



Chen Hsong Europe



SPEED SERIES | 128 - 468 TON TOGGLE
SPEED-PACK SERIES | 260 - 470 TON TOGGLE
Injection molding machine



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.

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.

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 YUKEN
 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.

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%.



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

ENERGY SAVING

The Chen Hsong machines are equipped with speed controlled servomotors. The system pressure is measured real-time by a pressure sensor. In this way, it can provide the flow according to requirement and non-functioning consumption is eliminated. 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 8 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 32 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)	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	•	
Sliding angled type screw tip set 128-398	•	
Locking angled type screw tip set 468	•	
E-drive (HYBRID)		•
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		•

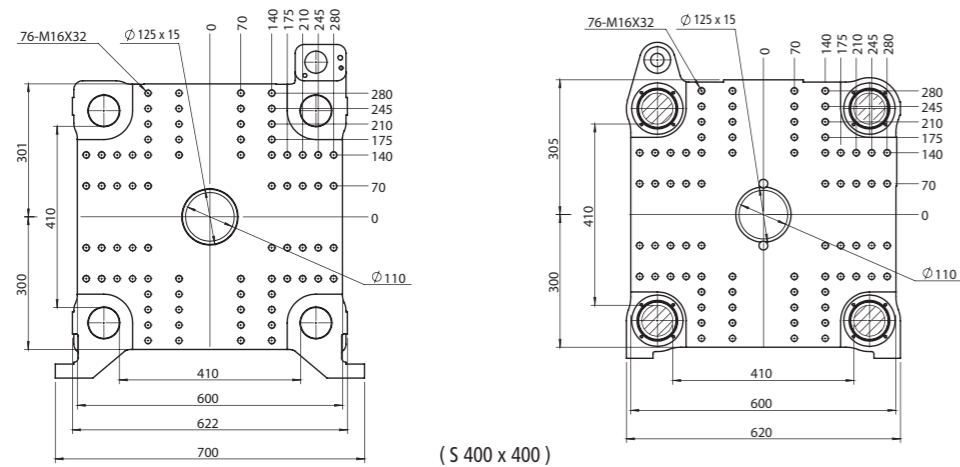
Injection unit	Unit	SPEED 128		SPEED 168		SPEED 208		SPEED 258		SPEED 328		SPEED 398		SPEED 468	
Swept Volume	cm ³	136	183	209	271	304	382	304	382	432	552	947	1.181	947	1.181
Injection Weight (PS)	g	124	167	190	246	276	348	276	348	393	502	862	1.075	862	1.075
Screw Diameter	mm	31	36	36	41	41	46	41	46	46	52	60	67	60	67
Screw L/D Ratio	L/D	24,4	21,0	23,9	21,0	23,6	21,0	23,6	21,0	23,7	21,0	23,5	21,0	23,5	21,0
Injection Pressure (Max)	kgf/cm ²	2.548	1.890	2.451	1.890	2.118	1.683	2.119	1.683	2.419	1.893	1.867	1.497	1.867	1.497
Injection Pressure (Max)	MPa	250	185	240	185	208	165	208	165	237	186	183	147	183	147
Injection Rate (PS)	g/s	226	305	305	396	396	499	396	499	499	637	848	1.058	848	1.058
Plastification Rate (PS)	g/s	14,5	21	22	27	29	36	29	39	42	50	73	91	73	91
Screw Rotation Speed (Max)	rpm	300		300		300		300		300		300		300	
Screw Stroke	mm	180		205		230		230		260		335		335	
Nozzle contact force	t	4,2		4,2		6,2		6,2		6,2		9,1		9,1	
Nozzle Stroke	mm	275		290		330		330		380		440		440	
Clamping unit															
Clamping Force (Max)	t	128		168		208		258		328		398		468	
Opening Stroke	mm	380		450		510		560		660		720		820	
Maximum Daylight	mm	830		970		1.060		1.140		1.340		1.450		1.670	
Mould platen (PS)	mm	600 x 600		680 x 680		790 x 790		840 x 840		970 x 970		1060 x 1060		1160 x 1160	
Space Between Tie Bars (HxV)	mm	410 x 410		470 x 470		530 x 530		580 x 580		680 x 680		730 x 730		830 x 830	
Max. Mould Thickness	mm	450		520		550		580		680		730		850	
Min. Mould Thickness	mm	150		170		180		190		225		250		300	
Ejector Stroke	mm	120		140		150		150		180		215		220	
Ejector Force	mm	3,4		4,2		6,7		6,7		11,1		11,1		16,6	
Flange Position	mm	125		125		160		160		160		160		200	
Others															
Dry cycle	s	1,5		1,5		1,7		1,7		1,9		1,9		2,0	
Energy consumption (PP)	kWh														
Noise level	dBa														
System Pressure	MPa	17,5		17,5		17,5		17,5		17,5		17,5		17,5	
Pump Motor	kW	34		40		40		40		40 + 34		40 + 40		40 + 40	
Electrical Heating	kW	10,5		13		16,5		16,5		21		33,7		33,7	
Temperature Control Zones	Zones	3 + Nozzle		3 + Nozzle		3 + Nozzle		3 + Nozzle		3 + Nozzle		4 + Nozzle		4 + Nozzle	
Oil Tank Capacity	L	230		270		360		380		600		760		950	
Machine dimensions (LxWxH)	m	4,8 x 1,2 x 1,9		5,2 x 1,3 x 2,0		5,8 x 1,4 x 2,1		6,0 x 1,5 x 2,2		7,2 x 1,8 x 2,3		8,0 x 1,9 x 2,3		8,7 x 2,0 x 2,3	
Machine weight	t	4,2		5,5		7,5		8,5		13,5		17		21	

All technical data and features are subjected to change without notice.
Exchangable hardened centre RING is an OPTION.

SPEED SERIES | 128-468

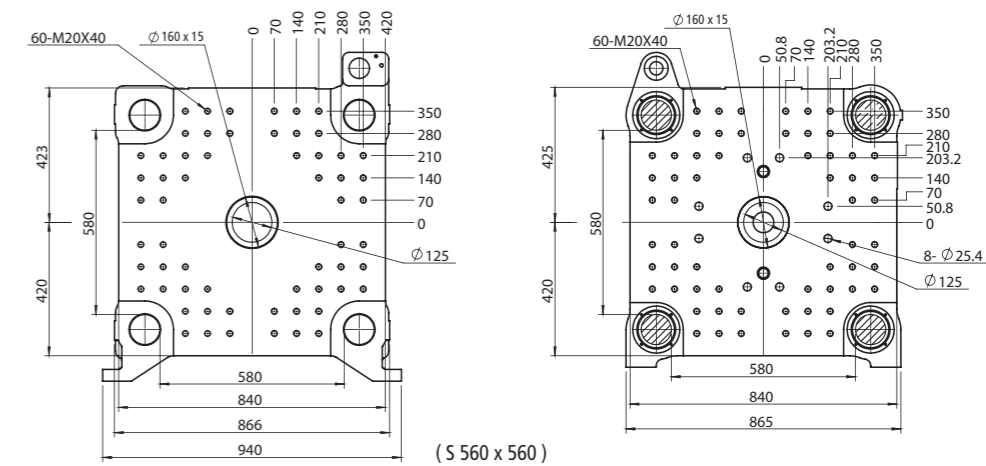
Injection molding machine

SPEED 128



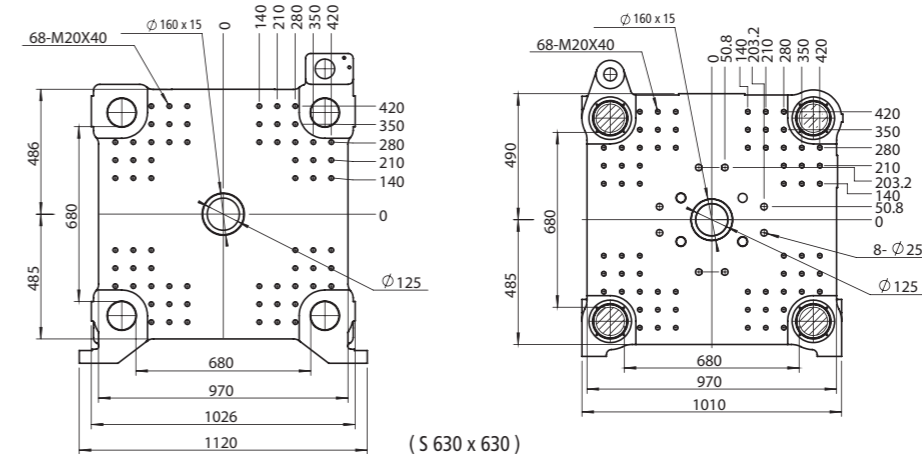
(S 400 x 400)

SPEED 258



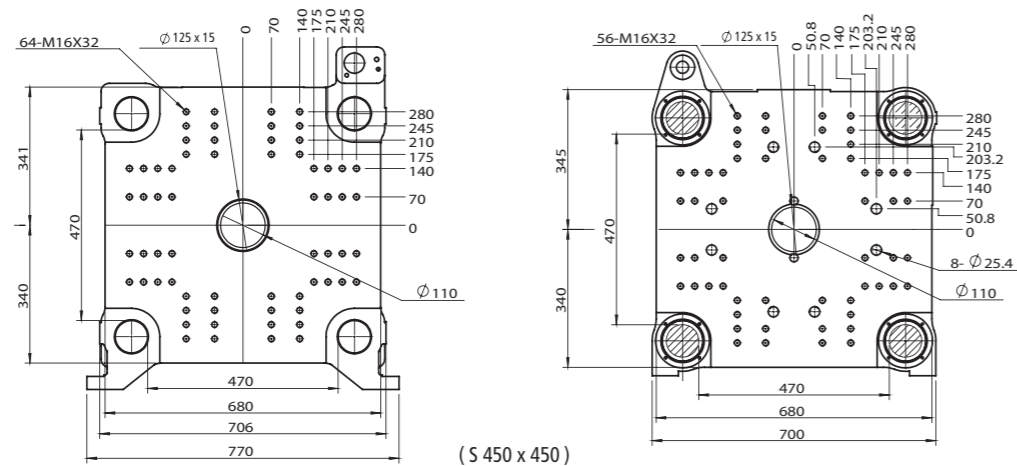
(S 560 x 560)

SPEED 328



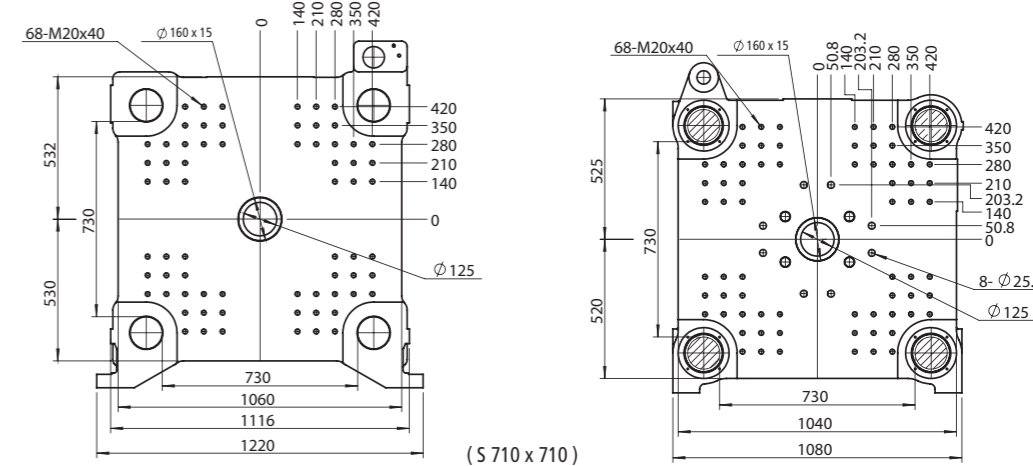
(S 630 x 630)

SPEED 168



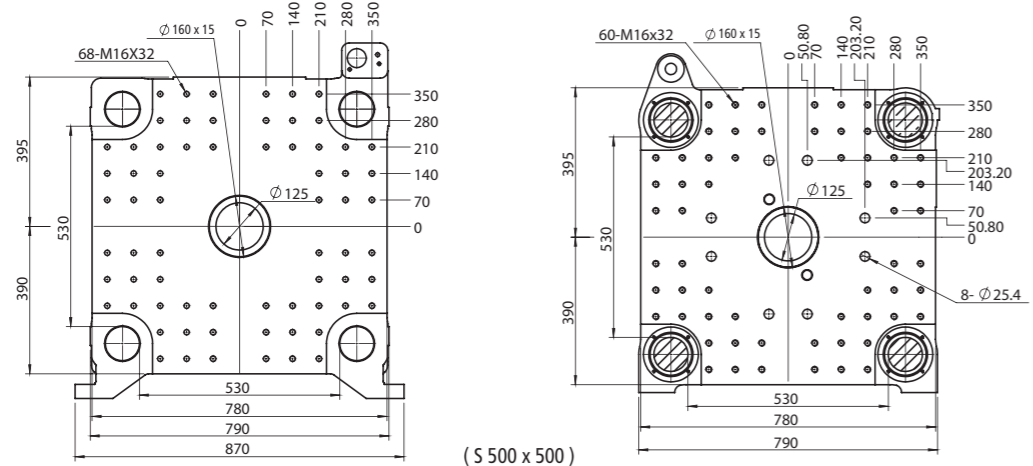
(S 450 x 450)

SPEED 398



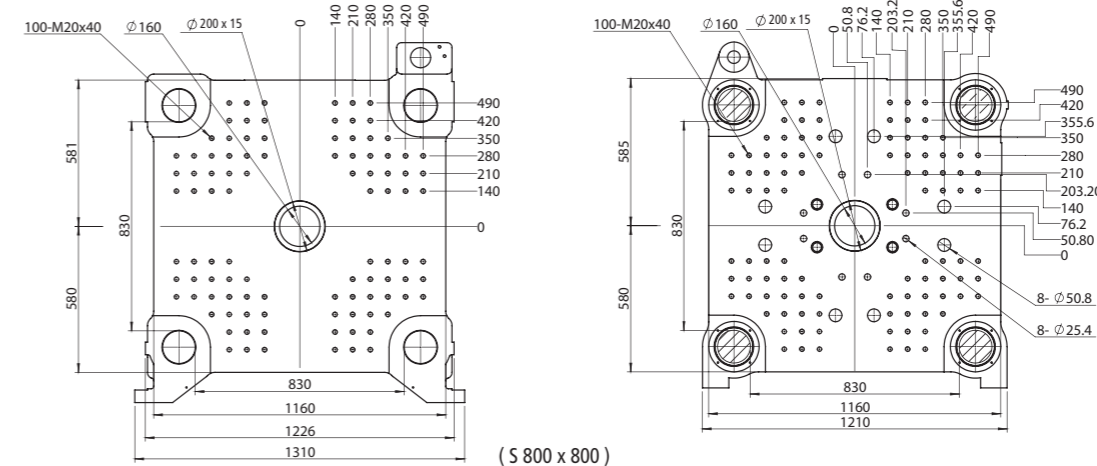
(S 710 x 710)

SPEED 208



(S 500 x 500)

SPEED 468



(S 800 x 800)

Exchangable hardened centre RING is an OPTION.

