x1.99		
Machine Weight	KG	5900		

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	1367/260
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INJECTION UNIT

Screw Diameter	mm	50	60	70
Short Volume	cm³	589	848	1154
Shot Weight(PS)	g	552	800	1085
Shot Weight(PS)	OZ	19.5	28.3	38.3
Injection Pressure	MPa	232	161	118
Screw L/D Ratio	L/d	25	21	18
Injection Stroke	mm	300		
Screw Rotary Speed max	rpm	143		

Nozzle Contact Force	KN	40		
Nozzle Stroke	mm	350		

CLAMPING UNIT

Clamping Force	KN	2600		
Opening Stroke	mm	520		

Platen Size	mmxmm	835x835		
Space btw. Tie Bars	mmxmm	575X575		

Daylight max	mm	1120		
Mold Thickness(min-max)	mm	195-600		

Ejecction Stroke	mm	180		
Ejector Force	KN	77.3		
Ejector Pin	unit	8+4+1		

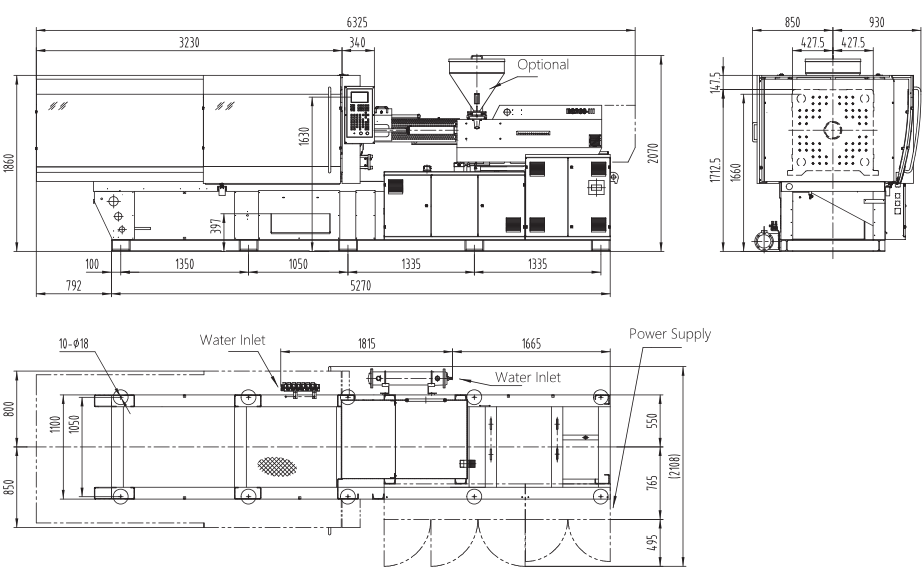
POWER UNIT

System Pressure	MPa	17.5		
Pump Motor	KW	22		
Heating Capacity	KW	16.2		
No.of Heater Zones	unit	6		

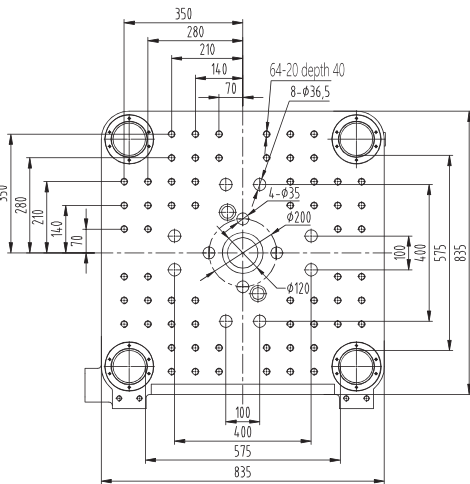
GENERAL UNIT

Oil Tank Capacity	L	500		
Machine Dimensions	mxmxm	6.33x1.73x2.03		
Machine Weight	KG	8300		

Appearance and Installation Dimensions



Mold Platen Drawing

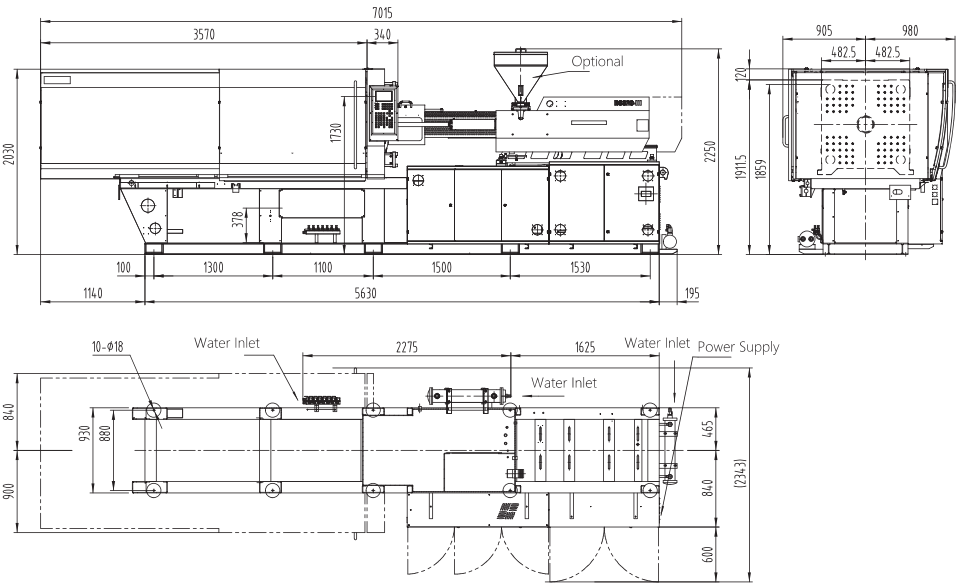


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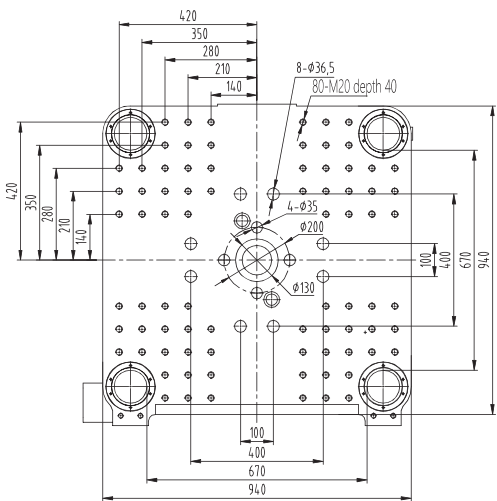
International Class NO. UNIT 2239/320

INJECTION UNIT				
Screw Diameter	mm	60	70	80
Short Volume	cm³	989	1346	1759
Shot Weight(PS)	g	928	1266	1652
Shot Weight(PS)	OZ	32.8	44.7	58.4
Injection Pressure	MPa	226	166	127
Screw L/D Ratio	L/d	24.5	21	18.5
Injection Stroke	mm	350		
Screw Rotary Speed max	rpm	166		
Nozzle Contact Force	KN	70		
Nozzle Stroke	mm	360		
CLAMPING UNIT				
Clamping Force	KN	3200		
Opening Stroke	mm	580		
Platen Size	mmxmm	940x940		
Space btw. Tie Bars	mmxmm	670x670		
Daylight max	mm	1235		
Mold Thickness(min-max)	mm	220-655		
Ejection Stroke	mm	180		
Ejector Force	KN	77.3		
Ejector Pin	unit	8+4+1		
POWER UNIT				
System Pressure	MPa	17.5		
Pump Motor	KW	37		
Heating Capacity	KW	18.5		
No.of Heater Zones	unit	6		
GENERAL UNIT				
Oil Tank Capacity	L	870		
Machine Dimensions	mxmxm	7.02x1.88x2.23		
Machine Weight	KG	11000		

Appearance and Installation Dimensions



Mold Platen Drawing

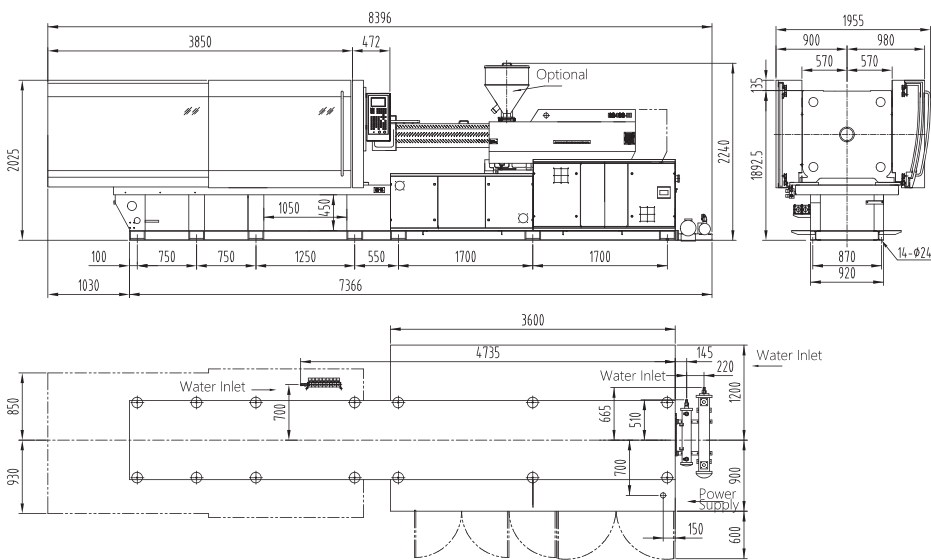


DESCRIPTION

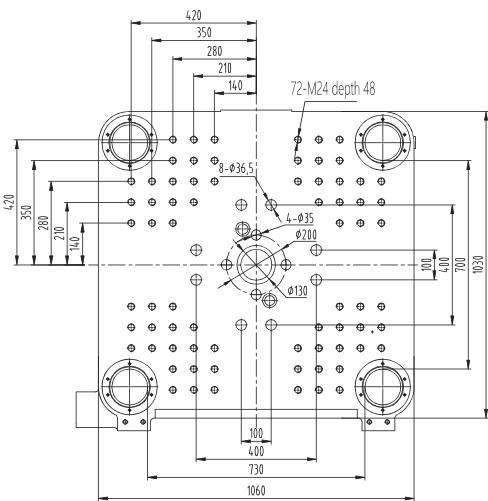
International Class NO. UNIT 3266/400

INJECTION UNIT				
Screw Diameter	mm	70	80	90
Short Volume	cm³	1539	2010	2544
Shot Weight(PS)	g	1446	1890	2366
Shot Weight(PS)	OZ	51.1	66.8	82.5
Injection Pressure	MPa	212	162	128
Screw L/D Ratio	L/d	24	21	19
Injection Stroke	mm	400		
Screw Rotary Speed max	rpm	140		
Nozzle Contact Force	KN	80		
Nozzle Stroke	mm	395		
CLAMPING UNIT				
Clamping Force	KN	4000		
Opening Stroke	mm	655		
Platen Size	mmxmm	1060x1030		
Space btw. Tie Bars	mmxmm	730x700		
Daylight max	mm	1375		
Mold Thickness(min-max)	mm	245-720		
Ejection Stroke	mm	205		
Ejector Force	KN	111.3		
Ejector Pin	unit	8+4+1		
POWER UNIT				
System Pressure	MPa	17.5		
Pump Motor	KW	45		
Heating Capacity	KW	24.5		
No.of Heater Zones	unit	6		
GENERAL UNIT				
Oil Tank Capacity	L	1200		
Machine Dimensions	mxmxm	8.4x2.18x2.24		
Machine Weight	KG	15500		

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO. UNIT	3925/500
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INJECTION UNIT

Screw Diameter	mm	75	85	95
Short Volume	cm ³	1877	2411	3012
Shot Weight(PS)	g	1764	2267	2830
Shot Weight(PS)	OZ	62.3	80.1	100
Injection Pressure	MPa	209	163	130
Screw L/D Ratio	L/d	24	21	19
Injection Stroke	mm	425		
Screw Rotary Speed max	rpm	144		
Nozzle Contact Force	KN	80		
Nozzle Stroke	mm	450		

CLAMPING UNIT

Clamping Force	KN	5000
Opening Stroke	mm	755
Platen Size	mmxmm	1175x1145
Space btw. Tie Bars	mmxmm	830x800
Daylight max	mm	1555
Mold Thickness(min-max)	mm	265-800
Ejection Stroke	mm	250
Ejector Force	KN	111.3
Ejector Pin	unit	8+4+1

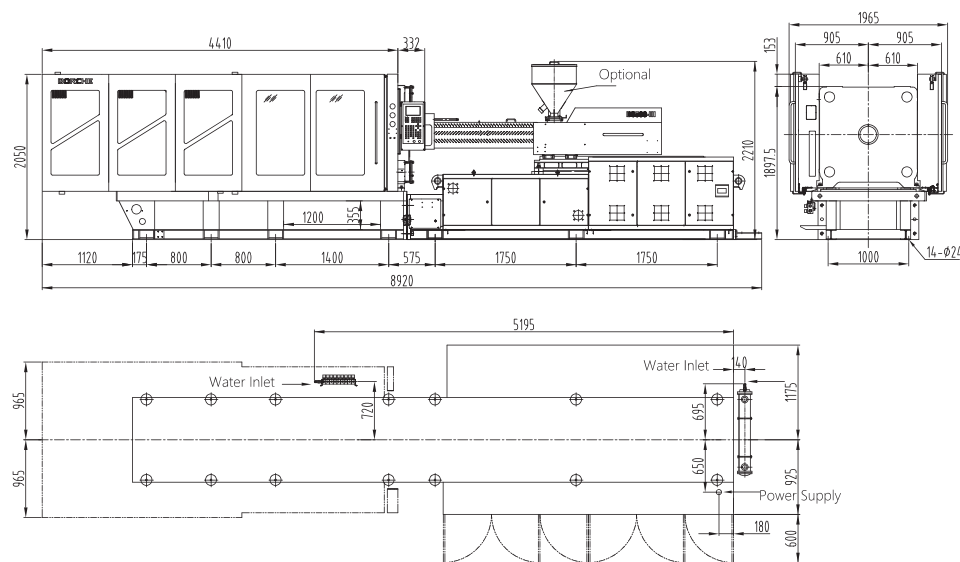
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	22+30
Heating Capacity	KW	31.7
No. of Heater Zones	unit	6

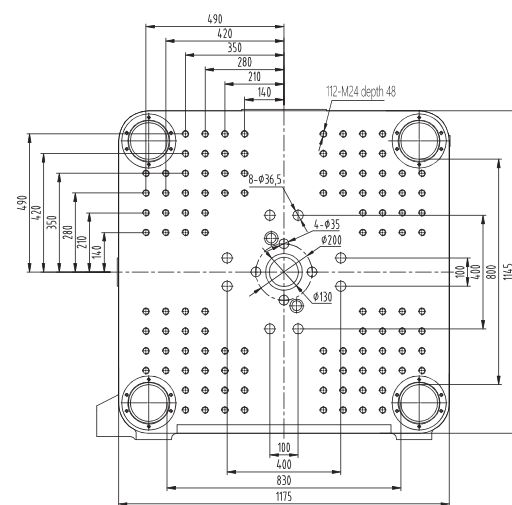
GENERAL UNIT

Oil Tank Capacity	L	1300
Machine Dimensions	mxmxm	8.8x2.15x2.21
Machine Weight	KG	18500

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO. UNIT 4156/560

INJECTION UNIT

Screw Diameter	mm	80	85	95
Short Volume	cm ³	2262	2554	3190
Shot Weight(PS)	g	2058	2323	2902
Shot Weight(PS)	OZ	72.6	81.9	102.4
Injection Pressure	MPa	184	163	130
Screw L/D Ratio	L/d	22.3	21	19
Injection Stroke	mm	450		
Screw Rotary Speed max	rpm	144		
Nozzle Contact Force	KN	80		
Nozzle Stroke	mm	450		

CLAMPING UNIT

Clamping Force	KN	5600
Opening Stroke	mm	820
Platen Size	mmxmm	1250x1220
Space btw. Tie Bars	mmxmm	880x850
Daylight max	mm	1670
Mold Thickness(min-max)	mm	300-850
Ejection Stroke	mm	280
Ejector Force	KN	137.4
Ejector Pin	unit	8+8+4+1

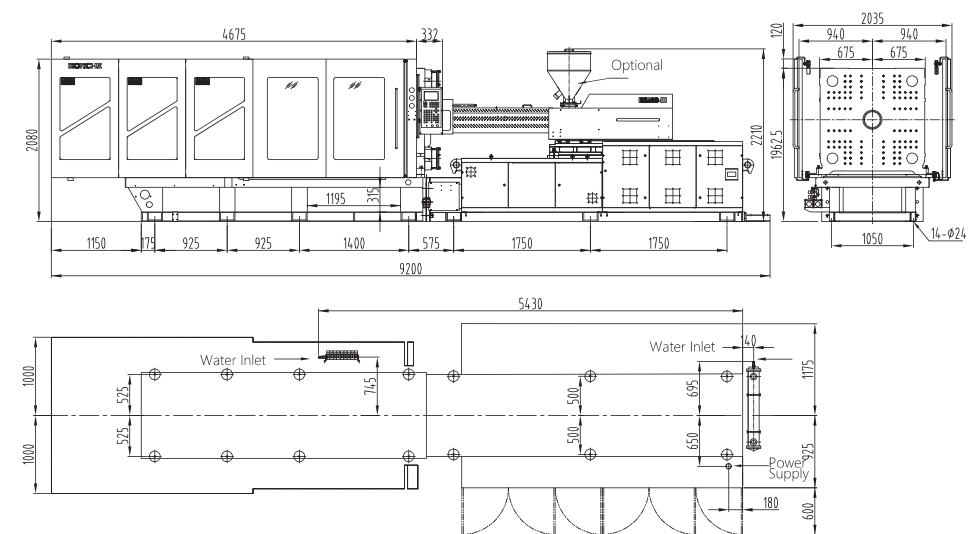
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	22+30
Heating Capacity	KW	31.7
No. of Heater Zones	unit	6

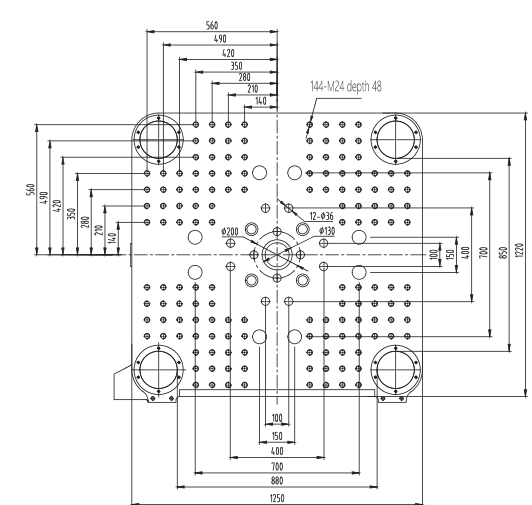
GENERAL UNIT

Oil Tank Capacity	L	1300
Machine Dimensions	mxmxm	9.09x2.18x2.21
Machine Weight	KG	21000

Appearance and Installation Dimensions



Mold Platen Drawing



BS650-III

BORCHE

DESCRIPTION

International Class NO. UNIT 4453/650

INJECTION UNIT

Screw Diameter	mm	80	90	100
Short Volume	cm ³	2261	2862	3534
Shot Weight(PS)	g	2125	2690	3321
Shot Weight(PS)	OZ	75.1	95.1	117.3
Injection Pressure	MPa	197	156	126
Screw L/D Ratio	L/d	23.5	21	19
Injection Stroke	mm		450	
Screw Rotary Speed max	rpm		120	
Nozzle Contact Force	KN		80	
Nozzle Stroke	mm		510	

CLAMPING UNIT

Clamping Force	KN	6500
Opening Stroke	mm	880
Platen Size	mmxmm	1310x1280
Space btw. Tie Bars	mmxmm	930x900
Daylight max	mm	1750
Mold Thickness(min-max)	mm	300-870
Ejection Stroke	mm	280
Ejector Force	KN	137.4
Ejector Pin	unit	8+8+4+1

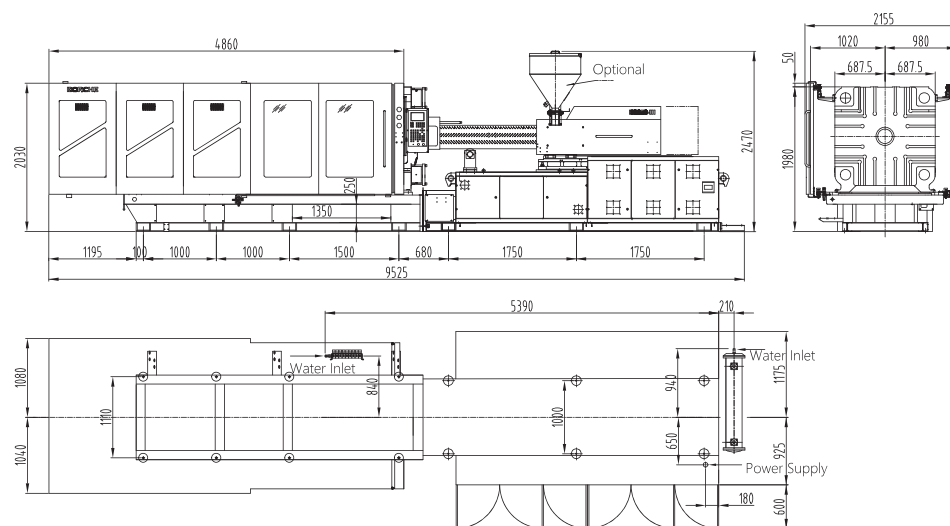
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	30x2
Heating Capacity	KW	33.5
No. of Heater Zones	unit	6

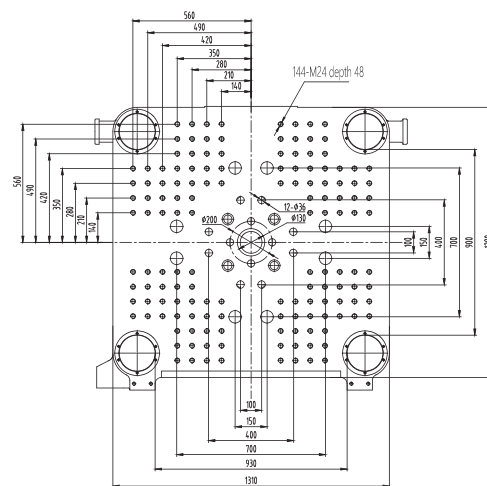
GENERAL UNIT

Oil Tank Capacity	L	1300
Machine Dimensions	mxmxm	953x222x247
Machine Weight	KG	24000

Appearance and Installation Dimensions



Mold Platen Drawing



BS800-III

BORCHE

DESCRIPTION

International Class NO.	UNIT	5700/800
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INJECTION UNIT

Screw Diameter	mm	90	100	105
Short Volume	cm ³	3181	3927	4329
Shot Weight(PS)	g	2987	3687	4065
Shot Weight(PS)	OZ	105.5	130.3	143.6
Injection Pressure	MPa	181	147	133
Screw L/D Ratio	L/d	25	22.5	21.4
Injection Stroke	mm		500	
Screw Rotary Speed max	rpm		117	
Nozzle Contact Force	KN		200	
Nozzle Stroke	mm		560	

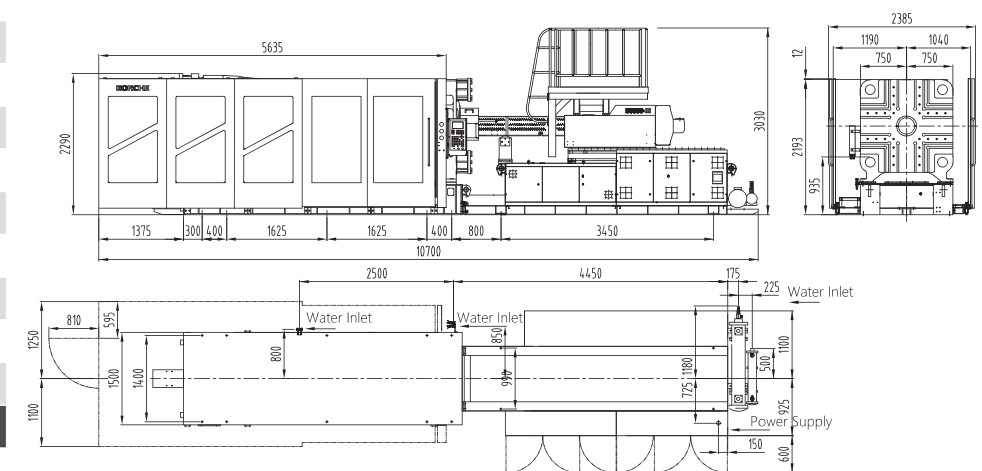
CLAMPING UNIT

Clamping Force	KN	8000
Opening Stroke	mm	1025
Platen Size	mmxmm	1470X1470
Space btw. Tie Bars	mmxmm	1010x1010
Daylight max	mm	2000
Mold Thickness(min-max)	mm	380-975
Ejection Stroke	mm	300
Ejector Force	KN	275
Ejector Pin	unit	8+8+4+1

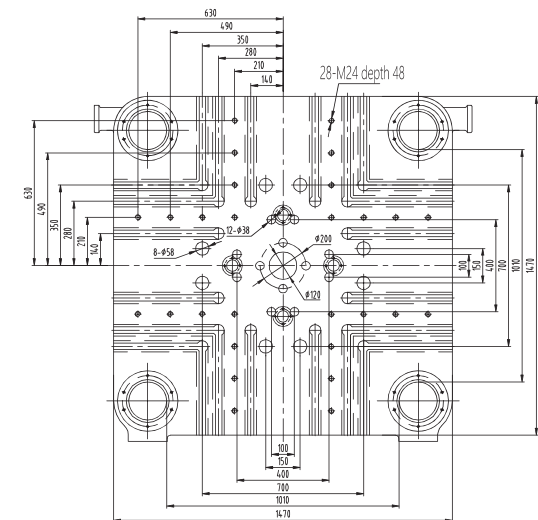
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	37x2
Heating Capacity	KW	40.9
No.of Heater Zones	unit	8
GENERAL UNIT		
Oil Tank Capacity	L	1400
Machine Dimensions	mmxmxm	10.53x2.39x3.03
Machine Weight	KG	35500

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	7550/1000
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INJECTION UNIT

Screw Diameter	mm	100	105	115
Short Volume	cm³	4123	4546	5453
Shot Weight(PS)	g	3871	4268	5120
Shot Weight(PS)	OZ	136.8	150.8	181
Injection Pressure	MPa	180	163	136
Screw L/D Ratio	L/d	23	22	20
Injection Stroke	mm	525		
Screw Rotary Speed max	rpm	112		
Nozzle Contact Force	KN	200		
Nozzle Stroke	mm	560		

CLAMPING UNIT

Clamping Force	KN	10000
Opening Stroke	mm	1150
Platen Size	mmxmm	1680X1620
Space btw. Tie Bars	mmxmm	1160x1100
Daylight max	mm	2250
Mold Thickness(min-max)	mm	450-1100
Ejecction Stroke	mm	350
Ejector Force	KN	275
Ejector Pin	unit	8+8+4+1

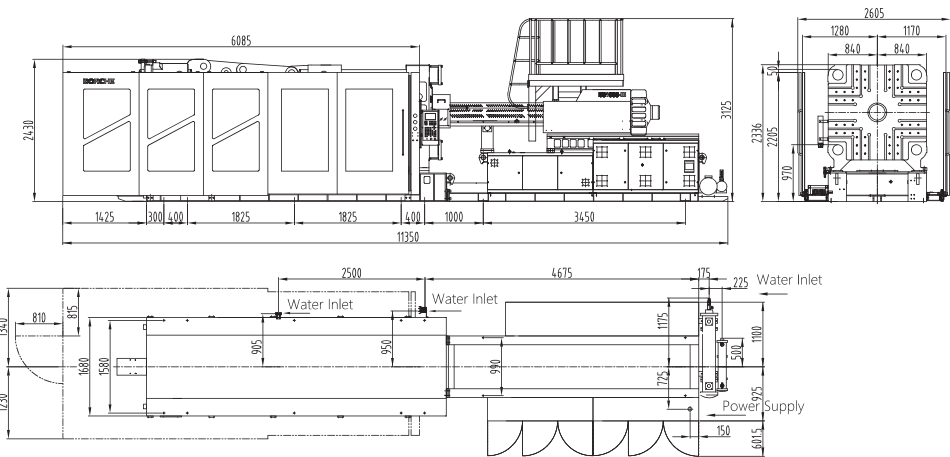
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	45x2
Heating Capacity	KW	47.1
No.of Heater Zones	unit	8

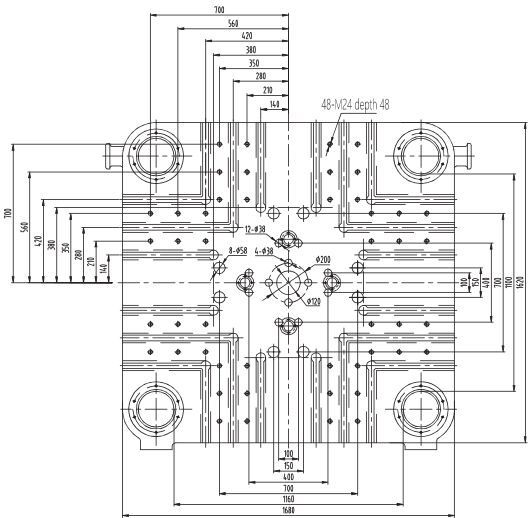
GENERAL UNIT

Oil Tank Capacity	L	1400
Machine Dimensions	mxmxm	11.18x2.6x3.13
Machine Weight	KG	48000

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	11500/1300
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INJECTION UNIT

Screw Diameter	mm	105	115	130
Short Volume	cm³	5195	6232	7964
Shot Weight(PS)	g	4727	5671	7247
Shot Weight(PS)	OZ	167	200	256
Injection Pressure	MPa	222	185	145
Screw L/D Ratio	L/d	24	22	19.5
Injection Stroke	mm	600		
Screw Rotary Speed max	rpm	110		
Nozzle Contact Force	KN	200		
Nozzle Stroke	mm	750		

CLAMPING UNIT

Clamping Force	KN	13000
Opening Stroke	mm	1300
Platen Size	mmxmm	1760X1760
Space btw. Tie Bars	mmxmm	1250x1250
Daylight max	mm	2550
Mold Thickness(min-max)	mm	600-1250
Ejecction Stroke	mm	380
Ejector Force	KN	303
Ejector Pin	unit	8+8+4+1

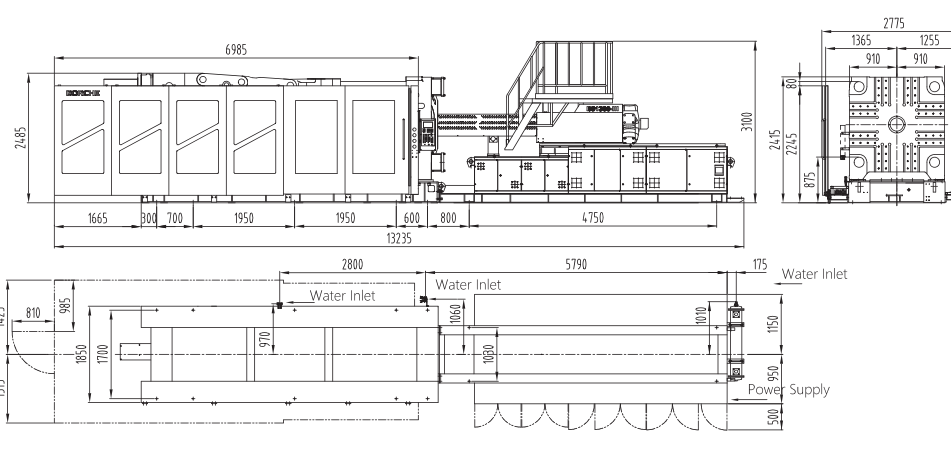
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	45+37x2
Heating Capacity	KW	55.2
No.of Heater Zones	unit	9

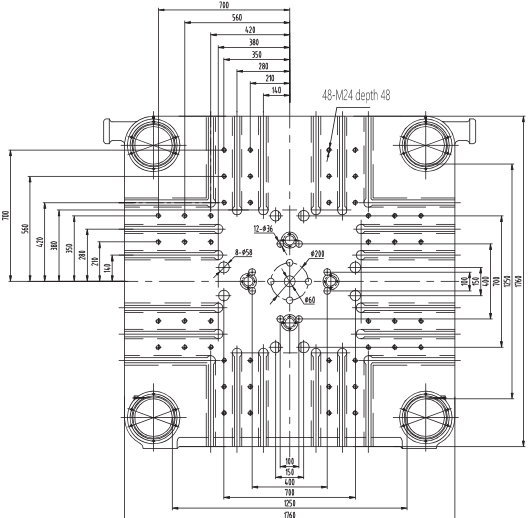
GENERAL UNIT

Oil Tank Capacity	L	1850
Machine Dimensions	mxmxm	12.7x2.77x3.1
Machine Weight	KG	64500

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	13500/1600
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INJECTION UNIT

Screw Diameter	mm	115	130	140
Short Volume	cm³	6751	8628	10006
Shot Weight(PS)	g	6144	7851	9105
Shot Weight(PS)	OZ	216.7	246.9	321.2
Injection Pressure	MPa	200	156	135
Screw L/D Ratio	L/d	25	22	20.4
Injection Stroke	mm	650		
Screw Rotary Speed max	rpm	90		
Nozzle Contact Force	KN	200		
Nozzle Stroke	mm	750		

CLAMPING UNIT

Clamping Force	KN	16000
Opening Stroke	mm	1550
Platen Size	mmxmm	2140x2040
Space btw. Tie Bars	mmxmm	1480x1380
Daylight max	mm	2950
Mold Thickness(min-max)	mm	700-1400
Ejecction Stroke	mm	380
Ejector Force	KN	303
Ejector Pin	unit	8+8+8+4+1

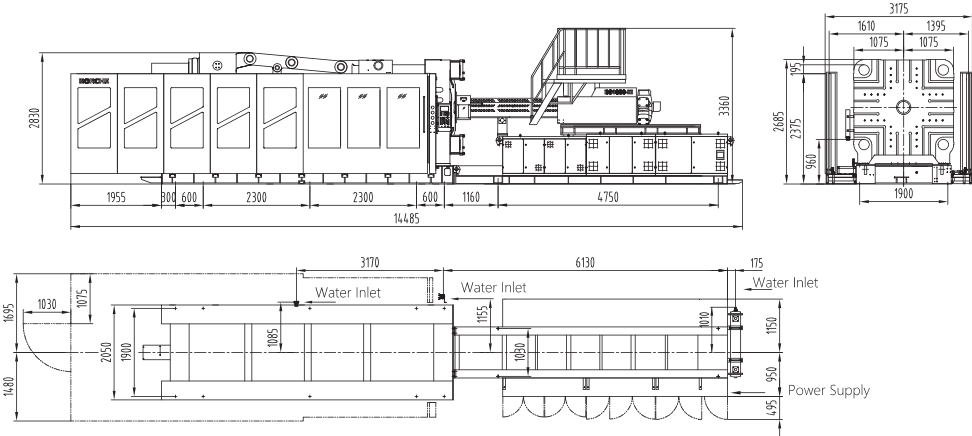
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	45x2+37
Heating Capacity	KW	78
No.of Heater Zones	unit	9

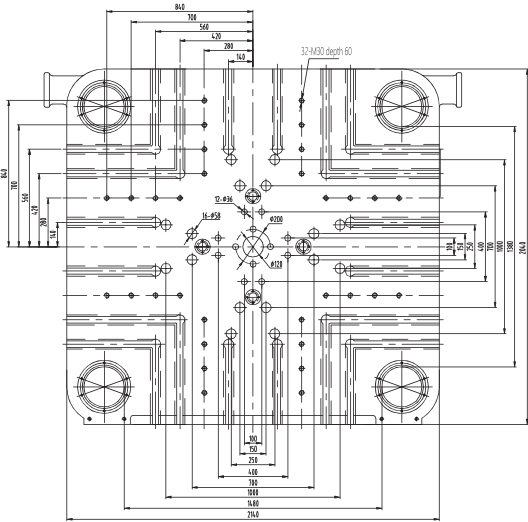
GENERAL UNIT

Oil Tank Capacity	L	1850
Machine Dimensions	mxmxm	13.9x3.17x3.36
Machine Weight	KG	93500

Appearance and Installation Dimensions



Mold Platen Drawing



DESCRIPTION

International Class NO.	UNIT	16600/1800
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INJECTION UNIT

Screw Diameter	mm	130	140	150
Short Volume	cm³	9291	10776	12370
Shot Weight(PS)	g	8455	9806	11257
Shot Weight(PS)	OZ	298.2	345.9	397.1
Injection Pressure	MPa	191	164	143
Screw L/D Ratio	L/d	24	22	20
Injection Stroke	mm	700		
Screw Rotary Speed max	rpm	85		
Nozzle Contact Force	KN	200		
Nozzle Stroke	mm	920		

CLAMPING UNIT

Clamping Force	KN	18000
Opening Stroke	mm	1650
Platen Size	mmxmm	2220X2100
Space btw. Tie Bars	mmxmm	1600x1480
Daylight max	mm	3150
Mold Thickness(min-max)	mm	800-1500
Ejecction Stroke	mm	380
Ejector Force	KN	303
Ejector Pin	unit	8+8+8+4+1

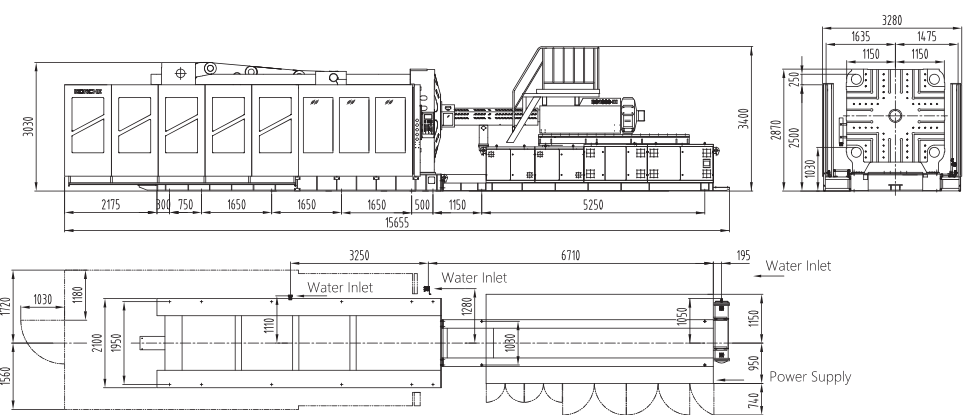
POWER UNIT

System Pressure	MPa	17.5
Pump Motor	KW	45X3
Heating Capacity	KW	78.5
No.of Heater Zones	unit	9

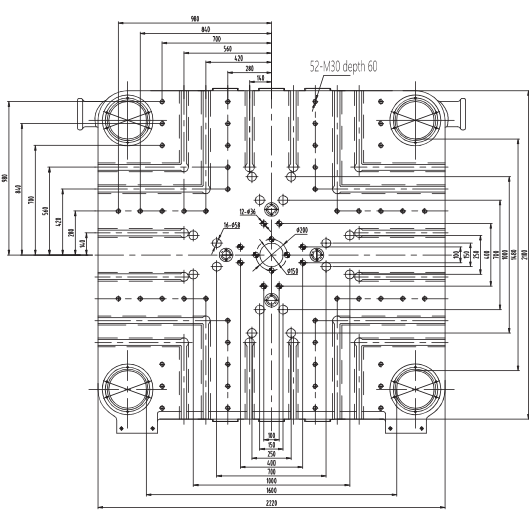
GENERAL UNIT

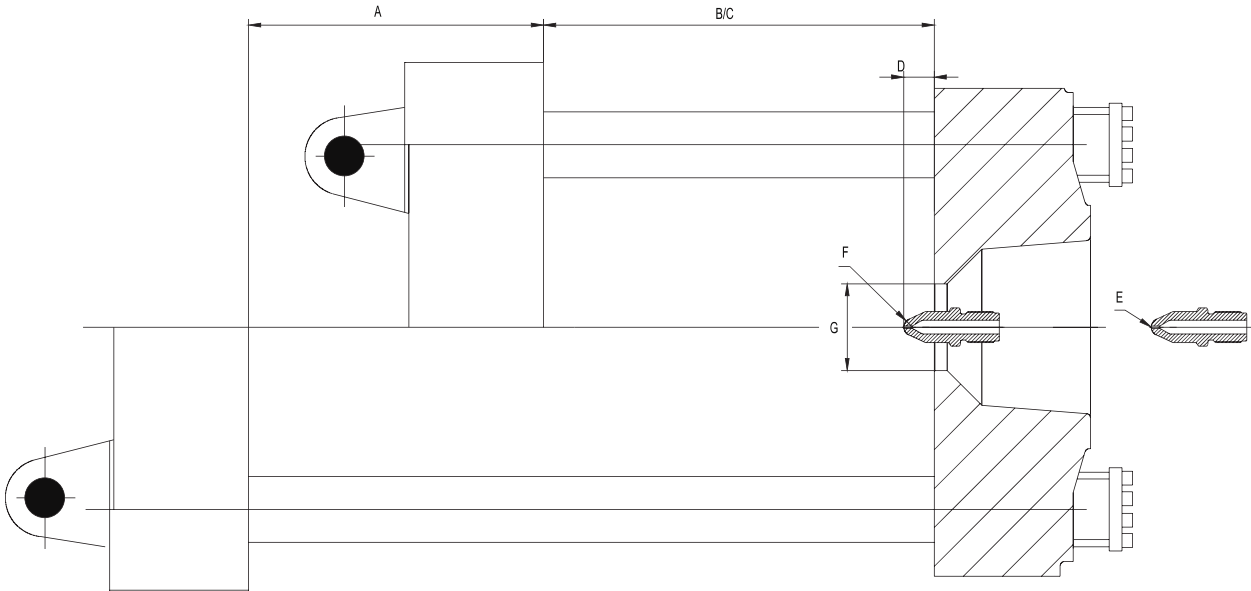
Oil Tank Capacity	L	2400
Machine Dimensions	mxmxm	15.1x3.28x3.4
Machine Weight	KG	100000

Appearance and Installation Dimensions



Mold Platen Drawing

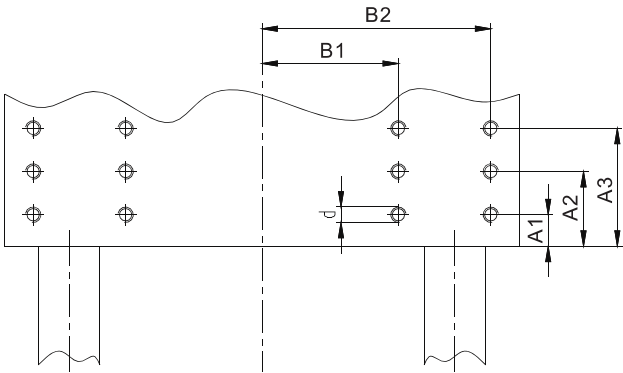




Clamping Unit Schematic Drawing

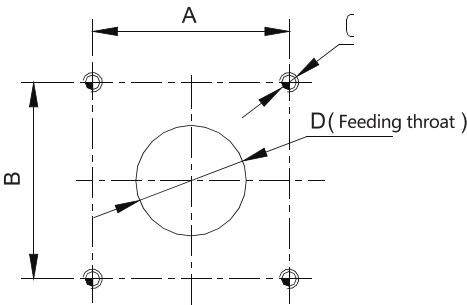
	BS60-III	BS80-III	BS120-111	BS150-III	BS200-III	BS260-III	BS320-III	BS400-III	BS500-III	BS560-III	BS650-III	BS800-III	BS1000-III	BS1300III	BS1600-III	BS1800-III
A (Opening stroke)	270	320	340	410	465	520	580	655	755	820	880	1025	1150	1300	1550	1650
B (Max. mold thickness)	300	360	450	500	550	600	655	720	800	850	870	975	1100	1250	1400	1500
C (Min. mold thickness)	130	130	145	160	180	195	220	245	265	300	300	380	450	600	700	800
D (The distance of nozzle extension inside fixed platen)	30	35	35	45	45	45	45	45	50	50	50	50	50	50	50	50
E (Dia. Of nozzle hole)	2.5	3	3	3	4	4	4	4	5	5	5	5	5	6	6	7
F (Radius of nozzle sphere)	10	10	10	10	10	10	10	10	10	10	10	10	10	15	15	20
G (Dia. of locating ring)	100*	125	125	125	160	160	160	160	200	200	200	250	250	250	250	250

* : No locating ring available



Robot Installation Dimension

	BS80-III	BS120-111	BS150-III	BS200-III	BS260-III	BS320-III	BS400-III	BS500-III	BS560-III	BS650-III	BS800-III	BS1000-III	BS1300III	BS1600-III	BS1800-III
A1	17.5	35	35	35	35	35	35	35	35	35	70	70	70	70	70
A2	52.5	105	105	105	175	175	175	175	175	175	175	175	175	175	210
A3	—	—	—	—	—	—	—	—	—	—	280	280	280	280	350
B1	140	140	175	175	210	280	350	350	350	420	420	420	560	560	700
B2	210	245	280	280	350	420	490	490	490	560	630	700	840	840	980
d	M12	M16	M16	M16	M20	M20	M20	M20	M20	M20	M24	M24	M24	M24	M24



Hopper Dryer Installation Dimension

	BS80-III	BS120-111	BS150-III	BS200-III	BS260-III	BS320-III	BS400-III	BS500-III	BS560-III	BS650-III	BS800-III	BS1000-III	BS1300III	BS1600-III	BS1800-III
A/mm	80	80	90	90	110	110	130	130	130	130	160	160	214	214	214
B/mm	80	80	95	95	110	110	130	130	130	130	160	160	214	214	214
C/mm	M10	M8	M8	M8	M10	M10	M10	M10	M10	M10	M12	M12	M16	M16	M16
D/mm	ø45	ø50	ø50	ø60	ø70	ø70	ø90	ø90	ø90	ø90	ø110	ø110	ø150	ø150	ø150

Standard Features

SAFETY UNIT		
1	New National Safety Standard (≥260T)	•
2	European technical standard totally enclosed cover(≥260T)	•
3	Double emergency button	•
4	Safety platform under mold area (≥800T)	•
5	Mechanical safety lock device(≤200T)	•

CLAMPING UNIT		
1	5 points-doubt toggle structure	•
2	Tie bar with high intensity chromeplate technics	•
3	Separate lock ring on fixed platen	•
4	Extra-large space for ejection operation	•
5	Anti-abrasion strip	•
6	Centralized Lubrication system with end position pressure monitoring	•
7	Low pressure mold protection system	•
8	Automatic mold clamping force adjustment function	•
9	Mold adjustment gear ring driven by hydraulic motor	•
10	Multi-hydraulic ejection device	•
11	Robot interface	•
12	Automatic safety door (≥800T)	•

HYDRAULIC UNIT		
1	Servo control	•
2	Servo power saving system	•
3	Low pressure mold protection function	•
4	Fast speed clamp locking system	•
5	Oil level indicator and oil temperature detector	•
6	High efficiency heat exchanger	•
7	Oil temperature alarm device	•
8	Plasticizing back pressure	•
9	Self-closed type absorb oil filter (≥400T)	•
10	Iron-separator	•

INJECTION UNIT		
1	Double carriage structure	•
2	Double injection cylinder	•
3	High abrasion resistance screw and barrel	•
4	Nozzle center adjust device	•
5	Barrel protection cover	•
6	Injection unit adopts linear guide rail	•
7	Movable hopper support up to 650T	•
8	Feeding platform above 800T	•
9	Three size screw and barrel available	•
10	High-torque hydraulic motor drive screw	•
11	Screw speed testing device	•
12	Plasticizing Screw cold protection	•
13	Screw backward function	•
14	Five stages for injection control, pressure/speed can be adjusted	•
15	Three stages for holding control, pressure/speed can be adjusted	•
16	Three stages for plasticizing control, pressure/speed can be adjusted	•

CONTROL UNIT		
1	Transducer	•
2	KEBA controller	•
3	Malfunction self-diagnosis system	•
4	Emergency stop both at operation and nonoperation side	•
5	Multi-language (Standard with Chinese and English)	•
6	SPC quality control	•
7	Auto purge function	•
8	Clocking heating function	•
9	Fuse protection for heater band power leakage	•
10	PID program for hearting	•
11	Data protect lock	•
12	Parameter quick settings	•
13	Robot interface	•

Optional Features

SAFETY UNIT		
1	CE safety standard	○
2	Main power with rotation handle	○
3	Mechanical safety lock device(≥260T)	○
4	Core pulling with pressure relief function	○

CONTROL UNIT		
1	Robot interface	○
2	Voltage stabilizer	○
3	Hot runner control	○
4	Phase protection	○
5	Multi sets sockets	○
6	Electricity meter	○
7	Special power voltage	○

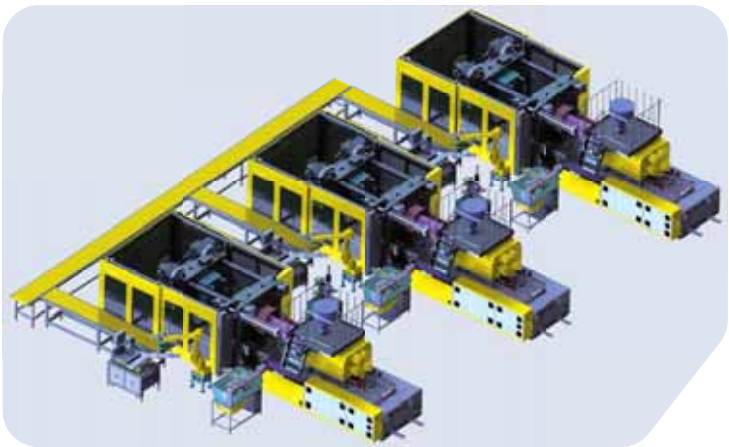
INJECTION UNIT		
1	Bi-metallic screw	○
2	Chrome plated screw	○
3	PC screw	○
4	Bi-metallic screw and barrel	○
5	PET machine	○
6	UPVC machine	○
7	Enlarged one stage injection unit	○
8	Decrease one stage injection unit	○
9	Extended nozzle	○
10	Shut off nozzle (Hydraulic/ Pneumatic)	○
11	Feeding throat temperature detect and control	○
12	Enlarge one stage hydraulic motor	○
13	Carriage transducer	○
14	Ceramic heater band	○
15	Infrared energy saving heater band	○
16	Manual centralized lubrication for injection unit	○
17	Stainless steel hopper	○

CLAMPING UNIT		
1	Multiple sets hydraulic core pulling	○
2	Hydraulic unscrewing	○
3	T slot platen (≤800 T)	○
4	Multiple sets air blower	○
5	Enlarged mold thickness	○
6	Mechanical position control for mold open	○
7	Quick change of central ejector pin	○
8	Special size mold locking ring	○
9	Graphite copper bush on moving platen	○
10	Transducer on moving platen	○
11	Manual centralized lubrication for rear platen	○
12	4 in-4 out water regulator	○
13	Photo sensor	○
14	Extra water manifold	○
15	Alarm lights	○

HYDRAULIC UNIT		
1	Proportional back pressure (≤1000 T)	○
2	Close loop cooling system	○
3	Filter on heat exchanger inlet	○
4	Enlarge one stage motor and pump	○
5	VDP system	○
6	Ejector on fly	○
7	Parallel charging	○
8	High pressure bypass oil filter (≤500 T)	○
9	High speed proportional valve for Injection	○
10	High speed proportional valve for locking	○
11	Oil level low limit alarm	○
12	Pressure sensor for injection	○
13	Ball valve at suction port (≤320 T)	○
14	Enlarge one stage heat exchanger	○

Optional Functions Of Intelligent Manufacturing:	
1	With Industry 4.0 on IMM, three mold change ways can be realized with mold change platform: one-stop automatic mold change, semi-automatic mold change and manual mold change. IMM can automatically 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 hydraulic clamp. 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 interconnection.
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 reduce 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	iPHM, IMM Prognoses and Health Management (Equipment Online Doctor) 1) Safe and reliable bidirectional terminal is equipped with built-in firewall and remote VPN connection; various networking is available. Cloud platform connects IMM controller in real-time 2) Data of equipment operation, malfunction alarm and worker operation is collected in real time.IMM data visualization on Cloud Platform is realized. 3) Self diagnose module of failure and performance based one the dynamic data, can reduce the malfunction rate, and improve the equipment performance. 4) Operation and maintenance system connects the on-line management platform of after-sales service. It realizes remote on-line program upgrading, and improves the maintenance efficiency and quality. 5) IMM condition and performance report can be checked through mobile terminal; After-sales service request can be reported via WeChat.
11	Mold Visual Monitor 1) Low pressure mold protection for higher precision and efficiency 2) CAccurate 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 carried out worldwide in IMM industry.



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

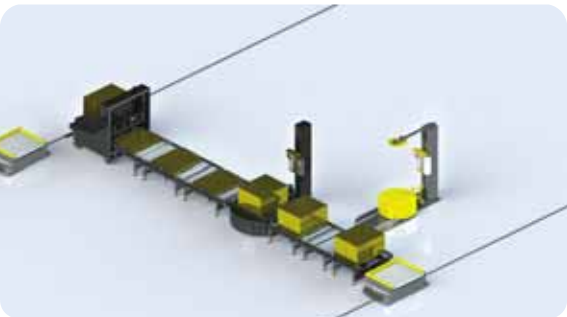
Visual Detective System



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



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





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