

Electric Injection Molding Machine

FANUC ROBOSHOT

α -S15*i*A / α -S30*i*A / α -S50*i*A
 α -S100*i*A / α -S130*i*A / α -S150*i*A
 α -S220*i*A / α -S250*i*A / α -S300*i*A

Specifications

- Specifications and installation conditions
- External dimensions
- Standard and optional features
(Mechanical unit, Control unit, Software, Barrel/Screw)
- Floor plan / Utility
- **ROBOSHOT-LINK*i***

FANUC ROBOSHOT α -S15iA

Mechanical specifications

Item		Unit	Data			
Clamping unit	Clamping mechanism	---	Double toggle			
	Tonnage	kN	Standard 150 (15tonf)			
	Maximum and minimum mold height	mm	Standard 260-130			
	Clamping stroke	mm	160			
	Locating ring diameter	mm	ϕ 60			
	Tie bar spacing (H×V)	mm	260×235			
	Platen size (H×V)	mm	355×340			
	Minimum mold size (H×V) *1)	mm	150×135			
	Ejector stroke	mm	50			
	Maximum ejector force	kN	7(0.7tonf)			
Injection unit	Screw diameter	mm	14	16	18	
	Injection stroke	mm	56	56	75	
	Maximum injection volume	cm ³	9	11	19	
	Inj.speed 525mm/s	Maximum injection pressure *2)	MPa	250	250	260
		Maximum pack pressure *2)	MPa	250	250	190
		Maximum injection rate *3)	cm ³ /s	80	105	133
		Maximum injection speed *3)	mm/s	525		
		Maximum screw rotation speed	min ⁻¹	450		
	Inj.speed 800mm/s	Maximum injection pressure *2)	MPa	250	250	230
		Maximum pack pressure *2)	MPa	250	230	190
		Maximum injection rate *3)	cm ³ /s	123	160	203
		Maximum injection speed *3)	mm/s	800		
		Maximum screw rotation speed	min ⁻¹	450		
	Nozzle touch force	kN	5 (0.5tonf)			
	Screw & Barrel	Number of pyrometers	Barrel	3		
			Nozzle	1		
Total heater wattage	kW	2.4	2.8	3.1		
Machine Weight	*5)	t	Inj.speed 525mm/s 1.45 (Approximately) Inj.speed 800mm/s 1.5 (Approximately)			

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The machine without option.

*5) The pressure conversion is 1MPa=10kgf/cm².

*6) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *7)	Inj.speed 525mm/s	100A (With peripheral devices)
		40A (With no peripheral device)
	Inj.speed 800mm/s	100A (With peripheral devices)
		40A (With no peripheral device)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

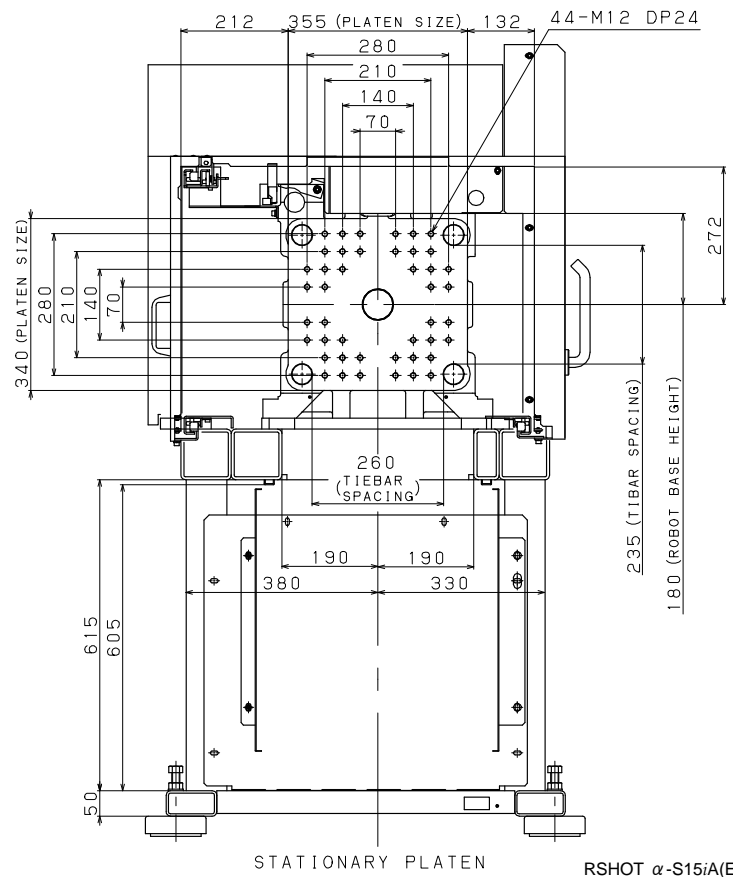
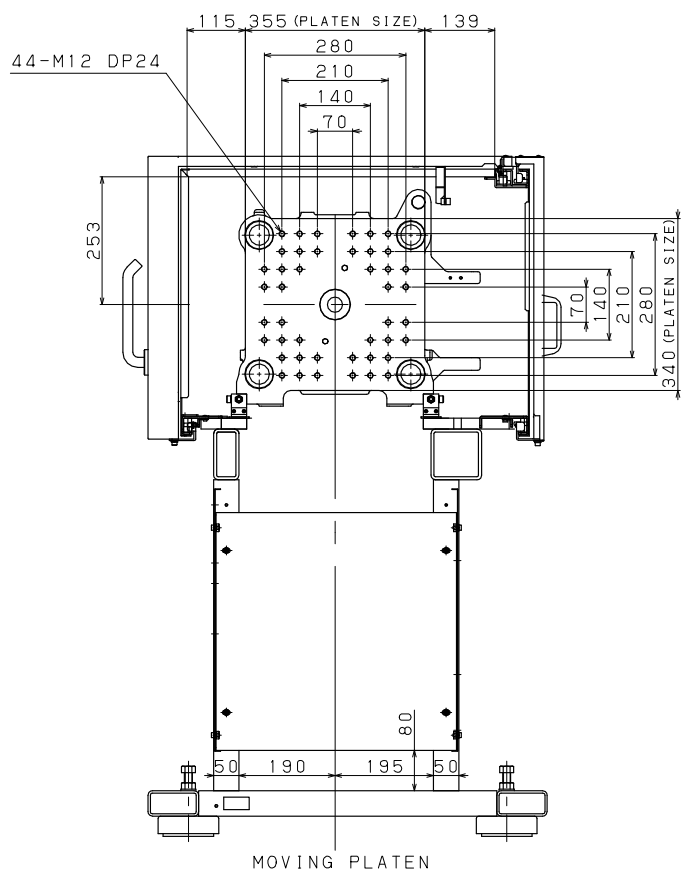
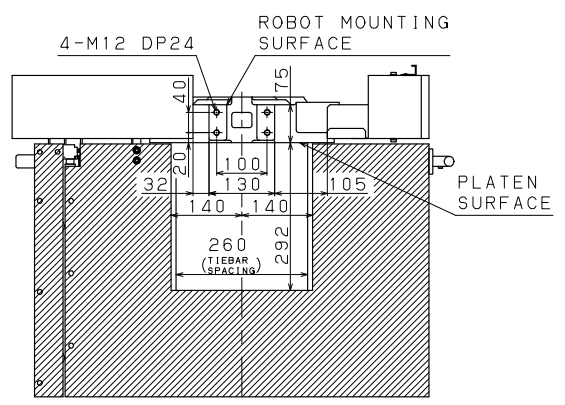
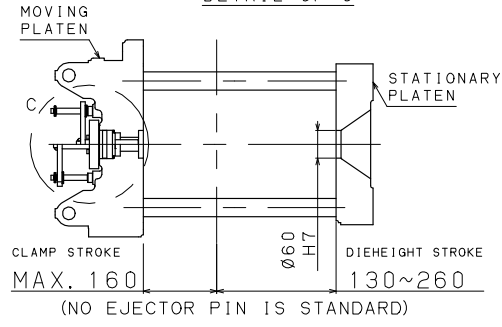
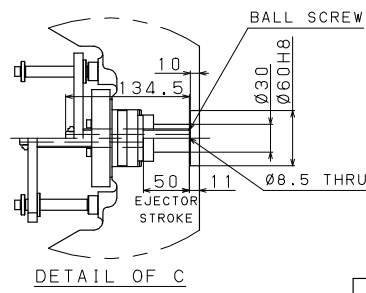
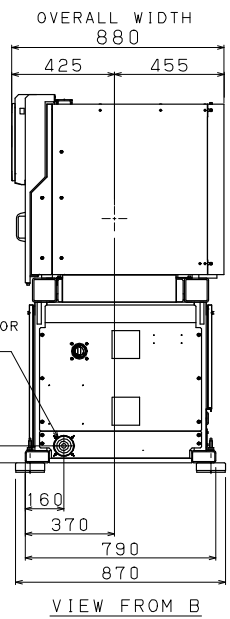
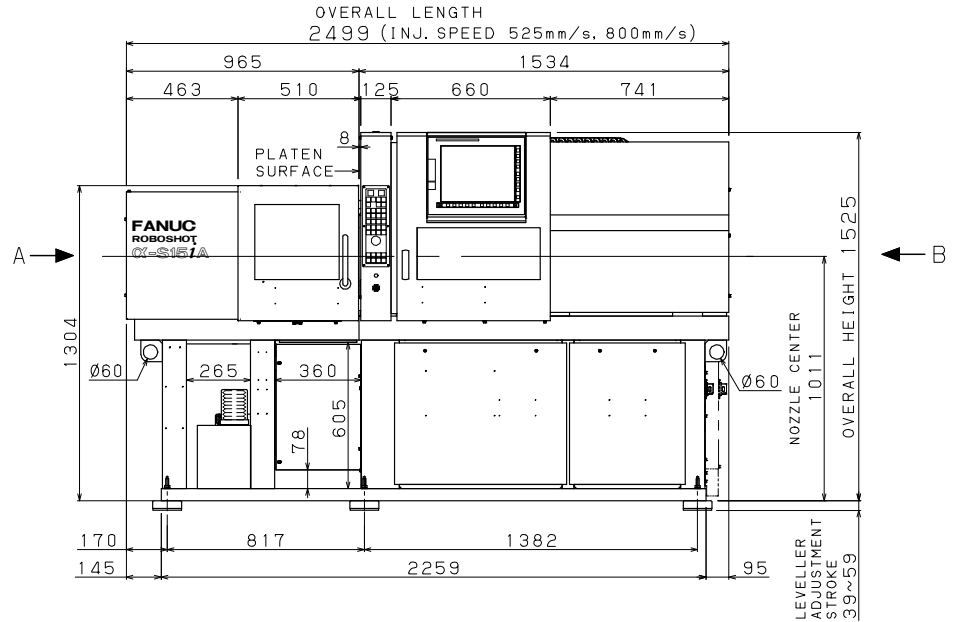
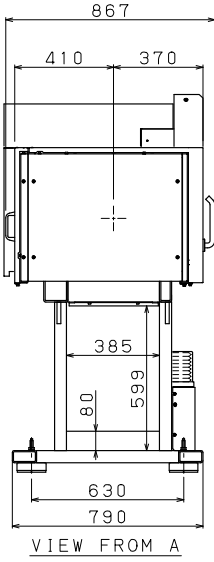
*7) Connect power cable to the machine's main breaker directly.

*8) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S15iA



FANUC ROBOSHOT α -S30iA

Mechanical specifications

Item		Unit	Data					
Clamping unit	Clamping mechanism	---	Double toggle					
	Tonnage	kN	Standard 300 (30tonf)					
	Maximum and minimum mold height	mm	Standard 330-150					
	Clamping stroke	mm	230					
	Locating ring diameter	mm	ϕ 100					
	Tie bar spacing (H×V)	mm	310×290					
	Platen size (H×V)	mm	440×420					
	Minimum mold size (H×V) *1)	mm	175×165					
	Ejector stroke	mm	60					
	Maximum ejector force	kN	8(0.8tonf)					
Injection unit	Screw diameter	mm	14	16	18	20	22	
	Injection stroke	mm	56	56	75	75	75	
	Maximum injection volume	cm ³	9	11	19	24	29	
	Inj.speed 525mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	---	330	300	---	---
		Maximum injection pressure *3)	MPa	250	250	260	270	220
		Maximum pack pressure *3)	MPa	250	250	260	250	200
		Maximum injection rate *4)	cm ³ /s	80	105	133	164	199
		Maximum injection speed *4)	mm/s	525				
		Maximum screw rotation speed	min ⁻¹	450				
	Inj.speed 800mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	---	---	300	---	---
		Maximum injection pressure *3)	MPa	250	250	260	270	220
		Maximum pack pressure *3)	MPa	250	250	260	250	200
		Maximum injection rate *4)	cm ³ /s	122	160	202	250	303
		Maximum injection speed *4)	mm/s	800				
		Maximum screw rotation speed	min ⁻¹	450				
	Nozzle touch force		kN	9 (0.9tonf)				
	Screw & Barrel	Number of pyrometers	Barrel	3				
			Nozzle	1				
	Total heater wattage		kW	2.4	2.8	3.1	3.5	3.8
	Machine Weight *5)		t	Inj.speed 525mm/s 2.0 (Approximately) Inj.speed 800mm/s 2.0 (Approximately)				

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*3) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*4) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm²

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 525mm/s	100A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
	Inj.speed 800mm/s	100A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

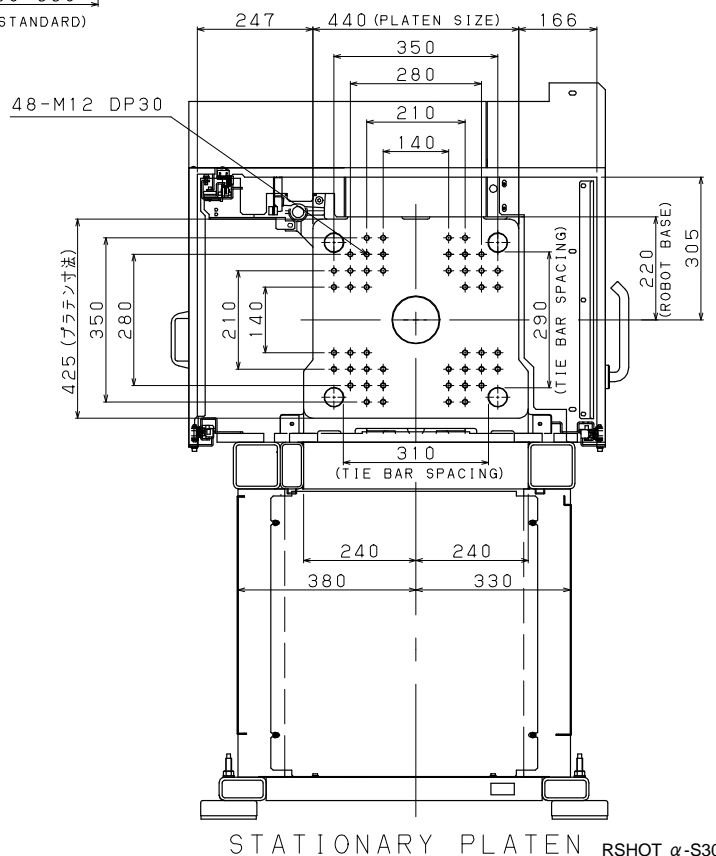
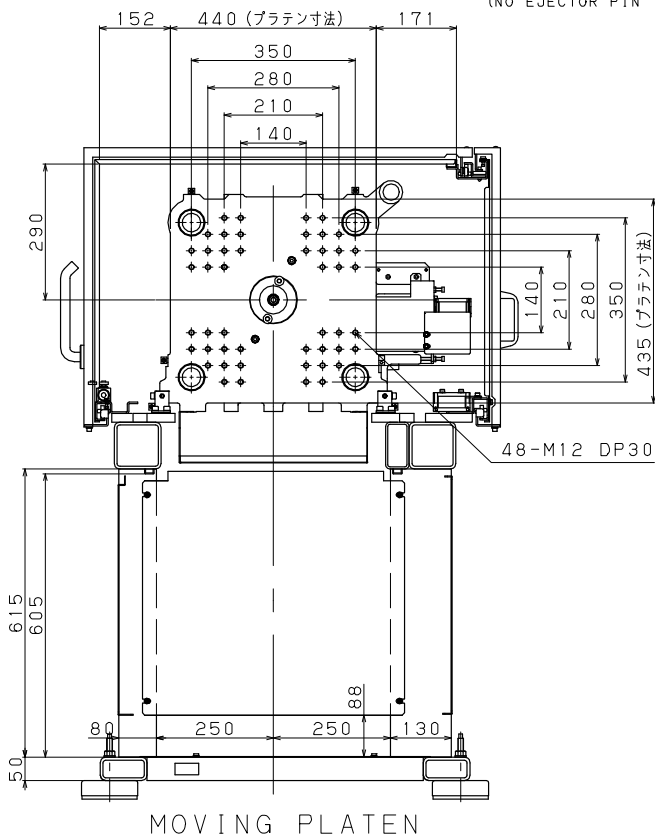
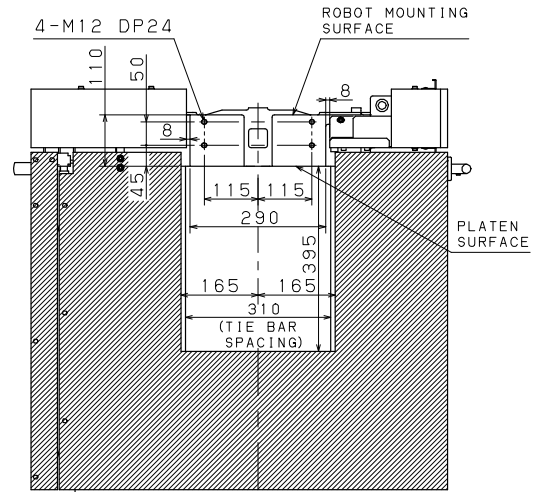
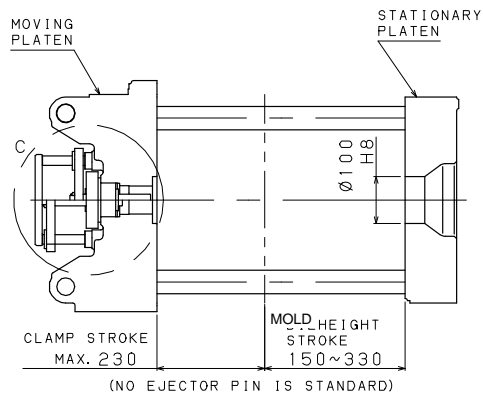
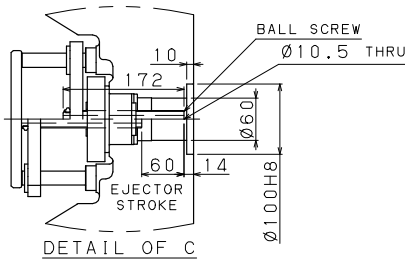
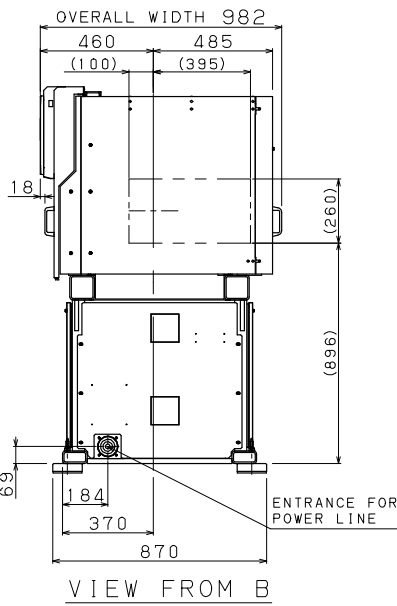
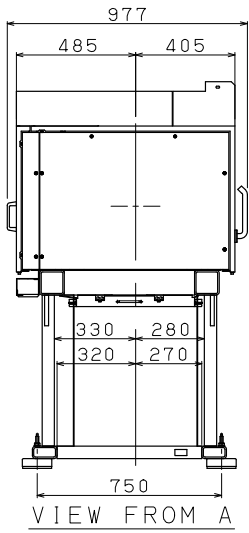
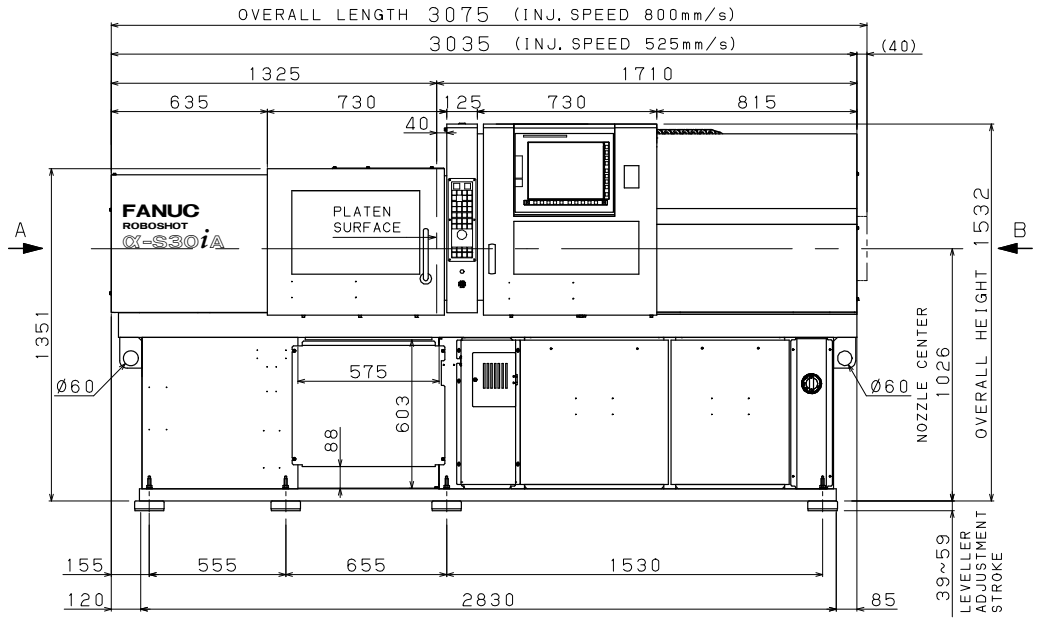
*8) Connect power cable to the machine's main breaker directly

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

FANUC ROBOSHOT α -S30iA

OVERALL LENGTH 3075 (INJ. SPEED 800mm/s)



FANUC ROBOSHOT α -S50iA

Mechanical specifications

Item		Unit	Data					
Clamping unit	Clamping mechanism	---	Double toggle					
	Tonnage	kN	Standard 500 (50tonf) / Clamp force variation 650 (65tonf)(Option)					
	Maximum and minimum die height	mm	Doubleplaten 350-150 / Extended die height 400-150(Option) Singleplaten 410-210 / Extended die height 460-210(Option)					
	Clamping stroke	mm	250					
	Locating ring diameter	mm	ϕ 125					
	Tie bar spacing (H×V)	mm	360×320					
	Platen size (H×V)	mm	500×470					
	Minimum mold size (H×V) *1)	mm	205×185					
	Ejector stroke	mm	70					
	Maximum ejector force	kN	20 (2.0tonf)					
Injection unit	Screw diameter	mm	20	22	26	28	32 *7)	
	Injection stroke	mm	75	75	95	95	95	
	Maximum injection volume	cm ³	24	29	50	58	76	
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	360	340	290	250	---
		Maximum injection pressure *3)	MPa	280	260	210	190	150
		Maximum pack pressure *3)	MPa	280	240	190	160	130
		Maximum injection rate *4)	cm ³ /s	104	125	175	203	265
		Maximum injection speed *4)	mm/s	330				
		Maximum screw rotation speed	min ⁻¹	450				
	Inj.speed 500mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	360	340	275	240	---
		Maximum injection pressure *3)	MPa	280	260	210	190	---
		Maximum pack pressure *3)	MPa	280	240	190	160	---
		Maximum injection rate *4)	cm ³ /s	157	190	265	308	---
		Maximum injection speed *4)	mm/s	500				
		Maximum screw rotation speed	min ⁻¹	450				
	Nozzle touch force		kN	15 (1.5tonf)				
	Screw & Barrel	Number of pyrometers	Barrel	3				
Nozzle			1					
Total heater wattage		kW	3.5	3.8	6.5	7.2	8.4	
Machine Weight *5)		t	Inj.speed 330mm/s 2.9(Doubleplaten) 2.85(Singleplaten) (Approximately) Inj.speed 500mm/s 3.1(Doubleplaten) 3.05(Singleplaten) (Approximately)					

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*3) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*4) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm².

*7) After shipment, the machine equipped with screw diameter ϕ 20- ϕ 28mm cannot install ϕ 32mm.

The machine equipped with screw diameter ϕ 32mm can install ϕ 26- ϕ 32mm and cannot install ϕ 20mm and ϕ 22mm.

The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

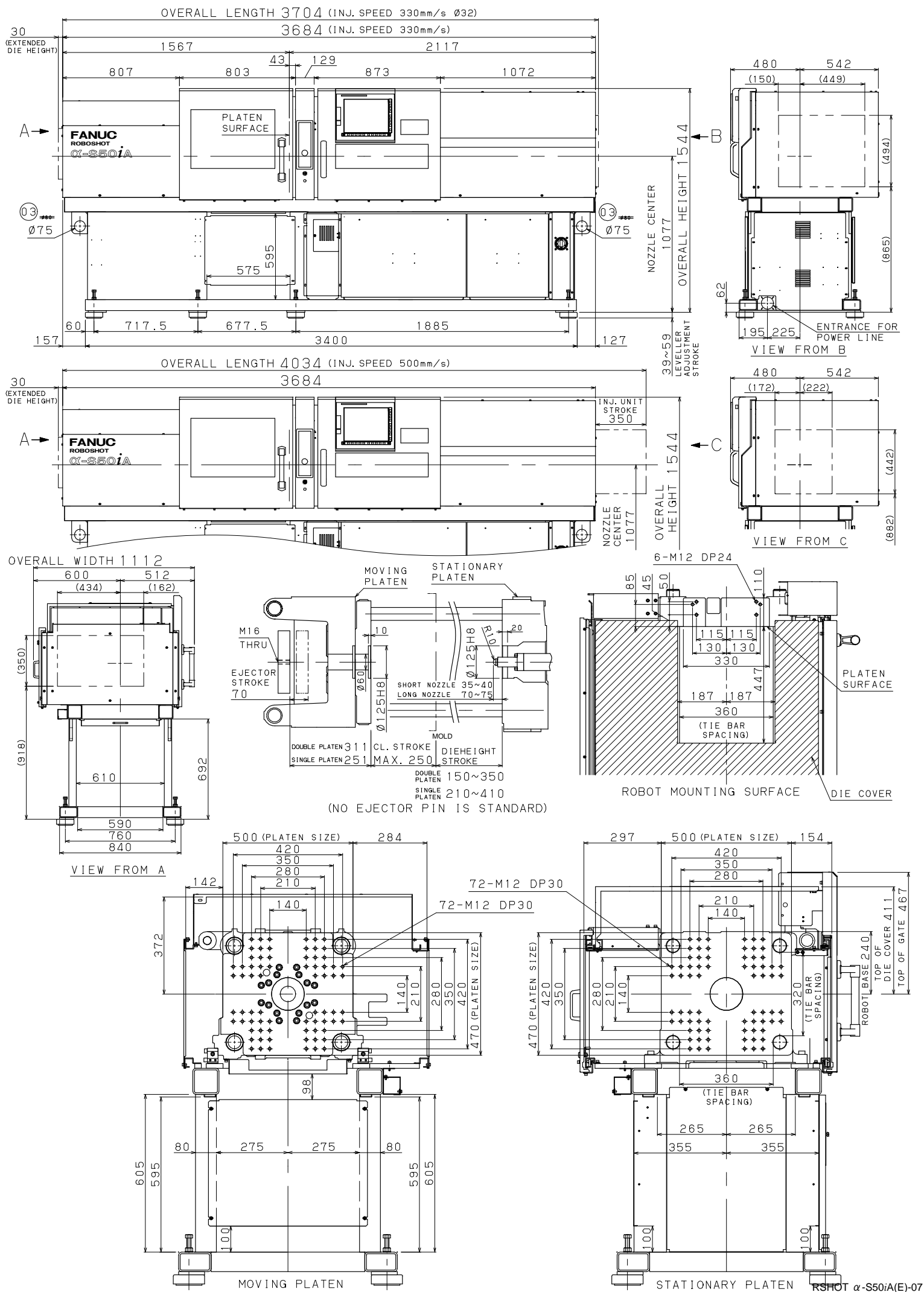
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 330mm/s	150A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
	Inj.speed 500mm/s	175A (With peripheral devices) *9)
		75A (With no peripheral device) *9)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

*8) Connect power cable to the machine's main breaker directly.

