



Chen Hsong Europe



JETMASTER MK6 SERIES | 88 - 668 TON TOGGLE SPEED SERIES | 128 - 468 TON TOGGLE

Injection molding machine



JETMASTER MK6 SERIES 88 – 668 TON TOGGLE

Injection molding machine

EUROMAP STANDARD

Hole pattern and ejector pattern according to Euromap standards*.
T-slot or other pattern possible on request.



SUPER HIGH PRECISION

Exclusive for this MK6 range is the new proprietary servo pressure regulation technology. This unique technology ensures fast pressure relief while never reversing the pump. High precision linear transducers are used for the clamping, injection and ejector axes. All results in low-pressure mold protection.

EUROPEAN COMPONENTS

Standard European components:

Hydraulic valves: Bosch Rexroth or Vickers

Hydraulic pump: Eckerle

Linear transducers: Gefran or Novotechnik

Electrical components: Siemens, Schneider, Telemecanique, PILZ

*Hole pattern/ejector pattern may differ from standard due to platen design.



BECKHOFF X-MOLD CONTROL APPLICATION

The XMold controller of Beckhoff offers an integrated solution for the automation of the Chen Hsong Injection Molding machines. High-speed applications and complete production cells can be implemented with XMold.

The integrated eXtreme Fast Control technology enables the sampling of rapidly changing input signals, allowing the injection process to be controlled with high precision. The 12,1 " screen area with touch function enables a clear process visualization.

HIGH PERFORMANCE AND VERSATILE SCREW DESIGN

More than 20 years of Japanese expertise is used for the development of the screws for this MK6 series. They are available for several process requirements (f.e. PVC screw, PC barrier screw) and for high demand mixing requirements (high mixing barrier screw).



HIGH SPEED, SHORT CYCLE TIME

The Chen Hsong MK6 series has the fastest clamping, injection and ejection movements among competition. This results in increased production efficiency with smoother and more stable movements.



INOVANCE SERVO DRIVE SYSTEM

The Inovance servo drive system is designed dedicated for injection molding machines. This system provides high performance, precision, low noise and easy maintenance. For machines using this servo drive, energy can be saved by up to 80%.

ENERGY SAVING

With speed controlled servomotor, drives a fixed internal gear pump.

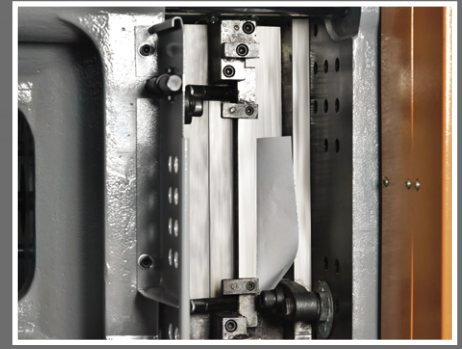
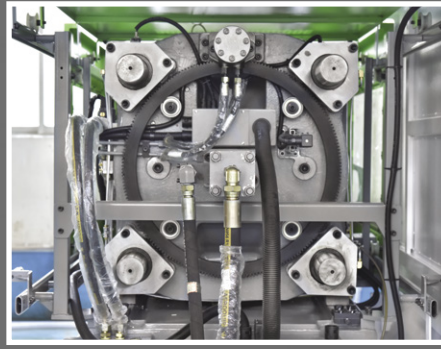
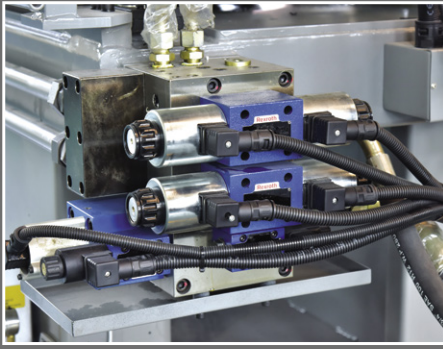
The system pressure is measured real-time by a pressure sensor. In this way it can provide the required flow according the requirement to eliminate non-functioning consumption.

In total this leads to lower energy consumption, high precision, low noise and low inertia.

STANDARD AND OPTIONAL FEATURES

CLAMPING UNIT	STANDARD	OPTION
Automatic mold height adjust	•	
Hydraulic safety device	•	
Core puller on moving platen	2	
Additional core pullers (up to 6 core pullers)		•
Airblow on fixed and moving platen	1 + 1	•
Parallel core movement		•
Parallel ejector movement		•
Euromap 2 platen design *	•	
Euromap 13 for core and ejector	•	
Euromap 18 for robot mounting	•	
Euromap 67 for robot communication	•	
Euromap 70 and 70.1		•
Larger maximum mold height		•
Automatic toggle lubrication	•	
Automatic lubrication on mold height adjust		•
Anti-skid plates on horizontal surfaces	•	
Differential boost for high-speed clamping	•	
Safety door with hydraulic and electrical safety interlock protection	•	
High tensile chrome-plated tie bars	•	
Oil-less bushings for toggle system		•
Ejection-on-fly / core-pull-on-fly		•
OTHERS		
Up to 16 zones integrated hotrunner System (Euromap 14 standard)		•
Power sockets 3-phase 400V 32A and 16A	One each	•
Power sockets 2-phase 240V 16A	2	•
Waterflow regulators (more available upon request)	4-6 circuits	•

*Hole pattern/ejector pattern may differ from standard due to platen design.



INJECTION UNIT	STANDARD	OPTION
Ceramic heater bands	•	
Nitrated screw and barrel	•	
Bi-metallic screw and barrel		•
PET or PVC screw features		•
PVC and UPVC-specialized injection units		•
Back pressure control	•	
Barrel shut-off nozzle		•
Hydraulic/pneumatic sequential injection (up to 12 valves)		•
Linear transducer on injection stroke	•	
Linear transducer on injection unit stroke	•	
Screw speed indicator	•	
Controlled feeding zone cooling	•	
Automatic PID temperature control	•	
Barrel isolation		•
Central lubrication points	•	
Anti-skid plates on horizontal surfaces	•	
Parallel plasticizing		•
Broken thermocouple detection alarm	•	
Blocked nozzle and overflow detection	•	
(Locking type) screw tip set	•	•
CONTROLLER		
Beckhoff XMold controller	•	
12,1 " TFT display with touch function	•	
LED backlight	•	
Free programmable cores	•	
Sequence editor	•	
High-precision mold safety	•	
EtherCAT-based eXtreme Fast Control technology	•	
Ethernet interface for teleservice via internet	•	
USB interface	•	
Euromap 67 interface	•	
Industry 4.0	•	
OPC-UA / Euromap 77		•

Injection unit	Unit	JM88-MK6			JM128-MK6		
Swept Volume	cm³	136	183	238	209	271	341
Injection Weight (PS)	g	124	167	216	190	246	310
Screw Diameter	mm	31	36	41	36	41	46
Screw L/D Ratio	L/D	24,4	21,0	18,4	23,9	21,0	18,7
Injection Pressure (Max)	kgf/cm²	2.549	1.890	1.457	2.451	1.890	1.501
Injection Rate (PS)	g/s	80	108	140	104	135	170
Screw Rotation Speed (Max)	rpm	245			245		
Screw Stroke	mm	180			205		
Nozzle contact force	t	4,2			4,2		
Nozzle Stroke	mm	275			290		
Clamping unit							
Clamping Force (Max)	t	88			128		
Opening Stroke	mm	340			380		
Maximum Daylight	mm	720			830		
Space Between Tie Bars (HxV)	mm	360 x 360			410 x 410		
Max. Mould Thickness	mm	380			450		
Min. Mould Thickness	mm	125			150		
Ejector Stroke	mm	120			120		
Ejector Force	mm	3,4			3,4		
Centerring	mm	125			125		
Others							
System Pressure	MPa	17,5			17,5		
Pump Motor	kW	14			17		
Electrical Heating	kW	8			10,3		
Temperature Control Zones	Zones	3 + Nozzle			3 + Nozzle		
Oil Tank Capacity	L	160			200		
Machine dimensions (LxWxH)	m	4,5 x 1,2 x 1,8			4,9 x 1,3 x 1,8		
Machine weight	t	3,3			4		

JM168-MK6			JM208-MK6			JM258-MK6		
304	382	488	432	552	735	432	552	735
276	348	444	393	502	669	393	502	669
41	46	52	46	52	60	46	52	60
23,6	21,0	18,6	23,7	21,0	18,2	23,7	21,0	18,2
2.368	1.881	1.472	2.419	1.893	1.422	2.419	1.893	1.422
138	174	222	169	216	287	169	216	287
224			200			200		
230			260			260		
6,2			6,2			6,2		
330			380			380		
168			208			258		
450			510			560		
970			1060			1140		
470 x 470			530 x 530			580 x 580		
520			550			580		
170			180			190		
140			150			150		
4,2			6,7			6,7		
125			160			160		
17,5			17,5			17,5		
22			30			30		
12,9			16,6			16,6		
3 + Nozzle			3 + Nozzle			3 + Nozzle		
250			330			330		
5,5 x 1,3 x 1,9			6,1 x 1,5 x 2,0			6,3 x 1,6 x 2,0		
4,9			6,8			7,8		

Injection unit	Unit	JM328-MK6			JM398-MK6		
Swept Volume	cm³	947	1.181	1.480	1.322	1.657	2.029
Injection Weight (PS)	g	862	1.075	1.347	1.203	1.508	1.846
Screw Diameter	mm	60	67	75	67	75	83
Screw L/D Ratio	L/D	23,5	21,0	18,8	23,5	21,0	19,0
Injection Pressure (Max)	kgf/cm²	2.355	1.889	1.507	2.333	1.862	1.520
Injection Rate (PS)	g/s	302	376	472	351	440	539
Screw Rotation Speed (Max)	rpm	200			190		
Screw Stroke	mm	335			375		
Nozzle contact force	t	9,1			11,1		
Nozzle Stroke	mm	440			470		
Clamping unit							
Clamping Force (Max)	t	328			398		
Opening Stroke	mm	660			720		
Maximum Daylight	mm	1340			1450		
Space Between Tie Bars (HxV)	mm	680 x 680			730 x 730		
Max. Mould Thickness	mm	680			730		
Min. Mould Thickness	mm	225			250		
Ejector Stroke	mm	180			215		
Ejector Force	mm	11,1			11,1		
Centerring	mm	160			160		
Others							
System Pressure	MPa	17,5			17,5		
Pump Motor	kW	48			60		
Electrical Heating	kW	26			31,1		
Temperature Control Zones	Zones	4 + Nozzle			5 + Nozzle		
Oil Tank Capacity	L	580			760		
Machine dimensions (LxWxH)	m	7,4 x 1,8 x 2,1			8,0 x 1,9 x 2,3		
Machine weight	t	13,2			16,7		

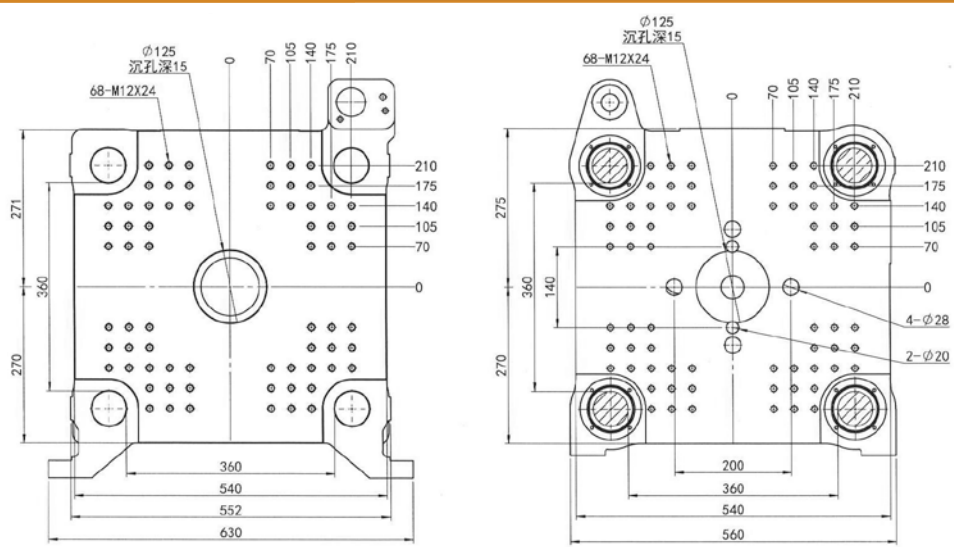
JM468-MK6			JM568-MK6			JM668-MK6		
1.833	2.245	2.640	1.833	2.245	2.640	2.433	2.861	3.393
1.668	2.043	2.403	1.668	2.043	2.403	2.214	2.604	3.088
75	83	90	75	83	90	83	90	98
23,2	21,0	19,4	23,2	21,0	19,4	23,9	22,0	20,2
2.253	1.840	1.564	2.253	1.840	1.564	2.163	1.840	1.552
442	541	636	442	541	636	540	635	753
180			180			170		
415			415			450		
11,1			11,1			11,1		
540			540			540		
468			568			668		
820			870			920		
1670			1730			1830		
830 x 830			860 x 860			920 x 920		
850			860			910		
300			350			380		
220			250			265		
16,6			16,6			18,2		
200			200			200		
17,5			17,5			17,5		
72			72			96		
35,5			35,5			42		
5 + Nozzle			5 + Nozzle			6 + Nozzle		
850			850			1050		
8,8 x 2,0 x 2,3			9,3 x 2,2 x 2,3			10,0 x 2,3 x 2,3		
19,8			21,5			24		

JETMASTER-MK6

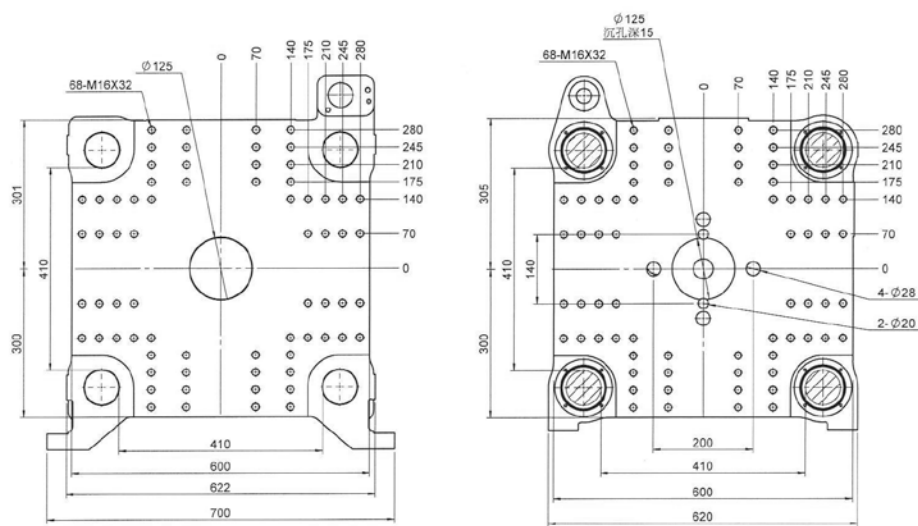
SERIES | 88-258

Injection molding machine

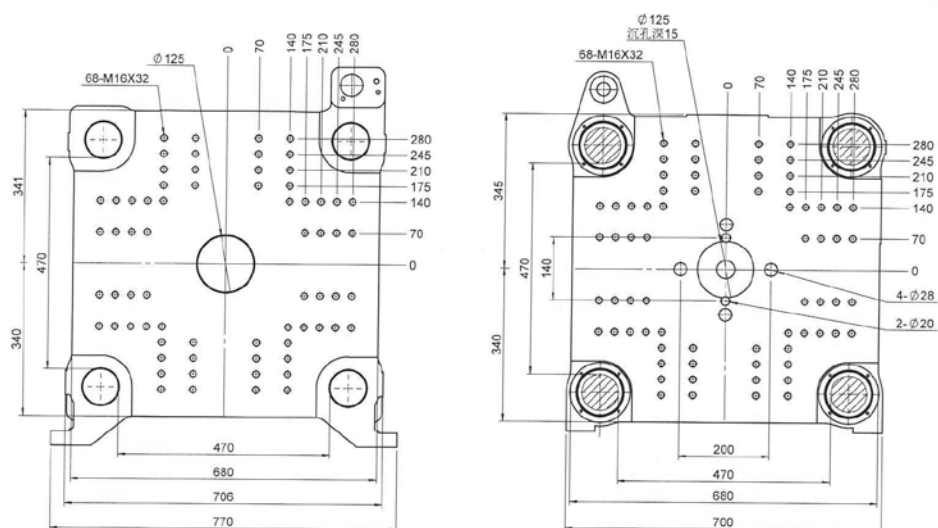
JM88-MK6



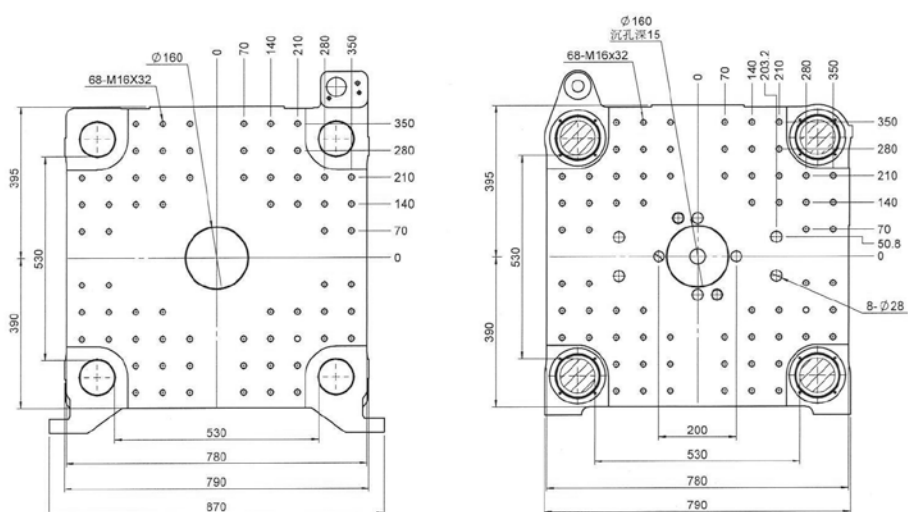
JM128-MK6



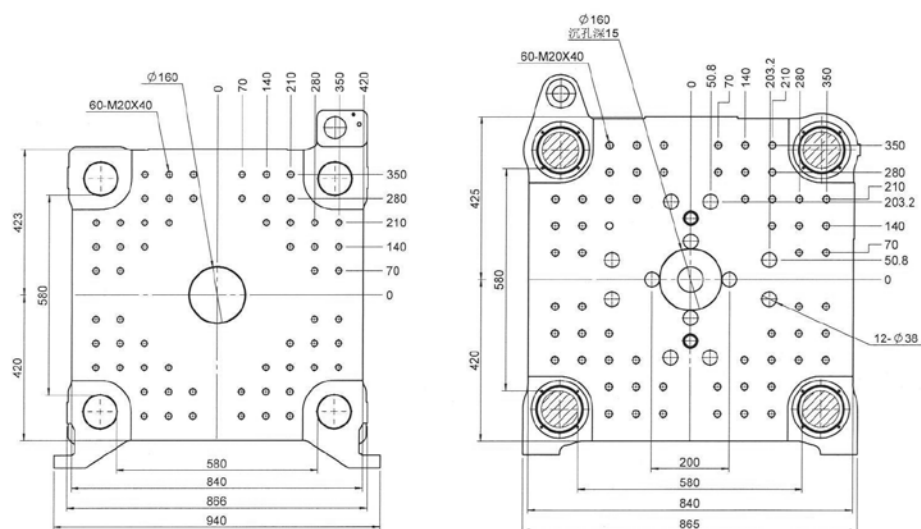
JM168-MK6



JM208-MK6

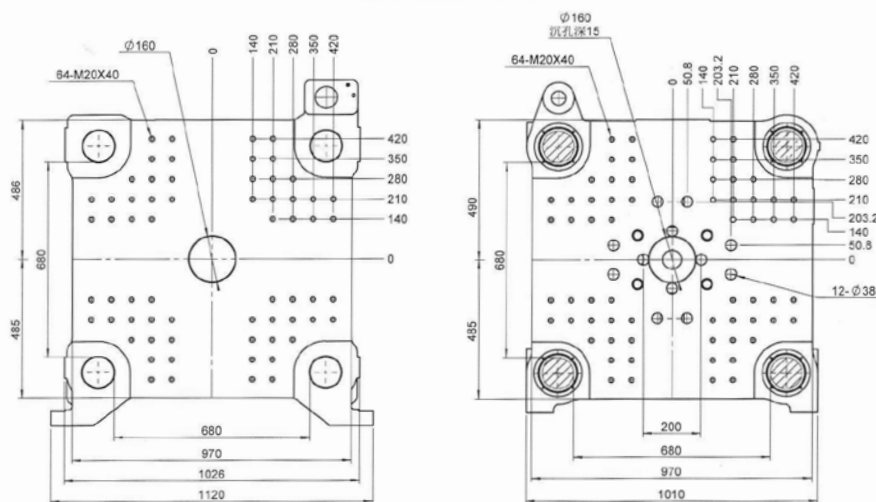


JM258-MK6

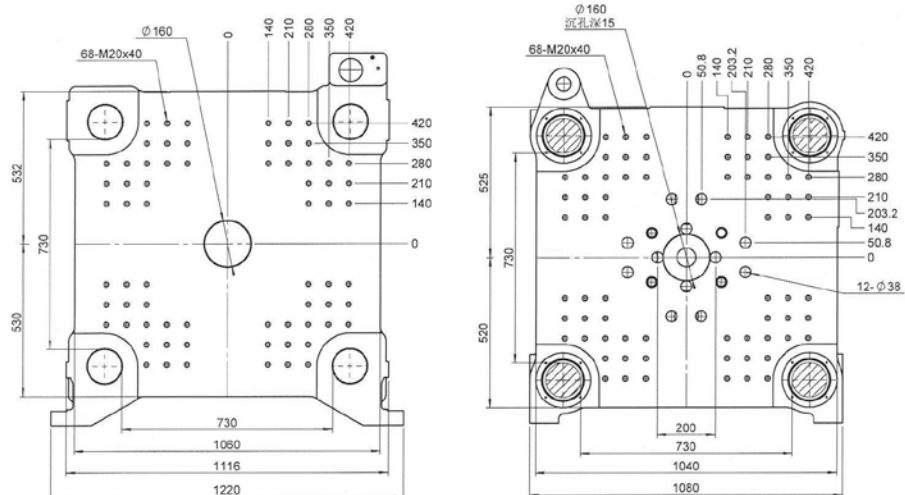


Injection molding machine

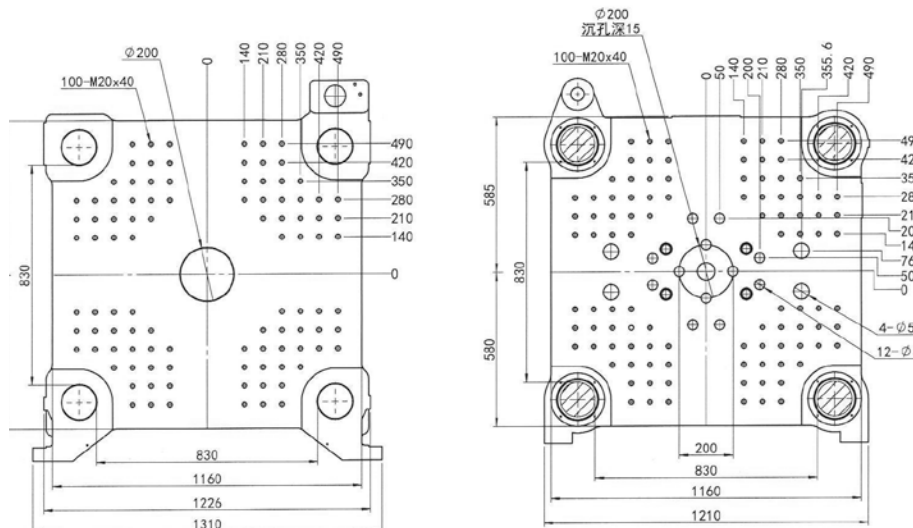
JM328-MK6



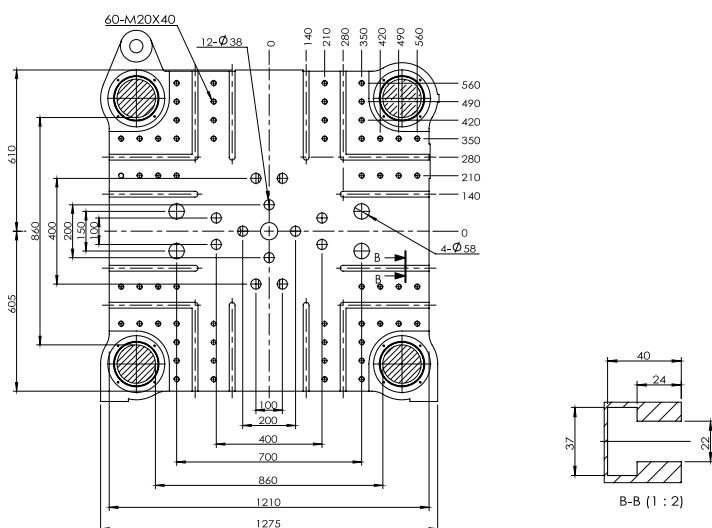
JM398-MK6



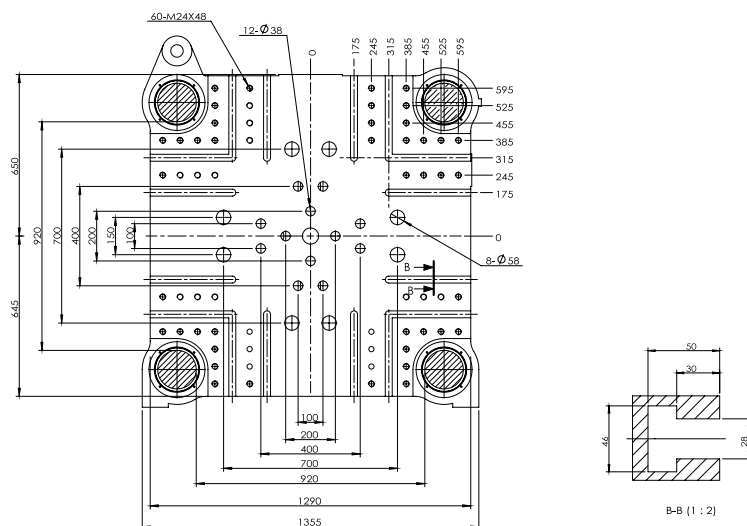
JM468-MK6



JM568-MK6



JM668-MK6



SPEED SERIES 128 – 468 TON TOGGLE

Injection molding machine



EUROMAP STANDARD

Hole pattern and ejector pattern according to Euromap standards*.
T-slot or other pattern possible on request.

ULTRA HIGH SPEED, FAST RESPONSE

Top-of-the-line high-response servomotor with 2 x faster dynamic response. This results in higher repeatability, control precision and energy efficiency.

OIL-LESS GRAPHITE BUSHINGS

Self-lubricating bushings have no need for lubricating oil.
Result is less pollution, less wear, less costs.

EUROPEAN COMPONENTS

Standard European components:

Hydraulic valves:	Bosch Rexroth or Vickers
Hydraulic pump:	Eckerle
Linear transducers:	Gefran or Novotechnik
Electrical components:	Siemens, Schneider, Telemecanique, PILZ

PRECISION HYDRAULICS

The Chen Hsong Speed series is equipped with the revolutionary, by Japanese engineers developed, technology Precision Hydraulics™. It includes the newest software simulation and control technology, which eliminates unnecessary pressure drops and offers a highly optimised hydraulic circuit.

*Hole pattern/ejector pattern may differ from standard due to platen design.



BECKHOFF X-MOLD CONTROL APPLICATION

The XMold controller of Beckhoff offers an integrated solution for the automation of the Chen Hsong Injection Molding machines. High-speed applications and complete production cells can be implemented with XMold.

The integrated eXtreme Fast Control technology enables the sampling of rapidly changing input signals, allowing the injection process to be controlled with high precision. The 12,1 " screen area with touch function enables a clear process visualization.

OPTIMISED INJECTION UNIT DESIGN

Standard injection unit is especially optimized for high-speed applications with higher injection speed and pressure.



SUPER HIGH PRECISION

High precision linear transducers are used for the clamping, injection and ejector axes. All results in low-pressure mold protection. Balanced dual hydraulic cylinders and linear guide rails make a low friction mechanism for high precision injection control.



INOVANCE SERVO DRIVE SYSTEM

The Inovance servo drive system is designed dedicated for injection molding machines. This system provides high performance, precision, low noise and easy maintenance. For machines using this servo drive, energy can be saved by up to 80%.

ENERGY SAVING

With speed controlled servomotor, drives a fixed internal gear pump.

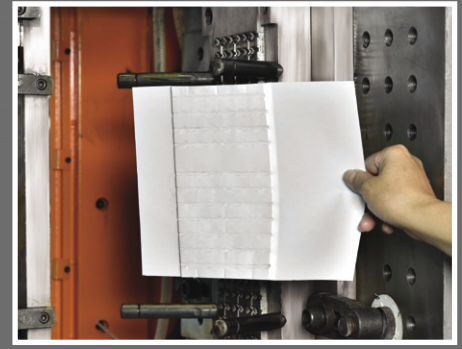
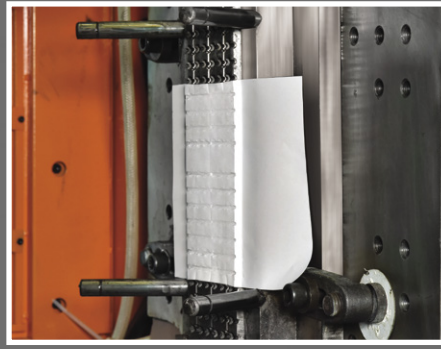
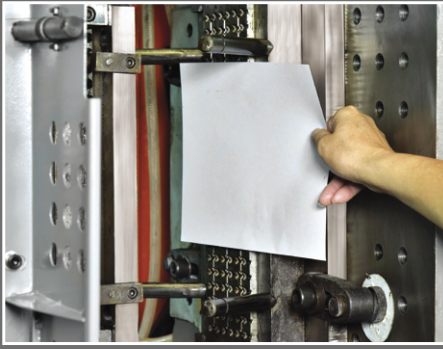
The system pressure is measured real-time by a pressure sensor. In this way it can provide the required flow according the requirement to eliminate non-functioning consumption.

In total this leads to lower energy consumption, high precision, low noise and low inertia.

STANDARD AND OPTIONAL FEATURES

CLAMPING UNIT	STANDARD	OPTION
Automatic mold height adjust	•	
Hydraulic safety device	•	
Core puller on moving platen	2	
Additional core pullers (up to 6 core pullers)		•
Airblow on fixed and moving platen	1 + 1	•
Parallel core movement		•
Parallel ejector movement		•
Euromap 2 platen design *	•	
Euromap 13 for core and ejector	•	
Euromap 18 for robot mounting	•	
Euromap 67 for robot communication	•	
Euromap 70 and 70.1		•
Larger maximum mold height		•
Automatic toggle lubrication	•	
Automatic lubrication on mold height adjust		•
Anti-skid plates on horizontal surfaces	•	
Differential boost for high-speed clamping	•	
Safety door with hydraulic and electrical safety interlock protection	•	
High tensile chrome-plated tie bars	•	
Oil-less bushings for toggle system		•
Ejection-on-fly / core-pull-on-fly		•
OTHERS		
Up to 16 zones integrated hotrunner System (Euromap 14 standard)		•
Power sockets 3-phase 400V 32A and 16A	One each	•
Power sockets 2-phase 240V 16A	2	•
Waterflow regulators (more available upon request)	4-6 circuits	•

*Hole pattern/ejector pattern may differ from standard due to platen design.



INJECTION UNIT	STANDARD	OPTION
Ceramic heater bands	•	
Nitrated screw and barrel	•	
Bi-metallic screw and barrel		•
PET or PVC screw features		•
PVC and UPVC-specialized injection units		•
Back pressure control	•	
Barrel shut-off nozzle		•
Hydraulic/pneumatic sequential injection (up to 12 valves)		•
Linear transducer on injection stroke	•	
Linear transducer on injection unit stroke	•	
Screw speed indicator	•	
Controlled feeding zone cooling	•	
Automatic PID temperature control	•	
Barrel isolation		•
Central lubrication points	•	
Anti-skid plates on horizontal surfaces	•	
Parallel plasticizing		•
Broken thermocouple detection alarm	•	
Blocked nozzle and overflow detection	•	
(Locking type) screw tip set	•	•
CONTROLLER		
Beckhoff XMold controller	•	
12,1 " TFT display with touch function	•	
LED backlight	•	
Free programmable cores	•	
Sequence editor	•	
High-precision mold safety	•	
EtherCAT-based eXtreme Fast Control technology	•	
Ethernet interface for teleservice via internet	•	
USB interface	•	
Euromap 67 interface	•	
Industry 4.0	•	
OPC-UA / Euromap 77		•

Injection unit	Unit	SPEED128		SPEED168		SPEED208	
Swept Volume	cm³	136	183	209	271	304	365
Injection Weight (PS)	g	124	167	190	246	276	338
Screw Diameter	mm	31	36	36	41	41	47
Screw L/D Ratio	L/D	24,4	21,0	23,9	21,0	23,6	20,0
Injection Pressure (Max)	kgf/cm²	2.548	1.890	2.451	1.890	2.118	1.650
Injection Rate (PS)	g/s	226	305	305	396	396	497
Screw Rotation Speed (Max)	rpm	300		300		300	
Screw Stroke	mm	180		205		230	
Nozzle contact force	t	4,2		4,2		6,2	
Nozzle Stroke	mm	275		290		330	
Clamping unit							
Clamping Force (Max)	t	128		168		208	
Opening Stroke	mm	380		450		510	
Maximum Daylight	mm	830		970		1.060	
Space Between Tie Bars (HxV)	mm	410 x 410		470 x 470		530 x 530	
Max. Mould Thickness	mm	450		520		550	
Min. Mould Thickness	mm	150		170		180	
Ejector Stroke	mm	120		140		150	
Ejector Force	mm	3,4		4,2		6,7	
Centerring	mm	125		125		160	
Others							
System Pressure	MPa	17,5		17,5		17,5	
Pump Motor	kW	34		40		40	
Electrical Heating	kW	10,5		13		16,5	
Temperature Control Zones	Zones	3 + Nozzle		3 + Nozzle		3 + Nozzle	
Oil Tank Capacity	L	230		270		360	
Machine dimensions (LxWxH)	m	4,8 x 1,2 x 1,8		5,2 x 1,3 x 1,9		5,8 x 1,4 x 1,9	
Machine weight	t	4,2		5,5		7,5	

	SPEED258		SPEED328		SPEED398		SPEED468	
382	304	382	432	552	947	1.181	947	1.181
448	276	348	393	502	862	1.075	862	1.075
46	41	46	46	52	60	67	60	67
1,0	23,6	21,0	23,7	21,0	23,5	21,0	23,5	21,0
683	2.119	1.683	2.419	1.893	1.867	1.497	1.867	1.497
499	396	499	499	637	848	1.058	848	1.058
	300		300		300		300	
	230		260		335		335	
	6,2		6,2		9,1		9,1	
	330		380		440		440	
	258		328		398		468	
	560		660		720		820	
	1.140		1.340		1.450		1.670	
	580 x 580		680 x 680		730 x 730		830 x 830	
	580		680		730		850	
	190		225		250		300	
	150		180		215		220	
	6,7		11,1		11,1		16,6	
	160		160		160		200	
	17,5		17,5		17,5		17,5	
	40		40 + 34		40 + 40			
	16,5		21		33,7		33,7	
	3 + Nozzle		3 + Nozzle		4 + Nozzle		4 + Nozzle	
	380		600		760		950	
9	6,0 x 1,5 x 1,9		7,2 x 1,8 x 2,1		8,0 x 1,9 x 2,2		8,7 x 2,0 x 2,2	
	8,5		13,5		17		21	



Chen Hsong Europe

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