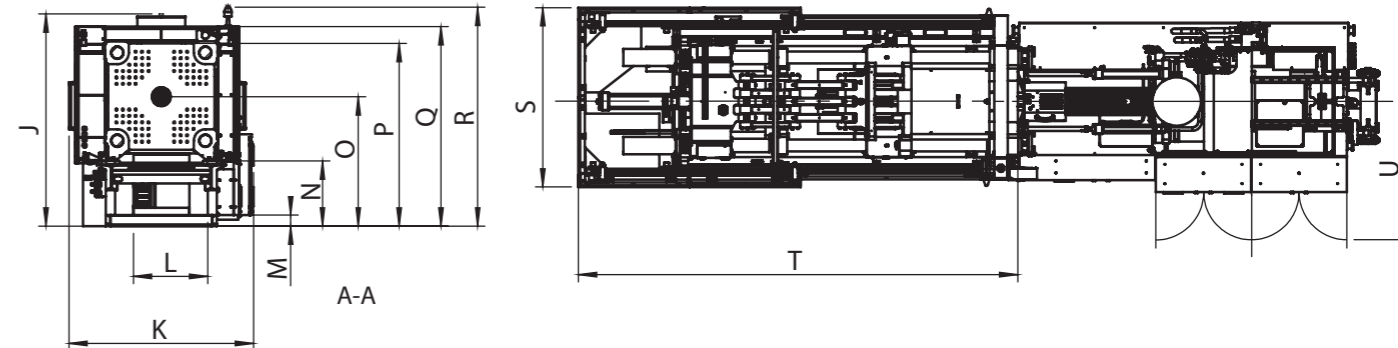
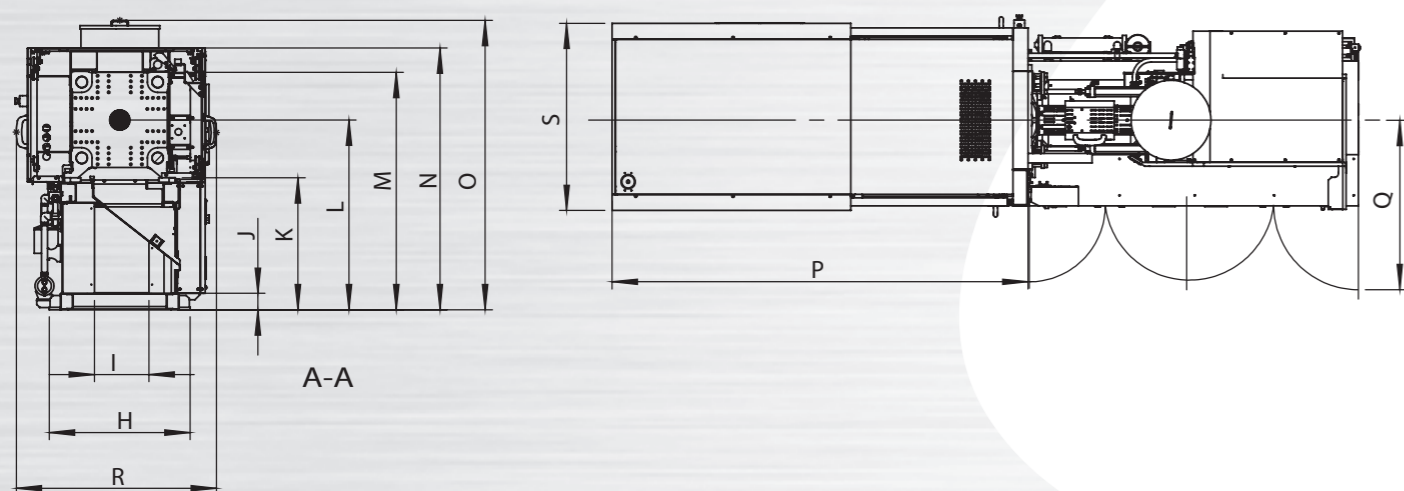
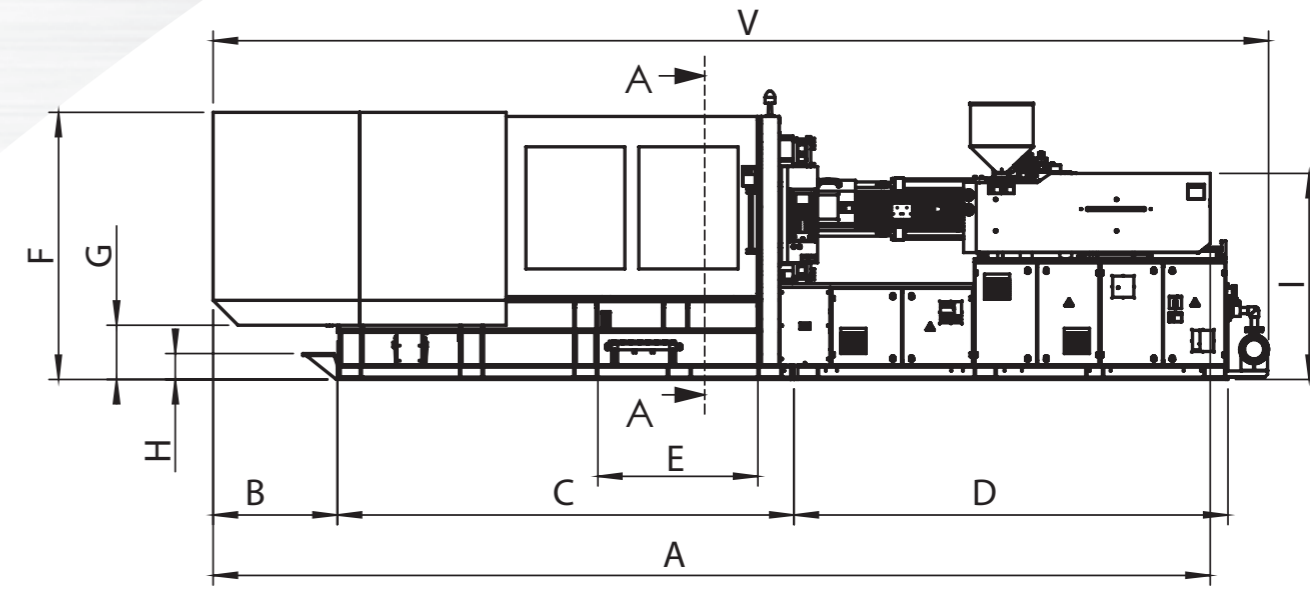
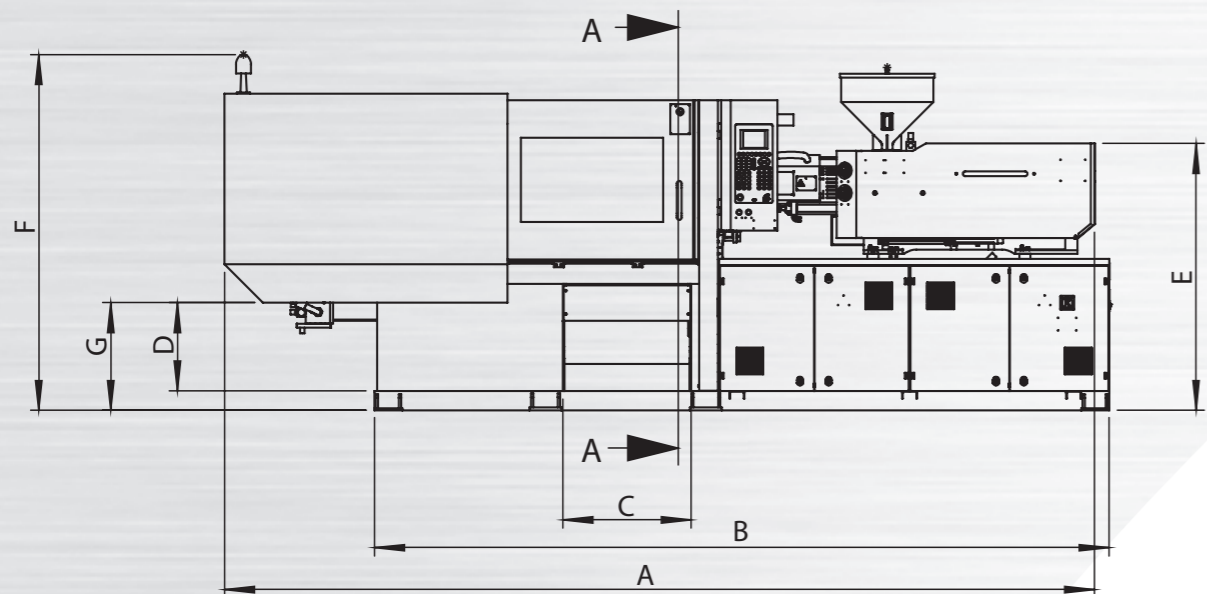
Exchangable hardened centre RING is an OPTION.

SPEED SERIES | 128-328

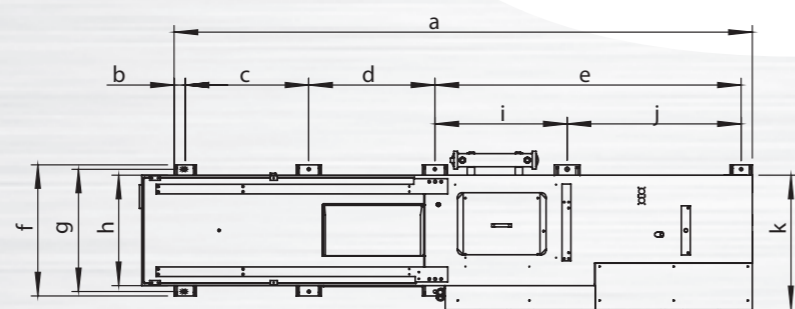
Injection molding machine

SPEED SERIES | 398-468

Injection molding machine

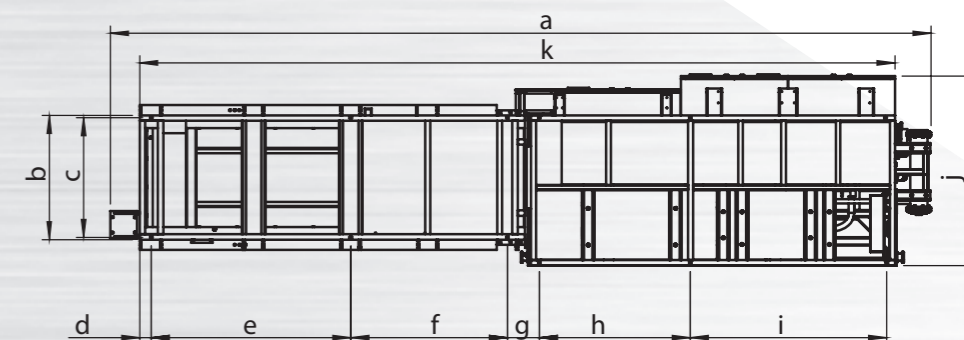


SYMBOL MODEL	SPEED 128	SPEED 168	SPEED 208	SPEED 258	SPEED 328
A	4440	4888	5450	5641	6423
B	3920	4200	4787	4917	5940
C	684	770	859	859	1075
D	471	461	481	471	510.5
E	1425	1465	1562	1607	1650
F	1898.5	1978.5	2105.5	2198	2315
G	575	565	592	577	630.5
H	890	940	1070	1140	1370
I	345	395	525	595	850
J	104	104	106	106	120
K	835	835	862	862	820
L	1200	1240	1317	1362	1400
M	1501	1581	1712	1785	1866
N	1655	1735	1862	1955	2060
O	1830	1870	1962	2007	2050
P	2630	2864.5	3197.5	3388	3948.5
Q	1073.5	1122	1253.5	1287	1503
R	1266	1301	1500	1576	1780
S	1184	1219	1418	1494	1780



SYMBOL MODEL	a	b	c	d	e	f	g	h	i	j	k
SPEED 128	3920	75	838	855	2077	890	830	750			916
SPEED 168	4200	75	977.5	905	2167.5	940	880	794			966
SPEED 208	4787	85	1111	1025		1070	1010	930	1181	1300	1096
SPEED 258	4917	85	1265.5	1025		1140	1080	1000	1156.5	1300	1163
SPEED 328	5940	100	1425	1250		1370	1310	1230	1635	1430	1396

SYMBOL	SPEED 398	SPEED 468
A	7310	7750
B	916.5	1027
C	3430	3780
D	3272	3588
E	1155	1325
F	2144.5	2210
G	510.5	450
H	216	215
I	1720	1660
J	2280	2160
K	1929	2030
L	1013	810
M	120	120
N	770	710
O	1400	1410
P	1932	1991
Q	2110	2175
R	2335	2385
S	1857	1957
T	4241.5	4681.5
U	1435	1504
V	8020	8795



MODEL SYMBOL	a	b	c	d	e	f	g	h	i	j	k
SPEED 398	7420	1120	1076	113	1775	1355	295	1492	1592	1825	6720
SPEED 468	8025	1210	1166	113	1942	1525	310	1470	1900	1845	7368

Exchangable hardened centre RING is an OPTION.

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SPEED-PACK SERIES 260 – 470 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.

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.

LARGER SCREW L/D

Larger screw L/D ratio for a perfect homogeneous melt.

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 YUKEN
 Hydraulic pump: Eckerle
 Linear transducers: Gefran or Novotechnik
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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 8 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 32 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)	6 circuits	•

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	•	
Sliding angled type screw tip set	•	
Locking type screw tip set Speed-Pack 470	•	•
E-drive (HYBRID)		•
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		•

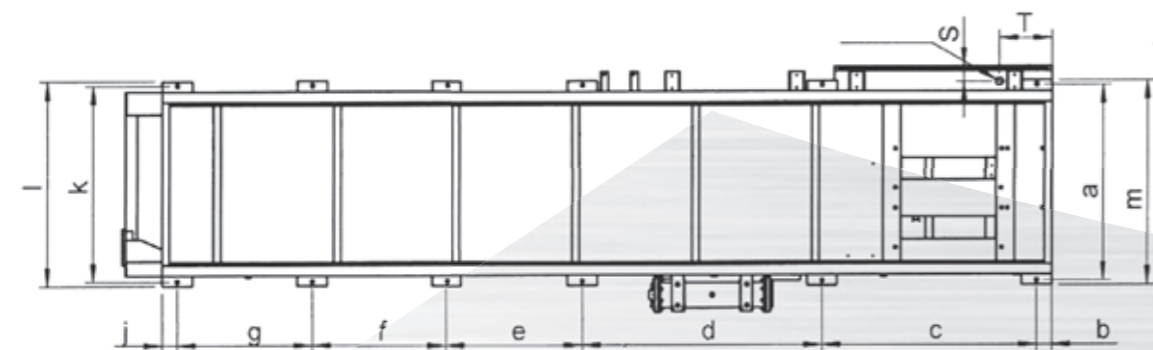
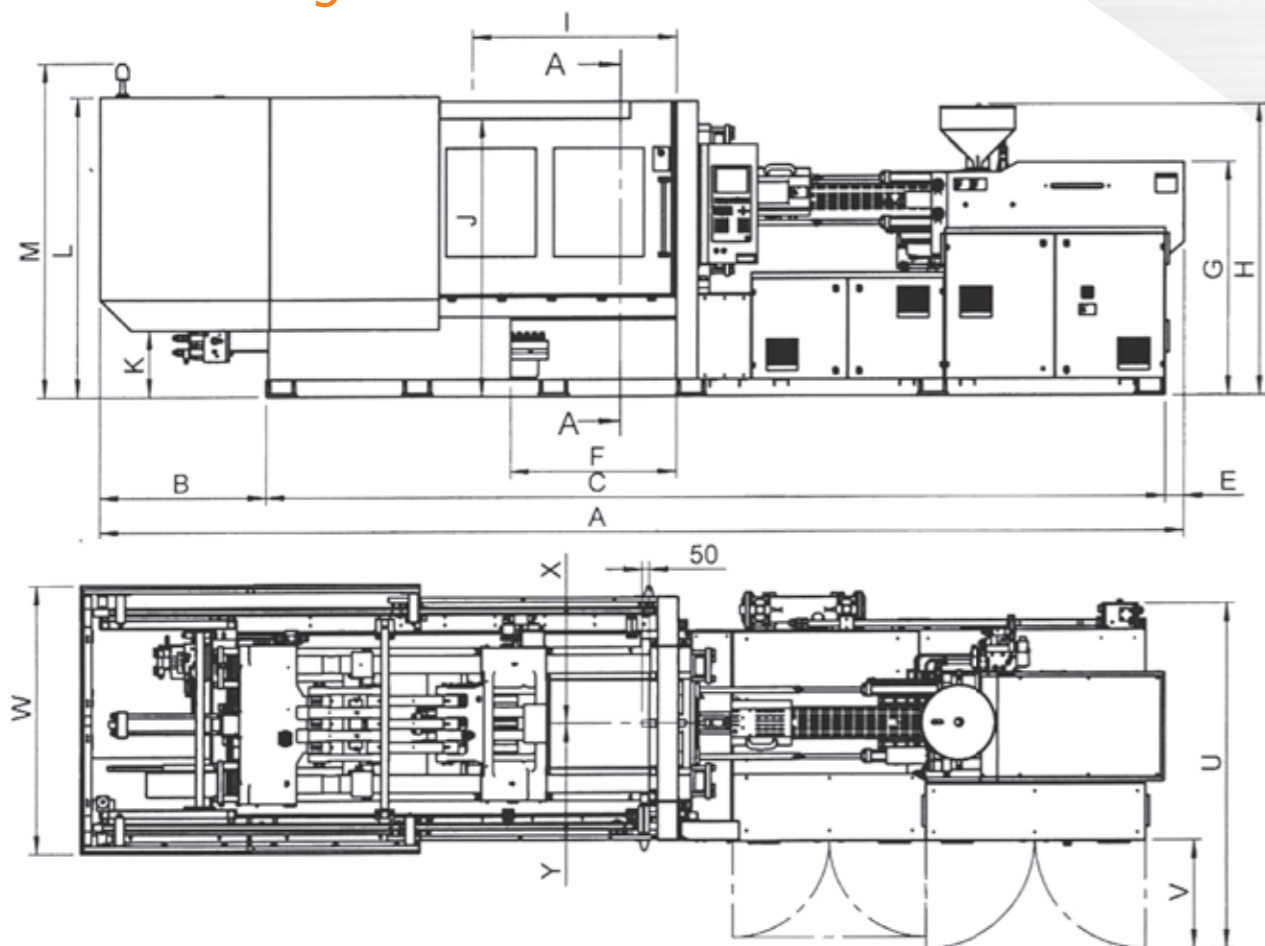
*Hole pattern/ejector pattern may differ from standard due to platen design.

Injection unit	Unit	SPEED-PACK 260		SPEED-PACK 330		SPEED-PACK 400		SPEED-PACK 470	
Swept Volume	cm ³	136	183	432	552	552	735	552	735
Injection Weight (PS)	g	124	167	393	502	502	669	502	669
Screw Diameter	mm	31	36	46	52	52	60	52	60
Screw L/D Ratio	L/D	24,4	21,0	26,0	26,0	26,0	26,0	26,0	26,0
Injection Pressure (Max)	kgf/cm ²	2.549	1.890	2.084	1.631	1.631	1.225	1.631	1.225
Injection Pressure (Max)	MPa	250	185	204	160	160	120	160	120
Injection Rate (PS)	g/s	309	417	681	870	966	1.287	966	1.287
Plasticizing rate (PS)	g/s	14,5	21	43	52	52	75	52	95
Screw Rotation Speed (Max)	rpm	300		300		300		300	
Screw Stroke	mm	180		205		230		230	
Nozzle contact force	t	4,2		4,2		6,2		6,2	
Nozzle Stroke	mm	275		290		330		330	
Clamping unit									
Clamping Force (Max)	t	128		168		208		258	
Opening Stroke	mm	380		450		510		560	
Maximum Daylight	mm	830		970		1.060		1.140	
Mould platen (HxV)	mm	600 x 600		680 x 680		790 x 790		840 x 840	
Space Between Tie Bars (HxV)	mm	410 x 410		470 x 470		530 x 530		580 x 580	
Max. Mould Thickness	mm	450		520		550		580	
Min. Mould Thickness	mm	150		170		180		190	
Ejector Stroke	mm	120		140		150		150	
Ejector Force	t	3,4		4,2		6,7		6,7	
Flange Position	mm	125		125		160		160	
Others									
Dry cycle	s	1,5		1,5		2,0		2,0	
Energy consumption (PP)	kWh								
Noise level	dBa								
System Pressure	MPa	17,5		17,5		17,5		17,5	
Pump Motor	kW	34		40		40		40	
Electrical Heating	kW	10,5		13		16,5		16,5	
Temperature Control Zones	Zones	3 + Nozzle		3 + Nozzle		3 + Nozzle		3 + Nozzle	
Oil Tank Capacity	L	230		270		360		380	
Machine dimensions (LxWxH)	m	4,8 x 1,2 x 1,9		5,2 x 1,3 x 2,0		5,8 x 1,4 x 2,1		6,0 x 1,5 x 2,2	
Machine weight	t	4,2		5,5		7,5		8,5	

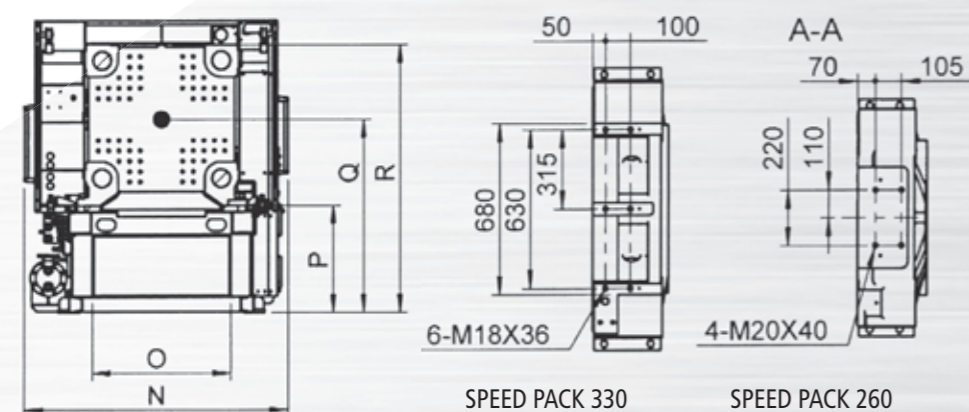
All technical data and features are subjected to change without notice.
 Exchangable hardened centre RING is an OPTION.

SPEED-PACK SERIES | 260-330

Injection molding machine



	PACK 260	PACK 330
A	5883	7162
B	966	1099
C	4917	5940
E	/	123
F	859	1097
G	1582	1550
H	1992	1935
I	1024	1264
J	1816	1843
K	596	444
L	1991	1989
M	2217	2215
N	1500	1752
O	770	920
P	862	720
Q	1362	1300
R	1785	1800
S	95	105
T	350	350
U	1895	2280
V	605	738
W	1494	1780
X	768	838
Y	666	771



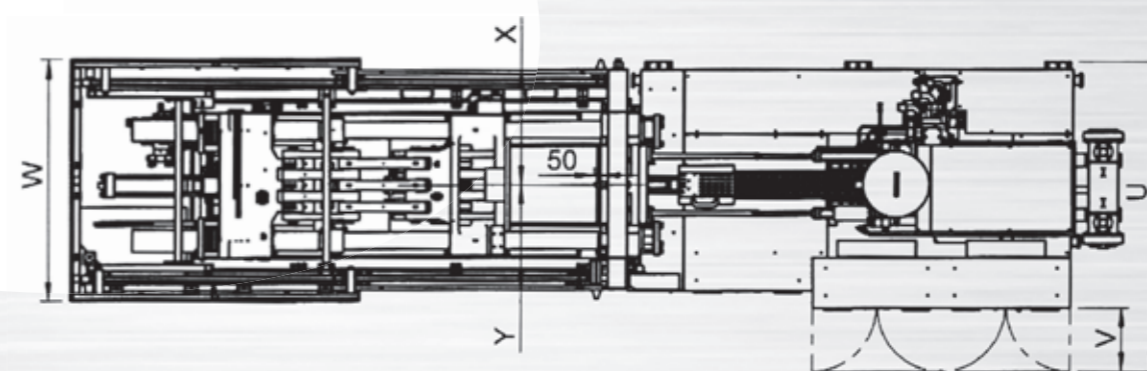
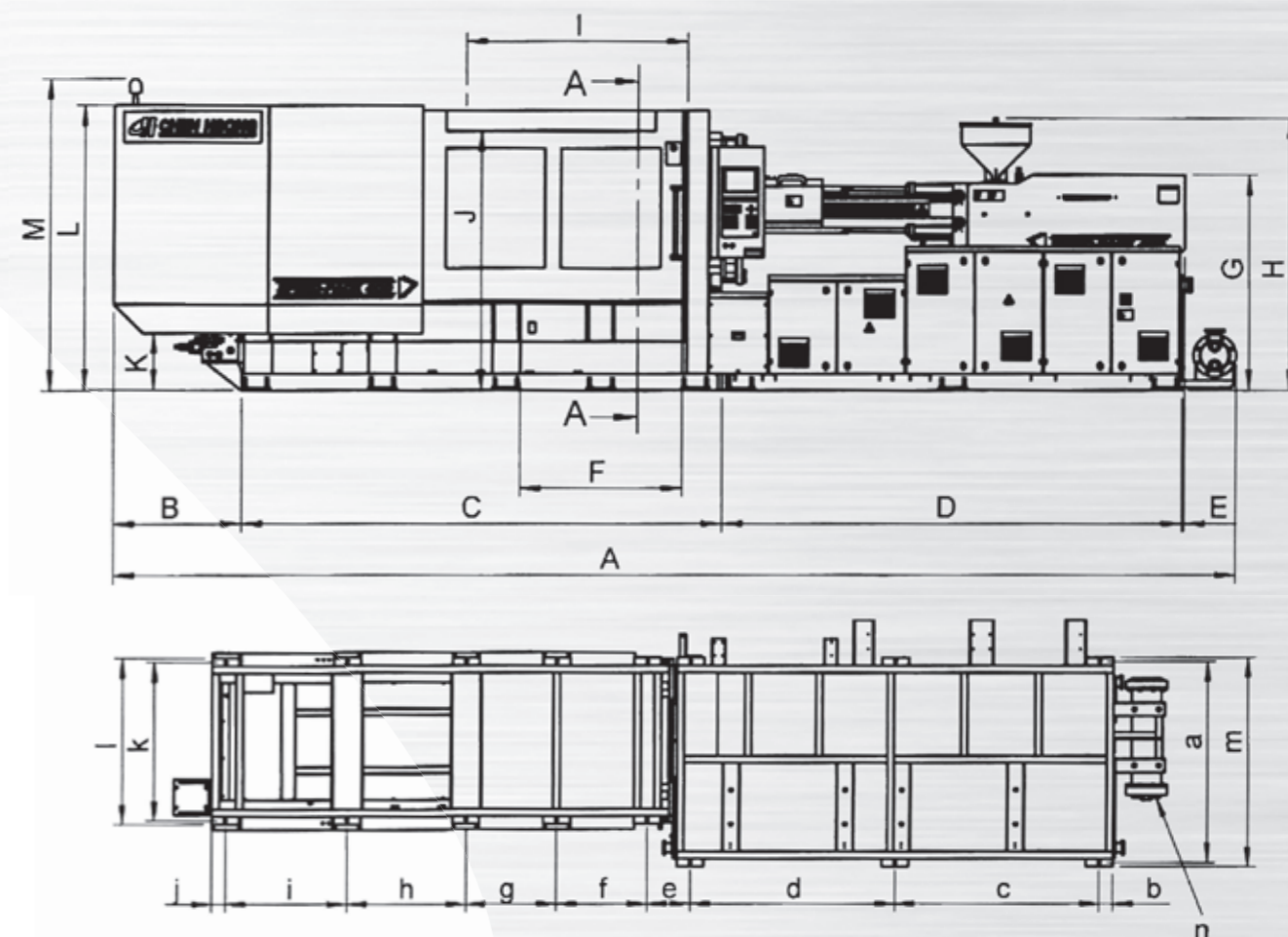
SPEED PACK 330

SPEED PACK 260

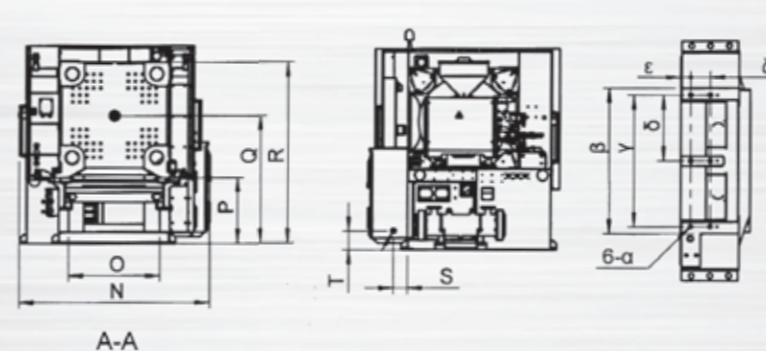
Exchangable hardened centre RING is an OPTION.

SPEED-PACK SERIES | 400-470

Injection molding machine



	PACK 400	PACK 470
A	8020	8777
B	917	1032
C	3430	3775
D	3290	3572
E	16	/
F	1155	1325
G	1550	1550
H	1952	1952
I	1578	1799
J	1862	1952
K	411	338
L	2045	2098
M	2235	2288
N	1915	2016
O	920	918
P	670	600
Q	1300	1300
R	1845	1900
S	140	140
T	190	190
U	2370	2408
V	485	533
W	1857	1957
X	833	938
Y	803	848



A-A

	PACK 400	PACK 470
a	M20X40	M20X40
β	740	880
γ	670	840
δ	335	420
ε	50	60
ζ	100	120
i	905	1005
j	100	100
k	1180	1270
l	1240	1330
m	1560	1580
n	2'	2'

Exchangable hardened centre RING is an OPTION.



Chen Hsong Europe

Distributor: **Chen Hsong Europe B.V.**
Address: **Hulostraat 2**
6911 KX Pannerden
The Netherlands
Phone **+31 (0)316-240718**
Mail: **info@chenhsongeuropa.eu**
Website: **www.chenhsongeuropa.eu**