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the
With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S50iA



FANUC ROBOSHOT α -S100iA

Mechanical specifications

Item		Unit	Data						
Clamp unit	Clamping mechanism	---	Double toggle						
	Tonnage	kN	Standard 1000 (100tonf) / Clamp force variation 1250 (125tonf)(Option)						
	Maximum and minimum die height	mm	Doubleplaten 450-150 / Extended die height 550-150(Option) Singleplaten 520-220 / Extended die height 620-220(Option)						
	Clamping stroke	mm	350						
	Locating ring diameter	mm	ϕ 125						
	Tie bar spacing (H×V)	mm	460×410						
	Platen size (H×V)	mm	660×610						
	Minimum mold size (H×V) *1)	mm	265×240						
	Ejector stroke	mm	100						
	Maximum ejector force	kN	25 (2.5 tonf)						
Injection unit	Screw diameter	mm	22	26	28	32	36	40 *7)	
	Injection stroke	mm	75	95	95	128	144	144	
	Maximum injection volume	cm ³	29	50	58	103	147	181	
	Inj.speed 200mm/s	Maximum injection pressure *3)	MPa	260	260	240	220	190	160
		Maximum pack pressure *3)	MPa	260	260	220	200	170	140
		Maximum injection rate *4)	cm ³ /s	76	106	123	161	204	251
		Maximum injection speed *4)	mm/s	200					
		Maximum screw rotation speed	min ⁻¹	300					
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	340	340	320	270	220	---
		Maximum injection pressure *3)	MPa	260	260	240	220	190	160
		Maximum pack pressure *3)	MPa	260	260	220	200	170	140
		Maximum injection rate *4)	cm ³ /s	125	175	203	265	336	415
		Maximum injection speed *4)	mm/s	330					
	Inj.speed 500mm/s	Maximum screw rotation speed	min ⁻¹	450					
		Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	340	320	280	---	---	---
		Maximum injection pressure *3)	MPa	260	260	240	220	170	---
		Maximum pack pressure *3)	MPa	260	260	220	200	170	---
		Maximum injection rate *4)	cm ³ /s	190	265	308	402	509	---
	Nozzle touch force	Maximum injection speed *4)	mm/s	500					
		Maximum screw rotation speed	min ⁻¹	450					
	Screw & Barrel	Nozzle touch force	kN	15 (1.5tonf)					
		Number of pyrometers	Barrel	3					
			Nozzle	1					
Total heater wattage		kW	3.8	6.5	7.2	8.4	9.1	9.9	
	Machine Weight *5)	t	Inj.speed 200mm/s 4.4 (Doubleplaten) 4.25(Singleplaten) (Approximately) Inj.speed 330mm/s 4.4 (Doubleplaten) 4.25(Singleplaten) (Approximately) Inj.speed 500mm/s 4.55 (Doubleplaten) 4.4(Singleplaten) (Approximately)						

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)
High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*3) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*4) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm²

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

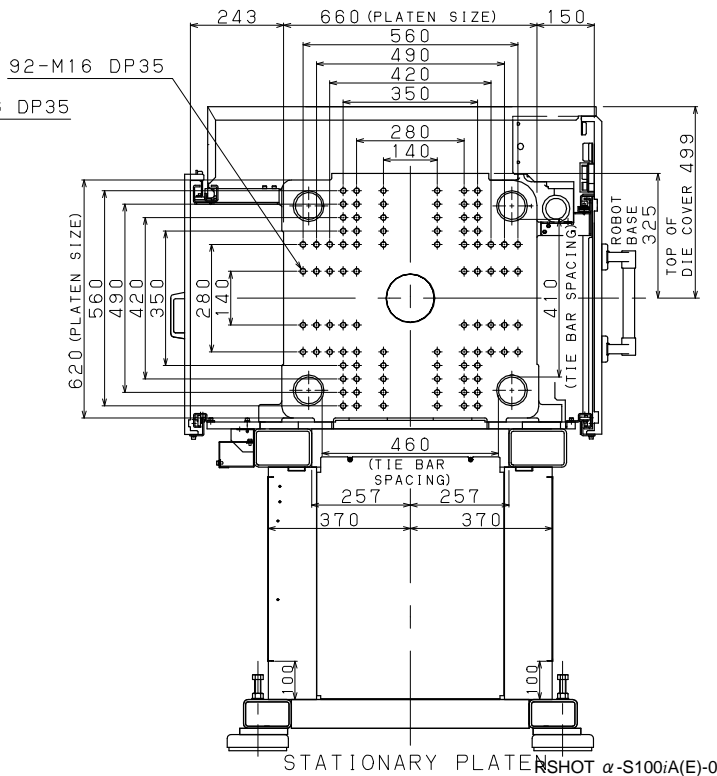
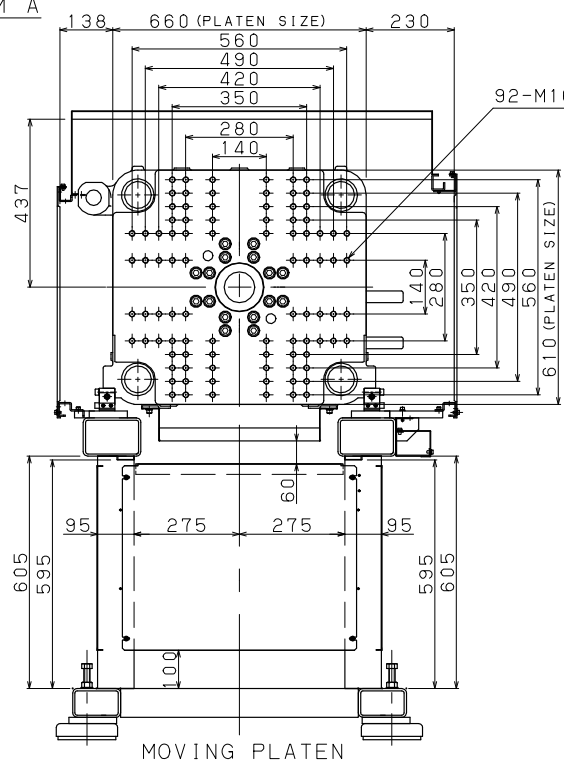
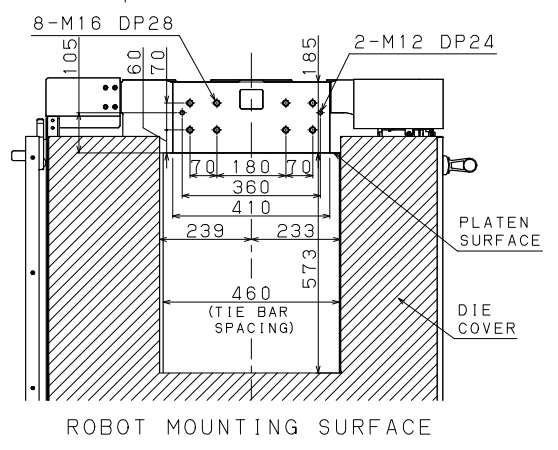
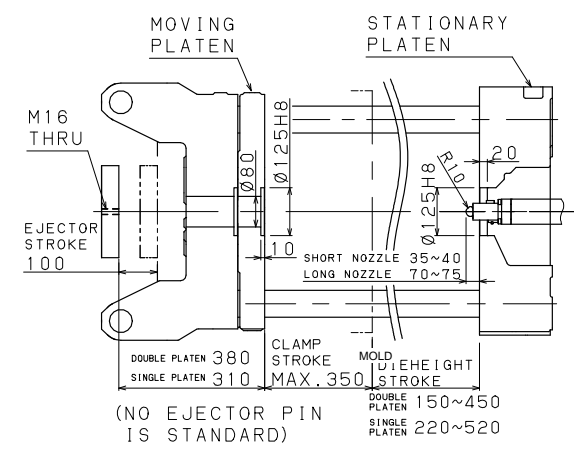
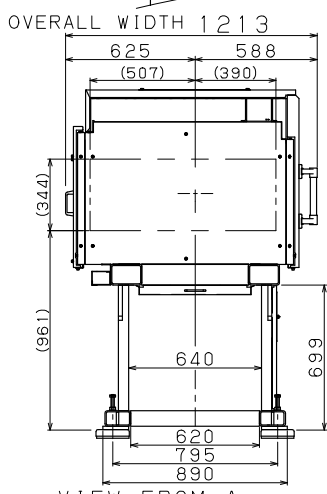
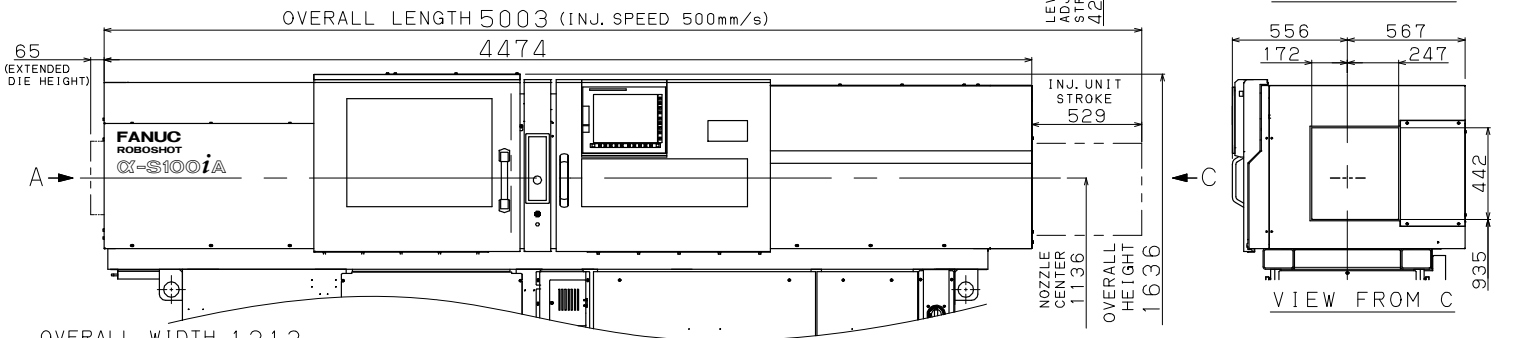
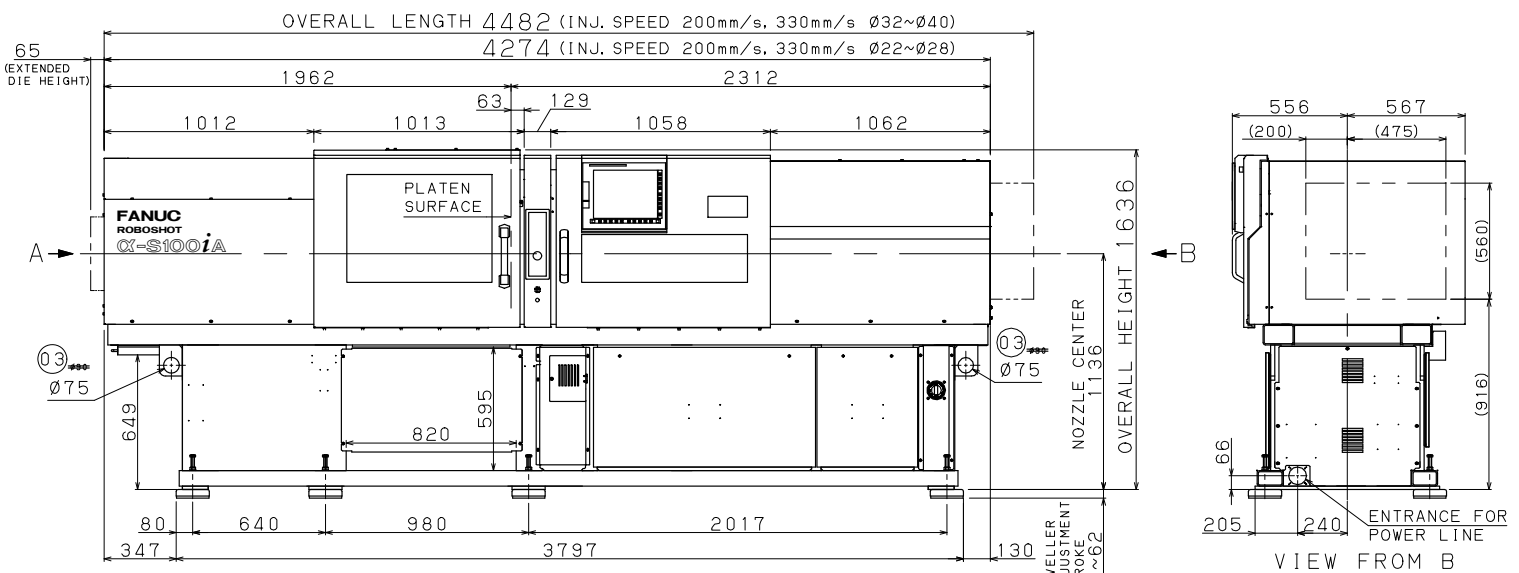
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 200mm/s	150A (With peripheral devices) *9)
		60A (With no peripheral device) *9)
	Inj.speed 330mm/s	150A (With peripheral devices) *9)
		60A (With no peripheral device) *9)
	Inj.speed 500mm/s	200A (With peripheral devices) *9)
100A (With no peripheral device) *9)		
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C (20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

*8) Connect power cable to the machine's main breaker directly.

*9) With peripheral devices: When peripheral devices "External outlet+ Mold heater controller" or "External outlet +Integrated hotrunner controller" are used in addition to the
With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice

FANUC ROBOSHOT α -S100iA



FANUC ROBOSHOT α -S130iA

Mechanical specifications

Item		Unit	Data			
Clamping unit	Clamping mechanism	---	Double toggle			
	Tonnage	kN	Standard 1300 (130 tonf)			
	Maximum and minimum die height	mm	Singleplaten 570 - 200 / Extended die height 670 - 200(Option)			
	Clamping stroke	mm	400			
	Locating ring diameter	mm	ϕ 125			
	Tie bar spacing (HxV)	mm	530 x 530			
	Platen size (HxV)	mm	730 x 730			
	Minimum mold size (HxV) ^{*1)}	mm	300 x 300			
	Ejector stroke	mm	100			
	Maximum ejector force	kN	25 (2.5 tonf)			
Injection unit	Screw diameter	mm	32	36	40 ^{*6)}	
	Injection stroke	mm	128	144	144	
	Maximum injection volume	cm ³	103	147	181	
	Inj.speed 200mm/s	Maximum injection pressure ^{*2)}	MPa	220	190	160
		Maximum pack pressure ^{*2)}	MPa	200	170	140
		Maximum injection rate ^{*3)}	cm ³ /s	160	203	251
		Maximum injection speed ^{*3)}	mm/s	200		
		Maximum screw rotation speed	min ⁻¹	300		
	Nozzle touch force	kN	15 (1.5 tonf)			
	Screw & Barrel	Number of pyrometers	Barrel	3		
Nozzle			1			
	Total heater wattage	kW	8.4	9.1	9.9	
Machine Weight ^{*4)}		t	4.9 (Approximately)			

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.
The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The machine without option.

*5) The pressure conversion is 1MPa=10kgf/cm².

*6) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker ^{*7)}	Inj.speed 200mm/s	150A (With peripheral devices) ^{*8)}
		60A (With no peripheral device) ^{*8)}
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

*7) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

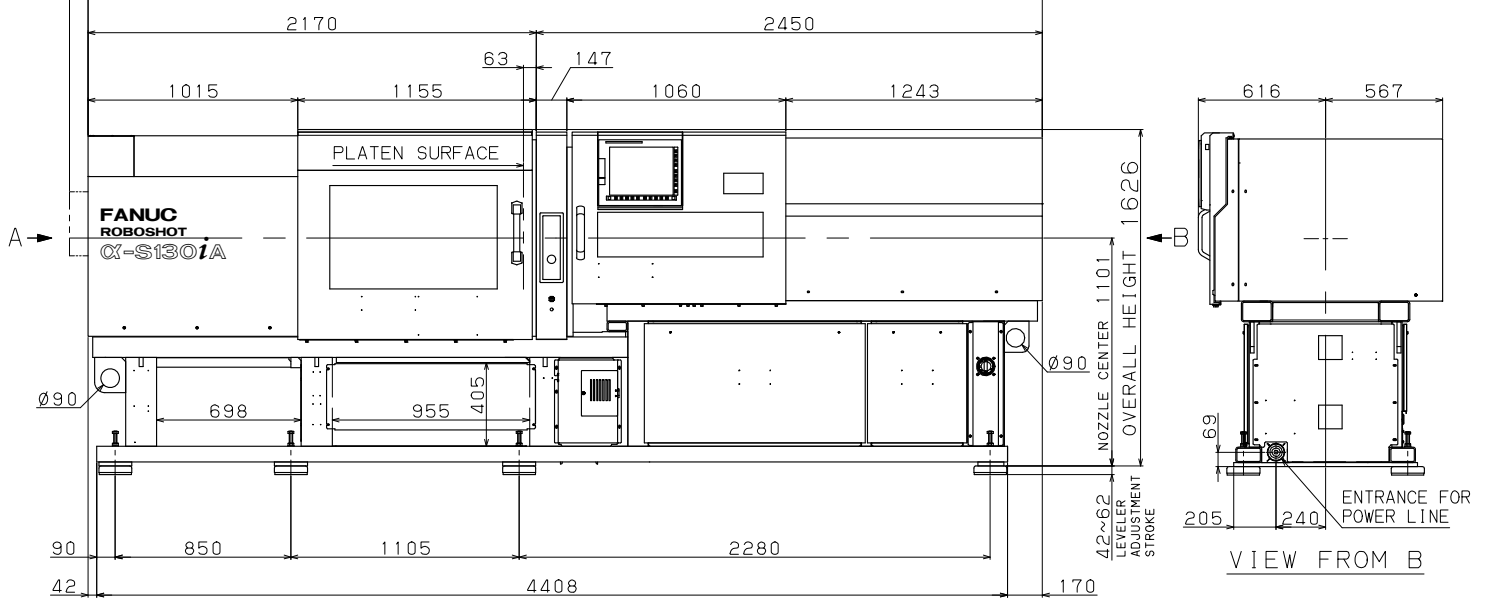
*8) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

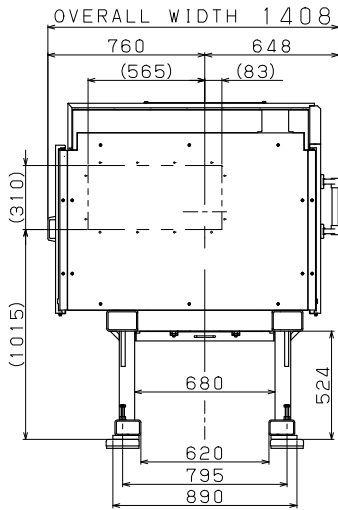
FANUC ROBOSHOT α -S130iA

(EXTENDED
MOLD
HEIGHT)
90

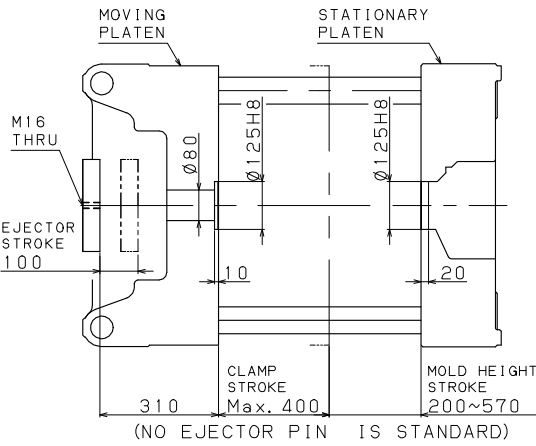
OVERALL LENGTH 4620



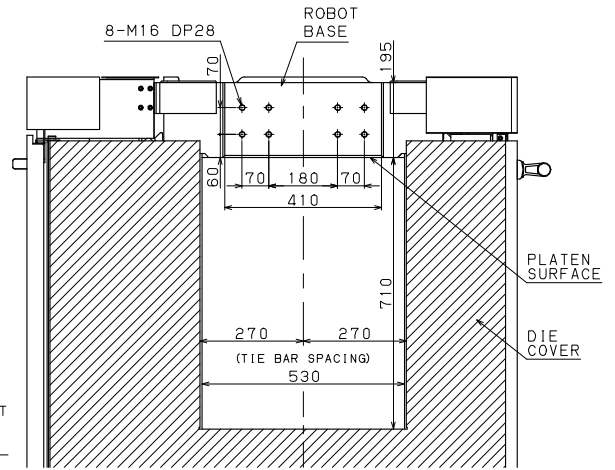
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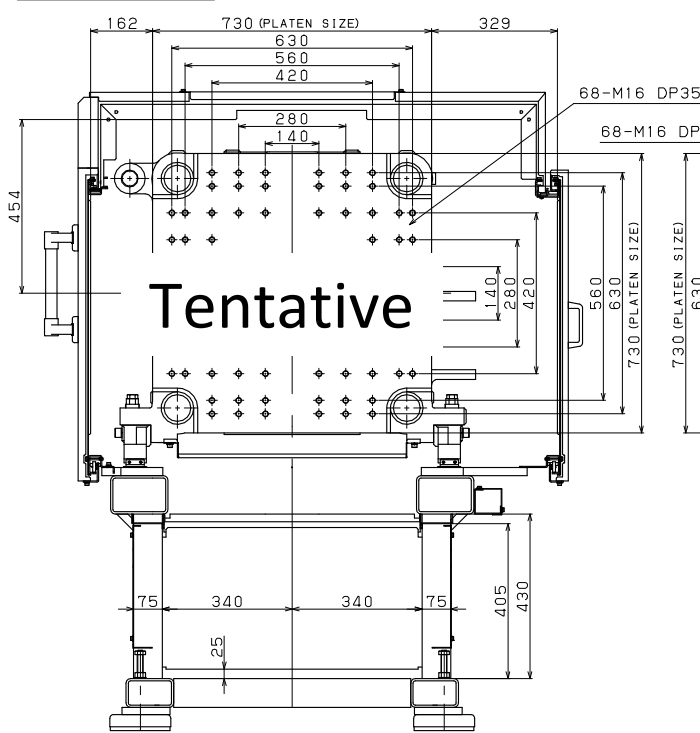
VIEW FROM A



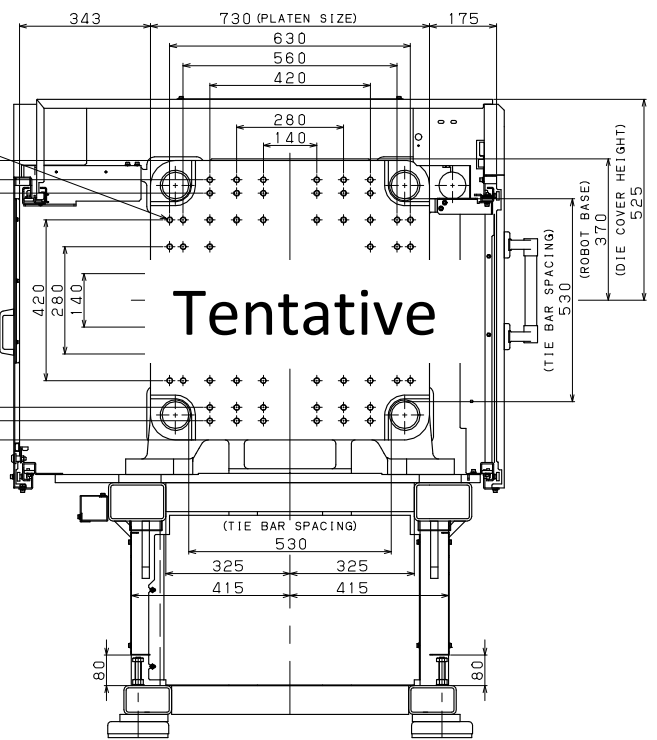
MOLD



ROBOT MOUNTING SURFACE



MOVING PLATEN



STATIONARY PLATEN

FANUC ROBOSHOT α -S150iA

Mechanical specifications

Item		Unit	Data						
Clamping unit	Clamping mechanism	---	Double toggle						
	Tonnage	kN	Standard 1500 (150 tonf) / Increased 1800 (180 tonf)(Option)						
	Maximum and minimum die height	mm	Doubleplaten 500 - 200 / Extended die height 600 - 200(Option) Singleplaten 575 - 275 / Extended die height 675 - 275(Option)						
	Clamping stroke	mm	440						
	Locating ring diameter	mm	ϕ 160						
	Tie bar spacing (HxV)	mm	560 x 510						
	Platen size (HxV)	mm	800 x 750						
	Minimum mold size (HxV) ^{*1)}	mm	325 x 300						
	Ejector stroke	mm	150						
	Maximum ejector force	kN	35 (3.5 tonf)						
Injection unit	Screw diameter	mm	32	36	40	44	48	52	
	Injection stroke	mm	150	150	150	176	176	208	
	Maximum injection volume	cm ³	121	153	188	268	318	442	
	Inj.speed 200mm/s	Maximum injection pressure ^{*2)}	MPa	280	280	260	220	190	160 ^{*7)}
		Maximum pack pressure ^{*2)}	MPa	280	280	220	190	160	130 ^{*7)}
		Maximum injection rate ^{*3)}	cm ³ /s	160	203	251	304	361	424
		Maximum injection speed ^{*3)}	mm/s	200					
		Maximum screw rotation speed	min ⁻¹	300					
	Inj.speed 330mm/s	Maximum injection pressure ^{*2),*4)} (High pressure filling mode)	MPa	380	345	280	---	---	---
		Maximum injection pressure ^{*2)}	MPa	280	280	260	220	190	160
		Maximum pack pressure ^{*2)}	MPa	280	280	260	220	190	160
		Maximum injection rate ^{*3)}	cm ³ /s	265	335	414	501	597	700
		Maximum injection speed ^{*3)}	mm/s	330					
		Maximum screw rotation speed	min ⁻¹	400					
	Nozzle touch force		kN	30 (3.0 tonf)					
	Screw & Barrel	Number of pyrometers	Barrel	3					
			Nozzle	1					
Total heater wattage		kW	12.0	13.0	14.9	15.9	17.9	20.2	
Machine weight ^{*5)}		t	Inj.speed 200mm/s 7.05 (Doubleplaten) 6.8 (Singleplaten) (Approximately) Inj.speed 330mm/s 7.2 (Doubleplaten) 6.95 (Singleplaten) (Approximately)						

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm².

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker ^{*8)}	Inj.speed 200mm/s	175A (With peripheral devices) ^{*9)} 75A (With no peripheral device) ^{*9)}
	Inj.speed 330mm/s	225A (With peripheral devices) ^{*9)} 125A (With no peripheral device) ^{*9)}
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C (20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

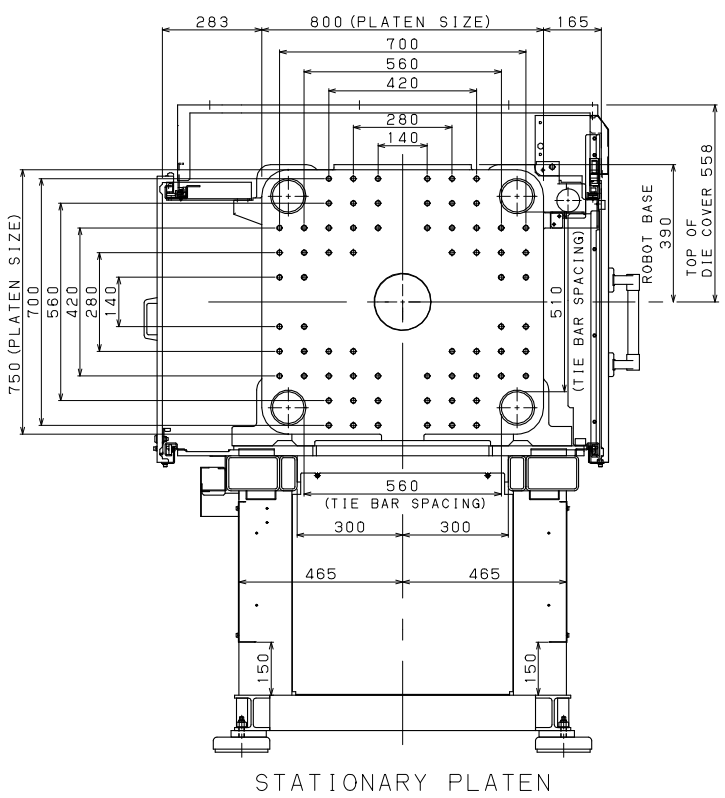
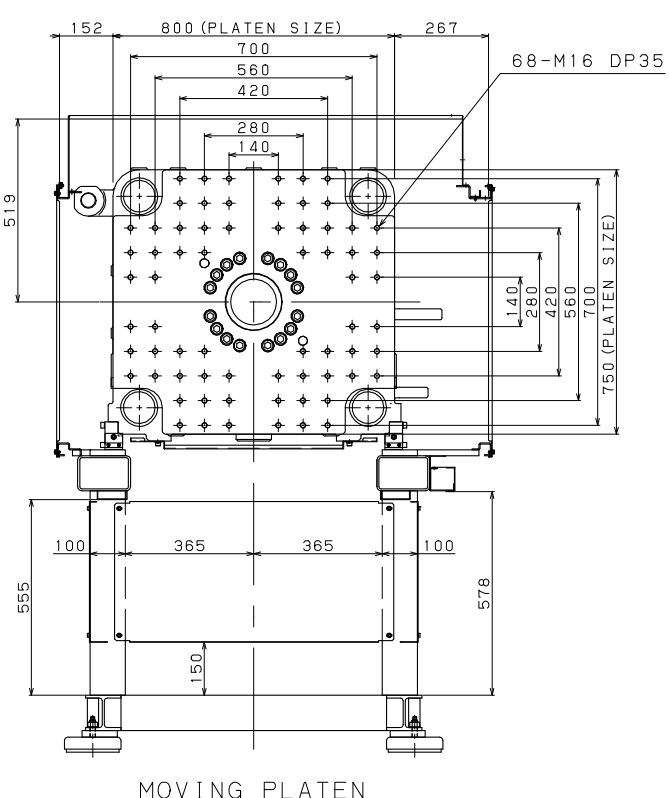
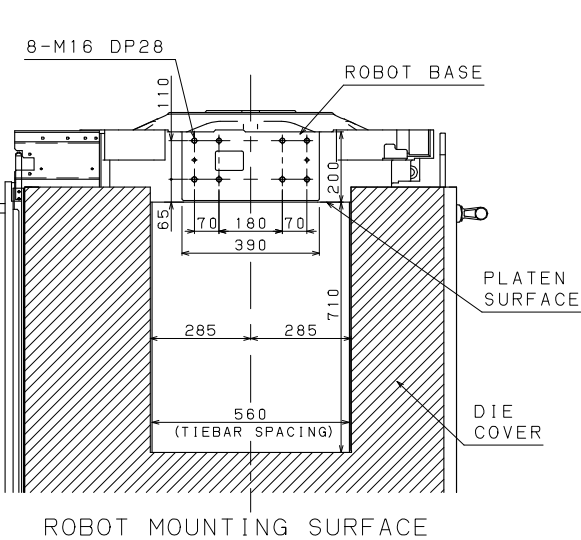
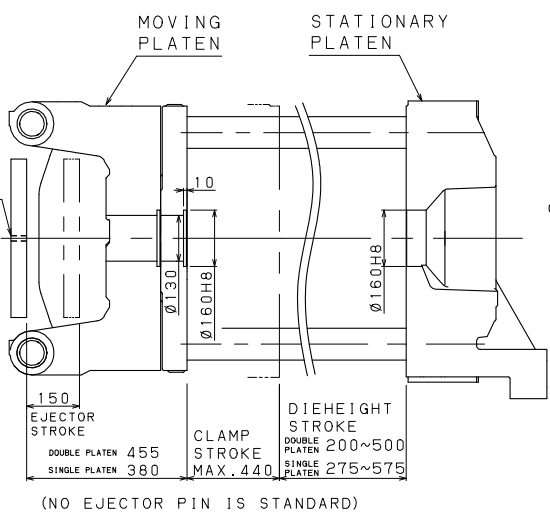
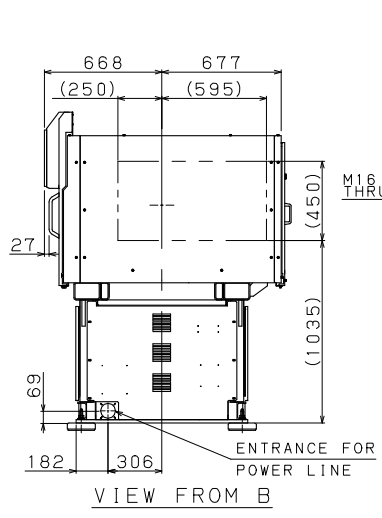
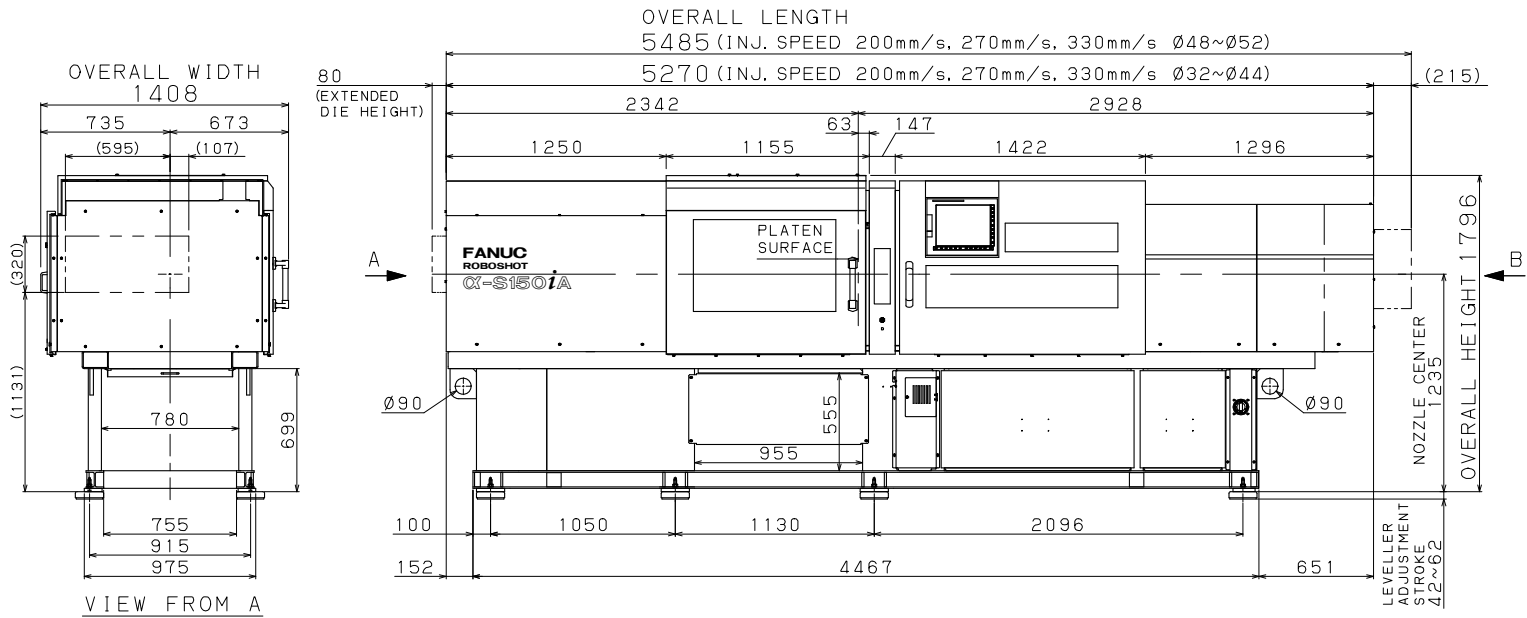
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S150iA



FANUC ROBOSHOT α -S150iA Small capacity injection specification

Mechanical specifications

Item		Unit	Data						
Clamping unit	Clamping mechanism	---	Double toggle						
	Tonnage	kN	Standard 1500 (150 tonf) / Increased 1800 (180 tonf)(Option)						
	Maximum and minimum die height	mm	Doubleplaten 500 - 200 / Extended die height 600 - 200(Option) Singleplaten 575 - 275 / Extended die height 675 - 275(Option)						
	Clamping stroke	mm	440						
	Locating ring diameter	mm	ϕ 160						
	Tie bar spacing (HxV)	mm	560 x 510						
	Platen size (HxV)	mm	800 x 750						
	Minimum mold size (HxV) *1)	mm	325 x 300						
	Ejector stroke	mm	150						
	Maximum ejector force	kN	35 (3.5 tonf)						
Injection unit	Screw diameter	mm	22	26	28	32	36	40 *7)	
	Injection stroke	mm	75	95	95	128	144	144	
	Maximum injection volume	cm ³	29	50	58	103	147	181	
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *2),*4)	MPa	340	340	320	270	220	---
		Maximum injection pressure *2)	MPa	260	260	240	220	190	160
		Maximum pack pressure *2)	MPa	260	260	220	200	170	140
		Maximum injection rate *3)	cm ³ /s	125	175	203	265	335	414
		Maximum injection speed *3)	mm/s	330					
		Maximum screw rotation speed	min ⁻¹	450					
	Inj.speed 500mm/s	Maximum injection pressure (High pressure filling mode) *2),*3)	MPa	340	320	280	---	---	---
		Maximum injection pressure *3)	MPa	260	260	240	220	170	---
		Maximum pack pressure *3)	MPa	260	260	220	200	170	---
		Maximum injection rate *4)	cm ³ /s	190	265	307	402	508	---
		Maximum injection speed *4)	mm/s	500					
		Maximum screw rotation speed	min ⁻¹	450					
	Nozzle touch force	kN	15 (1.5 tonf)						
	Screw & Barrel	Number of pyrometers	Barrel	3					
Nozzle			1						
Total heater wattage	kW	3.8	6.5	7.2	8.4	9.1	9.9		
Machine weight	*5)	t	Inj.speed 330mm/s 6.4 (Doubleplaten) 6.15 (Singleplaten) (Approximately) Inj.speed 500mm/s 6.55 (Doubleplaten) 6.3 (Singleplaten) (Approximately)						

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm².

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker *8)	Inj.speed 330mm/s	150A (With peripheral devices) *9)
		60A (With no peripheral device) *9)
	Inj.speed 500mm/s	200A (With peripheral devices) *9)
		100A (With no peripheral device) *9)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C (20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

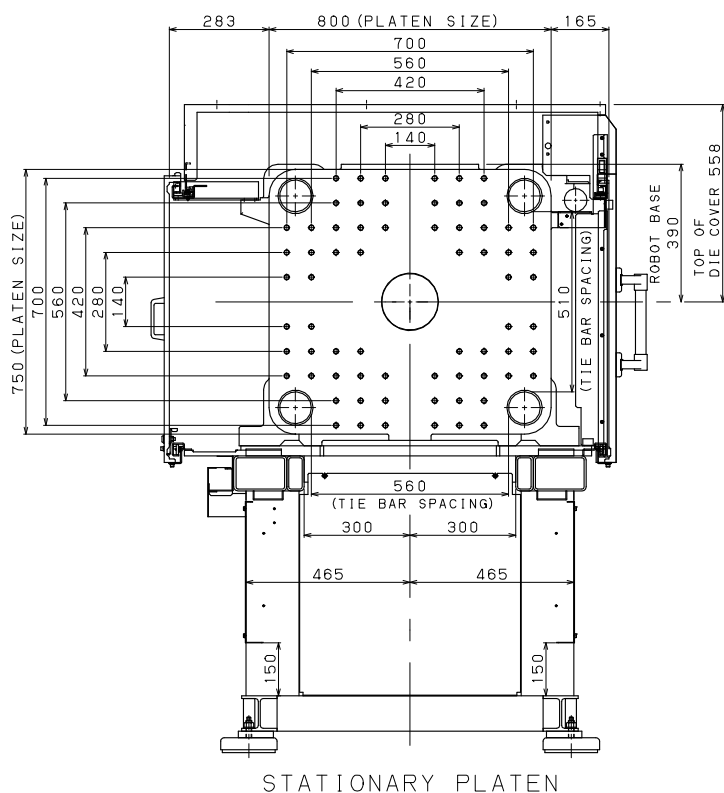
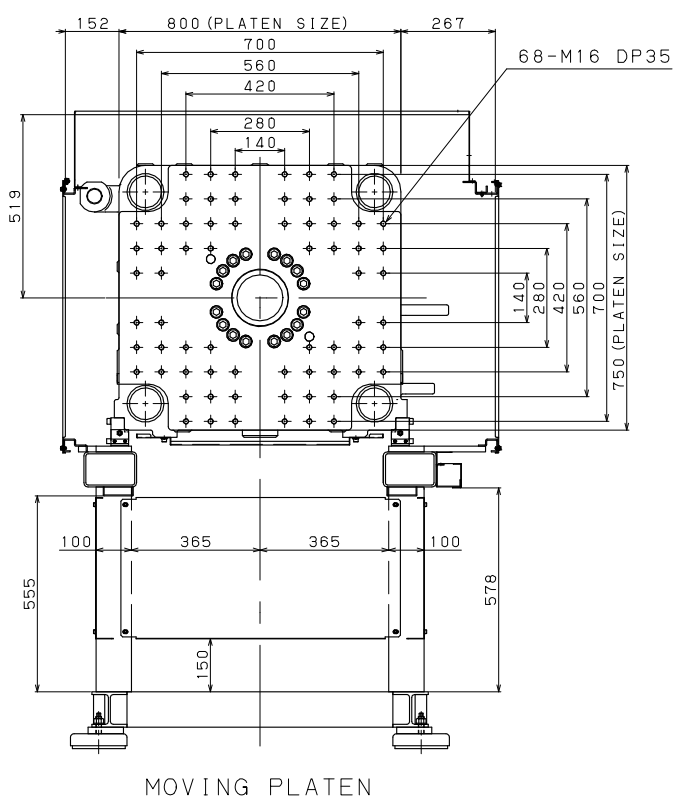
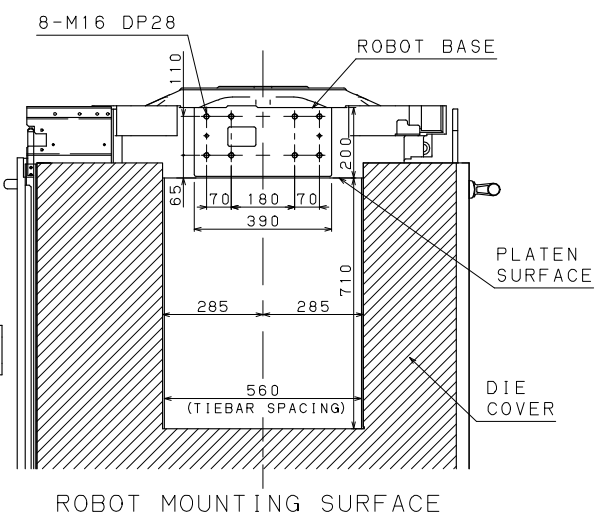
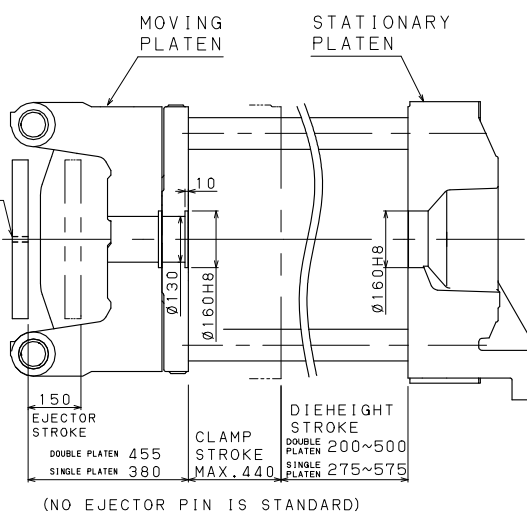
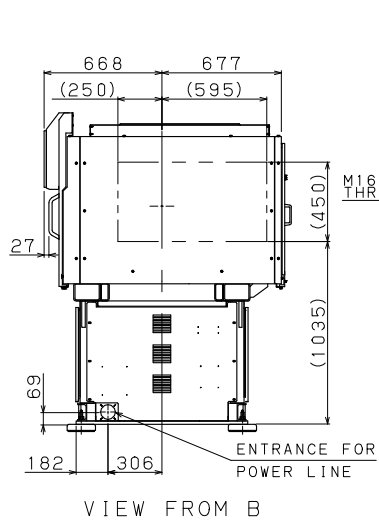
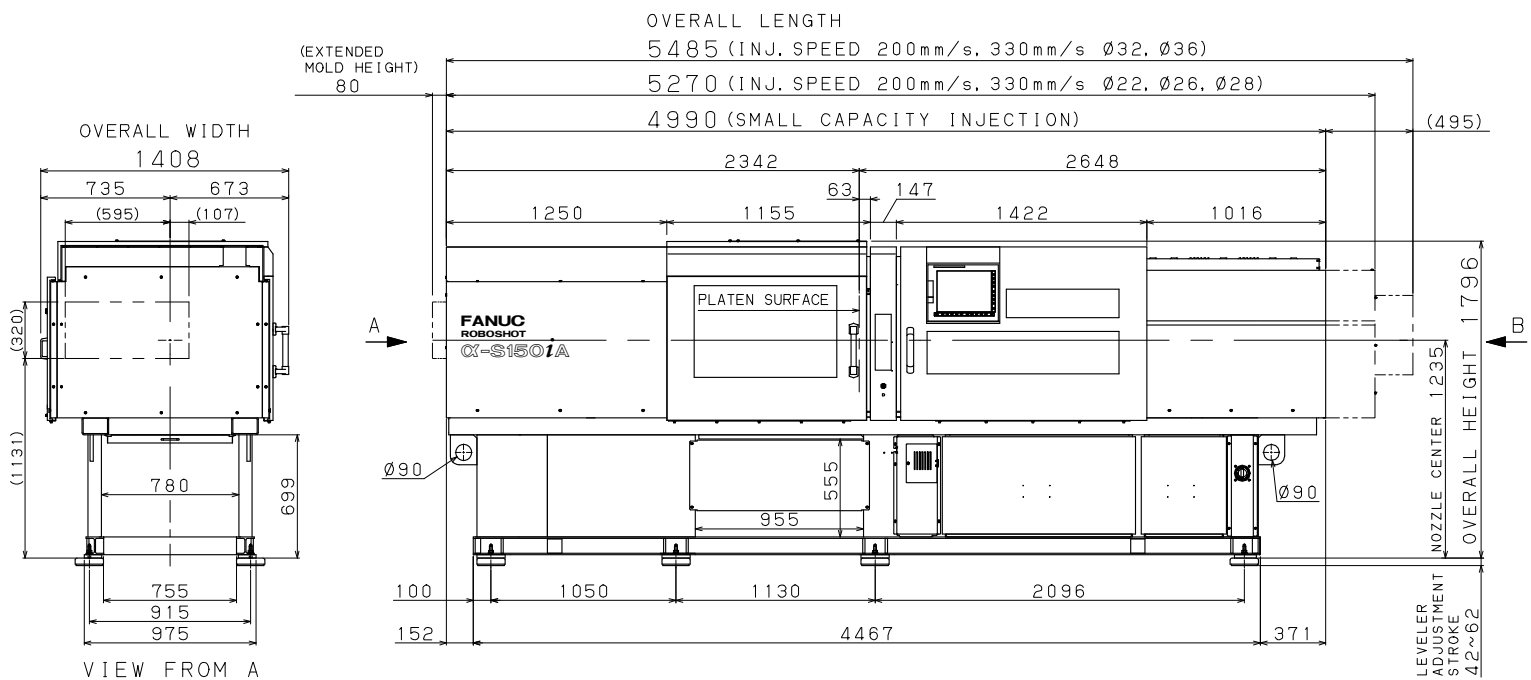
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S150iA Small capacity injection specification



FANUC ROBOSHOT α -S220iA

Mechanical specifications

Item		Unit	Data			
Clamping unit	Clamping mechanism	---	Double toggle			
	Tonnage	kN	Standard 2200 (220 tonf)			
	Maximum and minimum die height	mm	Singleplaten 650 - 250 / Extended die height 750 - 250(Option)			
	Clamping stroke	mm	550			
	Locating ring diameter	mm	ϕ 160			
	Tie bar spacing (HxV)	mm	650 x 650			
	Platen size (HxV)	mm	900 x 900			
	Minimum mold size (HxV) ^{*1)}	mm	375 x 375			
	Ejector stroke	mm	150			
	Maximum ejector force	kN	35 (3.5 tonf)			
Injection unit	Screw diameter	mm	44	48	52 ^{*6)}	
	Injection stroke	mm	176	176	208	
	Maximum injection volume	cm ³	268	318	442	
	Inj.speed 200mm/s	Maximum injection pressure ^{*2)}	MPa	220	190	160
		Maximum pack pressure ^{*2)}	MPa	190	160	130
		Maximum injection rate ^{*3)}	cm ³ /s	304	361	424
		Maximum injection speed ^{*3)}	mm/s	200		
		Maximum screw rotation speed	min ⁻¹	300		
	Nozzle touch force	kN	30 (3.0 tonf)			
	Screw & Barrel	Number of pyrometers	Barrel	3		
Nozzle			1			
	Total heater wattage	kW	15.9	17.9	20.2	
Machine weight ^{*4)}		t	10.8 (Approximately)			

*1) Smaller mold than this size may limit clamp force.

*2) Maximum injection rate and maximum injection speed is a theoretical value.
Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*3) The maximum injection pressure setting at high pressure filling mode option.
There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)
High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*4) The machine without option.

*5) The pressure conversion is 1MPa=10kgf/cm².

*6) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

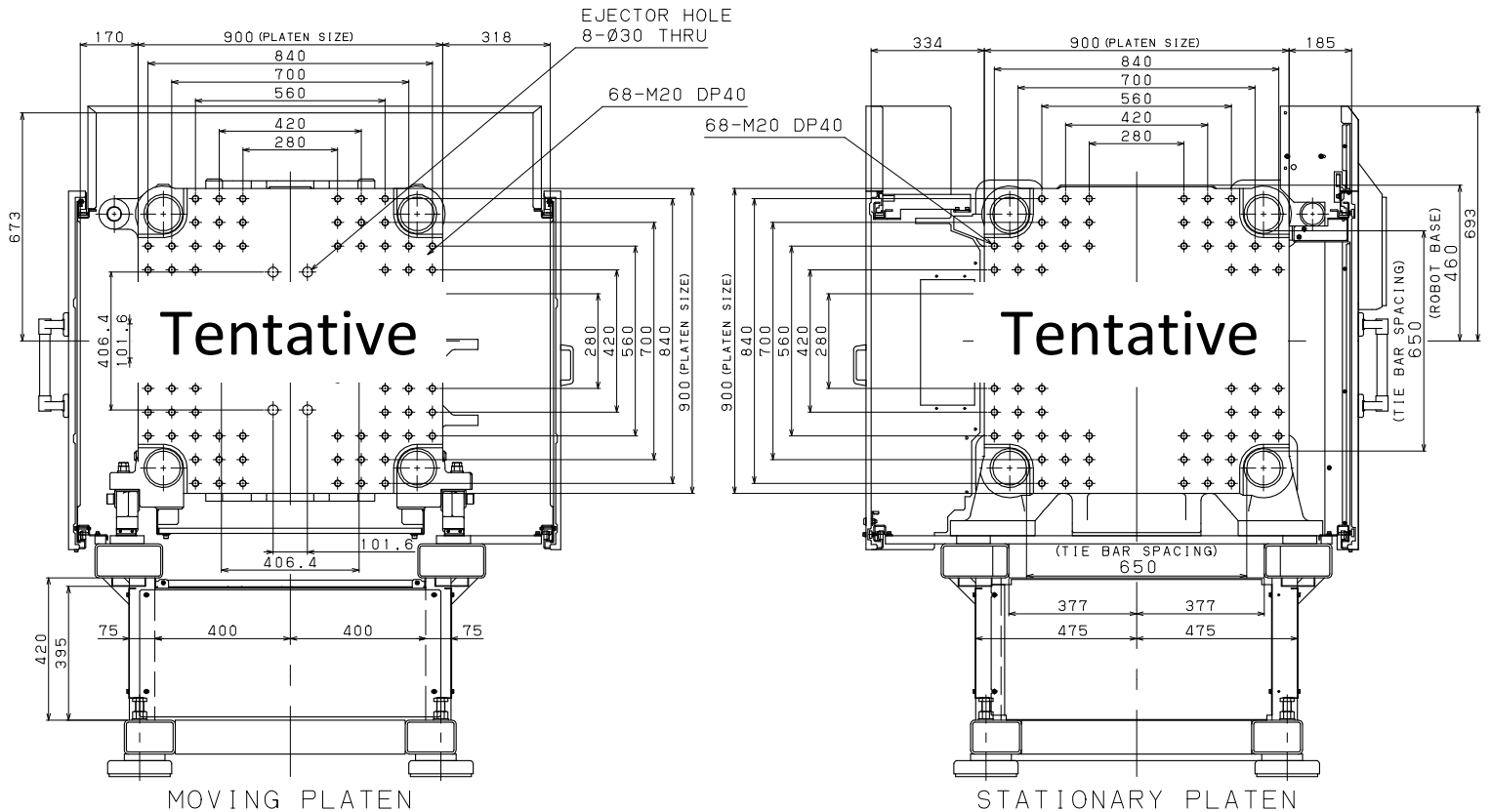
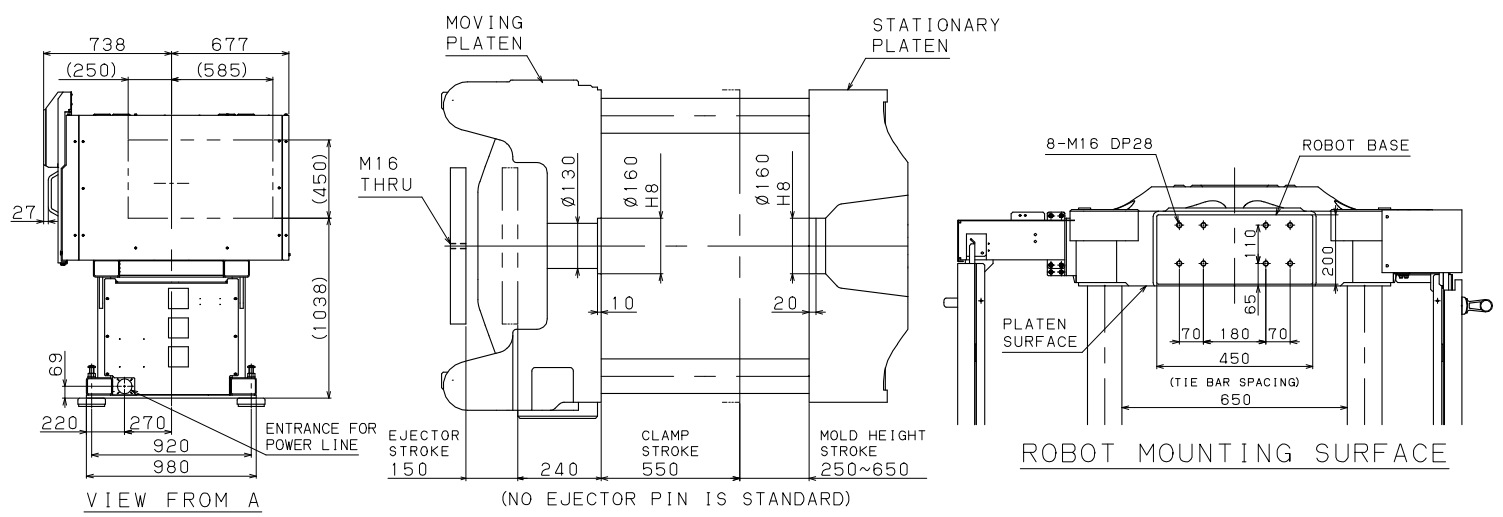
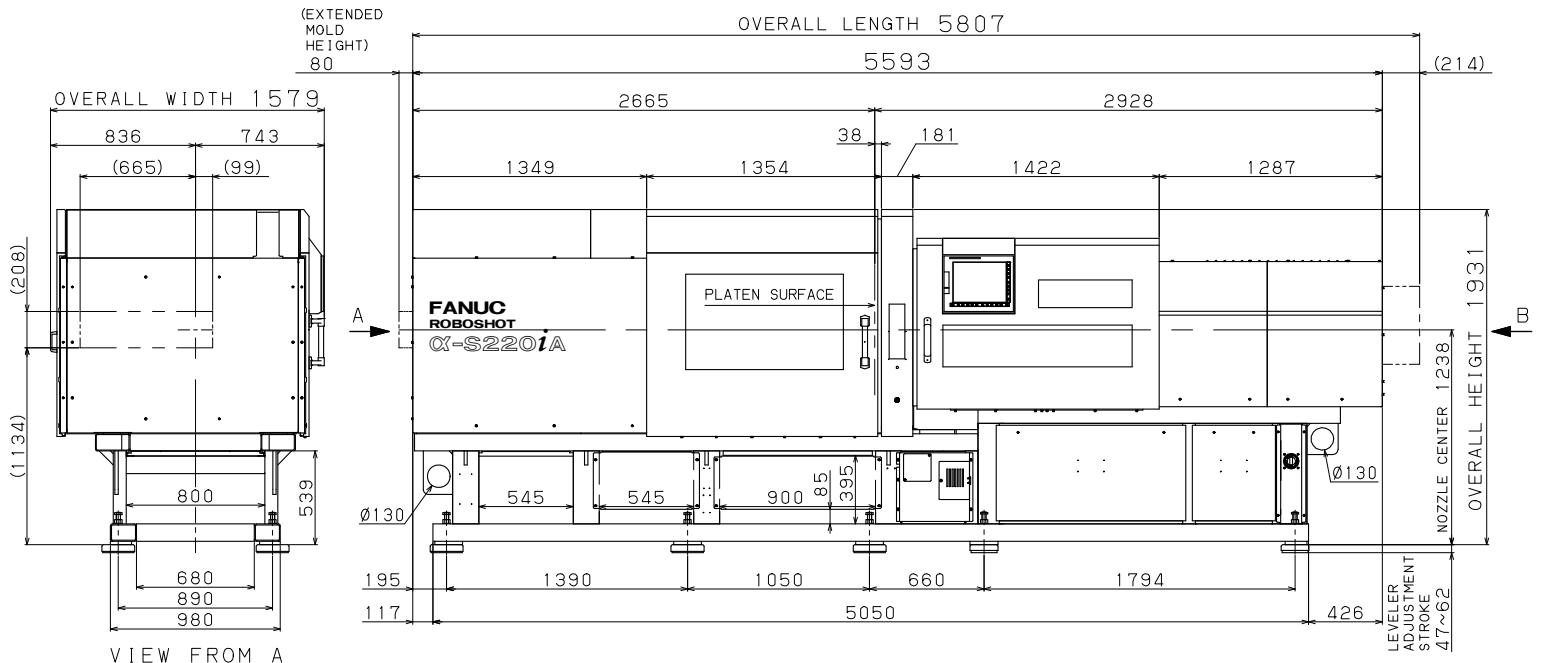
Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker ^{*7)}	Inj.speed 200mm/s	175A (With peripheral devices) ^{*8)}
		75A (With no peripheral device) ^{*8)}
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

*7) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

*8) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S220iA



FANUC ROBOSHOT α -S250iA

Mechanical specifications

Item		Unit	Data							
Clamping unit	Clamping mechanism	---	Double toggle							
	Tonnage	kN	Standard 2500 (250 tonf) / Increased 3000 (300 tonf)(Option)							
	Maximum and minimum die height	mm	Doubleplaten 650 - 300 / Extended die height 750 - 300(Option)							
	Clamping stroke	mm	600							
	Locating ring diameter	mm	ϕ 160							
	Tie bar spacing (HxV)	mm	710x635							
	Platen size (HxV)	mm	1030x960							
	Minimum mold size (HxV) ^{*1)}	mm	420x385							
	Ejector stroke	mm	200							
	Maximum ejector force	kN	80 (8.0tonf)							
Injection unit	Screw diameter	mm	32	36	40	44	48	52	56 ^{*7)}	
	Injection stroke	mm	150	150	150	176	176	208	260	
	Maximum injection volume	cm ³	121	153	188	268	318	442	640	
	Inj.speed 330mm/s	Maximum injection pressure ^{*2), *4)} (High pressure filling mode)	MPa	380	345	280	---	---	---	---
		Maximum injection pressure ^{*2)}	MPa	280	280	260	220	190	160	140
		Maximum pack pressure ^{*2)}	MPa	280	280	260	220	190	160	140
		Maximum injection rate ^{*3)}	cm ³ /s	265	335	414	501	597	700	812
		Maximum injection speed ^{*3)}	mm/s	330						
	Maximum screw rotation speed	min ⁻¹	400							
	Nozzle touch force	kN	30 (3.0 tonf)							
	Screw & Barrel	Number of pyrometers	Barrel	3						4
Nozzle			1							
Total heater wattage	kW	12.0	13.0	14.9	15.9	17.9	20.2	23.5		
Machine weight ^{*5)}	t	13.7(Approximately)								

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm².

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker ^{*8)}	Inj.speed 330mm/s	225A (With peripheral devices) ^{*9)}
		125A (With no peripheral device) ^{*9)}
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C(20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

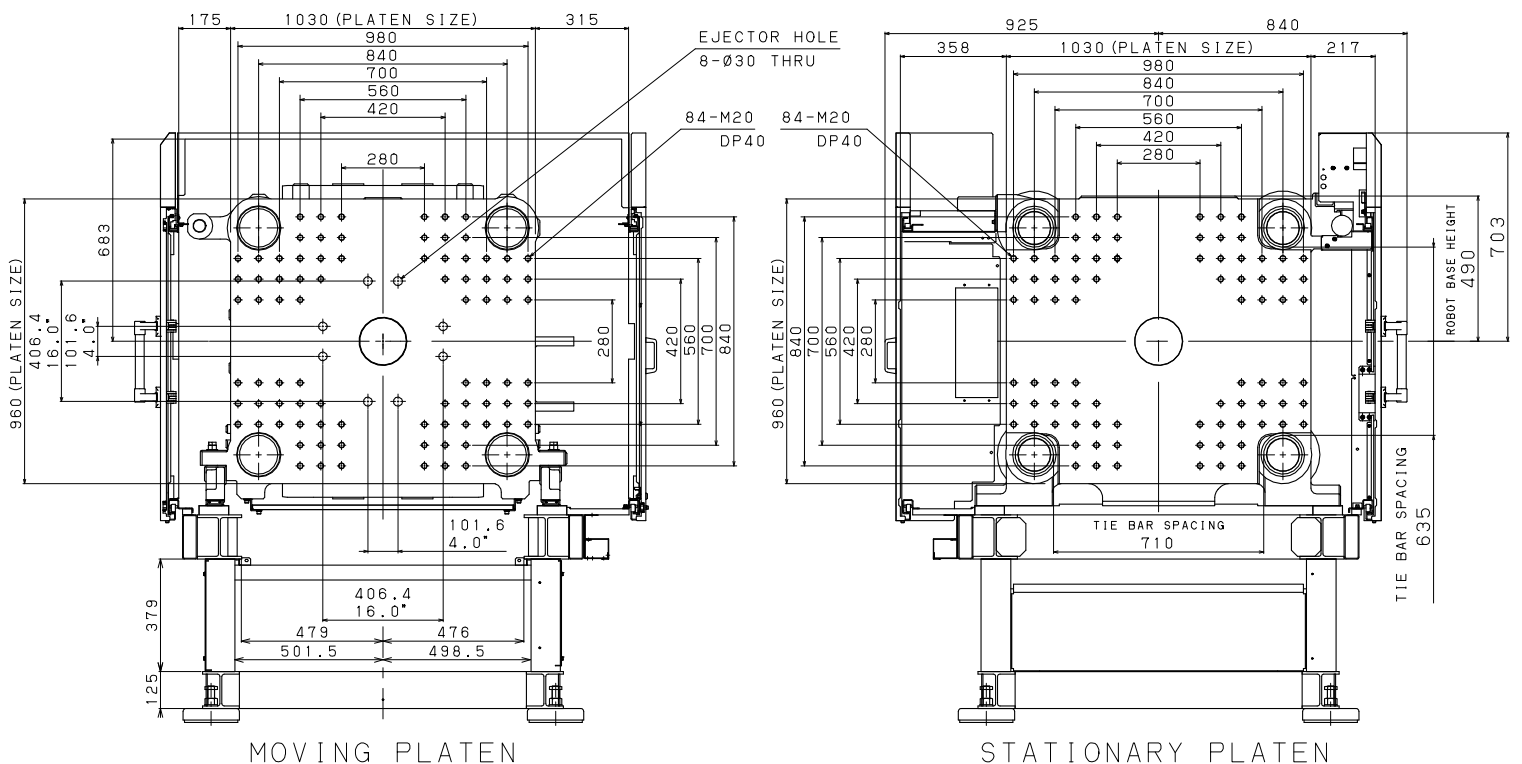
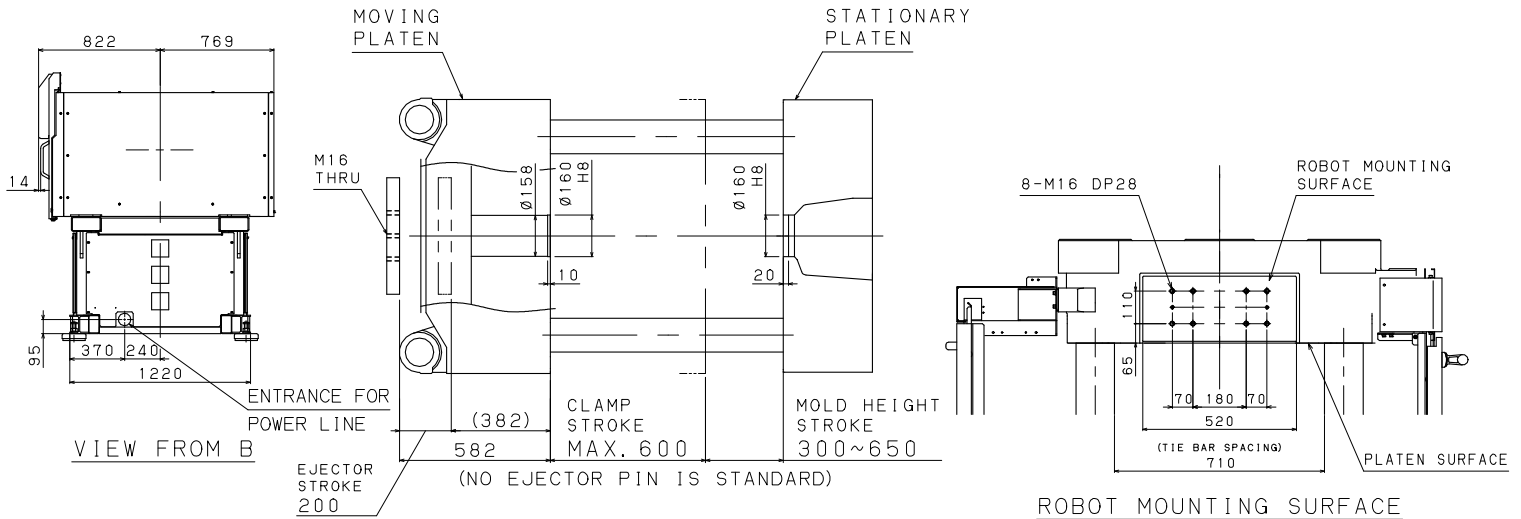
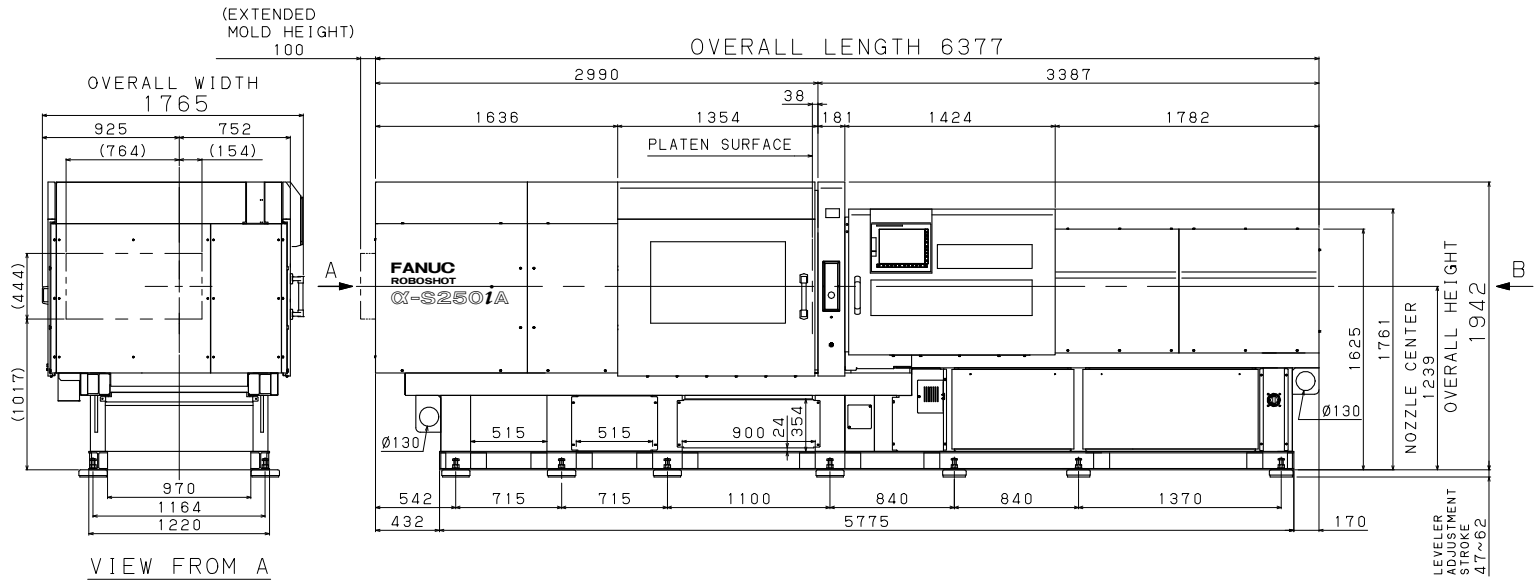
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S250iA



FANUC ROBOSHOT α -S300iA

Mechanical specifications

Item		Unit	Data								
Clamping unit	Clamping mechanism	---	Double toggle								
	Tonnage	kN	Standard 3000 (300 tonf) / Increased 3500 (350 tonf)(Option)								
	Maximum and minimum die height	mm	Doubleplaten 650 - 300 / Extended die height 750 - 300(Option)								
	Clamping stroke	mm	600								
	Locating ring diameter	mm	ϕ 160								
	Tie bar spacing (HxV)	mm	810x710								
	Platen size (HxV)	mm	1130x1030								
	Minimum mold size (HxV) *1)	mm	470x420								
	Ejector stroke	mm	200								
	Maximum ejector force	kN	80 (8.0tonf)								
Injection unit	Screw diameter	mm	40	44	48	52	56	64	68	72*7)	
	Injection stroke	mm	150	176	176	208	260	260	260	260	
	Maximum injection volume	cm ³	188	268	318	442	640	836	944	1059	
	Inj.speed 240mm/s	Maximum injection pressure *2)	MPa	280	280	270	240	225	175	155	135
		Maximum pack pressure *2)	MPa	280	260	240	220	195	150	130	120
		Maximum injection rate *3)	cm ³ /s	302	365	434	510	591	772	872	977
		Maximum injection speed *3)	mm/s	240							
		Maximum screw rotation speed	min ⁻¹	400							300
	Nozzle touch force		kN	30 (3.0tonf)							
	Screw & Barrel	Number of pyrometers	Barrel	3				4			
Nozzle			1								
Total heater wattage		kW	16.1	17.5	20.5	21.2	23.9	27.2	27.8	27.2	
Machine weight *5)		t	14.2(Approximately)								

*1) Smaller mold than this size may limit clamp force.

*2) The maximum injection pressure and maximum pack pressure is not melt pressure but injection unit output.

The maximum injection pressure and maximum pack pressure is the maximum value can be set.

The maximum injection pressure and maximum pack pressure might be limited depending on the molding condition.

*3) Maximum injection rate and maximum injection speed is a theoretical value.

Maximum injection rate and maximum injection speed can not be guaranteed when the injection pressure is maximum.

*4) The maximum injection pressure setting at high pressure filling mode option.

There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)

High pressure resistance barrel and nozzle are necessary, when high pressure filling option is selected.(Contact sales for detail)

*5) The machine without option.

*6) The pressure conversion is 1MPa=10kgf/cm².

*7) The molding condition might be limited by the resin.(Contact sales for detail)

Installation conditions

Item		Data
Input power source		3-phase AC200V \pm 10% 50/60Hz \pm 1Hz 3-phase AC220V \pm 10% 60Hz \pm 1Hz
Main breaker *8)	Inj.speed 330mm/s	225A (With peripheral devices) *9)
		150A (With no peripheral device) *9)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing grounding.
Installing environment	Temperature	0~40°C (20~25°C recommended)
	Humidity	Below 75% (Below 95% under short term operation)
	Vibration	Below 0.5G
	Atmosphere	Take care of corrosive gas.

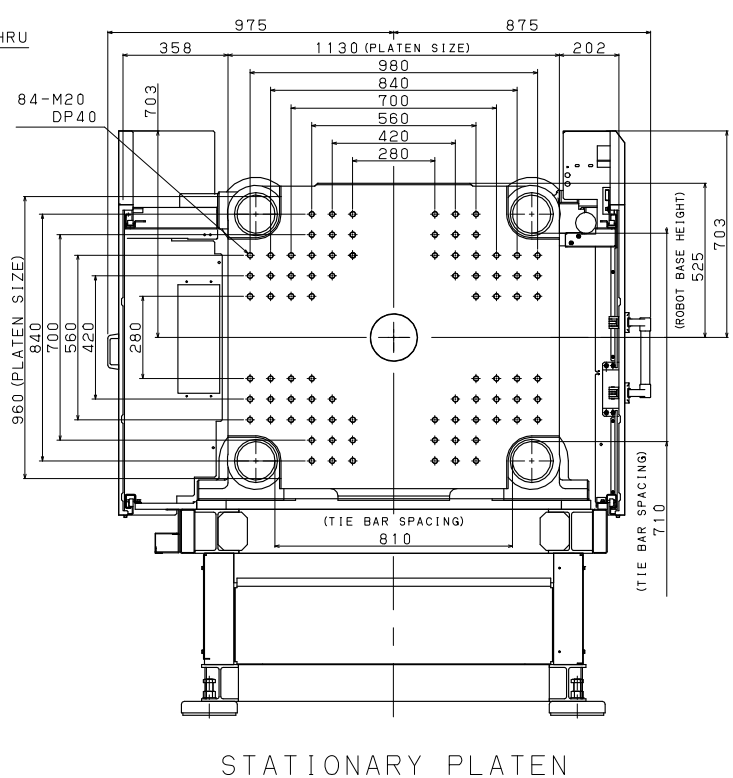
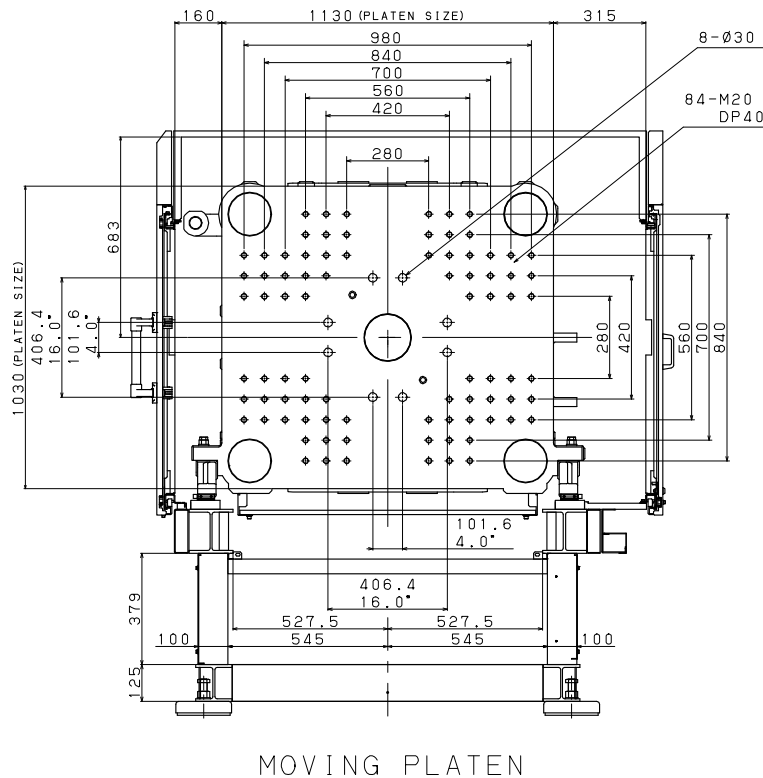
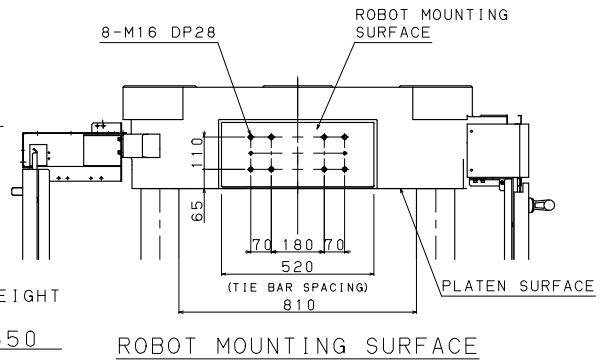
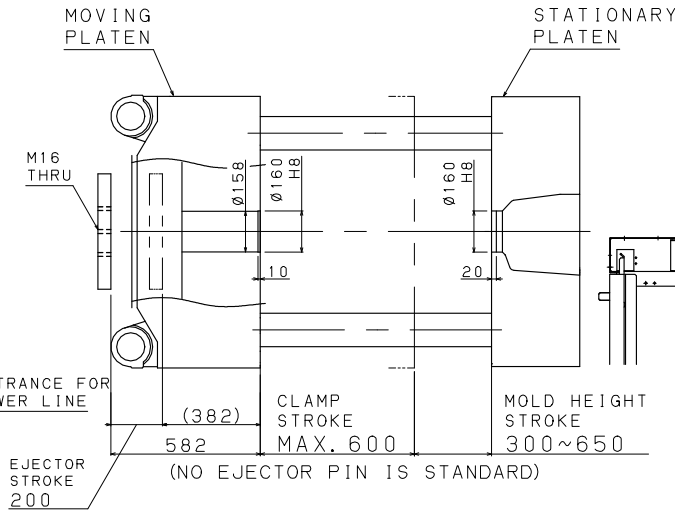
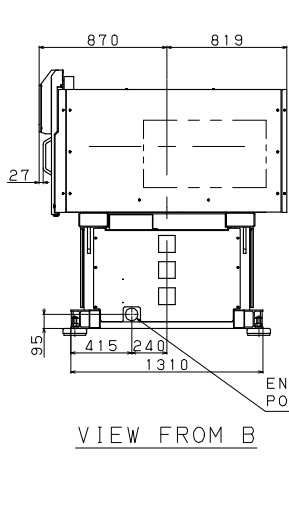
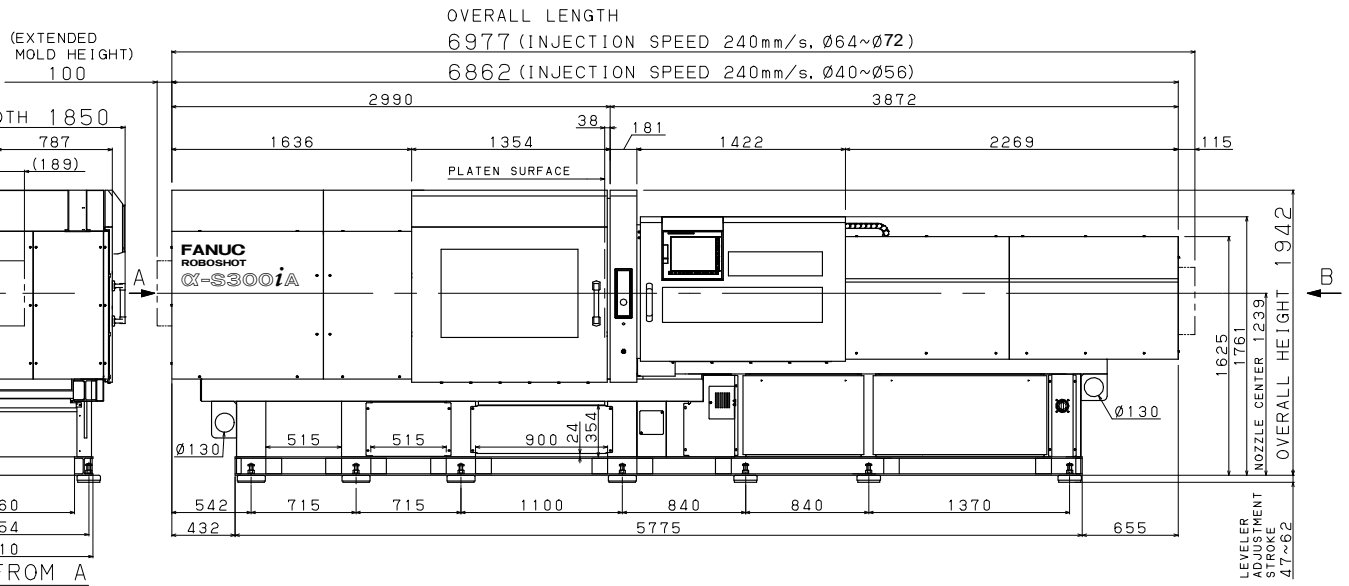
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.

*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.

FANUC ROBOSHOT α -S300iA



Features of α -SiA series

Item		Suitable category						Detail
		Thin-wall	Lens	Connector	Automotive	Medical	Container	
High Performance								
FANUC standard CNC	Selectable injection acceleration profile	○	○	○				B-10
	Precise injection/Pack switch over	○	○	○	○	○		
	Decompression control in Injection/Packing	○		○				B-14
	Backflow monitor	○	○	○	○	○	○	B-53
	Precise metering			○	○			B-17
	AI pressure profile trace control		○		○			B-18
	AI metering control				○	○		B-19
High rigidity, Low friction mechanism	Selectable 2 types of moving platen	○	○	○	○	○	○	A-20
	Moving platen support by Linear Guide	○	○	○				A-18
Additional servo axes control	Suitable feeding device		○	○	○	○		B-79
	Servo nozzle touch		○	○				
	Mold core drive				○	○	○	
High Reliability								
Safety, Usability	Fully covered mechanism	○	○	○	○	○	○	A-12
Operation rate improvement	AI mold protection	○	○	◎	◎	○	◎	B-29
	Start up function				○		○	B-20
Global support	Conformation to safety requirements	○	○	○	◎	◎	◎	A-17
	Multi language display	○	○	○	◎	◎	◎	B-4
High Productivity								
Energy saving	Low electricity heat up				○	○	○	B-41
	Power consumption monitor	◎	○	◎	◎	◎	◎	B-52
	Precise clamping force control	○	○					B-27
Cycle time reduction	Simultaneous motion	○		○	○		○	B-28
	Cycle diagnosis			○	○		○	B-51
Product/Quality management	ROBOSHOT-LINK<i>i</i>	○	○	○	◎	◎	○	B-57
System integration	Customizable machine status signals				○	○		B-60
	Customizable core motion				○	○	○	B-61
	External sensor connection		○	○	○			B-82

Standard and Optional features (Mechanical unit)

Std: Standard feature
 ●: Option with no retrofitting capability
 ○: Option with retrofitting capability (note 1)

Refer to the other pages for the barrel/screw options

No	Item	15i A	30i A	50i A	100i A	130i A	150i A	220i A	250i A	300i A
Injection unit										
A-1		Std	Std	Std	Std	Std	Std	Std	Std	Std
A-2	Safety gate, covers	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-3		○	○	○	○	○	○	○	○	○
A-4	Injection unit swivel	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-5	Closed loop feed throat temperature control	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-6	Feed throat surface temperature	○	○	○	○	○	○	○	○	○
A-7	Increased nozzle touch force	---	---	---	---	---	---	---	---	---
A-8	Hopper	○	○	○	○	○	○	○	○	○
A-9	Feed throat safety block (Note 2)	○	○	○	○	○	○	○	○	○
A-10	Thermal insulation cover	○	○	○	○	○	○	○	○	○
A-11	Additional temperature control zone for nozzle or barrel	○	○	○	○	○	○	○	○	○
Clamp unit										
A-12		Std	Std	Std	Std	Std	Std	Std	Std	Std
A-13	Safety gate, covers	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-14		Std	Std	Std	Std	Std	Std	---	---	---
A-15		Std	Std	Std	Std	Std	Std	Std	Std	Std
A-16		Std	Std	Std	Std	Std	Std	Std	Std	Std
A-17	Ejector servo motor equipped with brake (Note 2)	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-18	Platen support	●	●	●	●	●	●	●	●	●
A-19	Robot mounting holes	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-20	Clamp force variation	---	---	○	---	---	---	---	---	---
		---	---	---	●	---	---	---	---	---
		---	---	---	---	○	---	---	---	---
		---	---	---	---	---	---	---	○	---
		---	---	---	---	---	---	---	---	●
A-21	Extended die height No clamp stroke change	---	---	○	---	---	---	---	---	---
		---	---	---	○	---	---	---	---	---
		---	---	---	---	○	---	---	---	---
		---	---	---	---	---	○	---	---	---
		---	---	---	---	---	---	○	---	---
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		---	---	---	---	---	---	---	---	○
		---	---	---	---	---	---	---	---	○
A-22	Air ejector	○	○	○	○	○	○	○	○	○
A-23	Insulator plate	○	○	○	○	○	○	○	○	○
Auxiliary unit										
A-24	Manifolds for piping	○	○	○	○	○	○	○	○	○
A-25	Alarm lamp (Note 2)	○	○	○	○	○	○	○	○	○
A-26	Multiple color signal tower (Note 2)	○	○	○	○	○	○	○	○	○
A-27	Memory card	○	○	○	○	○	○	○	○	○
A-28	Memory card adaptor	○	○	○	○	○	○	○	○	○
Overall										
A-29	Audible buzzer	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-30	Machine mount	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-31	Emergency stop buttons	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-32	Main breaker	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-33	Central lubrication	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-34	Grease cartridge for maintenance	○	○	○	○	○	○	○	○	○
A-35	Tool kit	○	○	○	○	○	○	○	○	○
A-36	Fuse kit	○	○	○	○	○	○	○	○	○
A-37	Touch up paint	○	○	○	○	○	○	○	○	○
A-38	SPI robot interface	Std	Std	Std	Std	Std	Std	Std	Std	Std

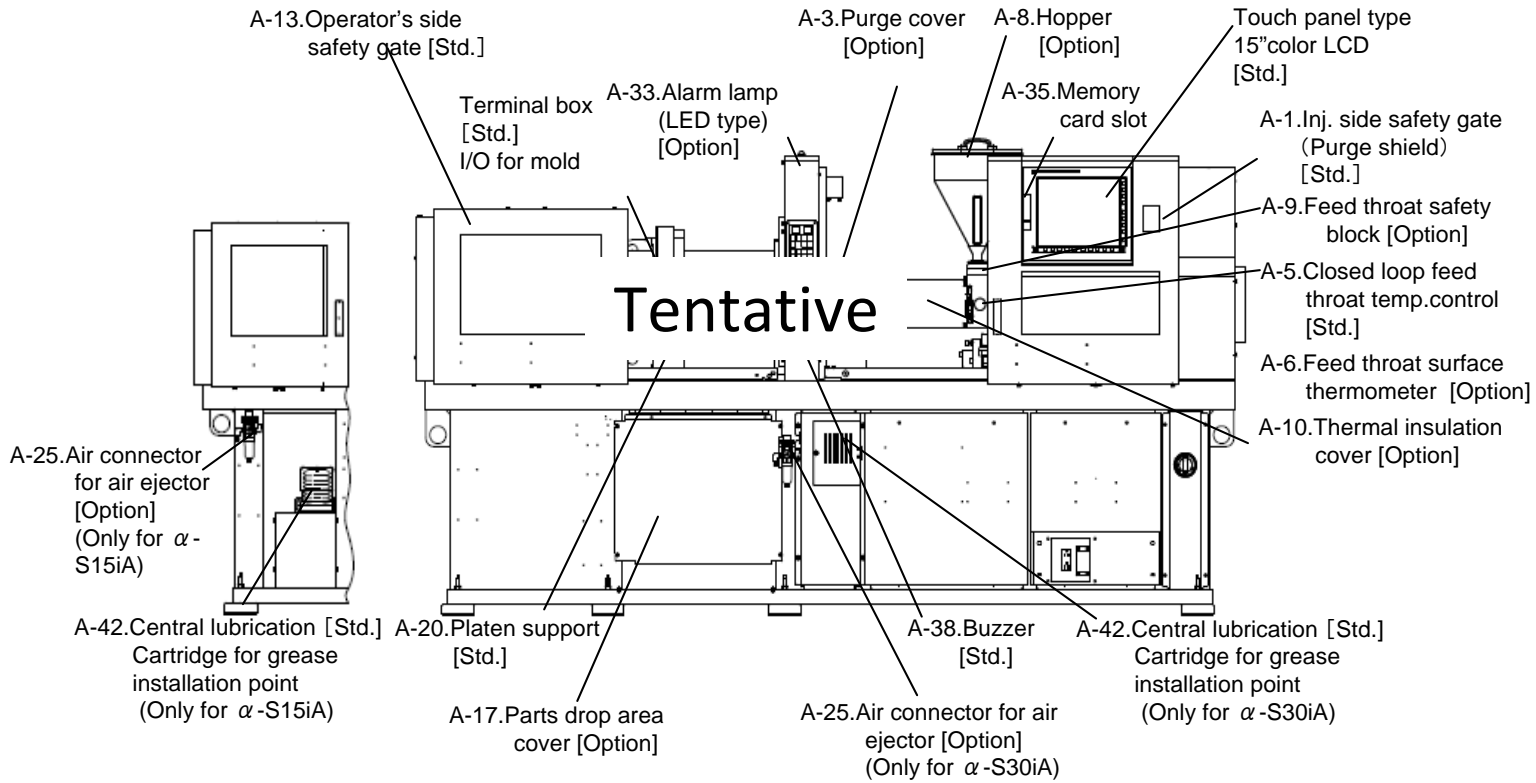
Note 1) The retrofit option after the machine shipment requires additional construction and tuning fee.

Note 2) Both cannot be installed.

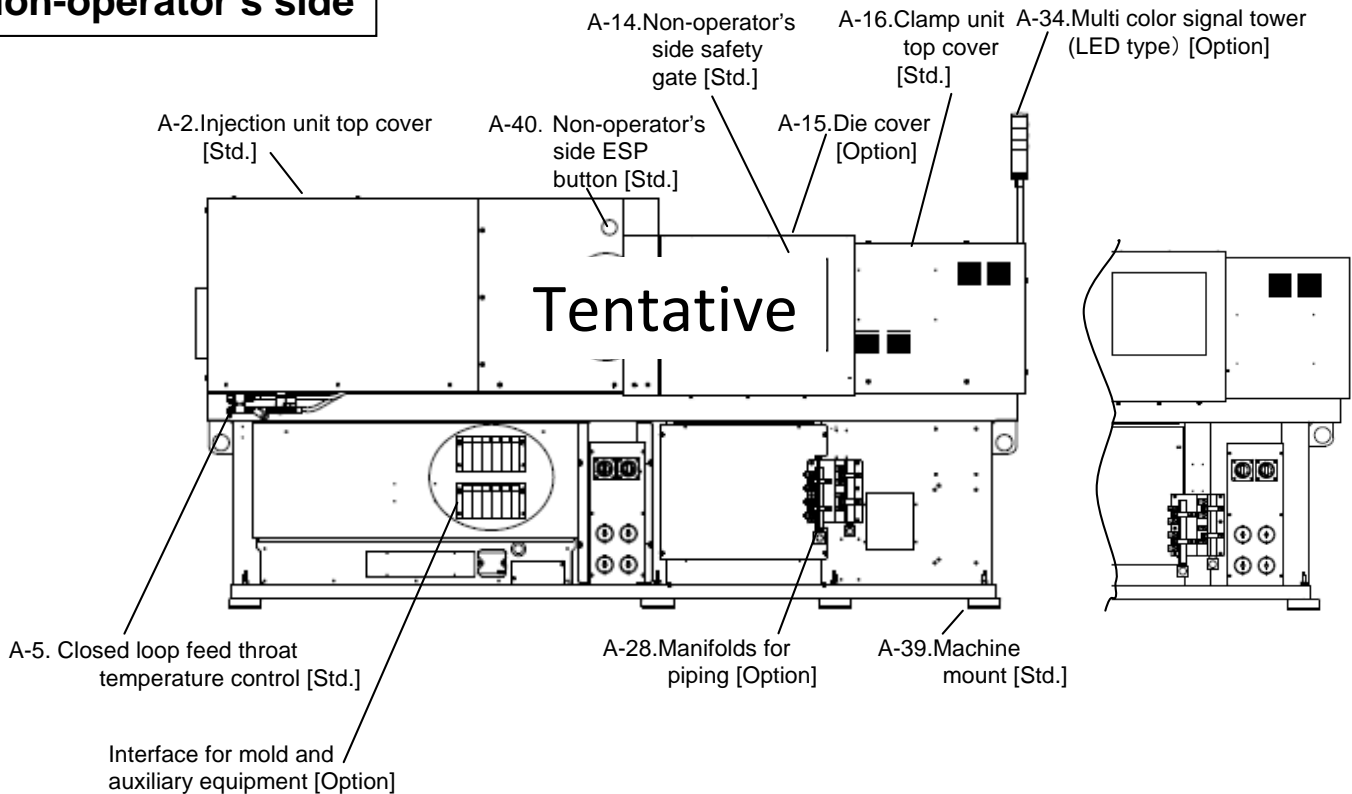
Standard and optional features location

ROBOSHOT α -S15iA/ α -S30iA

Operator's side



Non-operator's side



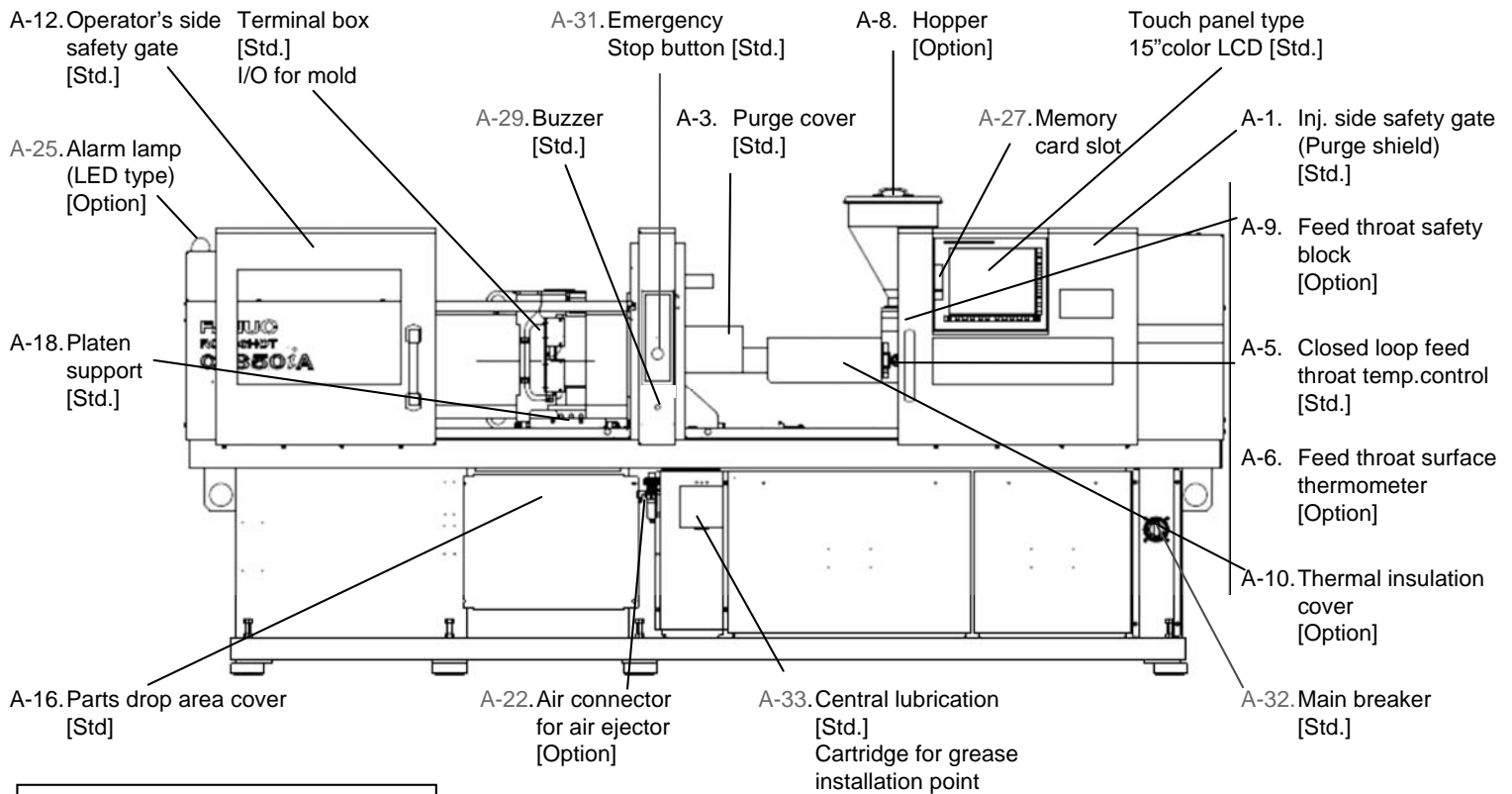
The numbers in above drawing meet with those in the table in "Standard and Optional features (Mechanical unit)".

Standard and optional features location

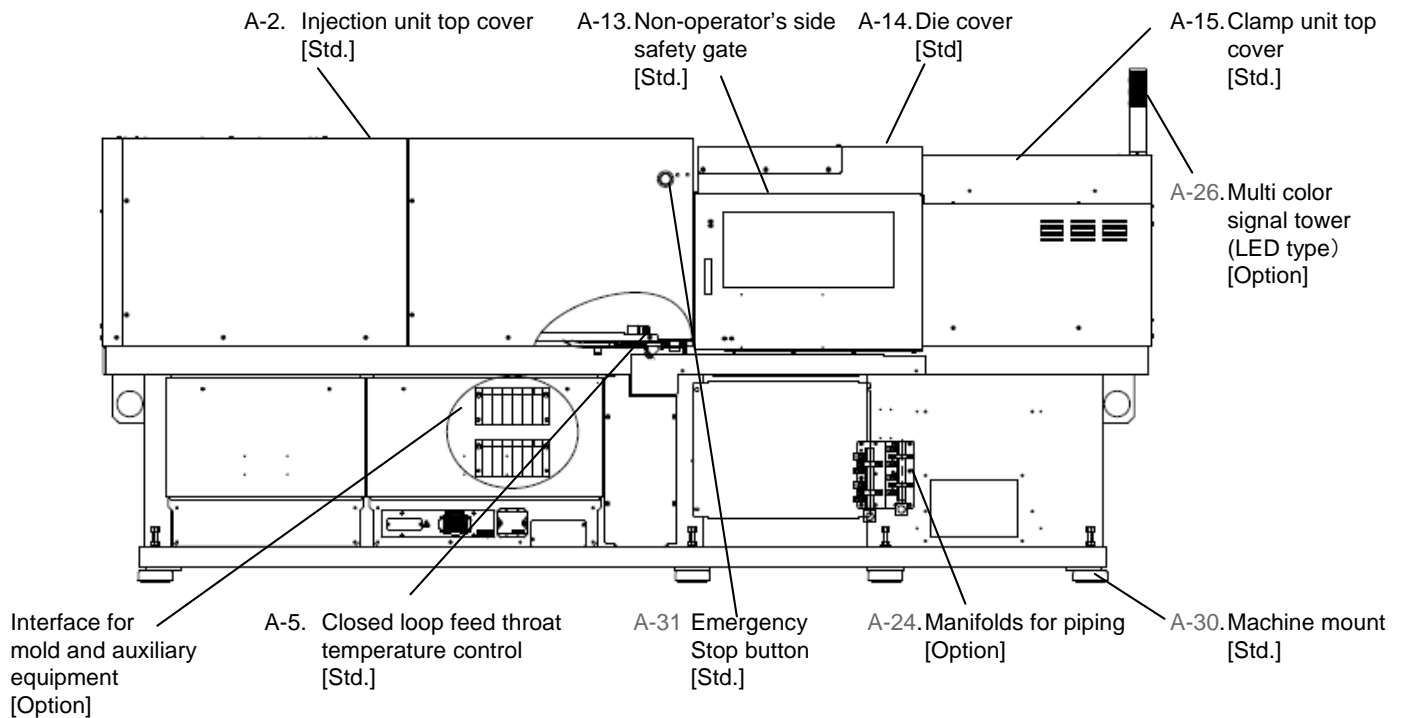
ROBOSHOT α -S50ia/ α -S100ia/ α -S130ia / α -S150ia

α -S220ia/ α -S250ia / α -S300ia

Operator's side



Non-operator's side



The numbers in above drawing meet with those in the table in "Standard and Optional features (Mechanical unit)".

Standard / Optional features (Control unit and Software)

No	Item		Description	
Display and Input				
B-1	Display unit		Display unit (15" color LCD with touch panel)	Standard
B-2	Display mode		Standard (setting screen and actual value) / Maximum (setting screen) / 4 divided screen (setting screen x 4)	Standard
B-3	Systems of measurement		SI unit (kN,MPa etc.), Metric, Inches capability	Standard
B-4	Display languages		19 languages (Japanese, English, Simplified Chinese, Traditional Chinese, Korean, Thai, Vietnamese, Indonesian, German, French, Italian, Spanish(Mexico), Portuguese, Finnish, Czech, Dutch, Hungarian, Danish, Polish)	Standard
B-5	Input mode		Numeric input, increment input	Standard
B-6	Automatic backlight off	Screen saver	1-99 min	Standard
B-7	Input lock function with password	Input lock	Batch management	Standard
		Operator management	200 operators, operator's ID is recorded in Last Change Log	Option
B-8	Customization of menu buttons	Custom menu		Standard
B-9	Setting profile display		Injection, Packing, Extruder ,Clamp open/close, Eject, Temperature	Standard
Injection and Extruder control				
B-10	Injection control	Injection response	10 steps of pressure and speed control (step can be specified), Constant injection acceleration ratio, Gate flow control	Standard
			FFF, A, B, C, user setting	Standard
		Injection/Pack switch over	Switch over by Position, Pressure, Time, Cavity pressure, Nozzle pressure, Signal, Filling Position (No cavity pressure sensor, nozzle pressure sensor, amplifier or cable is included)	Standard
B-11	Packing control		6 steps of pressure and time control (step can be specified), Maximum pack speed control, Extruder delay timer	Standard
B-12	Extruder control		6 steps of screw RPM and back pressure control (step can be specified), Suck back function	Standard
		Pre-suck back	Decompression before extruder	Option
B-13	Maximum pressure monitoring in Injection/Packing	Injection pressure alarm	Injection pressure, Cavity pressure, Nozzle pressure (No cavity pressure sensor, nozzle pressure sensor, amplifier or cable is included)	Standard
B-14	Decompression control in Injection/Packing	HR mode HR ⁺ mode <small>Note7)</small>	Selectable 8 modes pressure response	Standard
B-15	Automatic purging of resin	Auto purge	Normal mode/Refresh mode. Automatic calibration of injection pressure sensor is also available.	Standard
B-16	Sprue break			Standard
B-17	Backflow prevention control	Precise metering control	Decompression after metering (Precise metering 2), Compression before injection (Precise metering 3)	Standard
B-18	Pressure curve repeating at good parts molding	AI pressure profile trace control		Standard
B-19	Recovery process repeating at good parts molding	AI metering control		Standard
B-20	Automatic start up parameter change	Start up function	5 steps : A part of injection, packing, extruding and temperature	Option
Clamp/Ejector				
B-21	Clamp close/open control		Close 6 steps /open 5 steps of position and speed control (Step can be specified), Cycle time reduction by automatic acceleration control	Standard
B-22	Ejector control	2 stage ejector	Maximum 10 pulses ejection	Standard
		Ejector delay timer	2 stage ejector (4 patterns of ejector motion profile) Delayed ejection	
B-23	In-mold degating	Pre-ejector		Standard
B-24	Ejector compression function <small>Note 2)</small>	Ejector compression		Option
B-25	Clamp compression function	Clamp compression		Option
B-26	Automatic adjustment of die height	Automatic die height adjustment	0kN - Maximum clamp force	Standard
B-27	Automatic adjustment of optimum clamping force	Precise clamping force control		Option
B-28	Simultaneous motion	Ejection in clamp opening	Simultaneous ejector forward and clamp open	Standard
		Pre-injection	Simultaneous clamp and injection	Standard
		Clamp open and extruder	Simultaneous clamp open and extruder	Standard
		Ejector override	Simultaneous ejector retract and clamp close	Option
B-29	Protection of mold and ejector	AI mold protection	Clamp open and close	Standard
		AI ejector	Ejector forward and backward	Standard
Temperature control				
B-30	Nozzle/Barrel temperature control		High precision PID loop temperature control (0.01 degree resolution)	Standard
B-31	Closed loop feed throat temperature control		Solenoid valve ON/OFF control	Standard
B-32	Temperature alarm detection		Upper/lower band setting	Standard
B-33	PID parameters tuning	Auto-tuning function	Automatic tuning after heat up end	Standard
		Self-tuning function	Automatic tuning during heat up	
B-34	Synchronous nozzle/barrel heat up			Standard
B-35	Selectable temperature control ON/OFF	Manned/Unmanned operation	At alarm occurrence or production end	Standard
		Heater management	At specified time (set for each date)	
B-36	Nozzle tip protection by cold resin	Soak timer		Standard
B-37	Nozzle/Barrel temperature holding	Low temperature holding		Standard
B-38	Resin residence time monitoring	Residence time monitor	Heater control when residence time becomes long	Standard
B-39	Thermocouple break detection			Standard
B-40	Heater disconnection detection		Heat up rate detection by software	Standard
			Heater current detection by special hardware	Option
B-41	Reduction of maximum electricity power	Low electricity heat up	Suppress heater output by 50% or 70%	Standard
B-42	Automatic transition to stop mode	Shutdown sequence	Temperature control/Clamp close/Nozzle touch/Auxiliary outlet	Option
Output/Input of mold conditions				
B-43	Mold file		500 files. File name, comment, memo input is available.	Standard
B-44	Mold file storage		Output device : memory card / USB flash device, Format : JPEG / text	Standard
B-45	Screen image output		Output device : memory card / USB flash device, Format : BMP	Standard

No	Item		Description		
Monitor/Alarm/Diagnosis					
B-46	Process monitor		Cycle alarm, Parts rejection for 24 items, Trend chart for last 20000 shots	Standard	
B-47	Self-diagnostic message/ Alarm message			Standard	
B-48	Log management	Alarm log	Alarm (5000 logs)	Standard	
		Last change log	Setting parameters (10000 logs)		
		Operation log	Machine operation (10000 logs)		
		Production log	Production number (100 logs)		
B-49	Production management	Production management	Production number, Start up NG, Consecutive bad cycles, product completion date calculation	Standard	
		Container management	Number of parts-filled container		
		Counter stop function	Stops production counter temporarily		
B-50	Production information entry		Mold ID, Mold model number, Parts model number, Resin name, Resin grade, Cavity number and Memo	Standard	
B-51	Graphical timing chart display of each molding process	Cycle diagnosis	Display with reference data, elapsed time measurement	Standard	
B-52	Power consumption monitoring	Power consumption monitor	Power consumption and regeneration of ROBOSHOT	Standard	
		Wattmeter ^{Note6)}	Power consumption of peripheral equipment	Option	
B-53	Graphical display of waveform	Wave monitor	Position (screw, clamp, eject), Speed (screw, clamp, eject), Pressure (injection), Rotation, Backflow, Load (clamp, eject) 5 points pressure monitor(Reject and alarm), 6 sections metering monitor(Reject)	Standard	
B-54	Signal output for sampling inspection ^{Note 5)}	Sample function	Manual sample operation	Standard	
		Automatic sample function	Automatic sample signal output (shot count or time interval)	Standard	
Interface					
B-55	Function selectable input signals		Machine status input	Standard 12 inputs	Standard
B-56	Function selectable output signals		Machine status output	Standard 8 outputs	Standard
B-57	Ethernet port			100BASE-TX, For ROBOSHOT-LINKi	Standard
B-58	Ethernet HUB			100BASE-TX (5 ports)	Option
B-59	Memory card slot, USB slot ^{Note 3)}				Standard
B-60	Configurable machine signals		Custom signal function	Maximum 32 points available	Standard
B-61	Configurable core sequence		Custom core function	Maximum 6 systems are available.	Standard
B-62	Picker interface (11 outputs and 6 inputs)			12 outputs (clamp open limit, etc.), 8 inputs (clamp permission signal, etc.)	Standard
B-63	Core interface			2 systems for each core pull/set	Standard
B-64	Shut off nozzle interface ^{Note 5)}				Standard
B-65	Vacuum device interface ^{Note 5)}				Standard
B-66	Valve gate interface ^{Note 5)}			Maximum 8 circuits are available.	Standard
B-67	Parts removal detector interface ^{Note 5)}				Standard
B-68	Monitor camera interface ^{Note 5)}			Interlock with ejector is available	Standard
B-69	Air ejector interface			3 outputs	Option
B-70	Unscrewing interface ^{Note 5)}			2 inputs, 2 outputs	Option
B-71	Injection interface ^{Note 5)}		Injection permission	Motion permission	Standard
B-72	Clamp interface ^{Note 5)}		External signal clamp	Clamp open and close	Standard
B-73	Ejector interface ^{Note 5)}	Ejector interlock	Motion permission	Standard	
		Ejector skip	Motion skip		
		External signal ejector	Eject start, advanced, retracted, middle in advance and middle in retract		
B-74	Ejector retract confirmation signal ^{Note 5)}		Ejector plate retract confirmation		Standard
B-75	Cycle stop by external signals ^{Note 5)}		Alarm signal input	Immediate stop signals, Cycle end stop signals	Standard
B-76	Data communication with auxiliary device by SPI protocol		Auxiliary device communication	Mold temperature controller, dryer, loader, chiller, hot runner (SPI connector is option)	Standard
B-77	Forced rejection when bad parts occurs		Bad parts reject function		Standard
B-78	Non-operator's side parts unloading			EUROMAP 73 (HARTING connector is option)	Standard
B-79	Additional axes control	Suitable feeding device ^{Note2)}		Achieves optimal amount of resin supply by feedback control, Achieves long term molding repeatability	Option
		Servo nozzle touch ^{Note2)}		Controls nozzle touch force during moldig cycle optimally	Option
		Mold core drive		High-speed and accuracy positioning by FANUC servo technorogy No additional control equipment required, Integrated into ROBOSHOT	Option
B-80	Stationary side ejector signal		Ejector signals	Ejector forward, retract (hydraulic ejector)	Option
B-81	Waveform data output by voltage		Analog output	Maximum 4 points of injection pressure, position (screw, clamp, eject), speed (screw, rotate, clamp, eject)	Option
B-82	External sensor connection		Analog input	Maximum 2 boards of voltage input board (Max 4 points), current input board (Max 4 points) are available. Waveform display, Parts rejection	Option
B-83	Mold ID number signal output	Mold ID number output function		Mold ID output by 8 points of binary data (0-255)	Option
		Picker data link function		Mold ID output to picker by 8 points of binary data (0-255)	Option
B-84	Shot counter signal output		Shot counter output function	Current shot count output by 4 points of binary data (0-15)	Option
B-85	Barrel cooling fan control signal output			Maximum 4 points are available.	Option
B-86	Magnetic mold clamp interface				Option

Note 1) The retrofit option after the machine shipment requires additional construction and tuning fee.

Note 2) Please contact FANUC for the detail because mechanical modification is required.

Note 3) FANUC can provide memory card as an option.

Note 4) Please contact FANUC for available device. Commercially available USB flash device can be used, but it may not function properly.

Note 5) Machine status signals are available as input/output signal.

Note 6) Except ultra high speed injection specification.

Note 7) Only for ultra high speed injection specification.

Cylinder / Screw / Nozzle Specification

1. Cylinder / Screw / Screw Head / Nozzle

Purpose	Major polymer (Moldings)	Cylinder (Barrel)		Screw	Screw head ⁵⁾	Nozzle
General purpose	PP, PS, PE	PAL(wear-resistance cylinder)	Max Setting Temp.350°C ³⁾	Nitride	Nitride	Standard / Chrome plating
Low friction polymer	POM (Polyacetal)	PAL (wear-resistance cylinder) / H610		Nitride (In case of Screw Dia. 32mm and over, It is Double flight screw is recommended)	YPT42 / KH	Standard / Chrome plating
Transparent polymer	PS, ABS, AS	PAL (wear-resistance cylinder)		Chrome plating	YPT42	Chrome plating / TiCN
Lens spec. I	PMMA, PC	H503		W/C + Surface treatment	W/C + Surface treatment	Nozzle for Polyolefin
Lens spec. II	Transparent Polyolefin		W/C + Surface treatment			
Wear-resistance and anti-corrosion (W/C)	PS, ABS (with flame retardant), PC (GF reinforced), PBT, Nylon, LCP	H610	Max Setting Temp.400°C ³⁾	YPT42	YPT42	Standard / Middle Dia.
High wear-resistance and anti-corrosion (High W/C)	LCP, PPS (GF under 30%), High GF concentration resin, High Filler concentration resin, PA/ABS, Materials for MIM, CIM	C900 (Screw dia.44mm and under)		S15iA - S150iAs ⁴⁾ : KAM31	KH	Standard / Middle Dia.
Ultra wear-resistance and anti-corrosion (Ultra W/C)	LCP, PPS (GF 30% and over) , Silicone, Aromatic nylon, Halogen free flame-retardant resin	KH		S150iA : YPT71		KH (Standard / Middle Dia. / Slender)
Semi-high pressure resistance	Thin mold parts, Mobile phone (Cover)	S30iA - S150iAs ⁴⁾ Special spec.		YPT42	YPT42	Standard
High pressure resistance	Mobile phone (Body)	S50iA - S150iAs ⁴⁾ Special spec.				
Optical high pressure resistance	Light guide panel	S30iA - S150iAs ⁴⁾ Special spec.				
Connector spec. I	PPS (GF 30% and under) PBT, Nylon, LCP	C900 / KH		YPT42 / KAM31	YPT42 / KH	Middle Dia. Nozzle / Slender Nozzle
Connector spec. II	LCP Screw Dia. 22mm and under					Nozzle for LCP (Screw Dia.22mm and under)
Connector spec. III	Heat resistant LCP Screw Dia. 22mm and under	C900(High temp.)		W/C + Surface treatment		Nozzle for LCP (Screw Dia.22mm and under)
High temperature	Polysulfone, PEI	S15iA - S150iAs ⁴⁾ C900(High temp.)		Max Setting Temp.450°C ³⁾	YPT42	YPT42
		S150iA H610(High temp.)				
		Ultra W/C KH				

Note 1) Materials and combination of cylinder-screw may be changed to improve without any information.

Manufacturer : Hitachi Metals,Ltd. (YPT42, YPT71, PAL, H610, H503) , Asai Sangyo co.,Ltd. (KAM31, C900) , Kohan Kogyo co., Ltd. (KH)

Note 2) For other molding materials(Thermo-sets, PVC, etc), other cylinder-screw manufacturers and other cylinder-screw materials are also available.

Note 3) Refer to "3.Setting Temperature"

Note 4) S150iA Small capacity injection

Note 5) Screw head is Non-castle type except for [Nitride] and [W/C Surface treatment].

Note 6) In the case of peak pressure is higher than catalog max. pressure, mount Semi-high press. or High press. or Optical high press. resistance barrel.
(High pressure filling mode goes to usable.)

2. Screw Type

Choice of suitable screw type for your resin.

Screw type	Purpose
Single flight screw	General purpose
Double flight screw	POM, High distributive mixing, Homogenization of melt temp, Prevention of non-melting pellet
High plasticating screw	High cycle for PP, PS, PE, etc.
Lens	PC,PMMA(Anti-Contamination)
Transparent Polyolefin	Transparent Polyolefin(Anti-Contamination)
Smear head screw	Thermo-sets, PVC

Note 7) Custom profile or other surface treatment are also available.

3. Setting Temperature

Screw Dia. 14mm - 72mm		Setting Temperature(°C)					
		Nozzle	Barrel 1	Barrel 2	Barrel 3	Barrel 4	Under Hopper
Standard	Max Setting Temp. 350°C	0 - 350	0 - 350	0 - 350	0 - 350	-	0 - 95
Wear-resistance and anti-corrosion	Max Setting Temp. 400°C	0 - 400	0 - 400	0 - 400	0 - 350 ¹⁰⁾	-	0 - 95
					0 - 400 ¹¹⁾	0 - 350 ¹¹⁾	
High Temperature	Max Setting Temp. 450°C	0 - 450	0 - 450	0 - 450	0 - 430 ¹⁰⁾	-	0 - 95
					0 - 450 ¹¹⁾	0 - 430 ¹¹⁾	

Note 8)The temperature may not rise to the maximum setting temperature depending on the molding condition.

Especially, the rear zone (Barrel 3) temperature may not rise to the setting temperature because it is close to the cooling water line under hopper.

Note 9) By a molding condition, there is sometimes a difference in displayed Temperature and resin Temperature.

Note 10) Screw diameter φ14 - φ52

Note 11) Screw diameter φ56 - φ72

4. Nozzle Type

Nozzle type		Shape	Purpose	Application
Standard Nozzle ¹²⁾	Short / Long	Reference Fig.1	General purpose	Screw Dia.22mm and under
		Reference Fig.4		Screw Dia.26mm and over
Slender Nozzle	Short / Long	Heater out.dia.22mm Reference Fig.2	Short sprue mold	S15iA - S150iAs ¹⁴⁾ Screw Dia.22mm and under
Middle Dia. Nozzle	Short / Long	Heater out.dia.28mm Reference Fig.3	Short sprue mold, Low pressure loss	S15iA - S150iAs ¹⁴⁾ Screw Dia.22mm and under
	Short / Long	Heater out.dia.28mm Reference Fig.5		S50iA - S150iAs ¹⁴⁾ Screw Dia.26mm and over
Chrome Plating Nozzle		Reference Fig.1,4	Lens Molding	Standard Short, Long
TiCN Nozzle		—————	Lens molding, Prevention of contamination and degradation	All Nozzles except Needle Valve Nozzle
Needle Valve Nozzle ¹³⁾ (Air driving)		Nozzle penetration 35mm	Gas injection High cycle molding Prevention of stringy and drooling	S50iA Screw Dia.26mm and under S100iA Screw Dia.32mm and under S150iA Screw Dia.48mm and under S250iA Screw Dia.52mm and under S300iA Screw Dia.56mm and under
Nozzle for LCP	Short	Nozzle penetration 35mm	LCP connector	Screw Dia.22mm and under
Nozzle for Transparent Polyolefin	Short	Nozzle penetration 35mm	Transparent polyolefin (Prevention of Stringy, Drooling and Contamination)	S15iA - S150iAs ¹⁴⁾
	Long	Nozzle penetration 65mm		

Note 12) 2 Piece nozzle is available.

Note 13) In the case of screw dia.20mm or 22mm, special Barrel is required.

Note 14) S150iA Small capacity injection

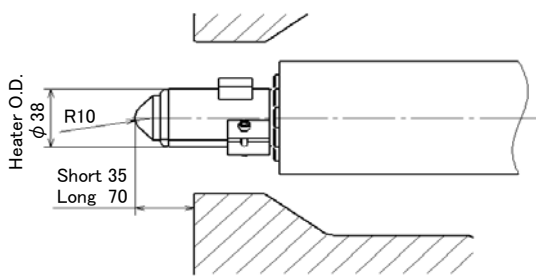


Fig.1 Standard Nozzle (Dia.22mm and under)
(Orifice Dia. ϕ 1.5, ϕ 2, ϕ 2.5, ϕ 3, ϕ 4)

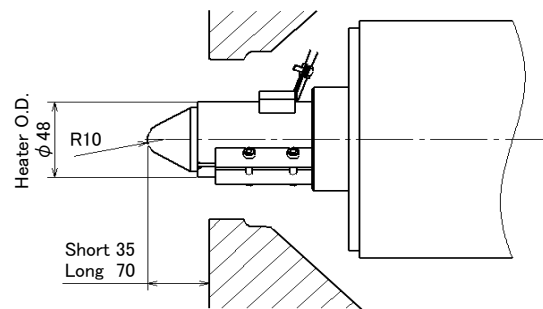


Fig.4 Standard Nozzle (Dia. 26mm and over)
(Including High press. resist., Semi-high press. resist.,
Optical high press. resist. Nozzle for ϕ 22mm and under)
(Orifice Dia. ϕ 1.5, ϕ 2, ϕ 2.5, ϕ 3, ϕ 4, ϕ 5, ϕ 6)

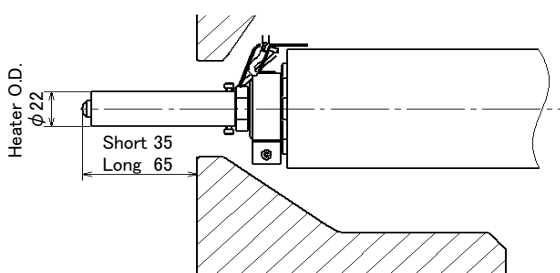


Fig.2 Slender Nozzle
(Orifice Dia. ϕ 1.5, ϕ 2, ϕ 2.5)

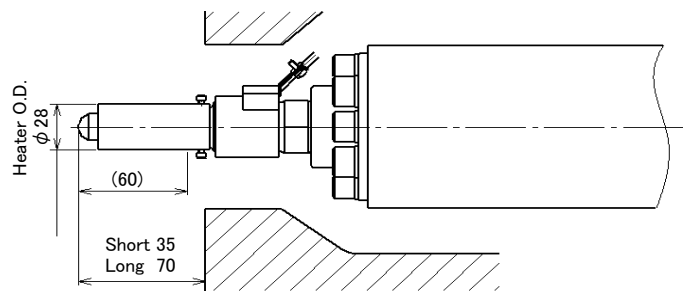


Fig.5 Middle Dia. Nozzle (Dia.26mm and over)
(Orifice Dia. ϕ 1.5, ϕ 2, ϕ 2.5, ϕ 3, ϕ 4)

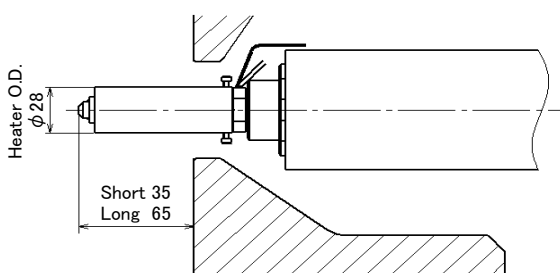


Fig.3 Middle Dia. Nozzle (Dia.22mm and under)
(Orifice Dia. ϕ 1.5, ϕ 2, ϕ 2.5, ϕ 3, ϕ 4)

5. Dimensions of Water jacket and Hopper attachment (Case with a safety pin under the hopper)

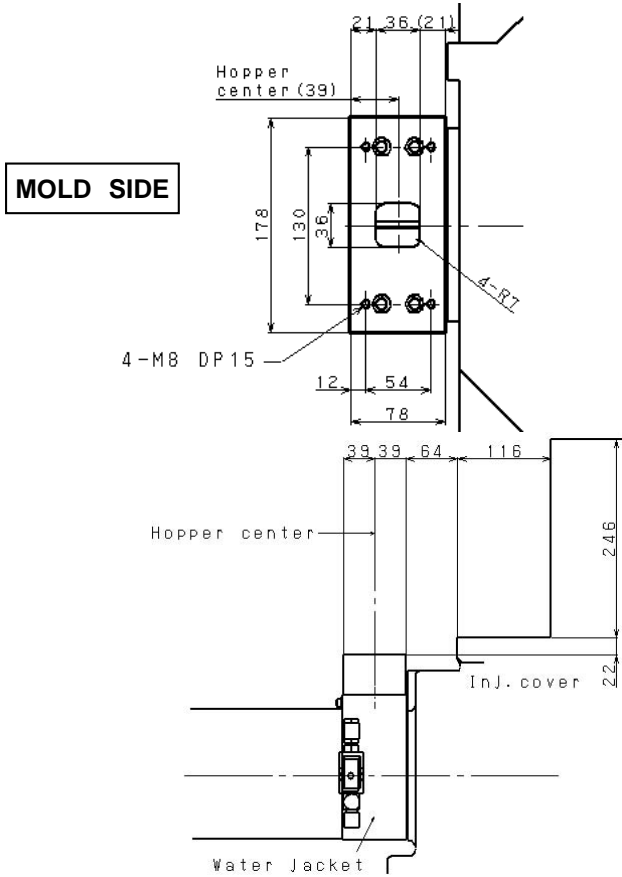


Fig.1 α -S15ia/ α -S30ia

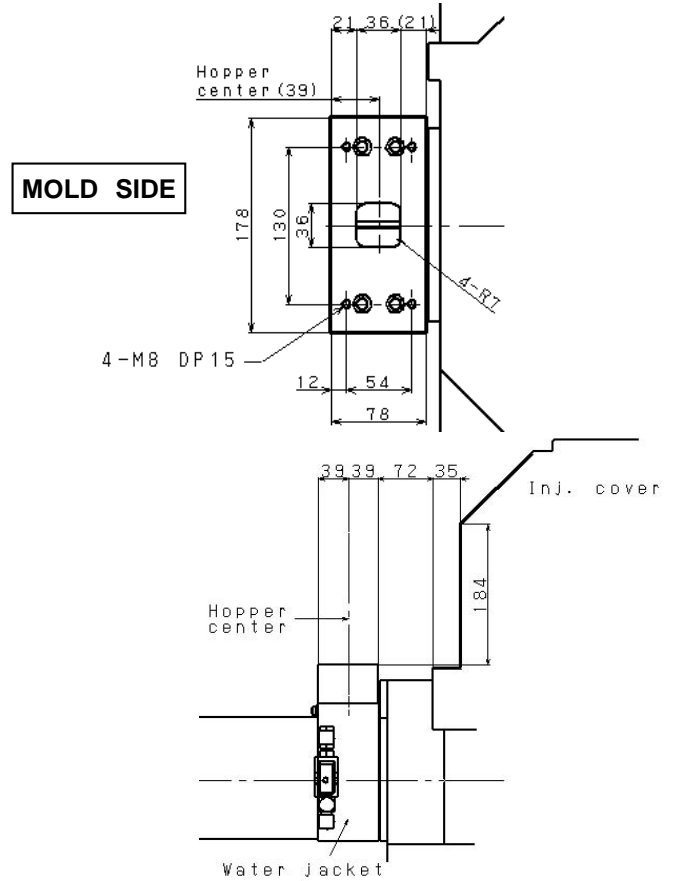


Fig.2 α -S50ia/ α -S100ia
 α -S150ia (Small capacity injection)
Screw Dia. ϕ 22 and under note1)

Tentative) except for High press. resist., Semi-high press. resist.,
at high press. resist. (refer to Fig.2)

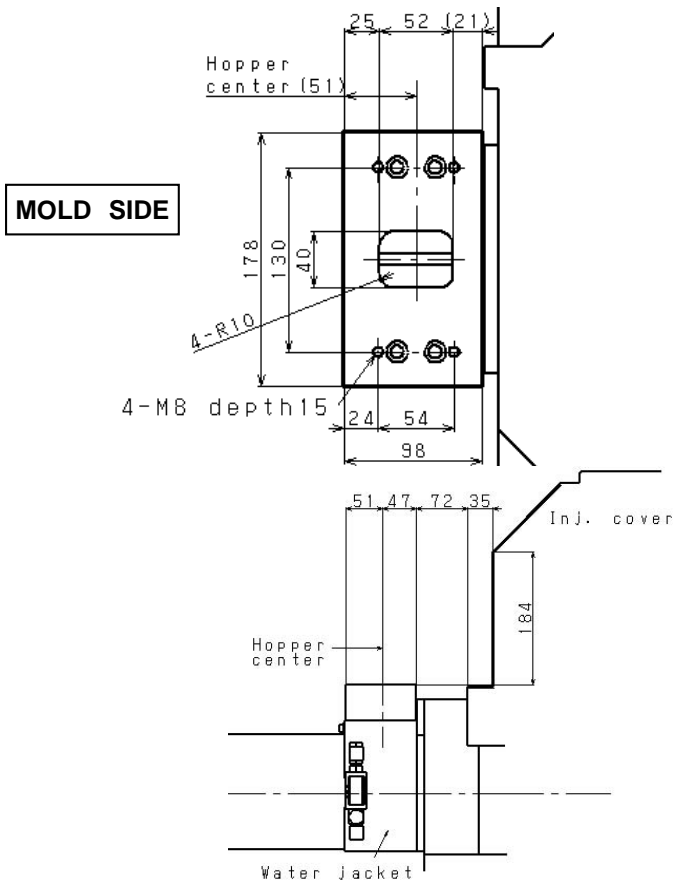


Fig.3 α -S50ia/ α -S100ia
 α -S150ia (Small capacity injection)
Screw Dia. ϕ 26, 28
Screw Dia. ϕ 22 and under (High press. resist.,
Semi-high press. resist, Optical high press. resist.)

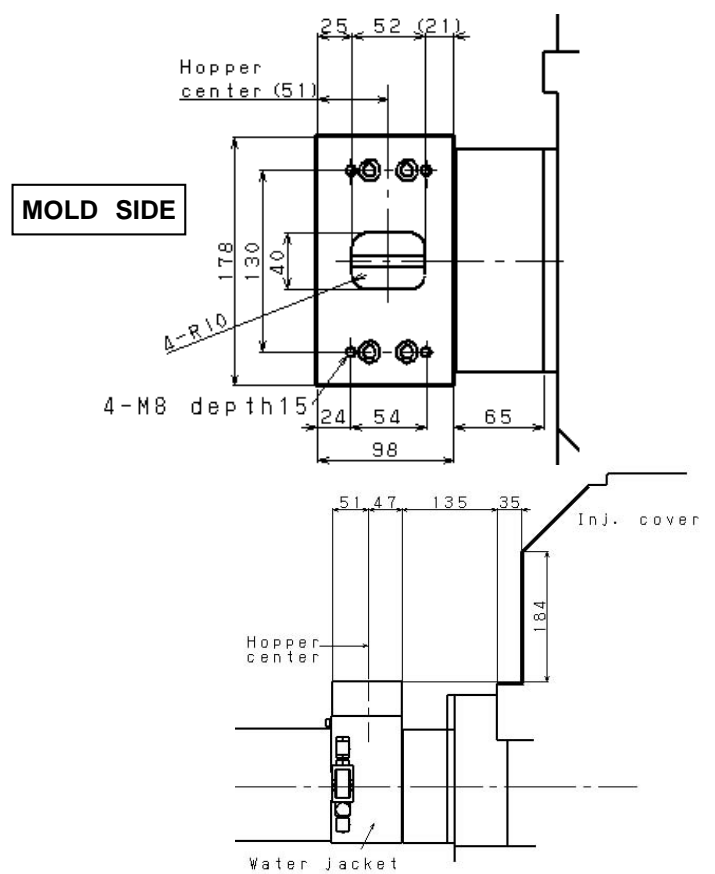


Fig.4 α -S50ia/ α -S100ia/ α -S130ia
 α -S150ia (Small capacity injection)
Screw Dia. ϕ 32, 26, 40

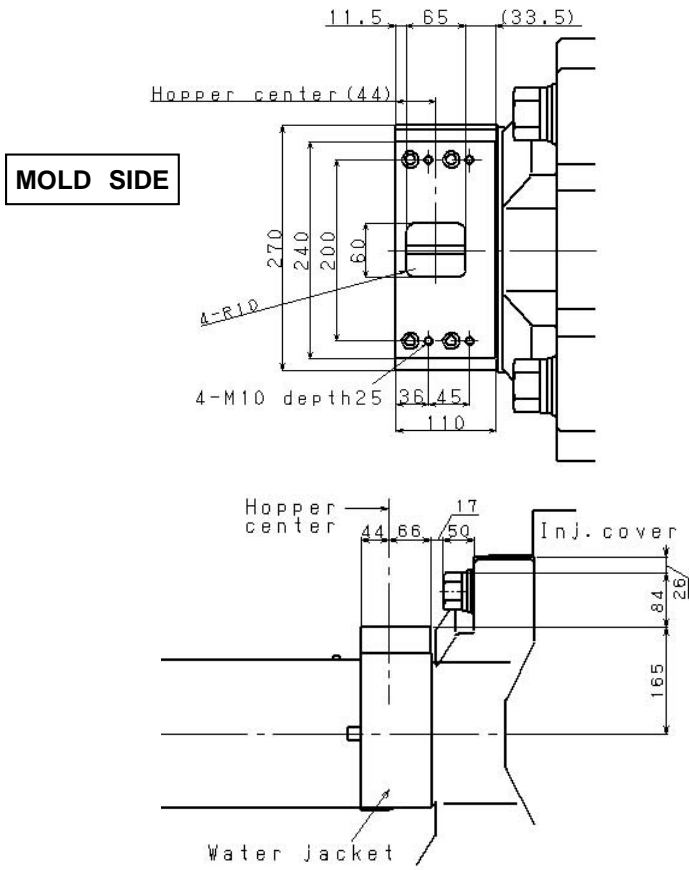


Fig.5 α -S150iA/ α -S220iA/ α -S250iA
Screw Dia. ϕ 48 and under

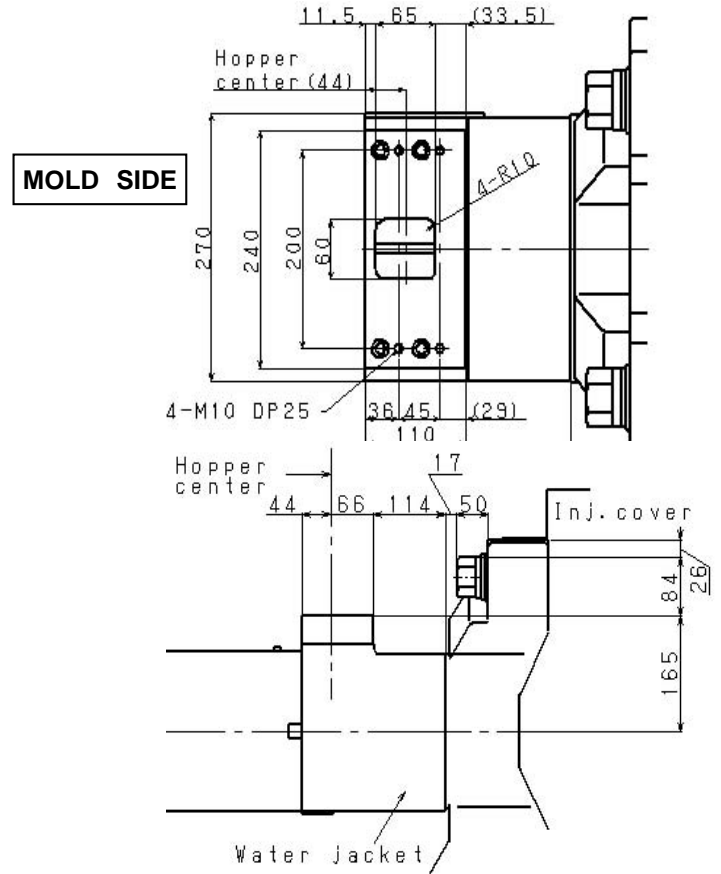


Fig.6 α -S150iA/ α -S220iA/ α -S250iA
Screw Dia. ϕ 52 and over

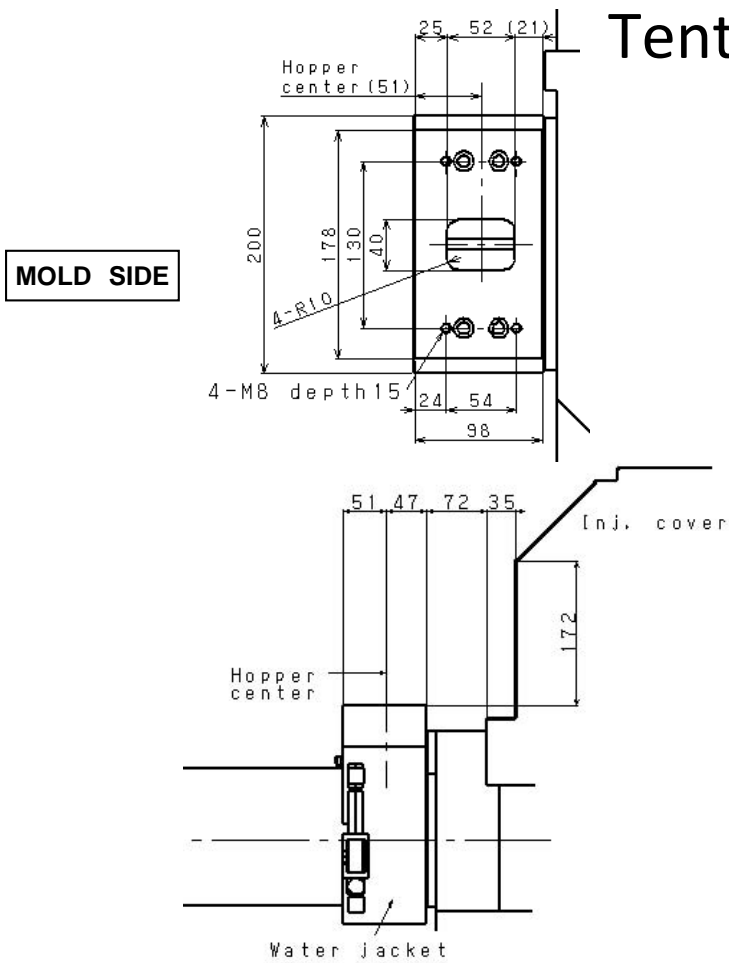


Fig.7 α -S100iA
Screw Dia. ϕ 28 and under

Tentative

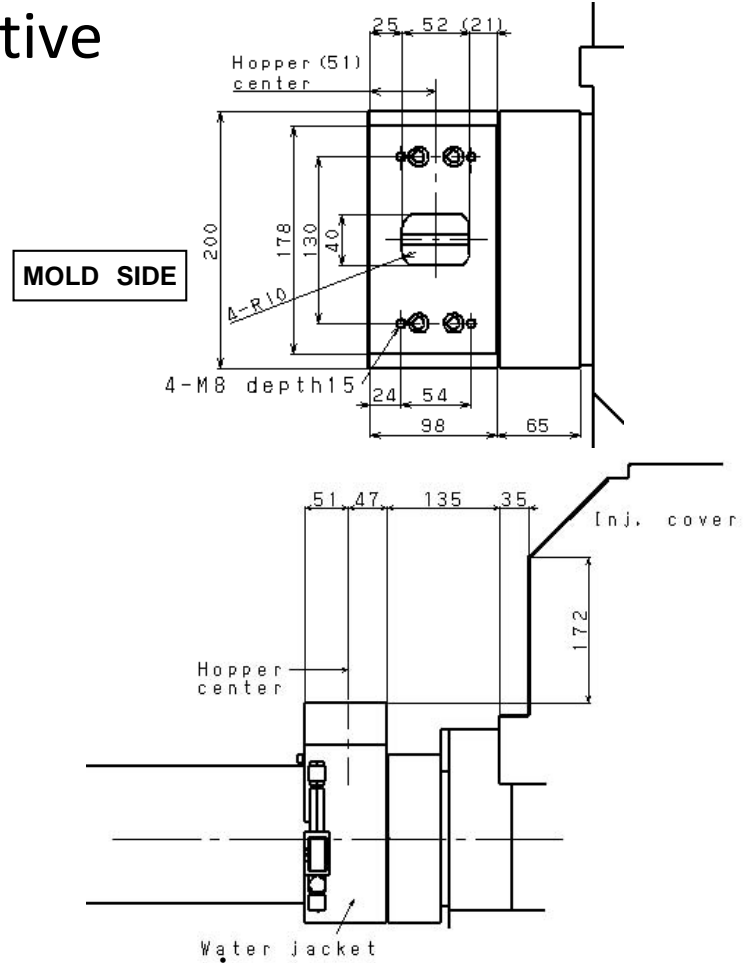


Fig.8 α -S100iA
Screw Dia. ϕ 32

MOLD SIDE

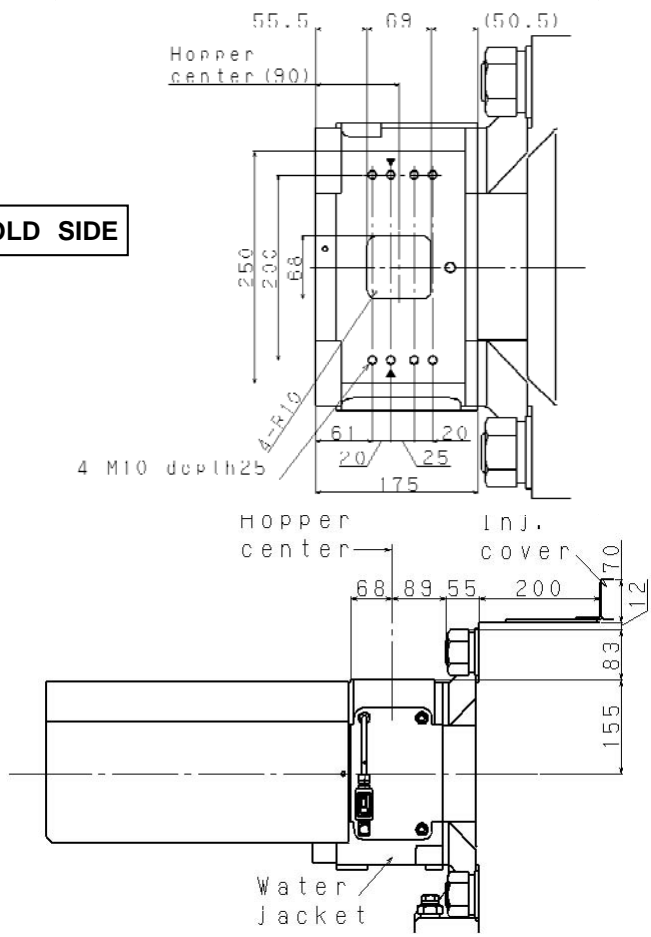


Fig.9 α -S300iA

Tentative

Floor Plan

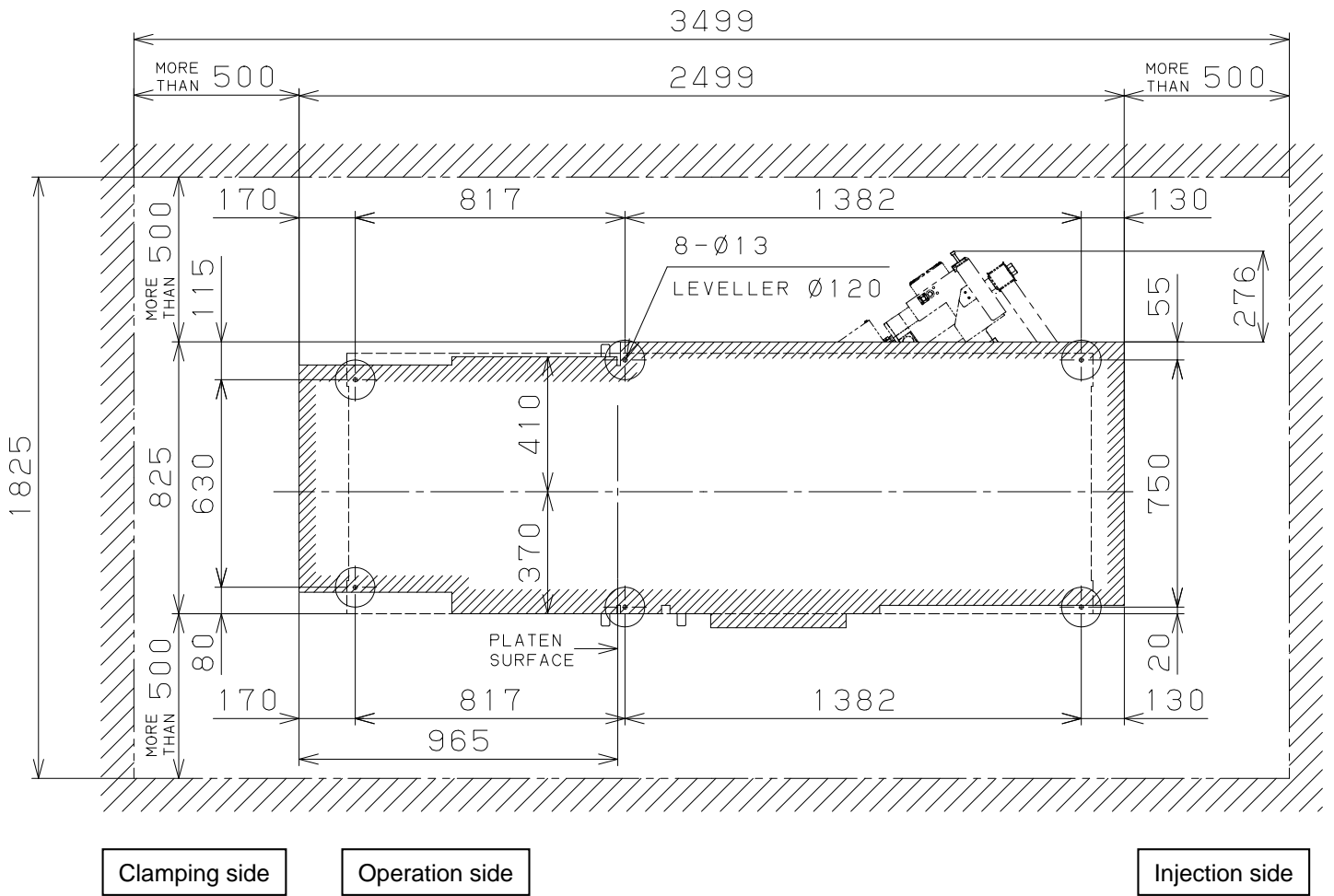


Fig.1 α-S15iA

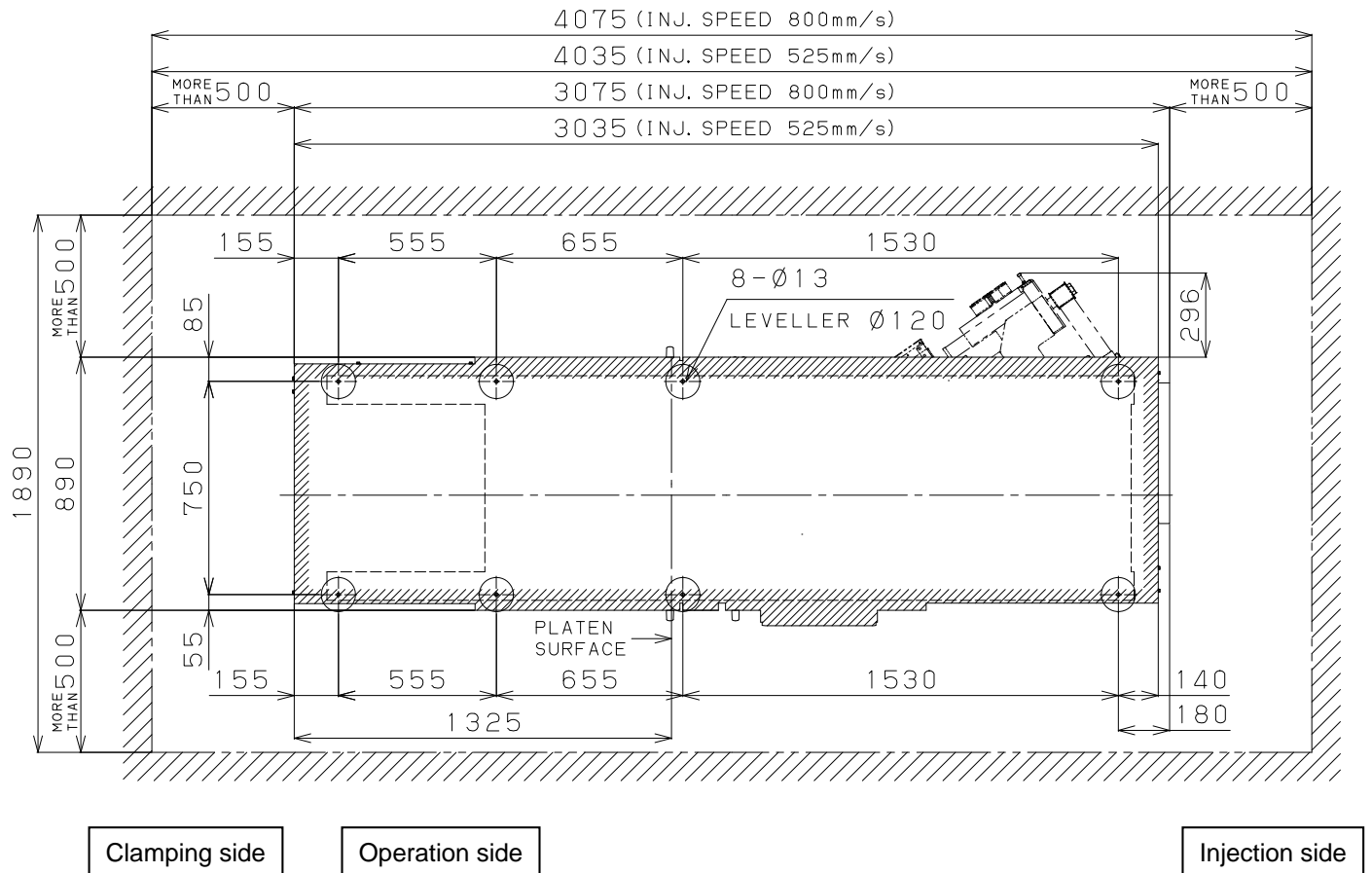


Fig.2 α-S30iA

Floor Plan

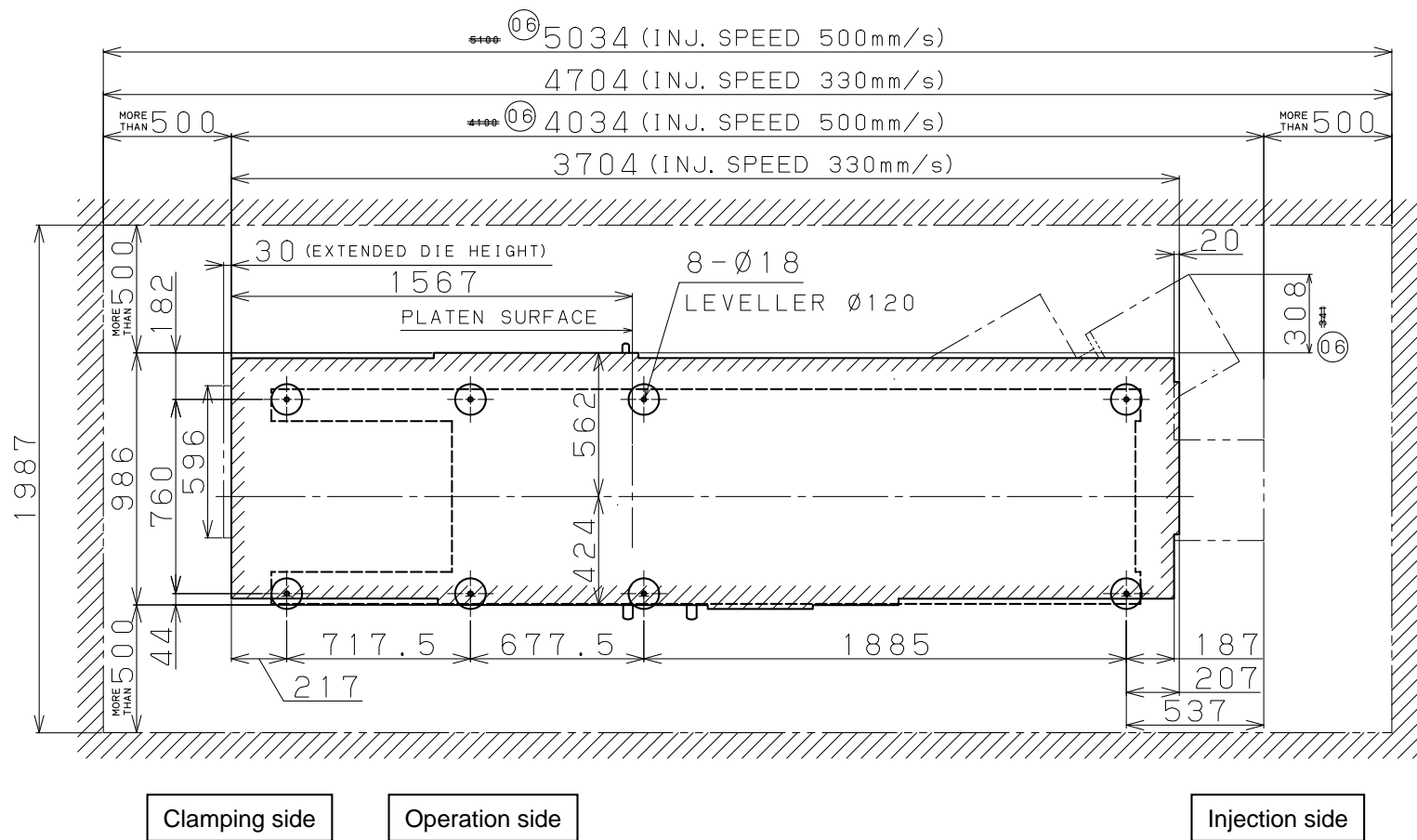


Fig.3 α-S50iA

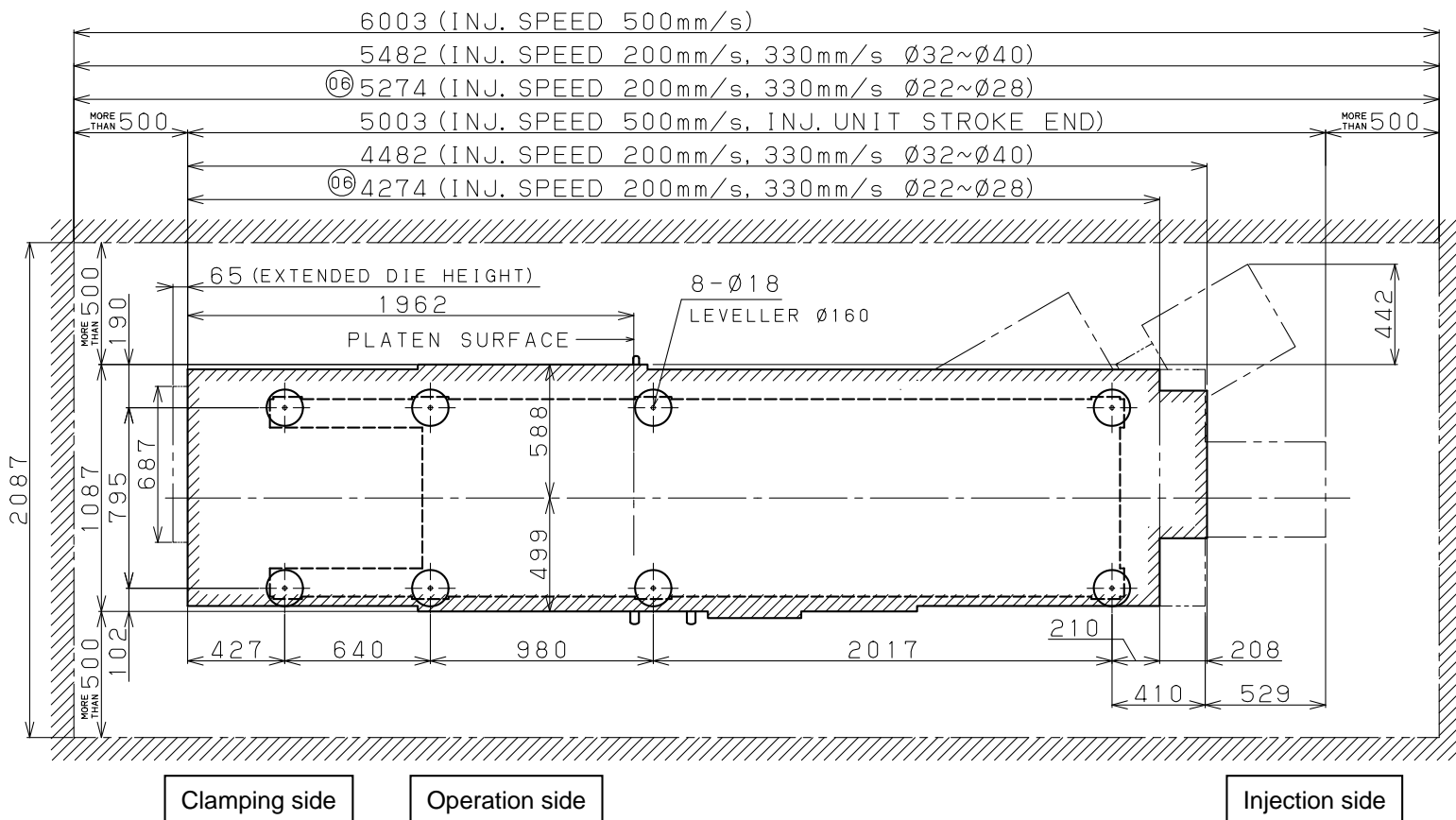


Fig.4 α-S100iA

Floor Plan

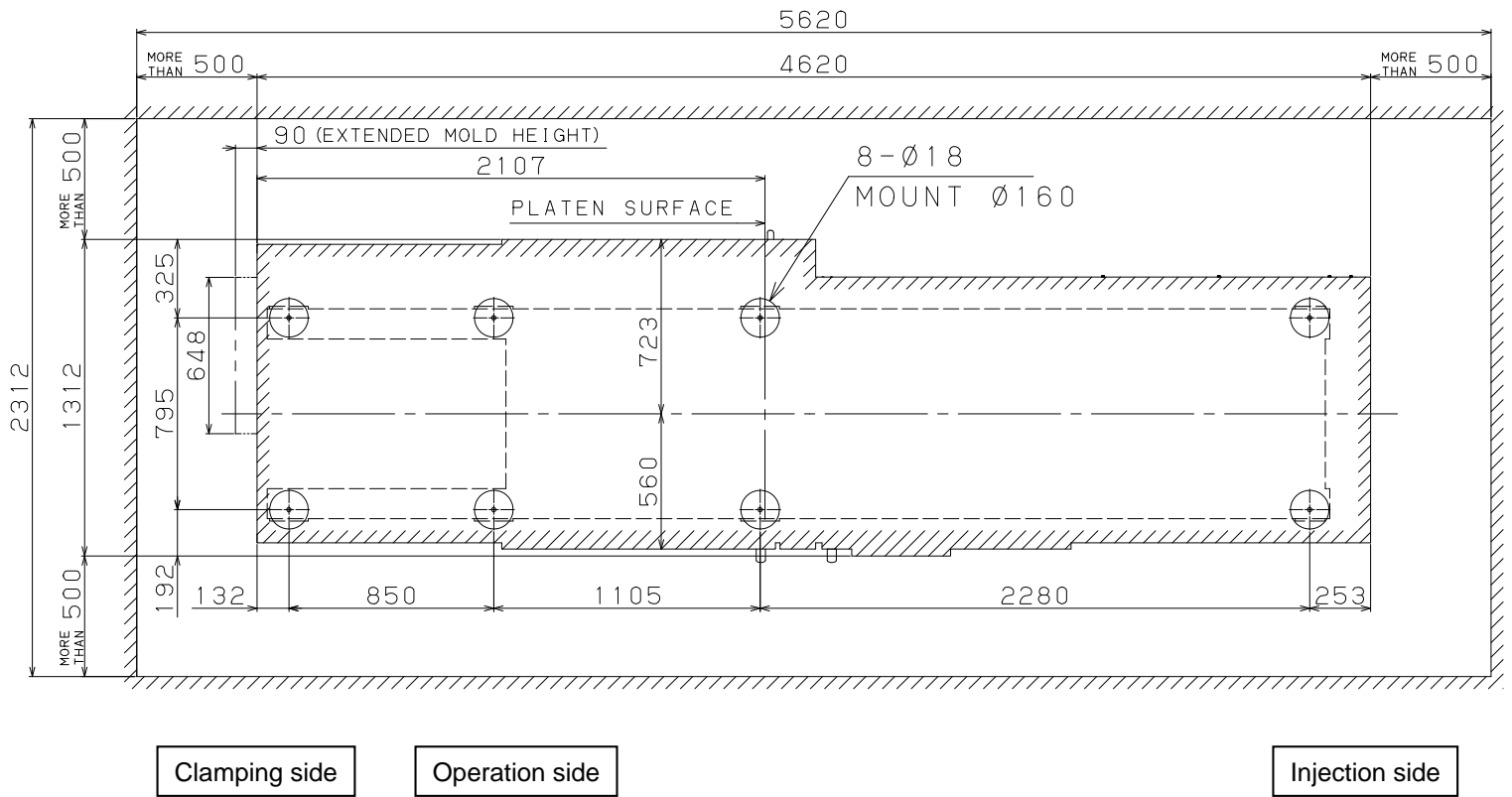


Fig.5 α-S130iA

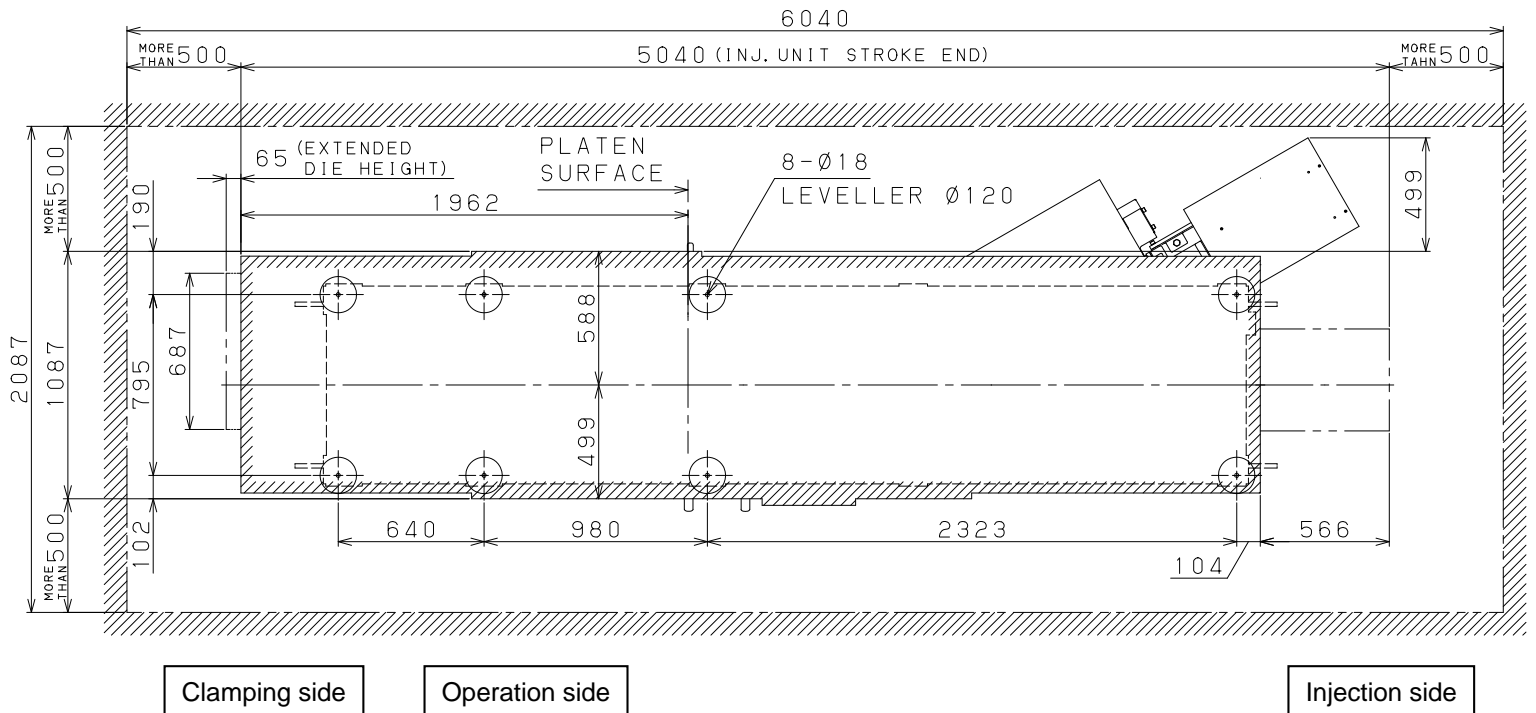


Fig.6 α-S150iA

Floor Plan

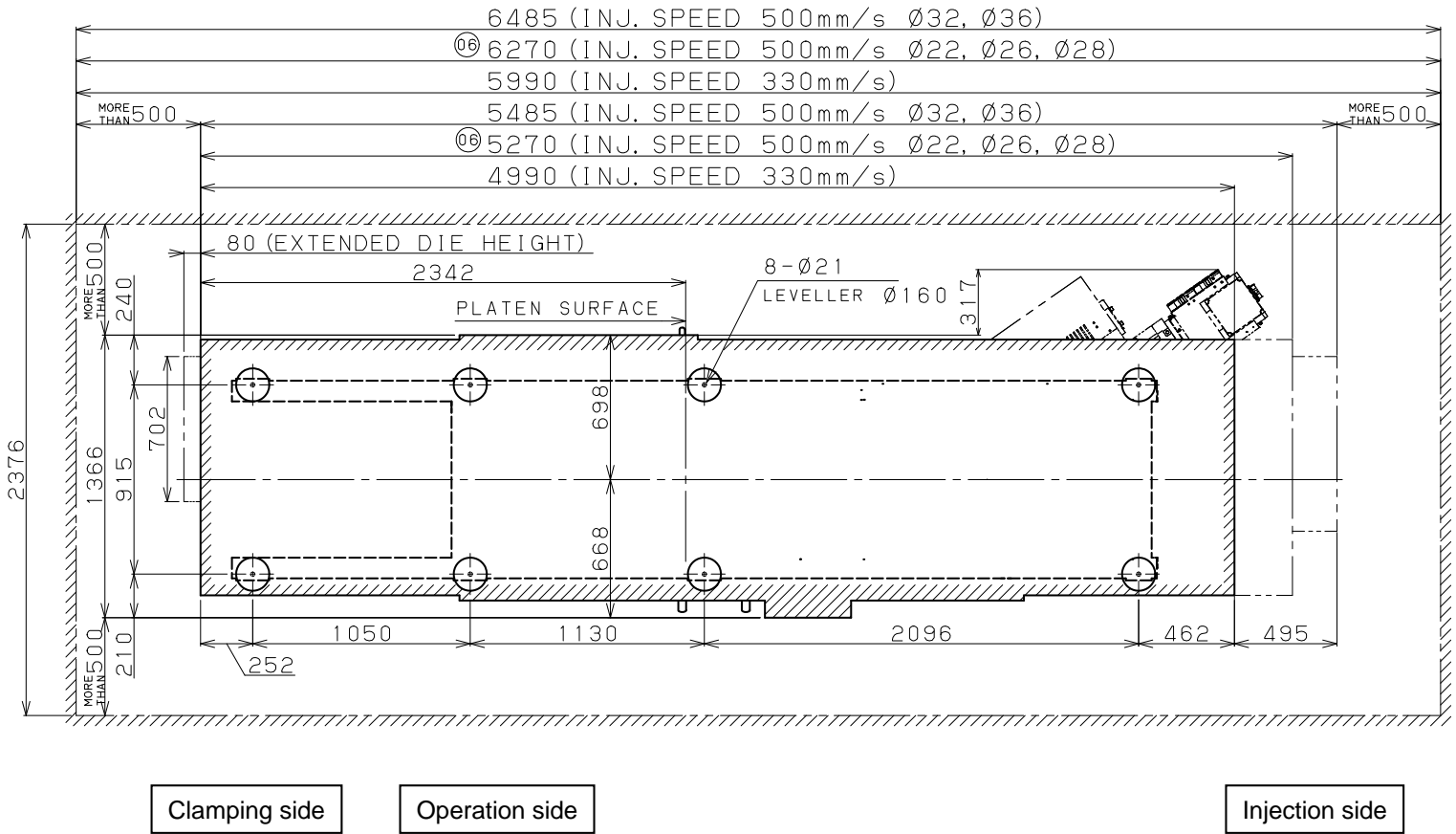


Fig.7 α-S150iA Small capacity injection specification

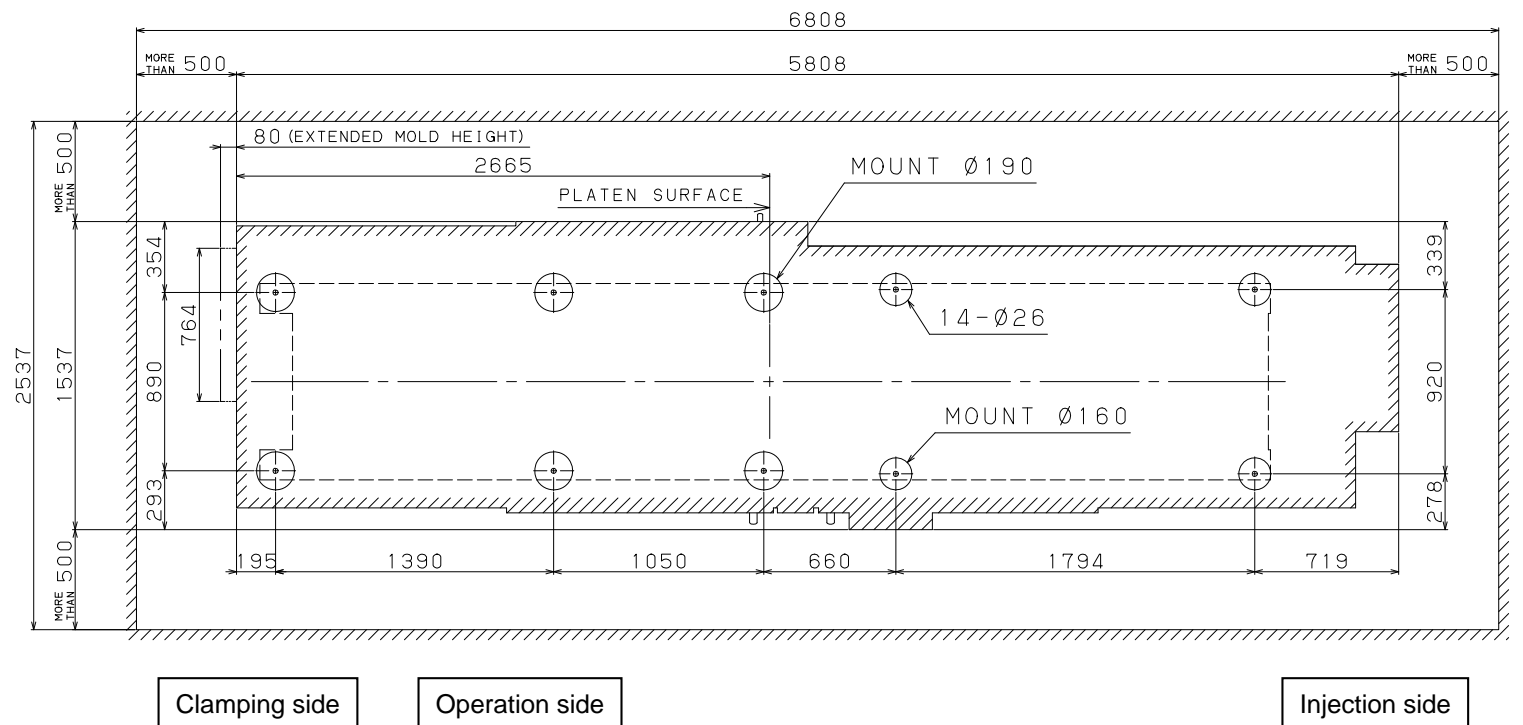


Fig.8 α-S220iA

Floor Plan

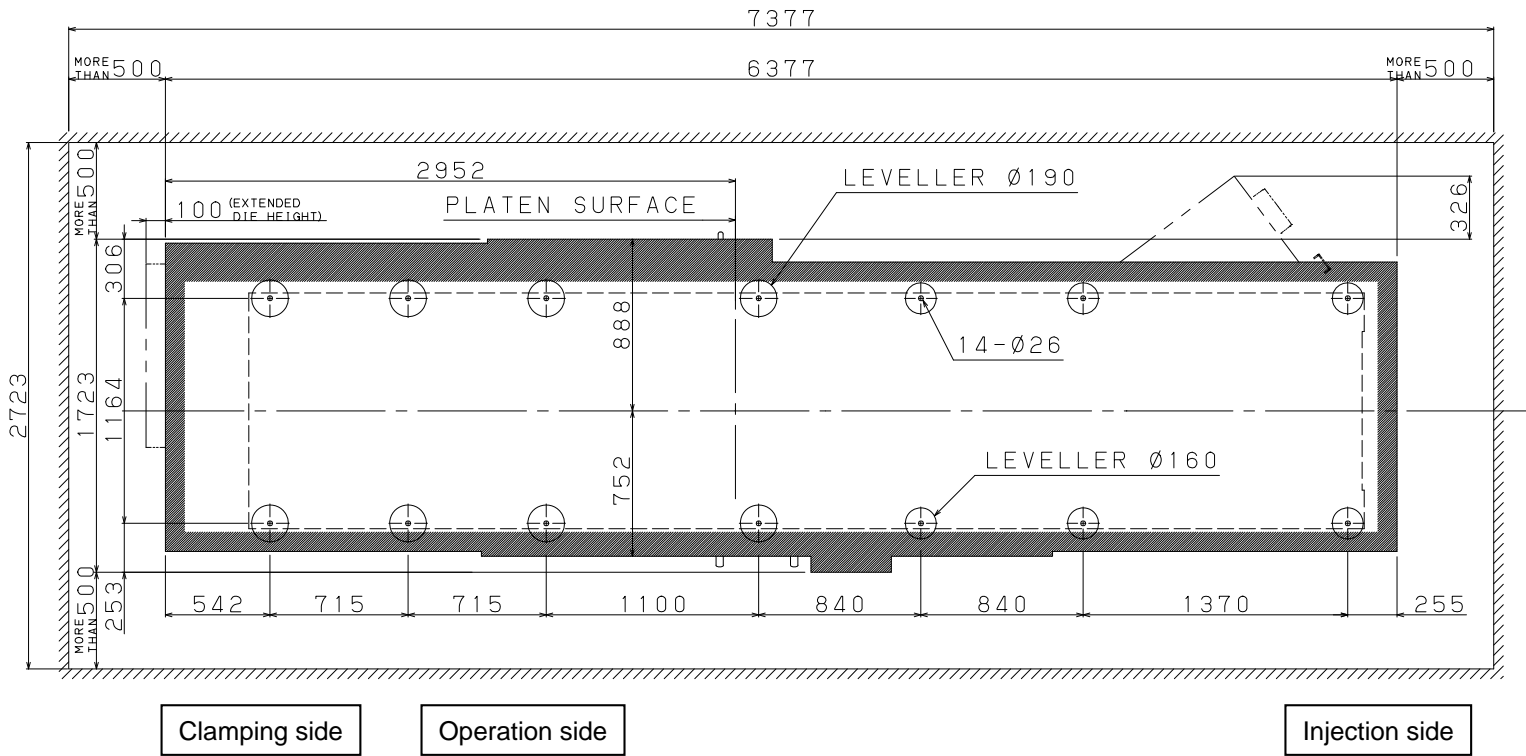


Fig.9 α-S250iA

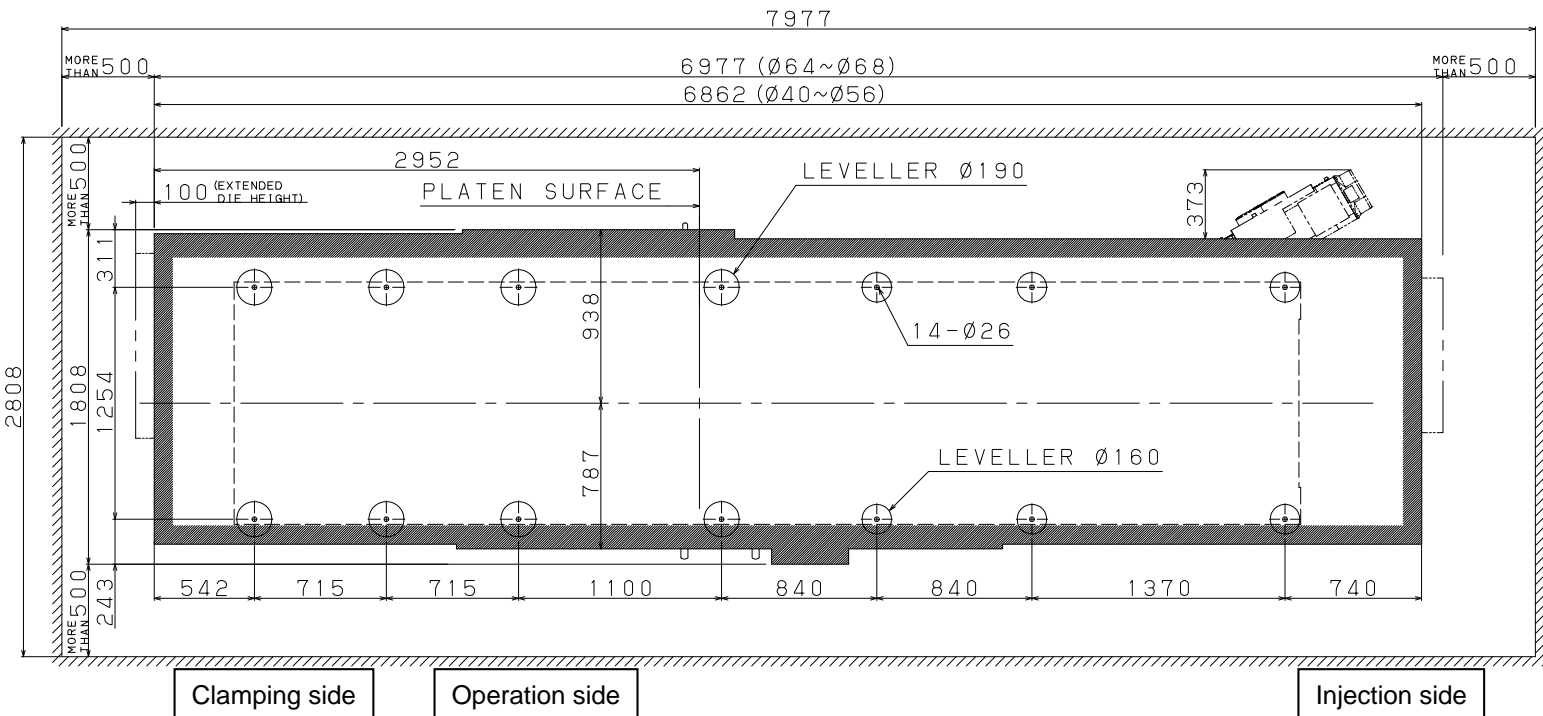


Fig.10 α-S300iA

Utility

1. Main breaker and primary side power cable

Items	α -S151A			
	Inj.speed 525mm/s		Inj.speed 800mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	100A	40A	100A	50A
Size of primary side power cable	30mm ²	5.5mm ²	30mm ²	8mm ²
Terminal size of primary side power cable	M8	M5	M8	M5
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity ^{Note4)}	29.6~30.6kVA	8.8~9.9kVA	33.3~34.4kVA	12.5~13.6kVA
Power transformer capacity ^{Note5)}	35kVA	20kVA	40kVA	30kVA

Items	α -S301A			
	Inj.speed 525mm/s		Inj.speed 800mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	100A	50A	100A	50A
Size of primary side power cable	30mm ²	8mm ²	30mm ²	8mm ²
Terminal size of primary side power cable	M8	M5	M8	M5
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity ^{Note4)}	33.4~35.0kVA	12.6~14.2kVA	33.4~35.0kVA	12.6~14.2kVA
Power transformer capacity ^{Note5)}	40kVA	30kVA	40kVA	30kVA

Items	α -S501A			
	Inj.speed 330mm/s		Inj.speed 500mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	150A	50A	175A	75A
Size of primary side power cable	50mm ²	8mm ²	60mm ²	22mm ²
Terminal size of primary side power cable	M8	M5	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity ^{Note4)}	47.3~50.3kVA	12.6~15.7kVA	54.7~57.5kVA	20.1~22.9kVA
Power transformer capacity ^{Note5)}	55kVA	30kVA	65kVA	35kVA

Items	α -S1001A					
	Inj.speed 200mm/s		Inj.speed 330mm/s		Inj.speed 500mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	150A	60A	150A	60A	200A	100A
Size of primary side power cable	50mm ²	14mm ²	50mm ²	14mm ²	80mm ²	30mm ²
Terminal size of primary side power cable	M8	M6	M8	M6	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8	M8	M8
Power supply capacity ^{Note4)}	47.9~52.8kVA	13.3~18.1kVA	47.9~52.8kVA	13.3~18.1kVA	62.1~65.0kVA	27.5~30.4kVA
Power transformer capacity ^{Note5)}	55kVA	35kVA	55kVA	35kVA	70kVA	45kVA

Items	α -S1301A	
	Inj.speed 200mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	150A	60A
Size of primary side power cable	50mm ²	14mm ²
Terminal size of primary side power cable	M8	M6
Terminal size of grounding cable	M8	M8
Power supply capacity ^{Note4)}	47.9~52.8kVA	13.3~18.1kVA
Power transformer capacity ^{Note5)}	55kVA	35kVA

Items	α -S1501A			
	Inj.speed 200mm/s		Inj.speed 330mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	175A	75A	225A	125A
Size of primary side power cable	60mm ²	22mm ²	100mm ²	38mm ²
Terminal size of primary side power cable	M8	M8	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity ^{Note4)}	55.3~59.8kVA	20.7~25.1kVA	73.8~76.4kVA	39.2~41.7kVA
Power transformer capacity ^{Note5)}	65kVA	35kVA	80kVA	45kVA

Items	α -S1501A			
	Small capacity 330mm/s		Small capacity 500mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	150A	60A	200A	100A
Size of primary side power cable	50mm ²	14mm ²	80mm ²	30mm ²
Terminal size of primary side power cable	M8	M6	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity Note4)	47.9~52.8kVA	13.3~18.1kVA	62.1~65.0kVA	27.5~30.4kVA
Power transformer capacity Note5)	55kVA	35kVA	70kVA	45kVA

Items	α -S2201A	
	Inj.speed 200mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	175A	75A
Size of primary side power cable	60mm ²	22mm ²
Terminal size of primary side power cable	M8	M8
Terminal size of grounding cable	M8	M8
Power supply capacity Note4)	55.3~59.8kVA	20.7~25.1kVA
Power transformer capacity Note5)	65kVA	35kVA

Items	α -S2501A	
	Inj.speed 330mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	225A	125A
Size of primary side power cable	100mm ²	38mm ²
Terminal size of primary side power cable	M8	M8
Terminal size of grounding cable	M8	M8
Power supply capacity Note4)	74.0~77.8kVA	39.4~43.1kVA
Power transformer capacity Note5)	80kVA	50kVA

Items	α -S3001A	
	Inj.speed 240mm/s	
	With peripheral devices ^{Note1)}	With no peripheral device ^{Note1)}
Main breaker	225A	150A
Size of primary side power cable	100mm ²	50mm ²
Terminal size of primary side power cable	M8	M8
Terminal size of grounding cable	M8	M8
Power supply capacity Note4)	80.3~83.9kVA	45.7~49.3kVA
Power transformer capacity Note5)	85kVA	55kVA

Note1) The machine with peripheral devices and that with no peripheral device have the following machine specifications, respectively.

With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

With no peripheral device: When only the molding machine is used

Note2) The wire sizes are based on the values of the maximum permissible current of 600-V vinyl-insulated wires in exposed wiring at an ambient temperature of 40°C that are listed in Table 1 in Annex 4 in JIS B 6015.

Note3) When connecting the input power supply to the machine, be sure to connect the ground wire. When installing the machine in a country other than Japan, follow relevant laws and standards of the country.

Note4) The power requirement depends on the screw diameter. Contact FANUC for details.

Note5) When installing a power transformer, be sure to select a transformer having the recommended capacity or more.

2. Cooling water (for feed throat control)

Machine type	Flux	Pressure	Connection
α -S151A/ α -S301A/ α -S501A/ α -S1001A/ α -S1301A α -S1501A/ α -S2201A/ α -S2501A/ α -S3001A	More than 3.0l/min(Normal)	0.15~0.49MPa	The socket (for I.D.= ϕ 9mm horse) is attached with ROBOSHOT

3. Dry air (for air ejector)

Connection	The connection coupler is attached with ROBOSHOT
Required air pressure	0.5MPa
Flux	More than 200l/min(Normal).

ROBOSHOT-LINKi

1. Platform configuration

Items	Contents
PC	<ul style="list-style-type: none"> - OS Windows® Vista / Windows® 7(X86/X64) / Windows® 8(X86/X64) - Main memory (Recommended) Windows® