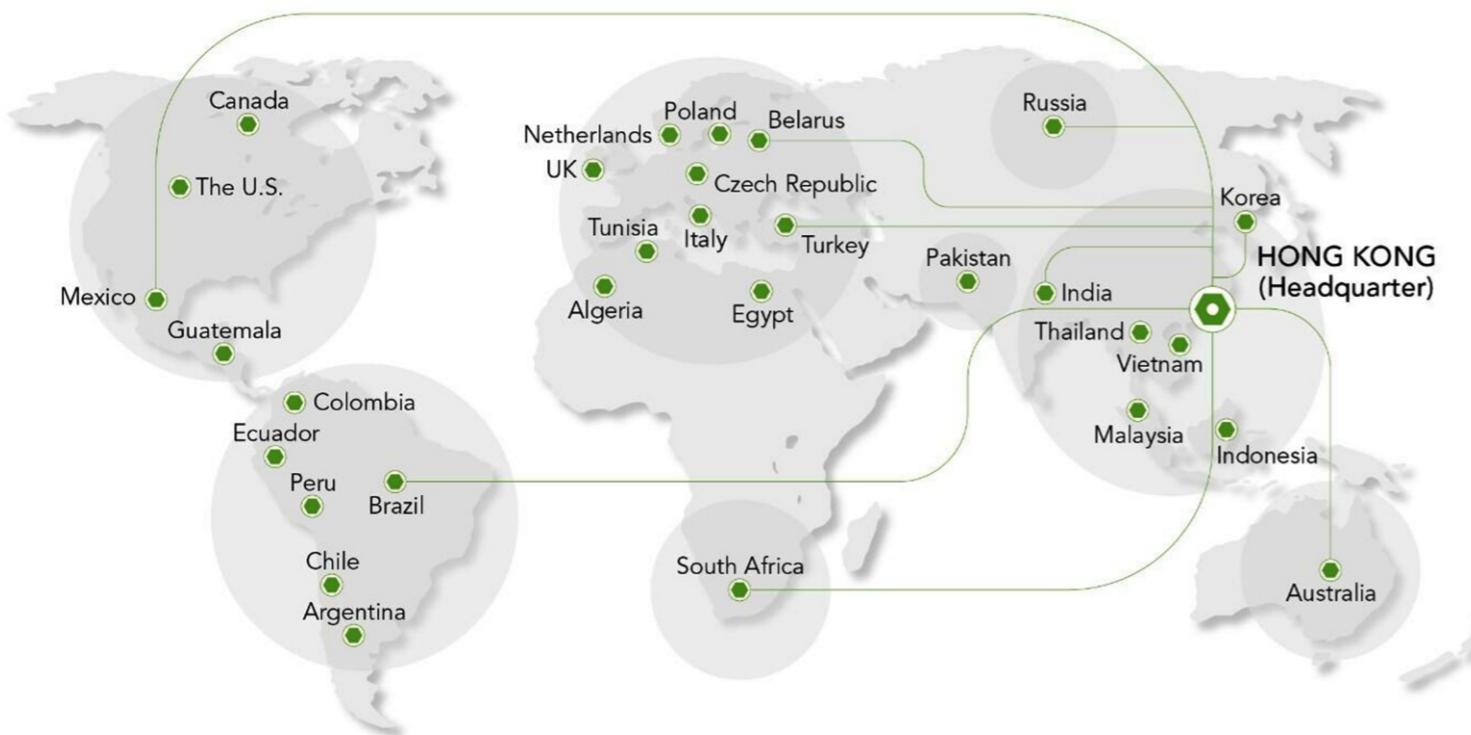


Our offices and agents



D series

All-electric (90-1400T)

Injection moulding machine
Precision and Productivity



Welltec Machinery Ltd



Version: D-202309W





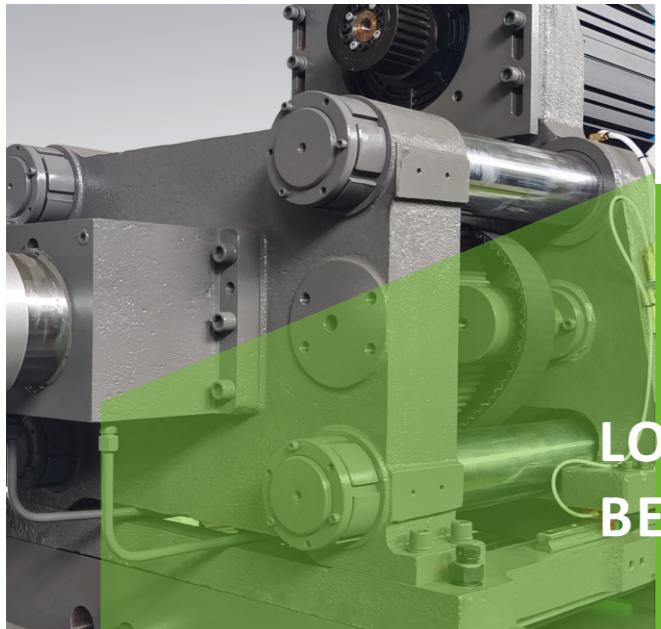
The Electric machine to showcase precision, performance and energy efficiency



- Facing the challenge of high energy cost, every manufacturer is trying to lower the costs.
The efficient all-electric machine will be a solution that works perfectly to meet your production needs.
- Our new generation of electric machine is dynamic and resourceful to allow broad applications ranging from industry-specific parts, thin-walled parts, optical articles to sophisticated medical components.
- With sophisticated drive and screw technology, we enable a highly accurate and stable movement even under high pressure and speed.



Highlights



LOWER CONSUMPTION BETTER PERFORMANCE

- Self-locking 5 points toggle clamping structure, remarkably high rigidity clamping unit.
- Ball screw driven by servo motor to achieve smooth and accurate clamping movements.
- State-of-art motor drive control system to ensure repeatability of $\pm 0.01\text{mm}$.
- Key components supplied by internationally well-known brands to achieve high machine stability.
- Save energy and lower your CO₂ footprint.

The Advantages

Reduce energy costs

Low energy consumption and high productivity come at the same time. Compared to the traditional hydraulic machines, our electric machines can enable an energy saving reaching up to **25%**



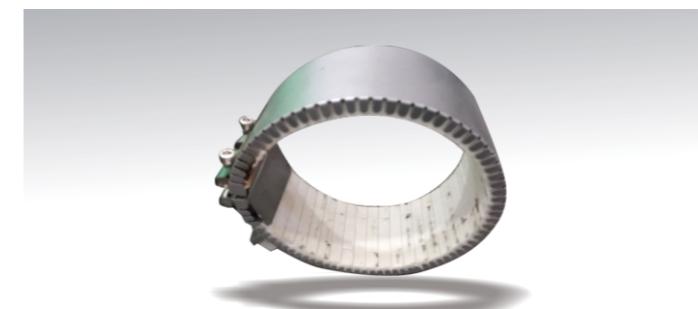
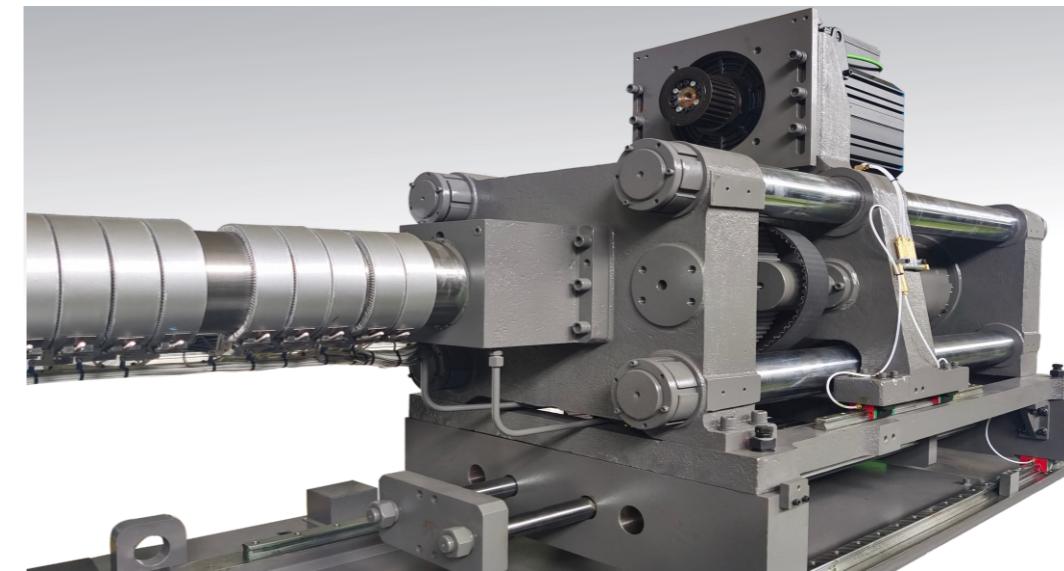
HIGH PRECISION

Fit for precision and high-end applications

The state-of-art injection units of high rigidity, coupled with ceramic heating bands, bimetallic screw to inject products with excellent flow length ratio.

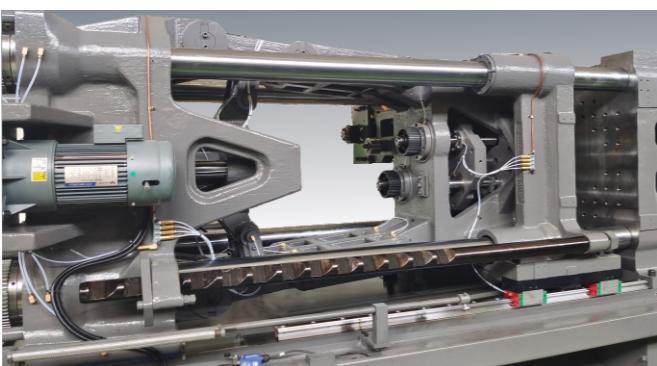
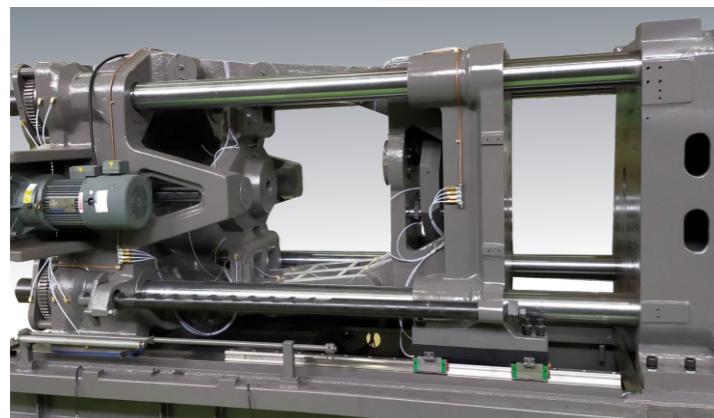
Injection unit

- High performance plasticizing unit including bi-metallic screw to achieve resistance to abrasive resins
- Low friction linear guide rail
- Standardized with bi-metallic screw and ceramic heating bands
- Improved plasticizing motor torque
- Double layer designs enable flexible injection unit upsize or downsize



Clamping unit

- Wide tie bar distance and extra long stroke
- Precise mold height adjustment
- Rigid clamping structure to reinforce precision molding
- Sensitive mold protection
- Smooth platen acceleration and deceleration
- Accredited with 10 national patented design



Control system

- 15" touch screen display
- User-friendly interface
- Seamless connection among control system, servo motor and servo drive unanimously powered by Inovance



EP- 700 control system



ES 810 Servo Driver

- Better prevention to overloading
- High performance even under high pressure and high speed
- Low speed long pressure holding
- Instant high torque start up



D series configuration

Injection Unit

- Heavy loading & high precision ball screw bearing
- High precision load cell
- High strength alloy steel chrome plating screw
- Moveable hopper base
- Nozzle safety cover
- Barrel protection cover
- Safety device for material feeding area
- Anti-drool function
- Automatic purging function
- Injection failure auto detection
- Screw cold-start prevention system
- Heat/holding temperature switch on and off
- Nozzle center adjustment device
- 10 stages injection control for pressure and speed
- 10 stages pressure holding control for speed and pressure
- 5 stages plasticizing speed rotate closed-loop control
- 5 stages back pressure control
- 2 stages carriage forward and 2 stages backward control

Clamping Unit

- 5 points toggle clamping structure
- Auto mold adjustment device
- Automatic capacity type grease lubrication system. Centralized lubrication for mold adjustment (without pump)
- Multi modes for ejection
- Screw holes mold platen
- Linear guide rail for mold opening and closing
- Low pressure mold protection function
- Machine safety function
- Safety guard for product dropping area
- 4 stages mold opening control for speed and pressure
- 4 stages mold clamping control for speed and pressure
- 2 stages ejection forward control for speed and pressure
- 2 stages ejection backward control for speed and pressure

Control system

- INOVNACE special control system
- 15' color LCD screen (rotate control box)
- PID temperature system for barrel heating
- Closed-loop control for injection, pressure holding and back pressure
- Barrel temperature holding and pre-heating function
- IMM energy consumption management function (Optional)
- Emergency button in the front and back safety door
- 4 level password protection
- IP54 level anti-dust electric cabinet
- Accurate position display
- Screw rotate speed display
- Automatic fault detection and display
- Auto-counting function
- 3 phase 380V 50HZ voltage
- 1 set 380V 16A socket
- 1 set 380V 32A socket
- Ceramic heater band
- Control system & SPC statistical functions
- Parameters password protection
- Injection molding animation display
- Injection molding process display
- 100 sets data saving. CF card (optional)
- Multi-language display

Others

- 7 sets water manifold
- Full-cover for injection unit
- Clamping guard with movable top cover
- Spare parts (with extended nozzle)
- Auto grease lubrication pump

D series (90-1400T)

Precision and Productivity

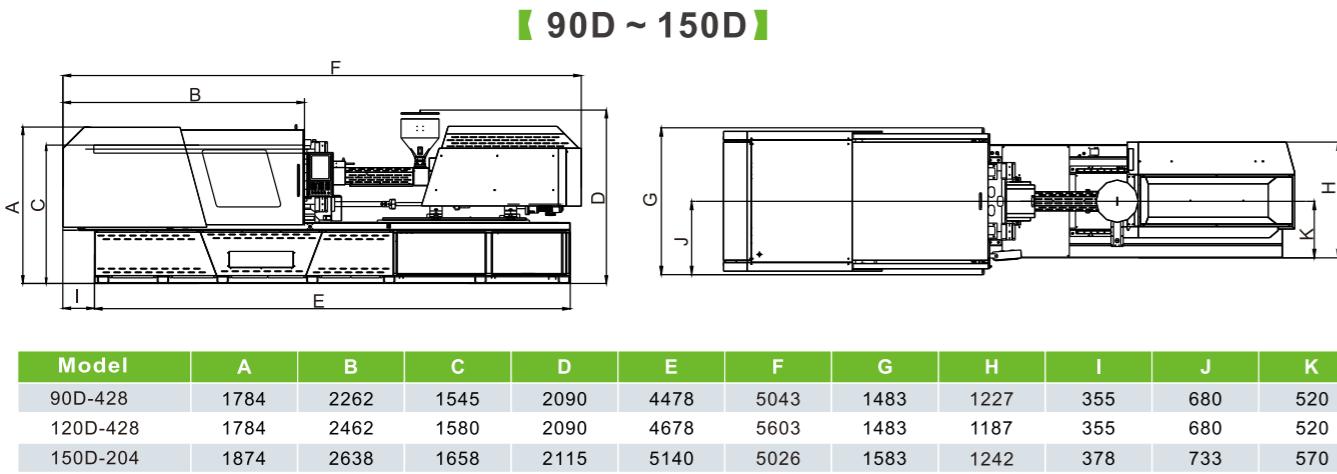
WELLTEC
INJECTION EXPERT

Specifications

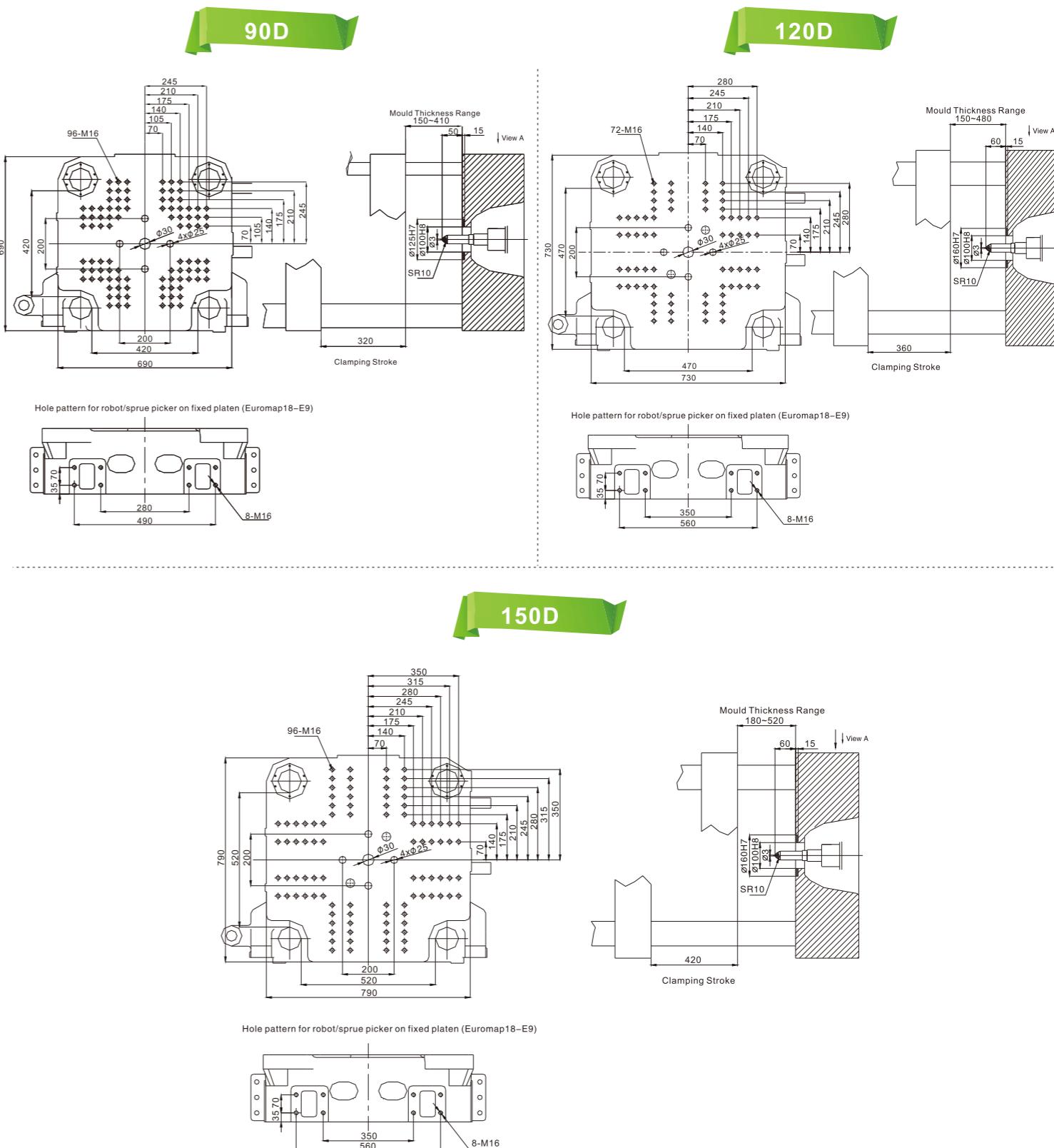
ITEM	UNIT	90D				120D				150D			
IU		204/204h		428/428h		204/204h		428/428h		204/204h		428/428h	
INJECTION UNIT													
Screw diameter	mm	25	28	32	36	40	45	25	28	32	36	40	45
Theoretical shot volume	cm ³	61	77	101	173	214	270	61	77	101	173	214	270
Shot weight (PS)	g	56	70	91	157	194	246	56	70	91	157	194	246
Length/Diameter ratio	L/D	22	20	18	22	20	18	22	20	18	22	20	18
Injection pressure	MPa	332	265	203	247	200	158	332	265	203	247	200	158
Holding pressure	MPa	266	212	162	198	160	126	266	212	162	198	160	126
Injection speed	mm/s	240/400		240/350		240/400		240/350		240/400		240/350	
Injection rate	cm ³ /sec	118	148	193	244	302	382	118	148	193	244	302	382
Injection stroke	mm	125		170		125		170		125		170	
Max. screw speed	rpm	350		350		350		350		350		350	
Plasticizing capacity (PS)	g/s	7.4	9.3	15.1	22.2	26.3	38.3	7.4	9.3	15.1	22.2	26.3	38.3
Injection unit force	Ton	2.5		3		2.5		3		2.5		3	
CLAMPING UNIT													
Clamping force	Ton	90		120		150							
Max. daylight	mm	730		840		940							
Clamping stroke	mm	320		360		420							
Distance btwn. tie bars	mm	420x420		470x470		520x520							
Min. mould size	mm	295x295		330x330		365x365							
Mould thickness range	mm	150-410		150-480		180-520							
Ejector force	Ton	3		3		3.5							
Ejector stroke	mm	80		100		120							
POWER UNIT													
No. of heating zones	unit	3+1		4+1		3+1		4+1		3+1		4+1	
Heating power	kW	8.77		14.73		8.77		14.73		8.77		14.73	
Electrical power	KVA	41.1/48.4		50.8/64.7		41.1/48.4		50.8/57.8		48.7/48.7		51.1/64.7	
Total current	A	69.4/81.8		85.8/109.2		69.4/81.8		85.8/97.5		82.3/82.3		86.3/109.2	
Machine weight	Ton	6/6.2		6.8/7		6.7/6.9		7.5/7.5		9.5/9.7		10.2/10.5	

We are always working on improvement and reserve the rights to change design and specifications without prior notice.

Machine Dimensions



Platen/Nozzle Dimensions



D series (90-1400T)

Precision and Productivity

WELLTEC
INJECTION EXPERT

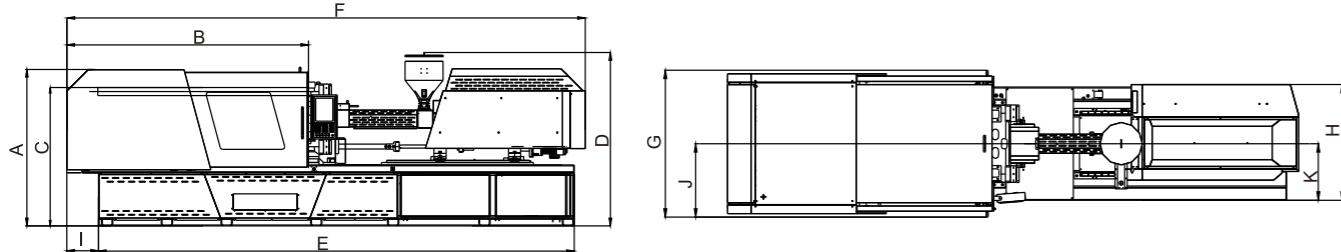
Specifications

ITEM	UNIT	190D						230D											
IU		428/428h			636/636h			636/636h			904/904h								
INJECTION UNIT																			
Screw diameter	mm	36	40	45	40	45	50	40	45	50	45	50	55						
Theoretical shot volume	cm ³	173	214	270	251	318	393	251	318	393	366	452	546						
Shot weight (PS)	g	157	194	246	229	289	357	229	289	357	333	411	497						
Length/Diameter ratio	L/D	22	20	18	23	20	18	23	20	18	22	20	18						
Injection pressure	MPa	247	200	158	253	200	162	253	200	162	247	200	165						
Holding pressure	MPa	198	160	126	203	160	130	203	160	130	198	160	132						
Injection speed	mm/s	240/350			240/350			240/350			240/350								
Injection rate	cm ³ /sec	244	302	382	302	382	471	302	382	471	382	471	570						
Injection stroke	mm	170			200			200			230								
Max. screw speed	rpm	350			320			320			320								
Plasticizing capacity (PS)	g/s	22.2	26.3	38.3	24.0	35.0	43.5	24.0	35.0	43.5	35.0	43.5	61.2						
Injection unit force	Ton	3			4			4			5								
CLAMPING UNIT																			
Clamping force	Ton	190						230											
Max. daylight	mm	1020						1150											
Clamping stroke	mm	470						550											
Distance btwn. tie bars	mm	570x570						620x620											
Min. mould size	mm	400x400						420x420											
Mould thickness range	mm	200-550						220-610											
Ejector force	Ton	5						5											
Ejector stroke	mm	130						150											
POWER UNIT																			
No. of heating zones	unit	4+1		5+1		5+1		5+1											
Heating power	kW	14.73		18.55		18.55		22.7											
Electrical power	KVA	52.8/66.4		62.6/75.5		66/75		69.6/77.2											
Total current	A	89.1/112.1		105.7/127.5		111.5/127.5		117.5/130.3											
Machine weight	Ton	10.1/10.3		10.9/11.3		12.7/12.9		13.1/13.4											

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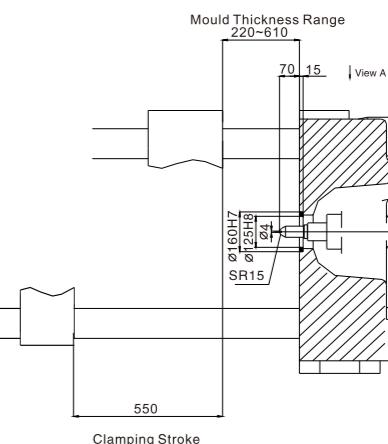
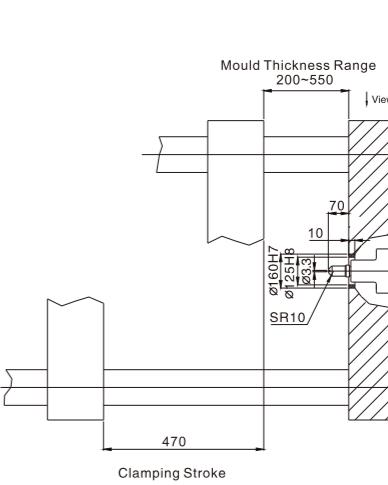
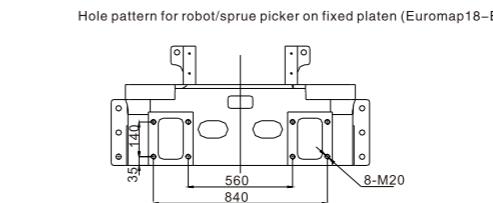
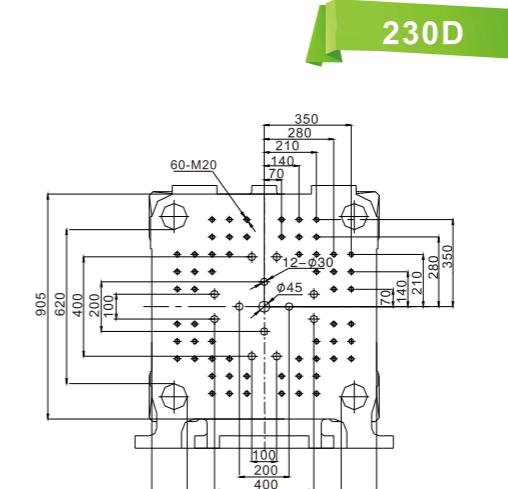
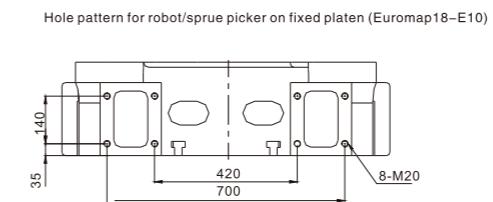
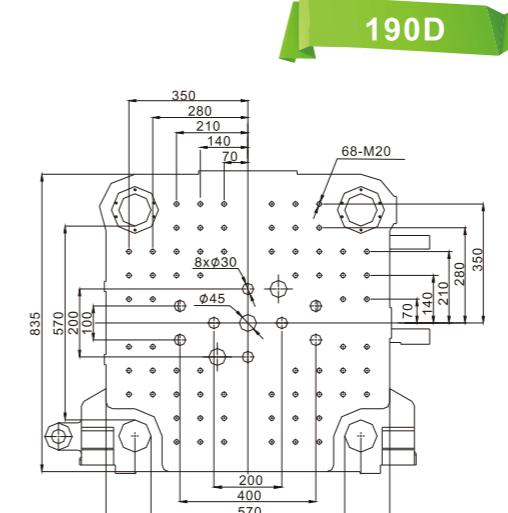
Machine Dimensions

TTI-190 ~ 230D



Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



D series (90-1400T)

Precision and Productivity

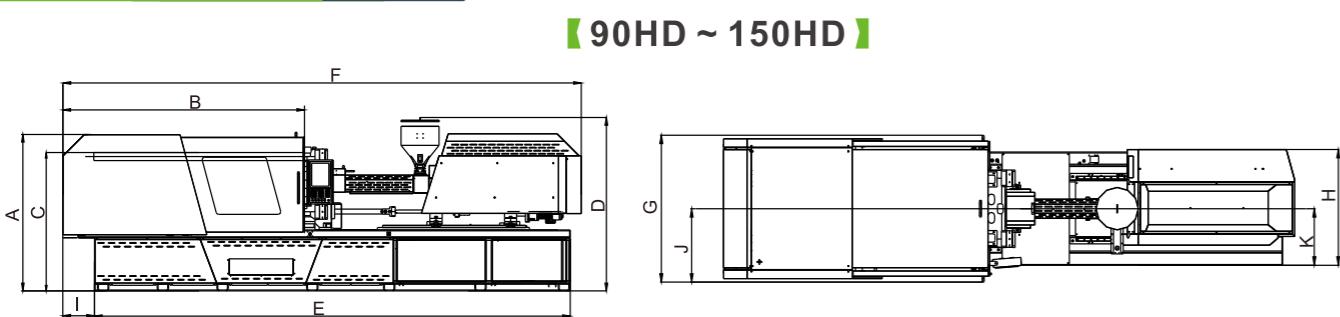
WELLTEC
INJECTION EXPERT

Specifications

ITEM	UNIT	90HD						120HD						150HD					
IU		204/204h			428/428h			204/204h			428/428h			204/204h			428/428h		
INJECTION UNIT																			
Screw diameter	mm	25	28	32	36	40	45	25	28	32	36	40	45	25	28	32	36	40	45
Theoretical shot volume	cm ³	61	77	101	173	214	270	61	77	101	173	214	270	61	77	101	173	214	270
Shot weight (PS)	g	56	70	91	157	194	246	56	70	91	157	194	246	56	70	91	157	194	246
Length/Diameter ratio	L/D	22	20	18	22	20	18	22	20	18	22	20	18	22	20	18	22	20	18
Injection pressure	MPa	332	265	203	247	200	158	332	265	203	247	200	158	332	265	203	247	200	158
Holding pressure	MPa	266	212	162	198	160	126	266	212	162	198	160	126	266	212	162	198	160	126
Injection speed	mm/s	240/400			240/350			240/400			240/350			240/400			240/350		
Injection rate	cm ³ /sec	118	148	193	244	302	382	118	148	193	244	302	382	118	148	193	244	302	382
Injection stroke	mm	125			170			125			170			125			170		
Max. screw speed	rpm	350			350			350			350			350			350		
Plasticizing capacity (PS)	g/s	7.4	9.3	15.1	22.2	26.3	38.3	7.4	9.3	15.1	22.2	26.3	38.3	7.4	9.3	15.1	22.2	26.3	38.3
Injection unit force	Ton	5.7			5.7			5.7			5.7			5.7			5.7		
CLAMPING UNIT																			
Clamping force	Ton	90			120			150											
Max. daylight	mm	730			840			940											
Clamping stroke	mm	320			360			420											
Distance btwn. tie bars	mm	420x420			470x470			520x520											
Min. mould size	mm	295x295			330x330			365x365											
Mould thickness range	mm	150-410			150-480			180-520											
Ejector force	Ton	5.5			5.5			5.5											
Ejector stroke	mm	80			100			120											
POWER UNIT																			
No. of heating zones	unit	3+1		4+1		3+1		4+1		3+1		4+1							
Heating power	kW	8.77		14.73		8.77		14.73		8.77		14.73							
Electrical power	KVA	41.1/48.4		50.8/64.7		41.1/48.4		50.8/57.8		48.7/48.7		51.1/64.7							
Total current	A	69.4/81.8		85.8/109.2		69.4/81.8		85.8/97.5		82.3/82.3		86.3/109.2							
Oil filling capacity	L	6/6.2		6.8/7		6.7/6.9		7.5/7.5		9.5/9.7		10.2/10.5							
Machine weight	Ton	50			50			50											

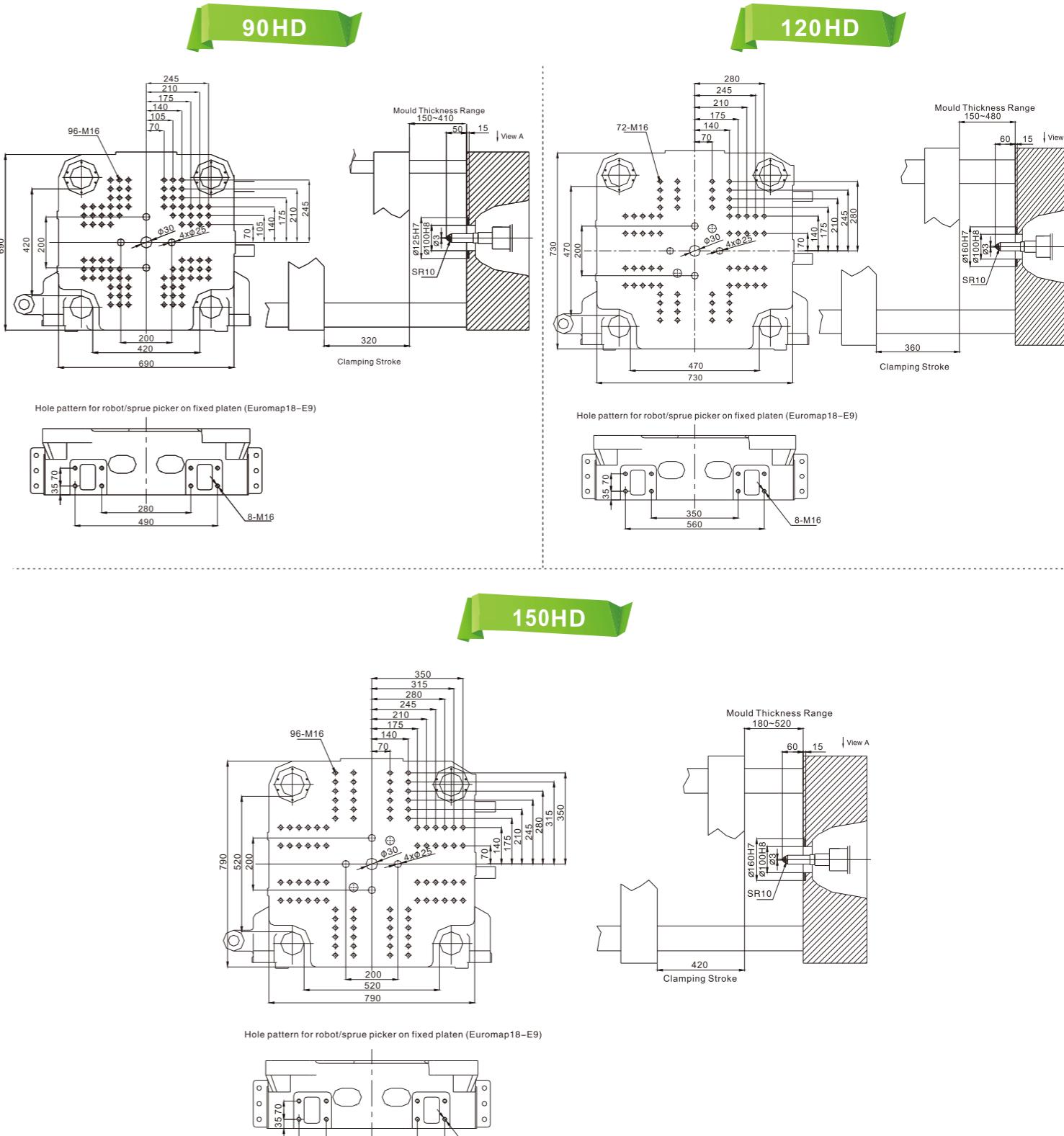
We are always working on improvement and reserve the rights to change design and specifications without prior notice

Machine Dimensions



Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



D series (90-1400T)

Precision and Productivity

WELLTEC
INJECTION EXPERT

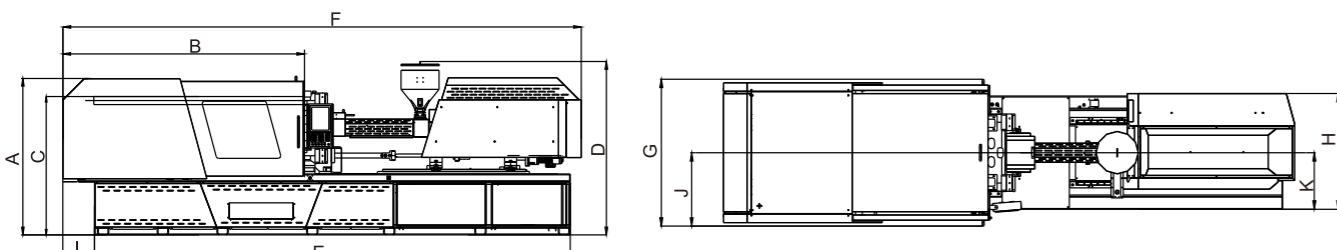
Specifications

ITEM	UNIT	190HD					230HD					300HD				
IU		428/428h					636/636h					904/904h				
INJECTION UNIT																
Screw diameter	mm	36	40	45	40	45	50	40	45	50	45	50	55	45	50	55
Theoretical shot volume	cm ³	173	214	270	251	318	393	251	318	393	366	452	546	366	452	546
Shot weight (PS)	g	157	194	246	229	289	357	229	289	357	333	411	497	333	411	497
Length/Diameter ratio	L/D	22	20	18	23	20	18	23	20	18	22	20	18	22	20	18.6
Injection pressure	MPa	247	200	158	253	200	162	253	200	162	247	200	165	247	200	165
Holding pressure	MPa	198	160	126	203	160	130	203	160	130	198	160	132	198	160	132
Injection speed	mm/s	240/350		240/350		240/350		240/350		240/350		240/350		230/350		
Injection rate	cm ³ /sec	244	302	382	302	382	471	302	382	471	382	471	570	382	471	570
Injection stroke	mm	170		200		200		230		230		230		280		
Max. screw speed	rpm	350		320		320		320		320		320		250		
Plasticizing capacity (PS)	g/s	22.2	26.3	38.3	24.0	35.0	43.5	24.0	35.0	43.5	61.2	35.0	43.5	61.2	61.2	76.5
Injection unit force	Ton	5.7		5.7		5.7		11		11		11		11		
CLAMPING UNIT																
Clamping force	Ton	190		230		300										
Max. daylight	mm	1020		1150		1250										
Clamping stroke	mm	470		550		600										
Distance btwn. tie bars	mm	570x570		620x620		730x730										
Min. mould size	mm	400x400		420x420		510x510										
Mould thickness range	mm	200-550		220-610		240-650										
Ejector force	Ton	8		8		11										
Ejector stroke	mm	130		150		160										
POWER UNIT																
No. of heating zones	unit	4+1		5+1		5+1		5+1		5+1		5+1				
Heating power	kW	14.73		18.55		18.55		22.7		22.7		31.29				
Electrical power	KVA	52.8/66.4		62.6/75.5		66/75		69.6/77.2		90.4/90.4		97.4/120				
Total current	A	89.1/112.1		105.7/127.5		111.5/127.5		117.5/130.3		152.6/152.6		164.5/202.6				
Oil filling capacity	L	10.1/10.3		10.9/11.3		12.7/12.9		13.1/13.4		16.7/16.9		17.6/17.8				
Machine weight	Ton	50		50		50		75								

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Machine Dimensions

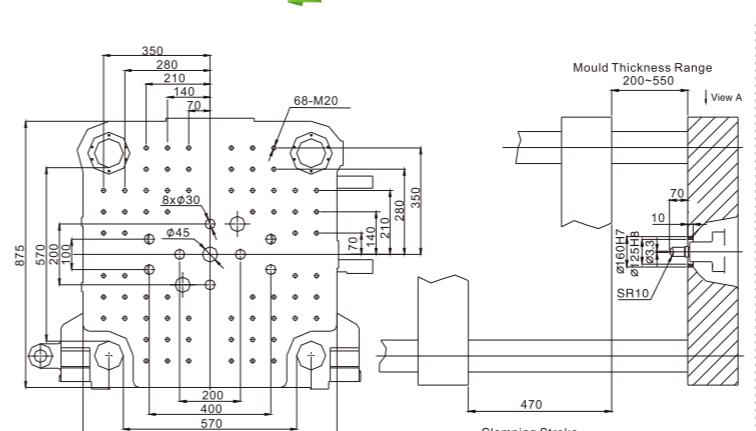
90HD ~ 150HD



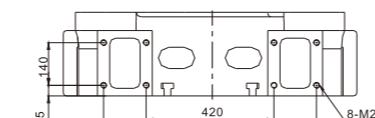
Remark: C-hopper height for reference only

Platen/Nozzle Dimensions

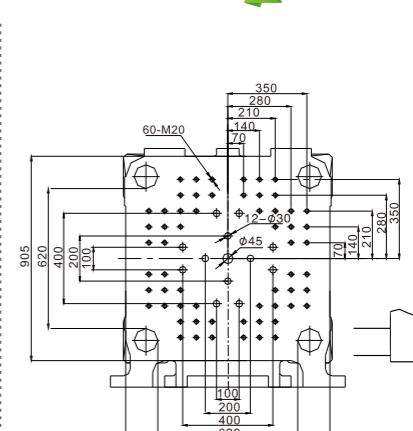
190HD



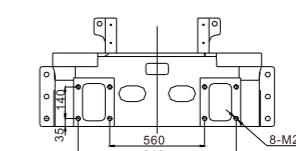
Hole pattern for robot/sprue picker on fixed platen (Euromap18-E10)



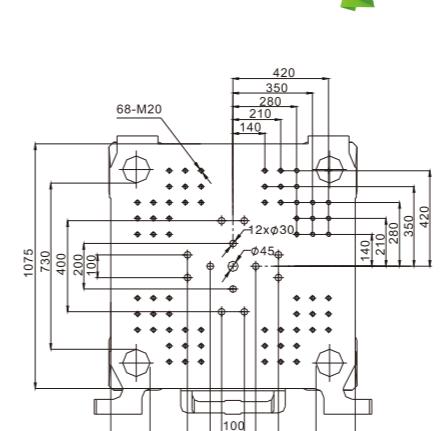
230D



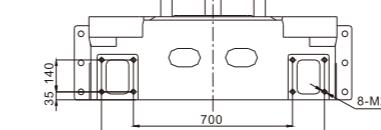
Hole pattern for robot/sprue picker on fixed platen (Euromap18-E11)



300HD



Hole pattern for robot/sprue picker on fixed platen (Euromap18-E12)



D series (90-1400T)

Precision and Productivity

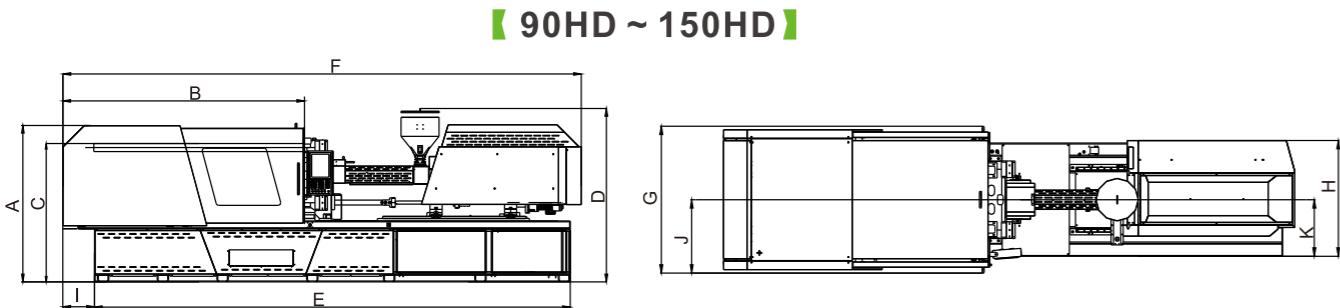
WELLTEC
INJECTION EXPERT

Specifications

ITEM	UNIT	360HD				450HD				550HD			
IU		904/904h				1728/1728h				1728/1728h			
INJECTION UNIT													
Screw diameter	mm	45	50	55	60	65	70	60	65	70	65	70	80
Theoretical shot volume	cm ³	366	452	546	792	929	1078	792	929	1078	1078	1251	1634
Shot weight (PS)	g	333	411	497	720	846	981	720	846	981	981	1138	1487
Length/Diameter ratio	L/D	22	20	18	22	20	18.6	22	20	18.6	23	21	18.4
Injection pressure	MPa	247	200	165	218	186	160	218	186	160	209	180	138
Holding pressure	MPa	198	160	132	175	149	128	175	149	128	167	144	110
Injection speed	mm/s	240/350		230/350		230		160		160		160	
Injection rate	cm ³ /sec	382	471	570	650	736	885	650	736	885	531	616	804
Injection stroke	mm	230		280		280		325		325		370	
Max. screw speed	rpm	320		250		250		210		210		185	
Plasticizing capacity (PS)	g/s	35.0	43.5	61.2	61.1	76.5	94.4	61.1	76.5	94.4	64.3	79.3	110.1
Injection unit force	Ton	11		11		11		11		11		11	
CLAMPING UNIT													
Clamping force	Ton	360			450			550					
Max. daylight	mm	1440			1610			1780					
Clamping stroke	mm	730			800			900					
Distance btwn. tie bars	mm	820x820			920x920			970x970					
Min. mould size	mm	575x575			600x600			630x630					
Mould thickness range	mm	250-710			350-810			380-880					
Ejector force	Ton	11			11			15.7					
Ejector stroke	mm	160			180			180					
POWER UNIT													
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	22.7		32.49		31.49		35.49		35.49		43.49	
Electrical power	KVA	90.4/90.4		97.4/120		110		117		130		136	
Total current	A	152.6/152.6		164.5/202.6		185		198		220		229	
Oil filling capacity	L	19/19.2		20/20.2		26.2		26		33.8		34.3	
Machine weight	Ton	75		160		160		160		160		160	

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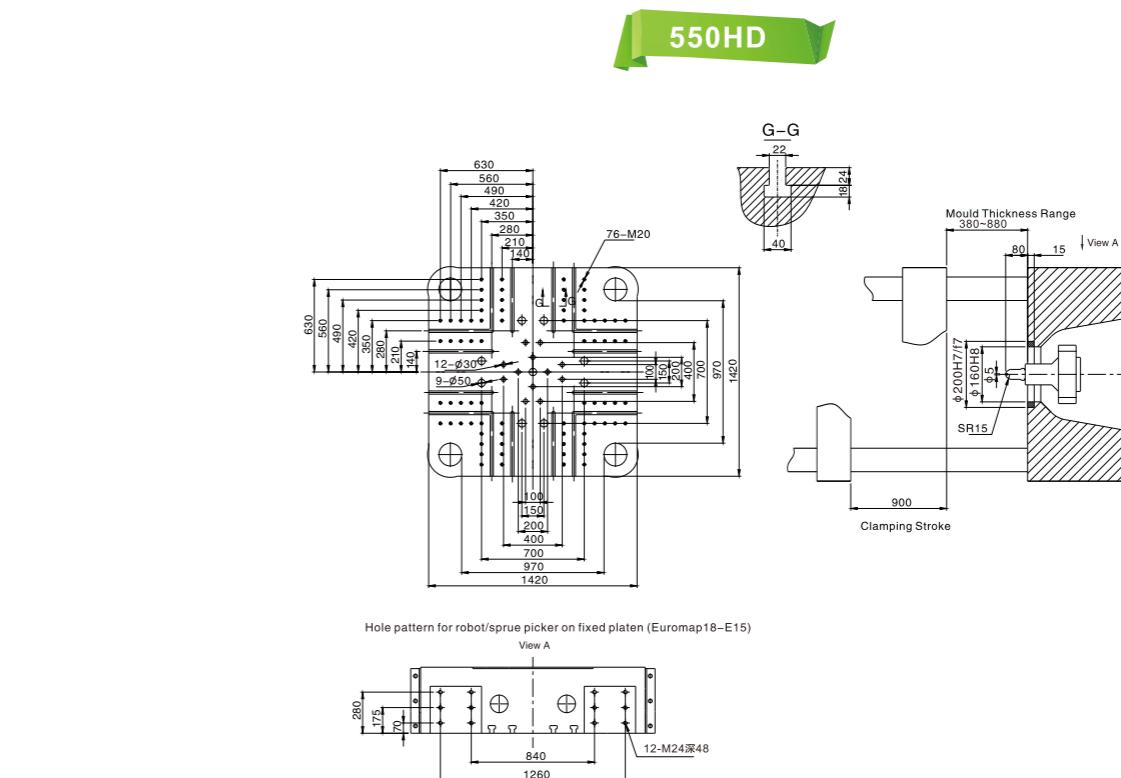
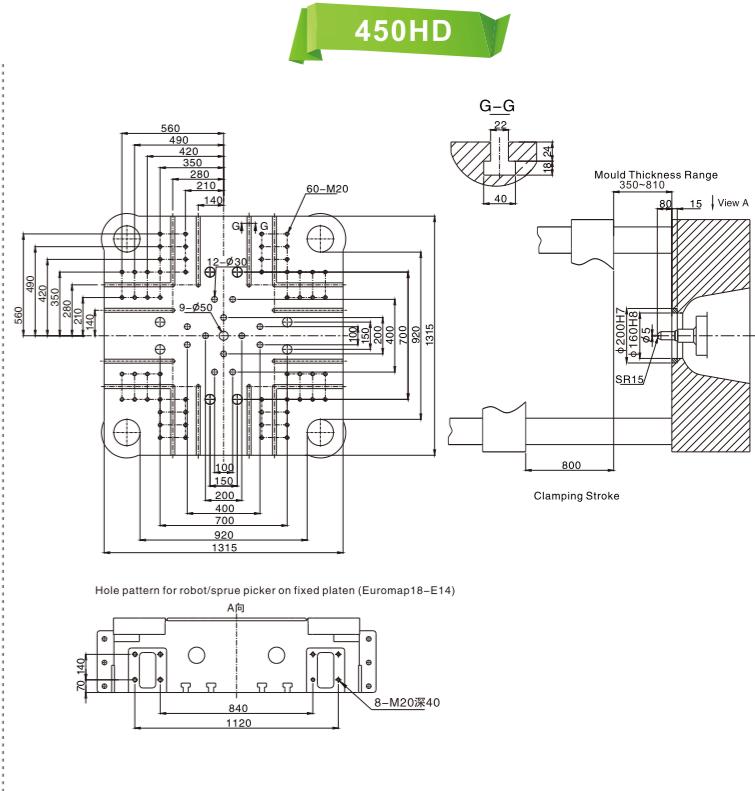
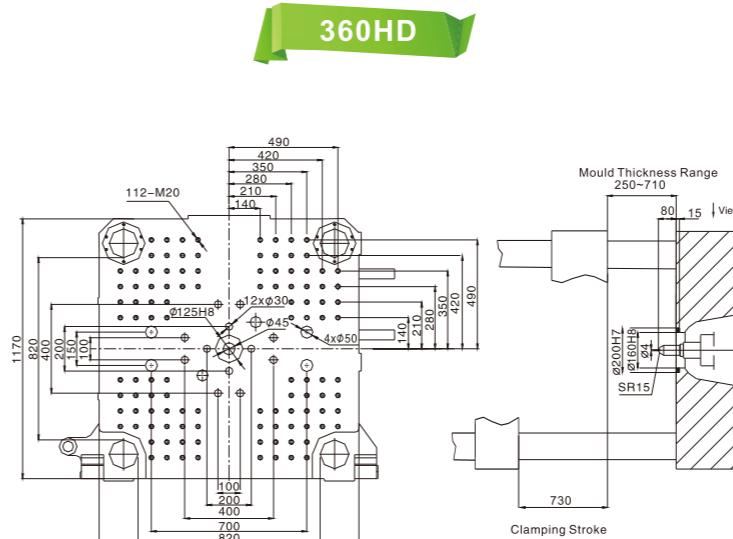
Machine Dimensions



Model	A	B	C	D	E	F	G	H	I	J	K
90HD	1784	2262	1545	2090	4478	4833	1483	1187	355	680	520
120D	1784	2462	1580	2090	4678	5033	1483	1187	355	680	520
150D	1874	2638	1658	2115	5140	5596	1583	1282	378	733	570

Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



D series (90-1400T)

Precision and Productivity

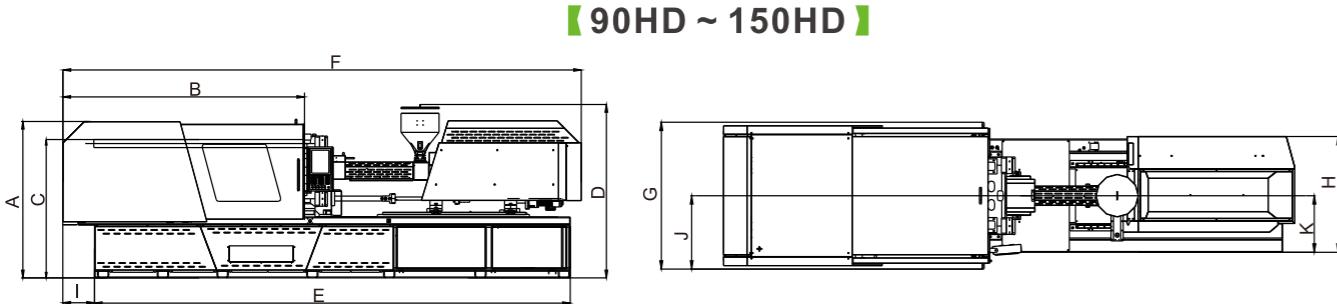
WELLTEC
INJECTION EXPERT

Specifications

ITEM	UNIT	650HD						800HD											
IU		2250			3350			3350			5300								
INJECTION UNIT																			
Screw diameter	mm	65	70	80	70	80	90	70	80	90	80	90	105						
Theoretical shot volume	cm ³	1078	1251	1634	1424	1860	2354	1424	1860	2354	2262	2863	3897						
Shot weight (PS)	g	981	1138	1487	1296	1692	2142	1296	1692	2142	2058	2605	3546						
Length/Diameter ratio	L/D	23	21	18.4	24	21.2	18.8	24	21.2	18.8	23.6	21	18						
Injection pressure	MPa	209	180	138	235	180	142	235	180	142	234	185	136						
Holding pressure	MPa	167	144	110	188	144	114	188	144	114	187	148	109						
Injection speed	mm/s	160			160			160			160								
Injection rate	cm ³ /sec	531	616	804	616	804	1018	616	804	1018	804	1018	1385						
Injection stroke	mm	325			370			370			450								
Max. screw speed	rpm	210			185			185			160								
Plasticizing capacity (PS)	g/s	64.3	79.3	110.1	69.8	97.0	113.2	69.8	97.0	113.2	96.8	117.5	177.7						
Injection unit force	Ton	11			11			11			12								
CLAMPING UNIT																			
Clamping force	Ton	650						800											
Max. daylight	mm	2000						2000											
Clamping stroke	mm	1000						1000											
Distance btwn. tie bars	mm	1090x1090						1090x1090											
Min. mould size	mm	700x700						700x700											
Mould thickness range	mm	420-1000						420-1000											
Ejector force	Ton	22.3						22.3											
Ejector stroke	mm	200						200											
POWER UNIT																			
No. of heating zones	unit	5+1		5+1		5+1		5+1											
Heating power	kW	35.49		43.49		43.49		53.98											
Electrical power	KVA	137		136		140		156											
Total current	A	231		229		237		263											
Oil filling capacity	L	42.3		42.8		43		44.5											
Machine weight	Ton	200		200		200		200											

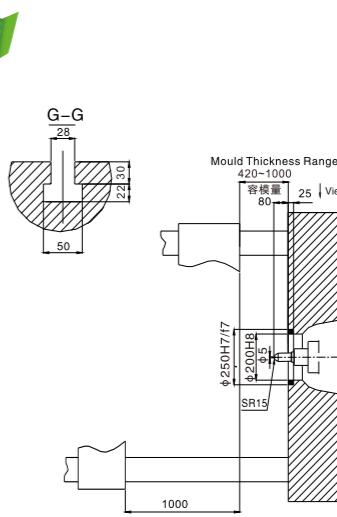
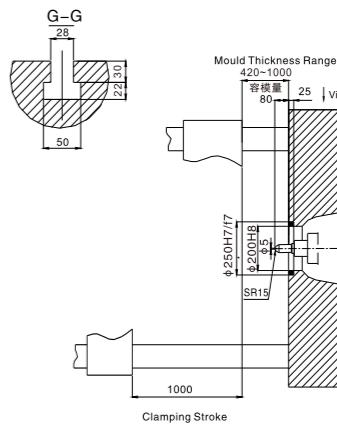
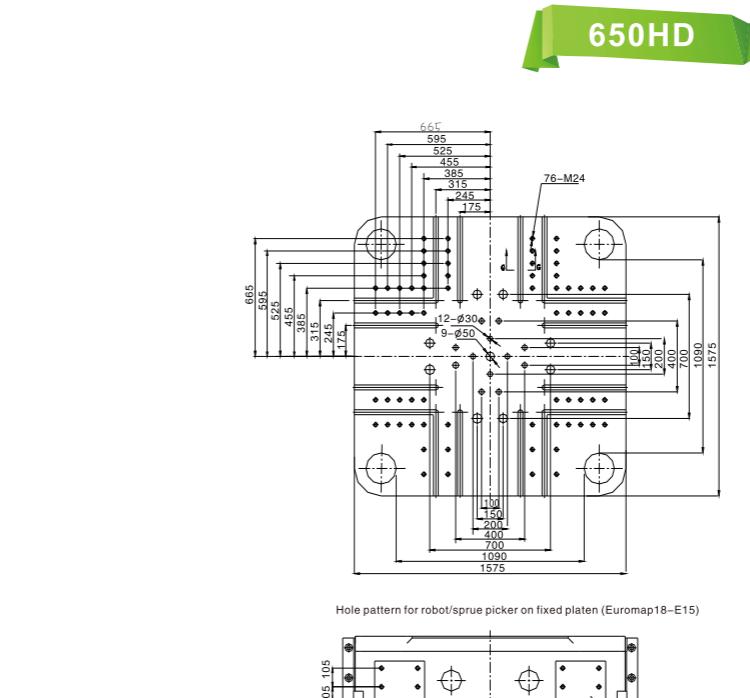
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Machine Dimensions

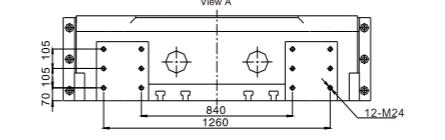


Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



View A



D series (90-1400T)

Precision and Productivity

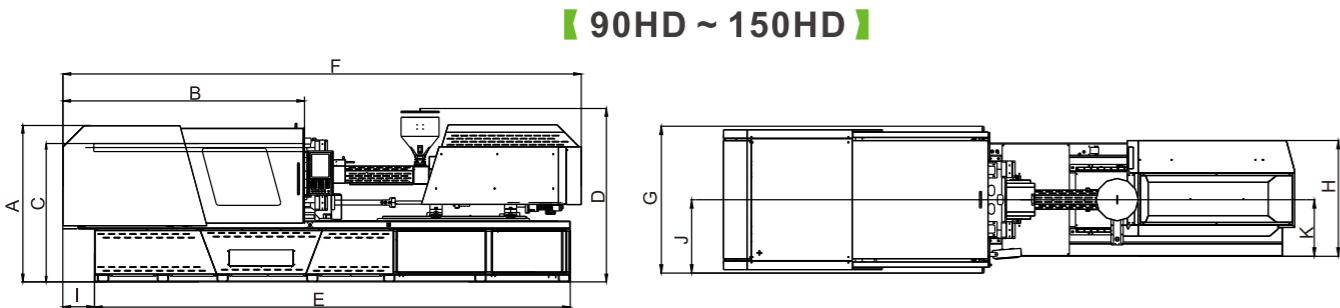
WELLTEC
INJECTION EXPERT

Specifications

ITEM	UNIT	1100HD						1400HD															
IU		5300			7200			5300			7200												
INJECTION UNIT																							
Screw diameter	mm	80	90	105	90	100	110	80	90	105	90	100	110	120									
Theoretical shot volume	cm ³	2262	2863	3897	3054	3770	4562	2262	2863	3897	3054	3770	4562	4006	4847	5768							
Shot weight (PS)	g	2058	2605	3546	2779	3431	4151	2058	2605	3546	2779	3431	4151	3645	4410	5249							
Length/Diameter ratio	L/D	23.6	21	18.0	23.3	21	19.1	23.6	21	18.0	23.3	21	19.1	23.1	21	19.3							
Injection pressure	MPa	234	185	136	235	190	157	234	185	136	235	190	157	230	190	160							
Holding pressure	MPa	187	148	109	188	152	126	187	148	109	188	152	126	184	152	128							
Injection speed	mm/s	160			150			160			150			150									
Injection rate	cm ³ /sec	804	1018	1385	954	1178	1425	804	1018	1385	954	1178	1425	1178	1425	1696							
Injection stroke	mm	450			480			450			480			510									
Max. screw speed	rpm	160			150			160			150			150									
Plasticizing capacity (PS)	g/s	96.8	117.5	177.7	89.6	111.2	151.2	83.9	97.9	207.6	89.6	111.2	151.2	237.1	289.4	364.6							
Injection unit force	Ton	12		16		12		16		16		16											
CLAMPING UNIT																							
Clamping force	Ton	1100						1400															
Max. daylight	mm	2500						2800															
Clamping stroke	mm	1300						1500															
Distance btwn. tie bars	mm	1320x1320						1560x1450															
Min. mould size	mm	920x920						1080x1000															
Mould thickness range	mm	500-1200						650-1300															
Ejector force	Ton	25						33															
Ejector stroke	mm	200						250															
POWER UNIT																							
No. of heating zones	unit	5+1		5+1		5+1		5+1		5+1													
Heating power	kW	53.98		70		49.6		70		78													
Electrical power	KVA	170						190															
Total current	A	280.5		313.5		297.0		330.0		363.0													
Oil filling capacity	L	70						72															
Machine weight	Ton	300						300															

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Machine Dimensions



Remark: C-hopper height for reference only

Platen/Nozzle Dimensions

