



**BORCHÉ**  
BT SERIES



**BORCHÉ**



[www.borchenorthamerica.com](http://www.borchenorthamerica.com)




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## BT SERIES

ENERGY EFFICIENT. DURABLE. PRECISE. COST EFFECTIVE

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## COMPANY BACKGROUND

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Borche was established in 2003 and has quickly grown to become one of the largest injection molding machine manufacturers in the world.

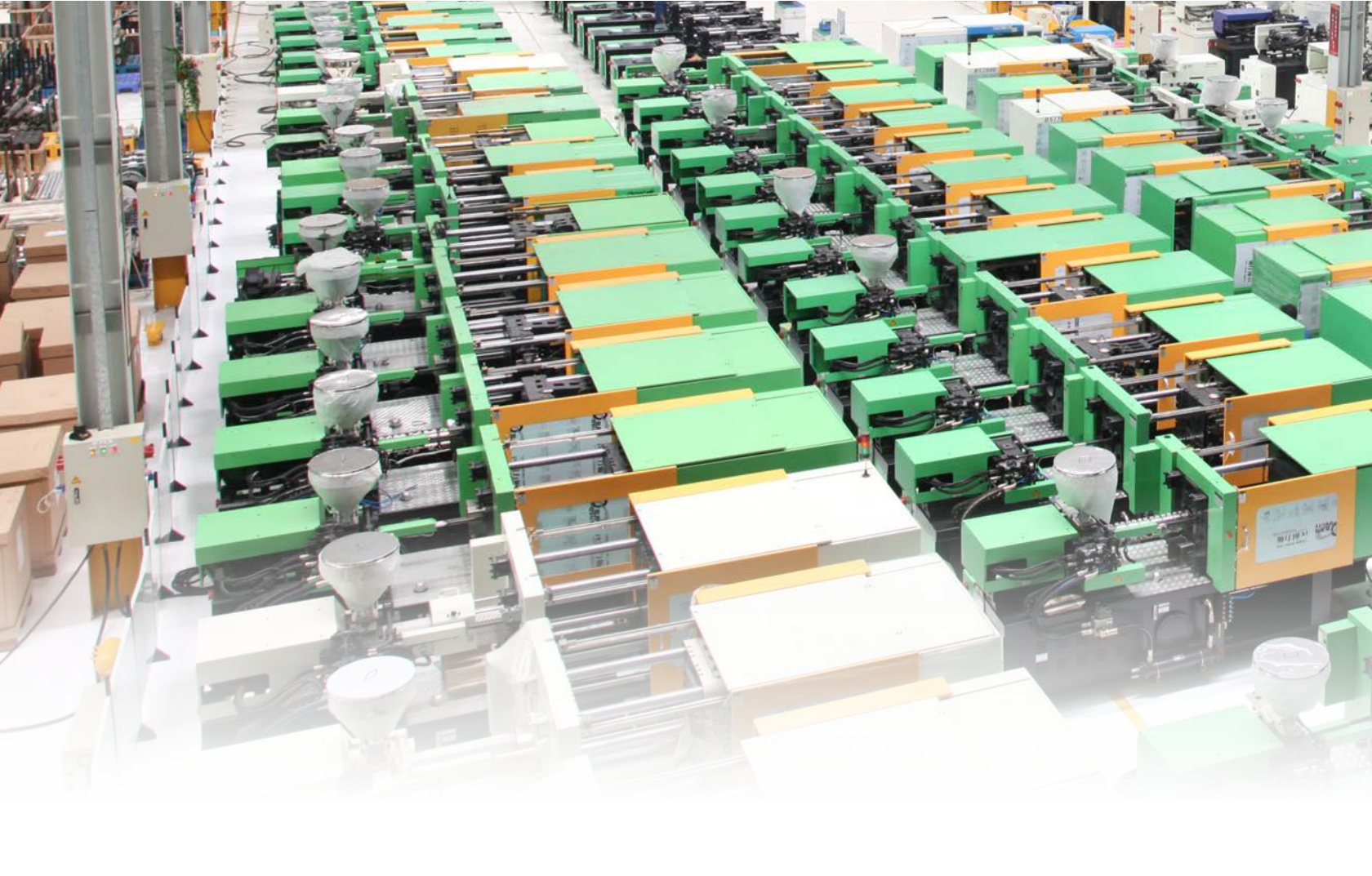
Our 1,800,000 square foot factory is equipped with the latest machining equipment from Japan, Korea and the United States, which enables us to produce over 10,000 precision molding machines per year.

When you choose Borche machinery, you'll quickly appreciate our customer service, realize increased productivity, energy savings and local support that can only be obtained from a dealer located in North America.

Combined with unbeatable pricing, what else is there to think about?

Contact us today and join the thousands of other companies who rely on Borche every day to drive their business forward.





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## CUSTOMER SERVICE

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Borche machines are designed to last several decades so it is important for our customers to know they have a local and reliable service partner.

Borche service will take care of your investments throughout its life cycle; from installation and startup → training of technicians → preventative maintenance → technical support, spare parts warehousing and online diagnostics.

### **INSTALLATION AND SETUP:**

Borche will assist you in setting up and installing the machine in your factory.

Our technicians will train your staff on how to optimally use your machine and guide you through suggested maintenance.

### **SPARE PARTS:**

From our warehouse in Hamilton, Ontario, Borche can supply your company with high quality original spare parts, should the need arise. We understand the importance of uptime and guarantee quick delivery of all standard parts.

### **PREVENTATIVE MAINTENANCE:**

On a yearly basis, Borche will send one of our technicians to do a complete walkthrough inspection, and calibration analysis of your machine to ensure repeatability, minimize maintenance cost and maximize uptime.



UNBEATABLE PRICING

NORTH AMERICAN  
PARTS WAREHOUSING

FAST DELIVERY

WHAT'S THERE TO  
THINK ABOUT?

NORTH AMERICAN  
SERVICE

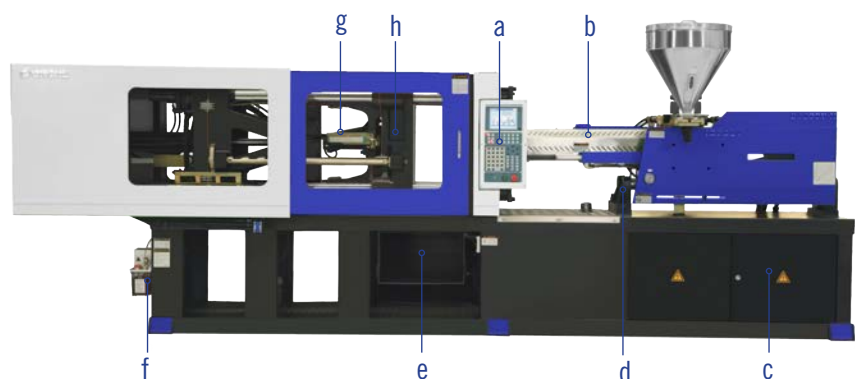
NORTH AMERICAN  
SUPPORT





## FEATURES

- a. Keba controller - See page 11
- b. Swivel injection unit for easy access to the barrel and screw
- c. Energy efficient Japanese piston pump combined with low, power consumption holding and cooling settings can decrease power consumption up to 80% over conventional machines
- d. Linear guiderails, built-in carriage cylinder and integral castings ensure proper nozzle alignment
- e. Large part drop-out area allows for easy part removal and use of conveyors
- f. Auto grease lubrication standard on all machines
- g. SPI pattern ejection
  - Easy access to ejector area
  - knock out bar for multi-point ejection
- h. SPI standard bolt pattern



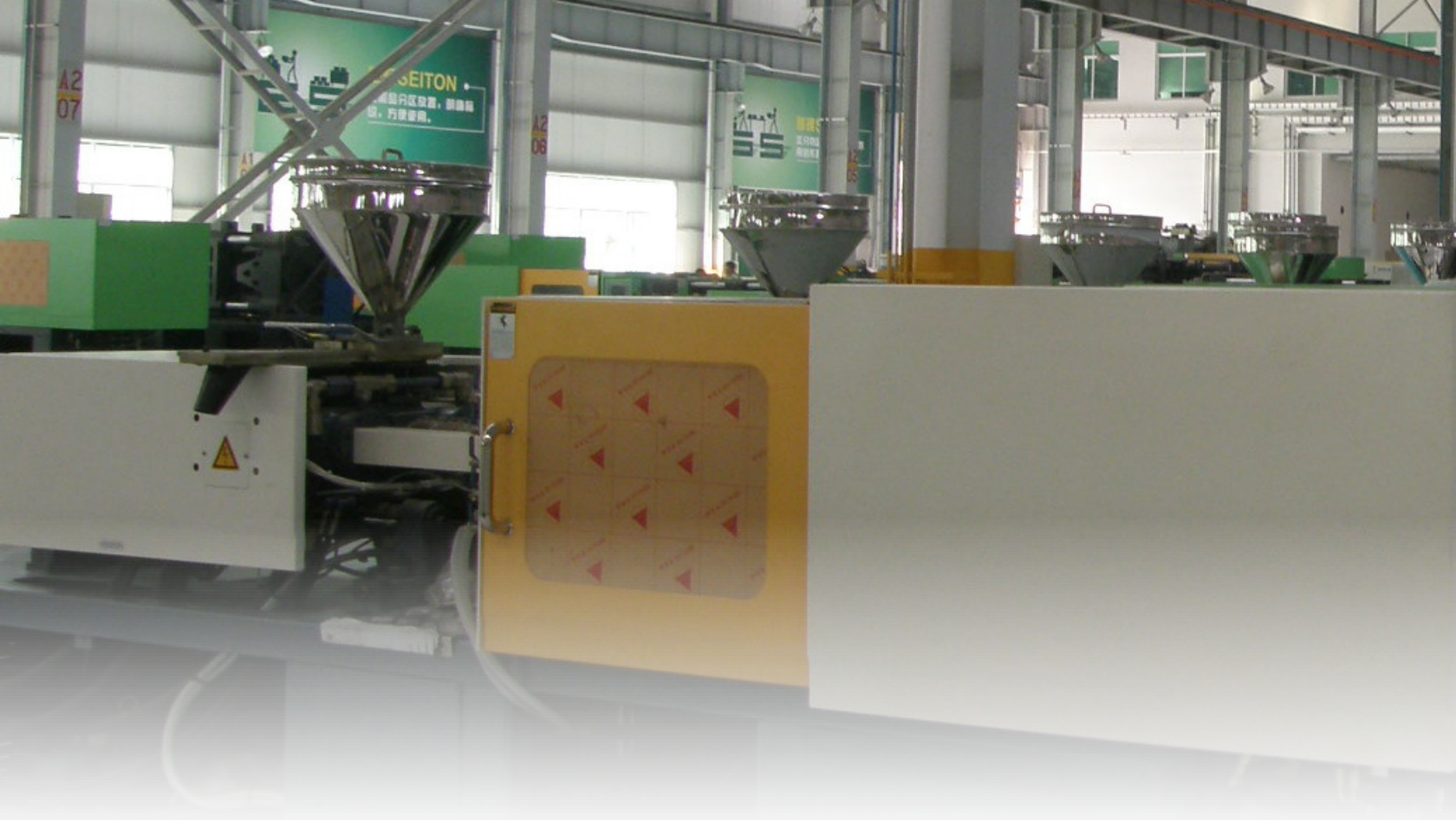




## MAJOR HYDRAULIC/ELECTRIC COMPONENTS

COMPONENTS	BRAND	ORIGIN
FIXED DISPLACEMENT PUMP	YUKEN	JAPAN
DIRECTIONAL VALVE	REXROTH / YUKEN	GERMANY / JAPAN
3-PHASE BREAKER	ABB	SWITZERLAND
AC CONTACTOR	SCHNEIDER	FRANCE
THERMAL OVERLOAD RELAY	SCHNEIDER	FRANCE
RELAY	SCHNEIDER	FRANCE
LINEAR TRANSDUCER	GEFRAN	ITALY
SAFETY SWITCH	SCHMERSA	GERMANY
POSITION SWITCH	SICK	GERMANY
SWITCHING POWER	MEAN WELL	TAIWAN
COMPUTER CONTROLLER	KEBA	AUSTRIA

THE ABOVE DATA IS FOR REFERENCE ONLY. SUBJECT TO CHANGE WITHOUT NOTICE.



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## CONTROLLER

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- 8" screen TFT colour display
- SPC cycle trace function for managing and analyzing product quality
- Dynamic graphic display of temperature
- Alarm record and data revision record
- Auto-tune PID temperature control
- IO extension
- Pre-heating & heat guarding function
- Auto-purging function
- Data-locking function
- Screw cold start prevention
- Linear adjustment of the proportional valve
- Parallel movement control
- Automatic adjustment of clamping force
- Automatic mold height adjustment
- Static monitor and alarm functions for injection end position; injection time, cushion position, mold open and close position
- Alarm system for controller hardware and mechanical error
- Mold protection
- Shot counter
- Adopted dual core CPU for high speed and precision control
- USB interface for load & save machine and mold data
- Ability to download modified programs
- Multi-core pull





## KEBA

KEBA AG is a leading manufacturer of computer controller systems. The KEBA controller was specifically developed in Austria for use in Borche injection molding machines.

- **Online monitoring of machine controls and functions allows Borche to provide real-time technical support and service over the internet**
- Large coloured screen with TFT interface
- PC interface (USB, PCI, Flash...)
- Full Automatic Close-Loop Control
- Online Central Monitoring Function
- Module Design of Hardware
- K-CAN Data Transmission
- Curve Monitoring and Analysis Function
- Auto-Tune PID Temperature Control

# SPECIFICATIONS

DESCRIPTION [UNIT]	INTERNATIONAL																				
	153/60			252/80			388/120			634/150			849/200			1367/260			1367/270		
	MODEL																				
	BT60			BT80			BT120			BT150			BT200			BT260			BT270		

## INJECTION UNIT

SHOT VOLUME [cm <sup>3</sup> ]	68	86	120	163	212	182	238	302	270	341	422	389	481	692	589	848	1154	589	848	1154
SHOT WEIGHT(PS) [g]	60	78	113	153	199	171	225	283	254	321	397	365	452	650	552	800	1058	552	800	1091
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	19.5	28.3	27.9
SCREW DIAMETER [mm]	25	28	30	35	40	35	40	45	40	45	50	45	50	60	50	60	70	50	60	70
INJECTION PRESSURE [MPa]	223	178	209	154	118	212	162	128	235	185	150	218	176	123	232	161	118	232	161	118
INJECTION RATE [cm <sup>3</sup> /s]	54	68	58	79	103	85	111	141	96	122	151	130	161	232	159	229	311	168	242	329
SCREW L/D RATIO	22	22	24	20.5	18	23.5	20.5	18	23	20.5	18.5	23	21	17	25	21	18	25	21	18
SCREW STROKE [mm]	140		170			190			215			245			300			300		
SCREW SPEED [rpm]	260		178			188			206			149			166			166		
NOZZLE CONTACT FORCE [KN]	42		42			50			50			50			65			50		
NOZZLE STROKE [mm]	205		250			250			250			250			350			370		

## CLAMPING UNIT

CLAMPING FORCE [KN]	600	800	1200	1500	2000	2600	2700
OPENING STROKE [mm]	270	320	340	410	465	520	300
PLATEN SIZE [mmxmm]	540 x 540	540 x 540	610 x 610	670 x 670	750 x 750	835 x 835	810 x 955
SPACE BETWEEN TIE BARS [mmxmm]	310 x 310	360 x 360	410 x 410	460 x 460	510 x 510	580 x 580	510 x 660
MAX. DAYLIGHT [mm]	570	680	790	910	1015	1120	840
MOLD THICKNESS (MIN.-MAX.) [mm]	130-300	130-360	145-450	160-500	180-550	195-600	220-540
HYDRAULIC EJECTION STROKE [mm]	80	100	100	130	150	180	100
HYDRAULIC EJECTION FORCE [KN]	28.5	28.5	34.4	41.6	49.5	77.3	77.3
EJECTOR PIN [unit]	4+1	4+1	4+1	4+1	4+1	12+1	8+1

## POWER UNIT

HYDRAULIC SYSTEM PRESSURE [Mpa]	14.5	14.5	17.5	17.5	17.5	17.5	17.5
PUMP MOTOR [kw]	7.5	7.5	11	15	18.5	22	22
HEATING CAPACITY [kw]	4.85	6.5	8.86	9.655	10.435	16.25	9.76
TEMP. CONTROL ZONE [unit]	4	4	4	5	5	6	5

## GENERAL UNIT

OIL TANK CAPACITY [L]	160	160	160	260	315	720	880
MACHINE DIMENSIONS [mxmxm]	4.03x1.1x1.76	4.3 x 1.13 x 1.63	4.25 x 1.2 x 1.7	4.85 x 1.24 x 1.85	5.36 x 1.3 x 1.9	6.12 x 1.45 x 2	6.71 x 1.56 x 2.05
MACHINE WEIGHT [Kg]	2600	3000	3500	4500	6000	8500	8500



STANDARD SPECIFICATION

2239/320	3266/400	3525/500	4161/560	4453/650	5733/800	7273/1000	9256/1380	16600/1800
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BT320	BT400	BT500	BT560	BT650	BT800	BT1000	BT1380	BT1800
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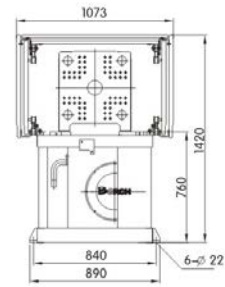
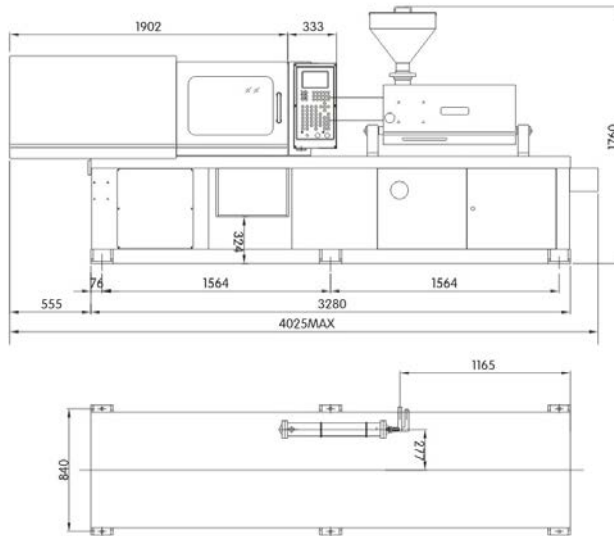
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928	1266	1652	1446	1890	2366	1764	2267	2830	2058	2323	2902	2125	2690	3321	2987	3687	4065	3871	4268	5120	4675	5607	7166	8451	9801	11251			
32.8	44.7	58.4	51.1	66.8	82.5	62.3	80.1	100	72.6	81.9	102.4	75.1	95.1	117.3	105.5	103.3	143.6	136.8	150.8	180.9	165.2	198.1	253.2	298.1	345.6	396.8			
60	70	80	70	80	90	75	85	95	80	85	95	80	90	100	90	100	105	100	105	115	105	115	130	130	140	150			
226	166	127	212	162	128	209	163	130	184	163	130	197	156	126	180	140	132	177	160	133	185	155	121	179	155	134			
233	317	414	279	364	461	351	451	563	388	438	547	456	577	712	616	760	838	700	771	925	997	1196	1529	1355	1572	1804			
24.5	21	18.5	24	21	19	24	21	19	22.3	21	18.8	23.5	21	19	24	22	20	23	22	20	24	22	19.5	22	20.4	19			
350			400			425			450			450			500			525			575			700					
159			119			132			132			138			120			120			115			90					
120			140			140			140			140			200			200			200			200					
360			395			450			450			510			540			540			540			750			900		

3200	4000	5000	5600	6500	8000	10000	13800	18000
580	655	755	820	880	1025	1150	1300	1460
950 x 950	1060 x 1030	1165 x 1135	1210 x 1180	1340 x 1310	1430 x 1430	1680 x 1680	1870 x 1870	2240 x 2230
670 x 670	730 x 700	830 x 800	880 x 850	930 x 900	1000 x 1000	1100 x 1100	1250 x 1250	1500 x 1360
1235	1375	155	1670	1750	2000	2250	2550	2960
220-655	245-720	265-800	300-850	300-870	380-975	450-1100	600-1250	550-1500
180	205	250	280	280	300	350	380	350
77.3	111.3	111.3	111.3	137.4	289	289	309	470
12+1	12+1	12+1	12+8+1	12+8+1	12+8+1	12+8+1	12+8+1	16+12+1

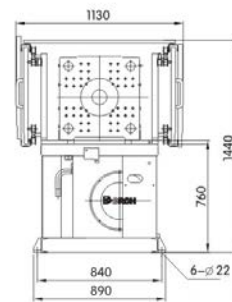
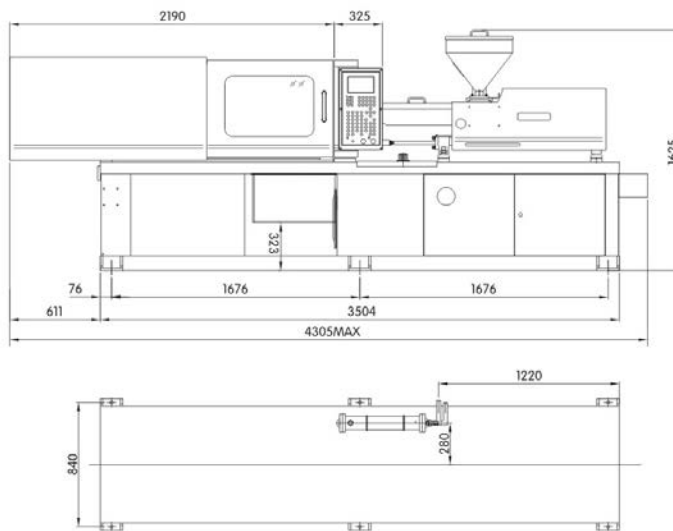
17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
30	37	22x2	22x2	37+18.5	30x2	37x2	2237x3	2237x4
18.49	24.48	31.7	31.7	33.5	40.9	49	59	68.32
6	6	6	6	6	7	7	8	7

820	1080	1195	1300	1600	1700	2000	2700	3250
7.57 x 1.7 x 1.94	8.35 x 1.95 x 1.88	8.35 x 1.95 x 1.88	8.8 x 1.98 x 2.35	8.76 x 1.89 x 2.2	10.3 x 2.4 x 2.5	11.19 x 2.58 x 2.85	13.4 x 2.8 x 2.96	15.9 x 3.4 x 4.83
13000	16000	20000	23000	25000	42000	51000	72000	116000

# DIMENSIONS

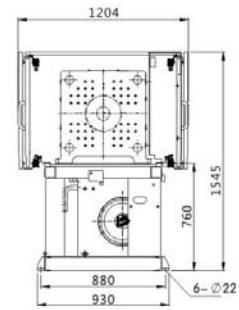
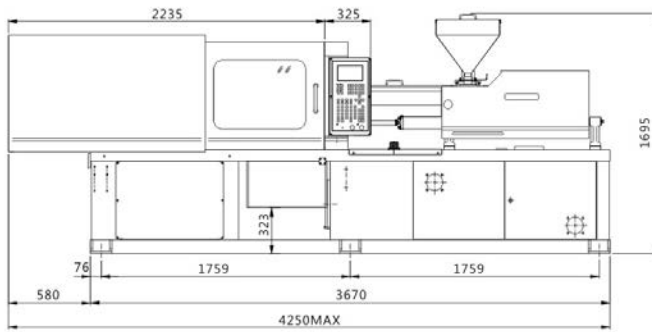


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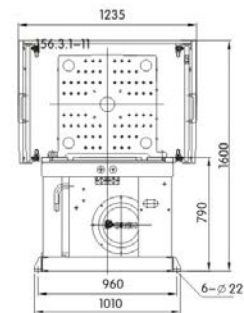
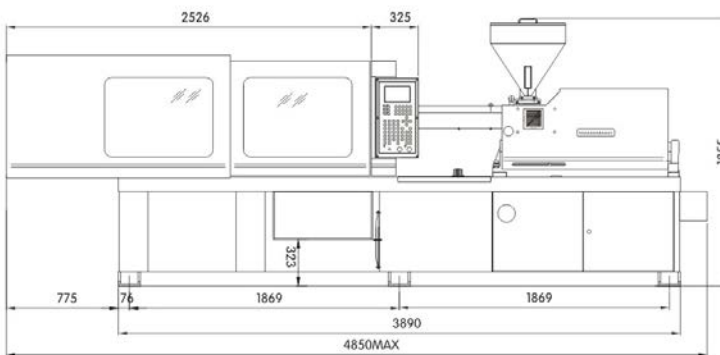
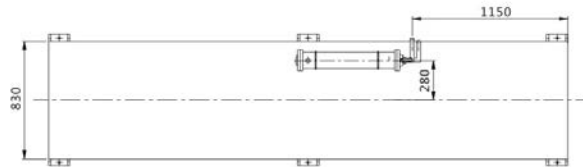


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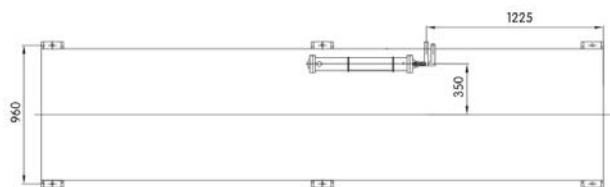




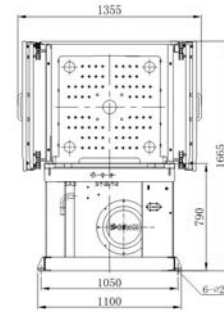
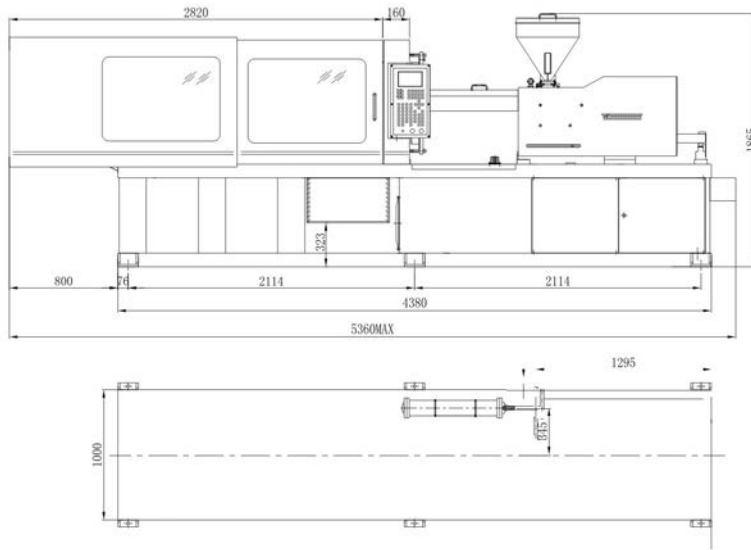
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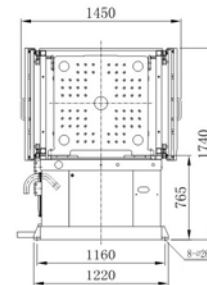
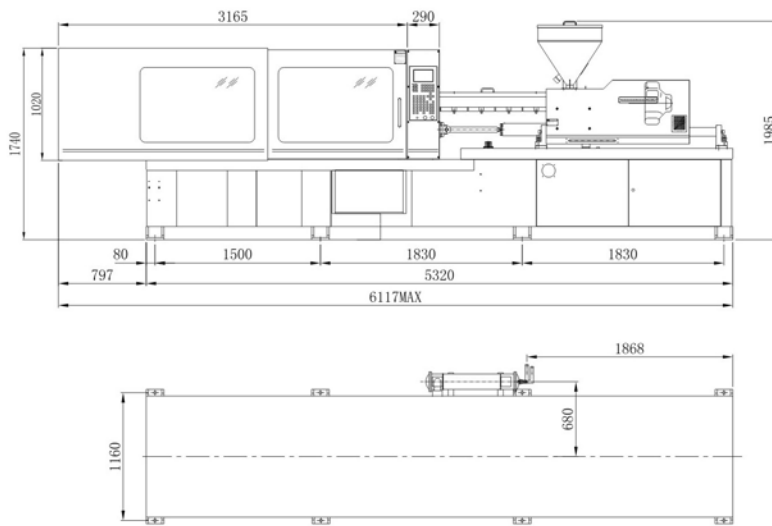
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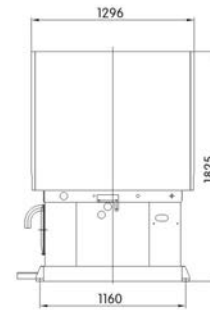
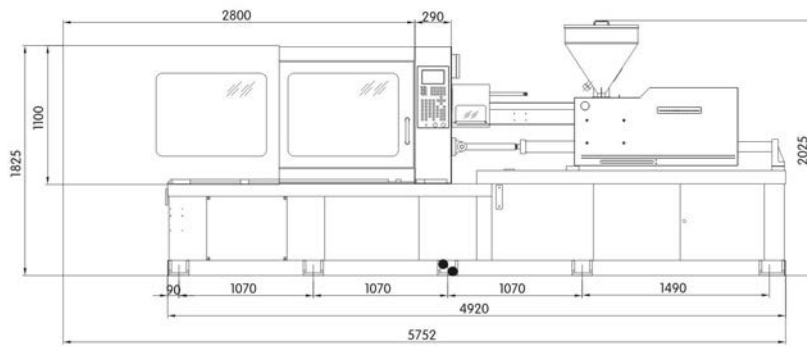


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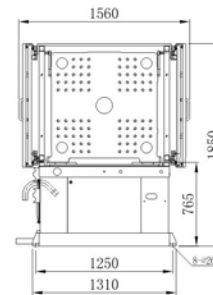
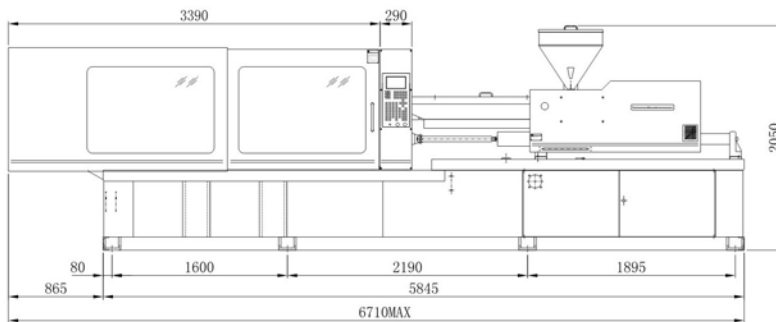


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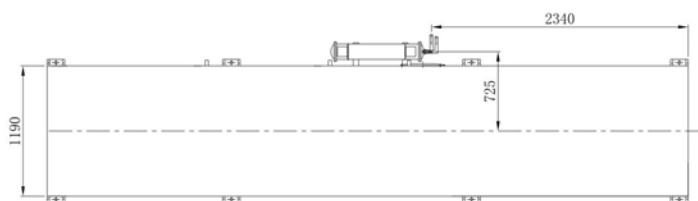




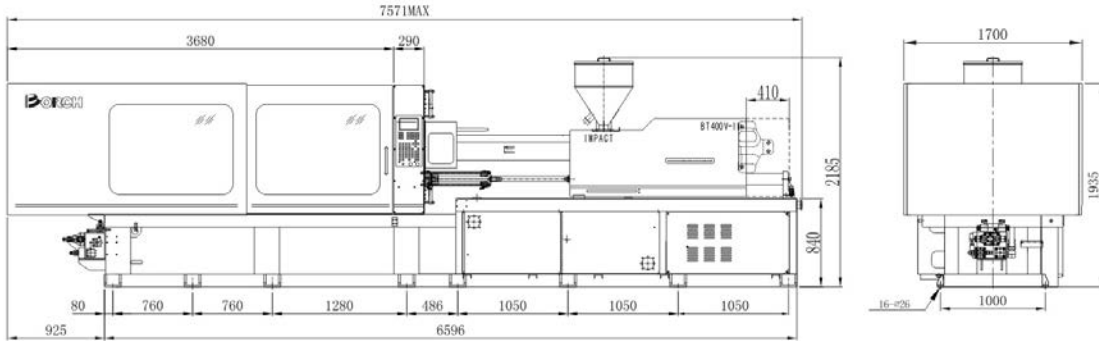
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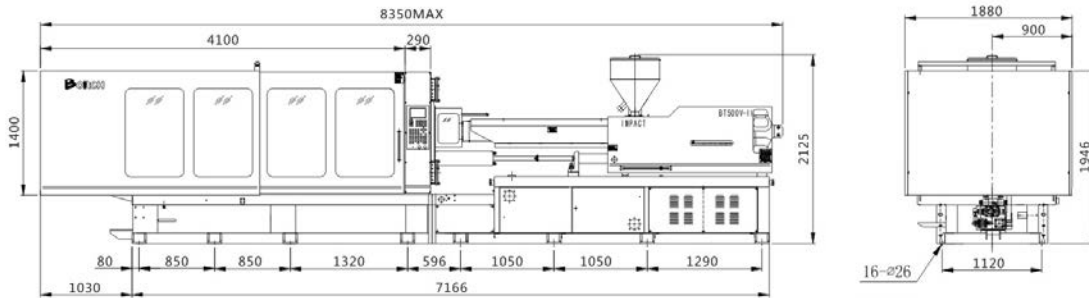
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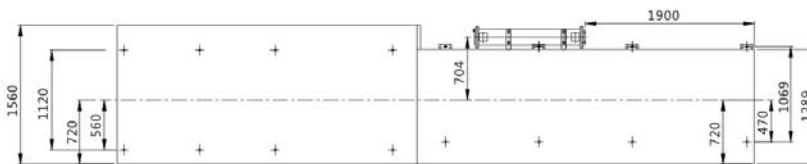
# DIMENSIONS



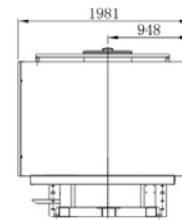
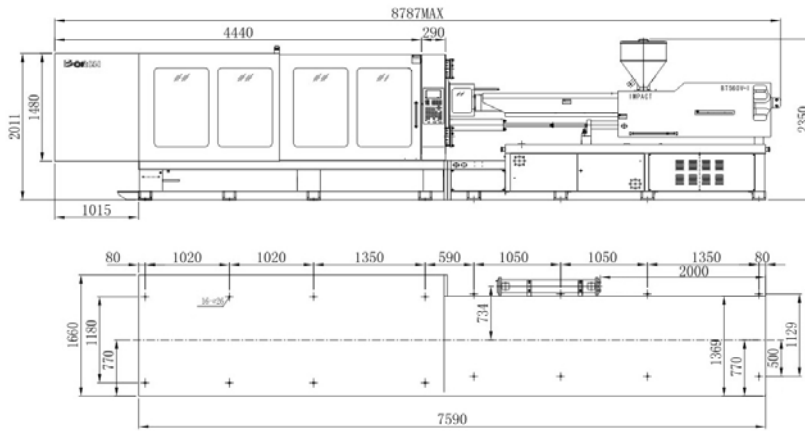
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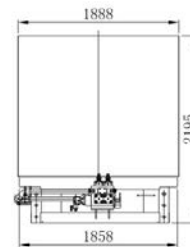
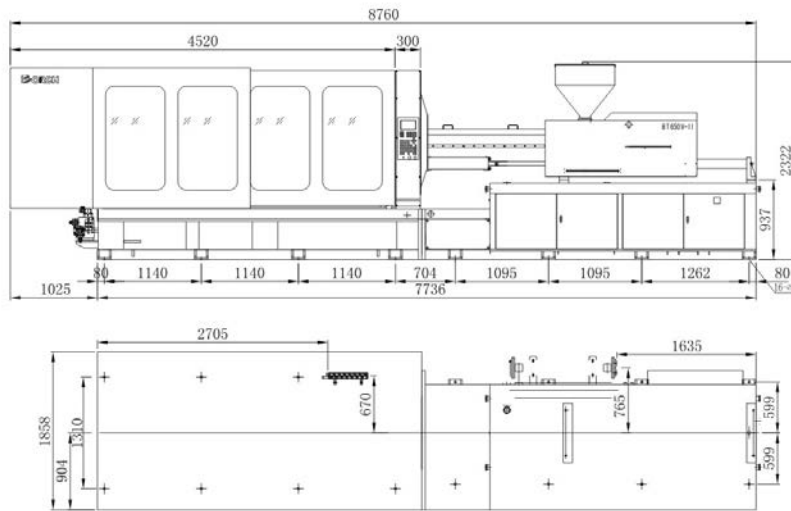
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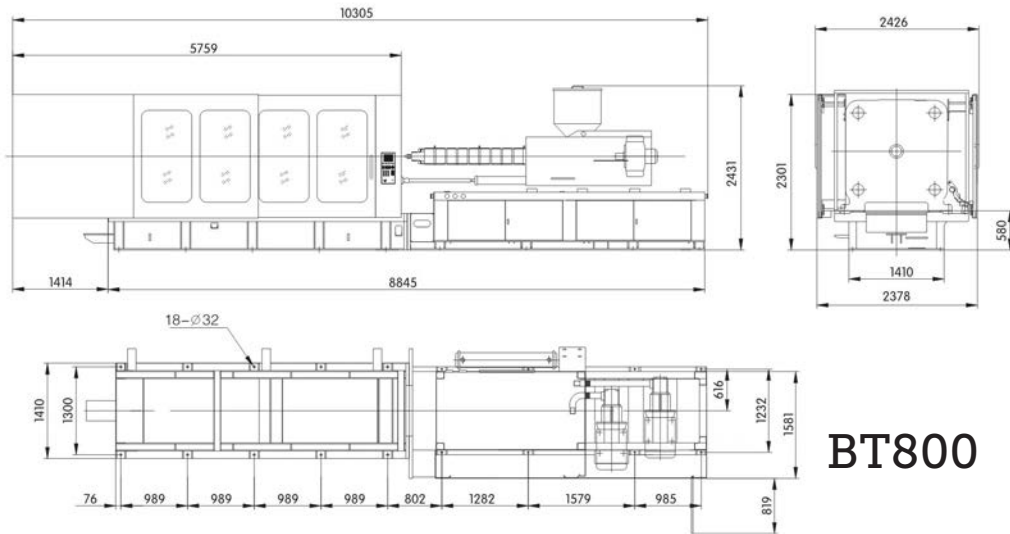


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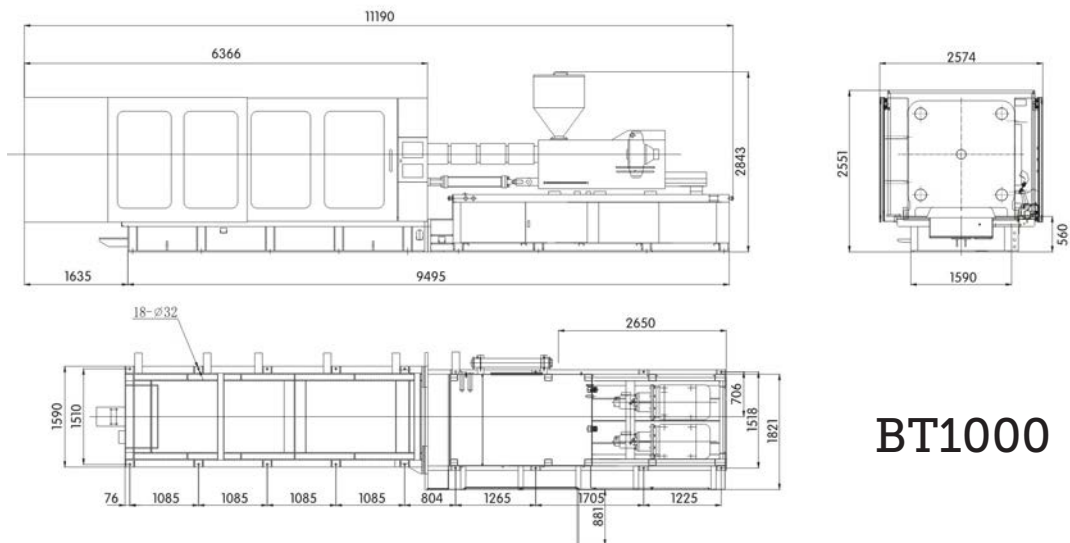


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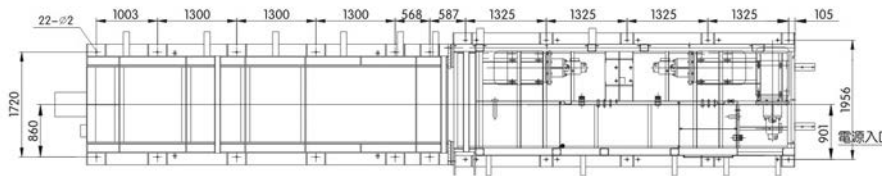
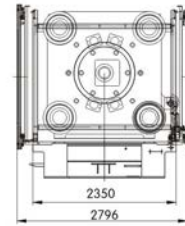
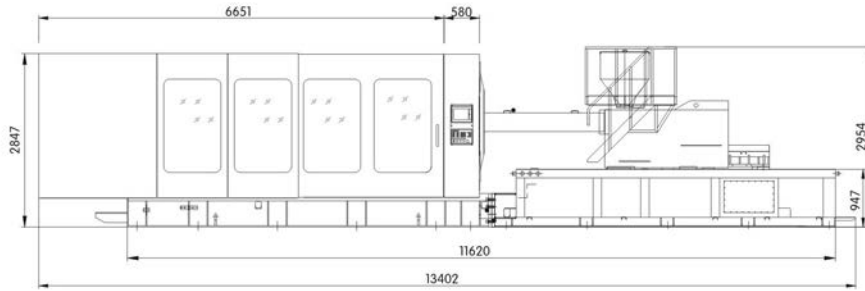
# DIMENSIONS



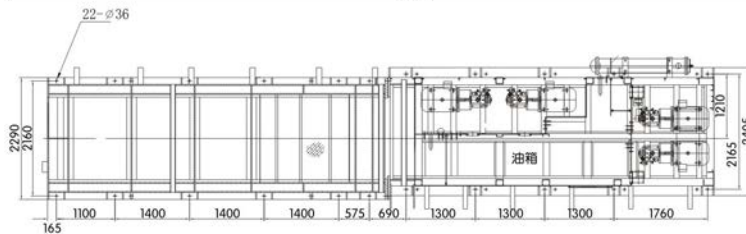
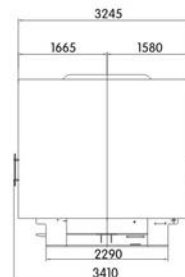
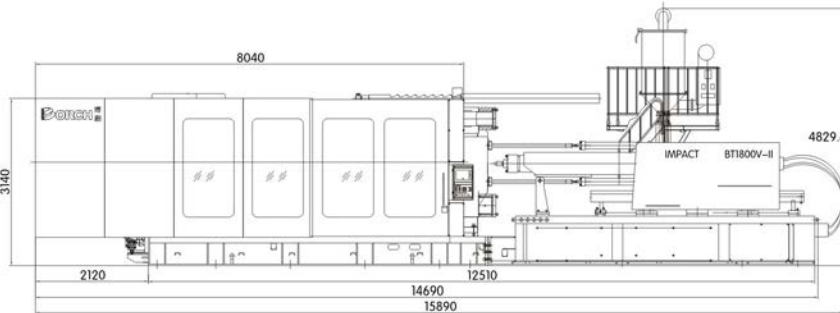
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**BT1000**



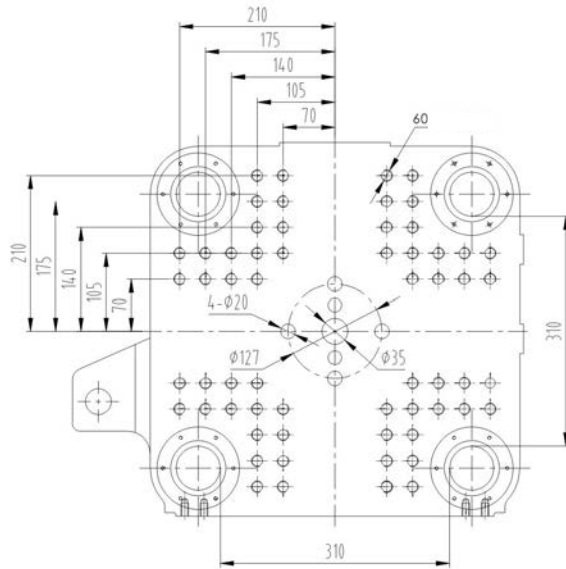
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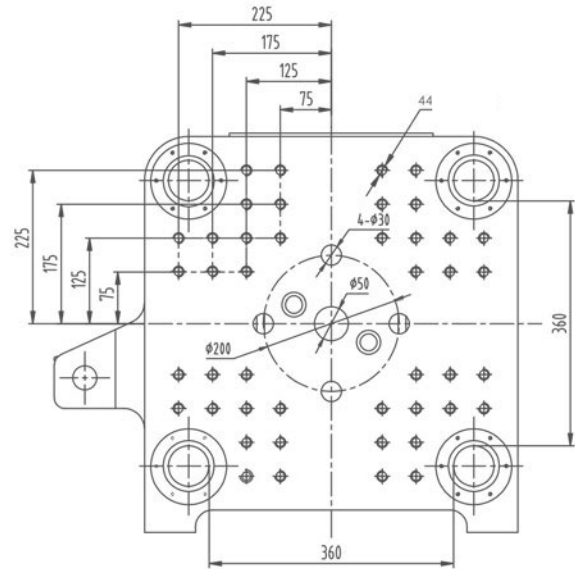
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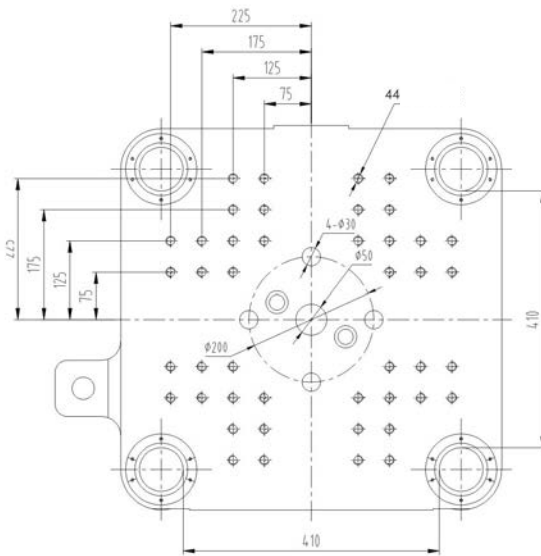
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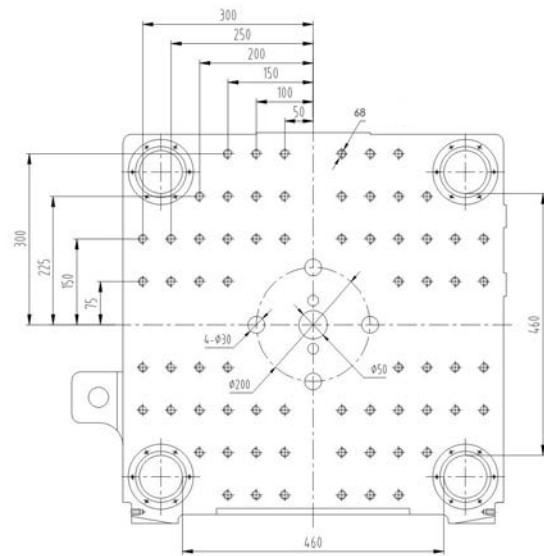
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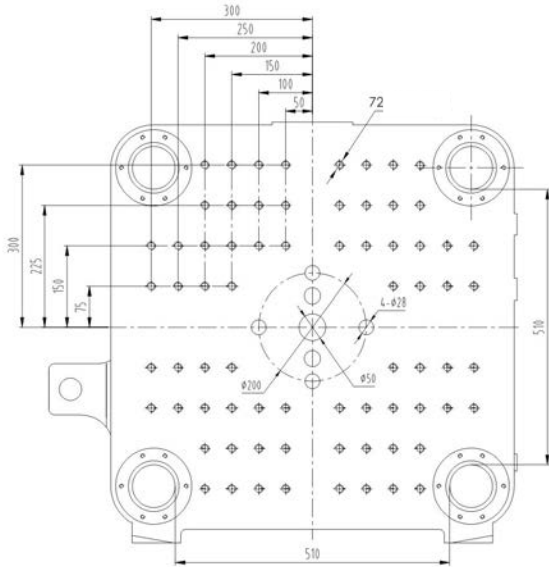
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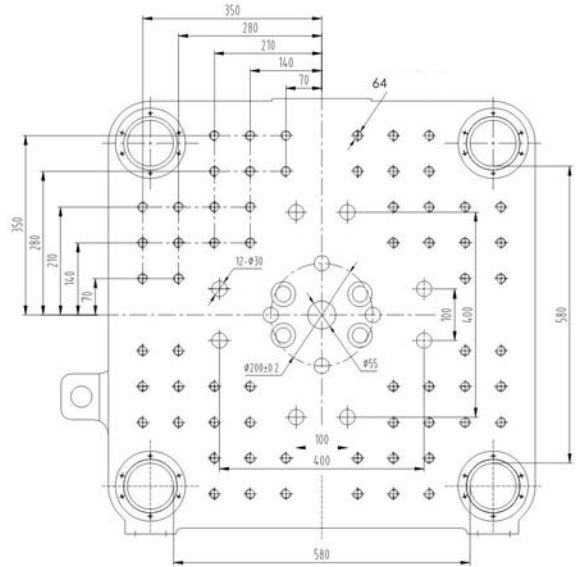
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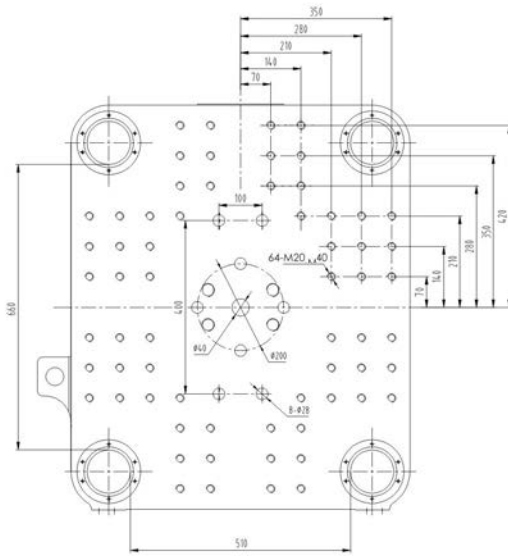
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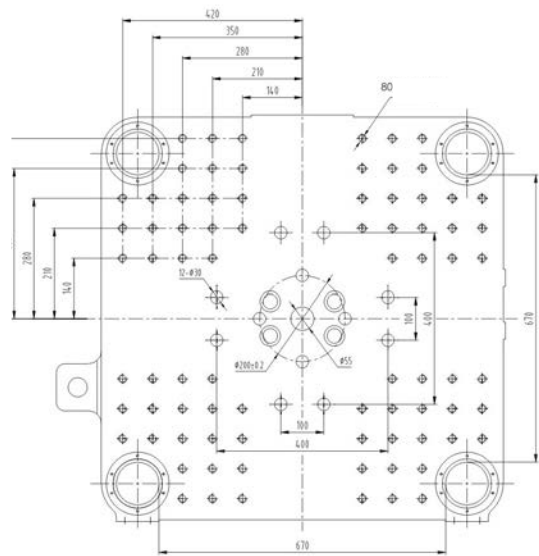
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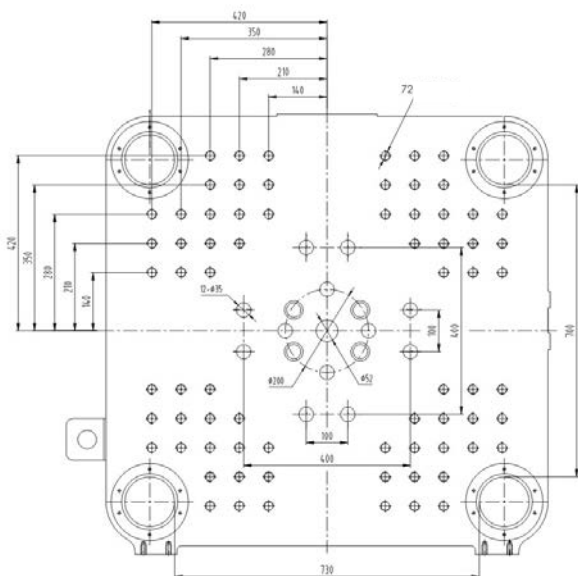


**BT270**

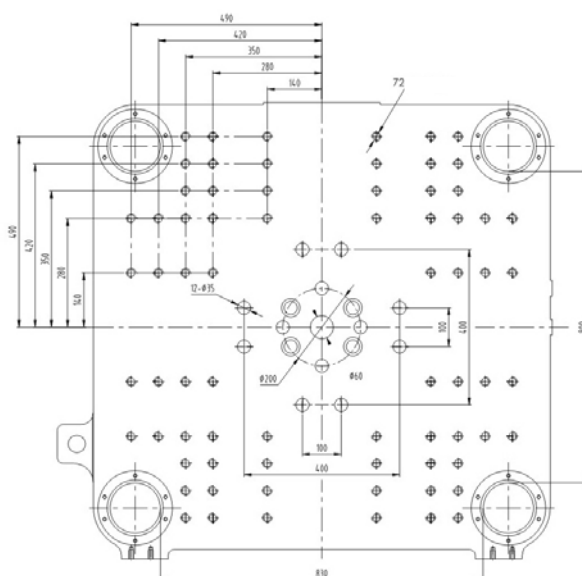


**BT320**

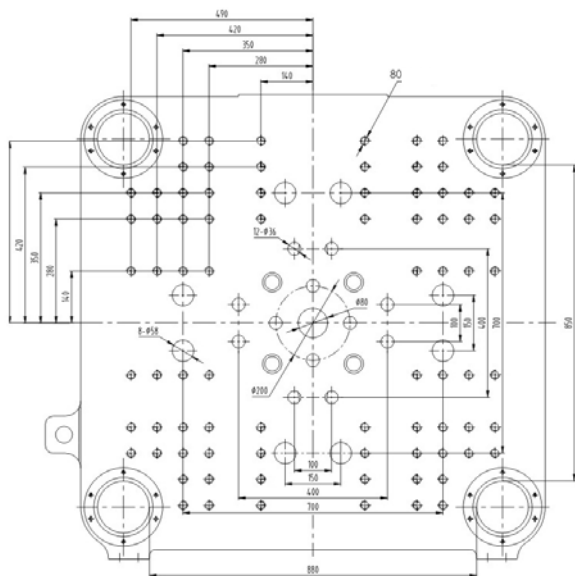
# PLATEN SPECIFICATIONS



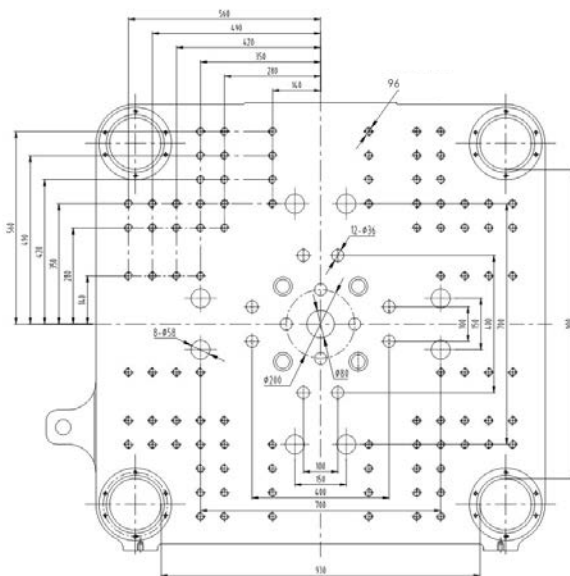
**BT400**



**BT500**

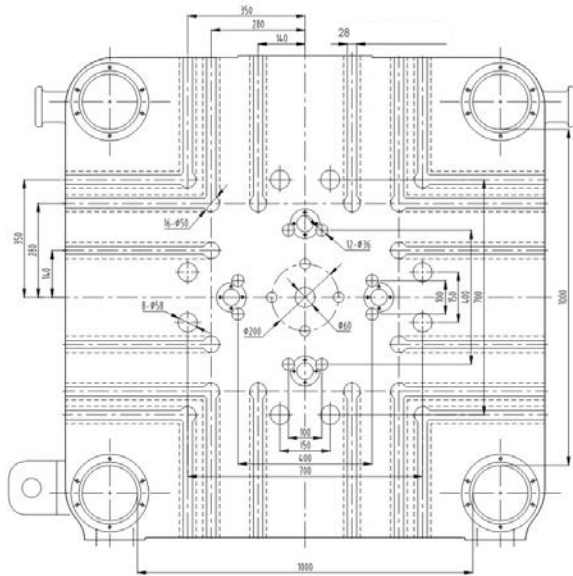


**BT560**

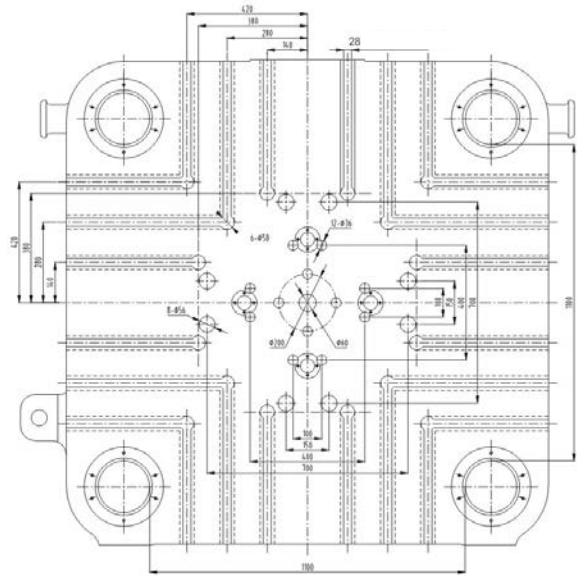


**BT650**

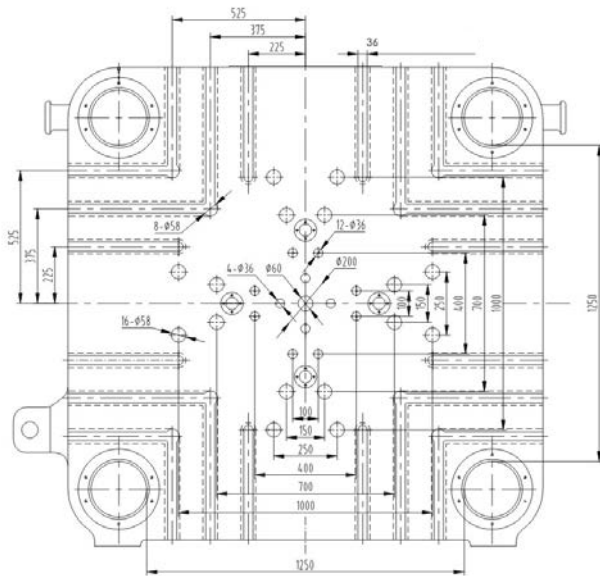




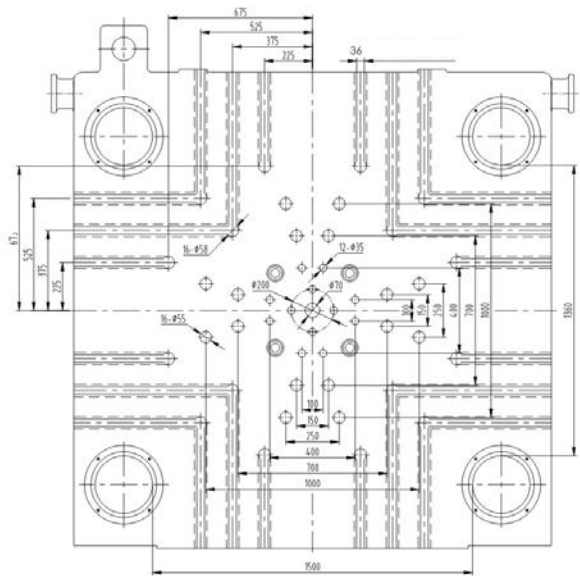
**BT800**



**BT1000**



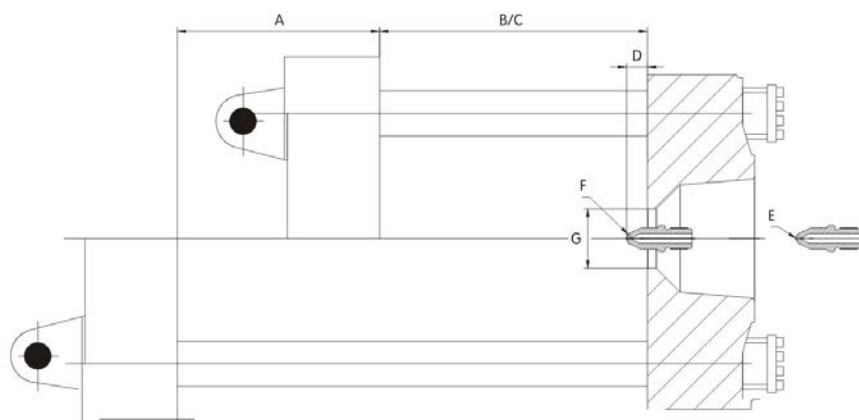
**BT1380**



**BT1800**

## CLAMPING UNIT DIMENSIONS

DESCRIPTION	BT60	BT80	BT120	BT150	BT200	BT260	BT270	BT320	BT400	BT500	BT560	BT650	BT800	BT1000	BT1380	BT1800
OPENING STROKE [A]	270	320	340	410	465	520	300	580	655	755	820	880	1025	1150	1300	1460
MAXIMUM MOLD THICKNESS [B]	300	360	450	500	550	600	540	655	720	800	850	870	975	1100	1250	1500
MINIMUM MOLD THICKNESS [C]	130	130	145	160	180	195	220	220	245	265	300	300	380	450	600	550
DISTANCE OF NOZZLE EXTENSION [D]	30	35	35	45	45	45	45	45	45	50	50	50	50	50	50	50
DIAMETER OF THE NOZZLE HOLE [E]	3	3	3	3	4	3.5	2	3.5	5	5	5	5	5	5	6	7
RADIUS OF THE NOZZLE SPHERE [F]	10	10	10	10	10	10	10	10	10	10	10	10	10	10	15	20
DIAMETER OF LOCATING RING [G]	100	100	100	100	100	120	120	150	150	150	150	150	250	250	250	250







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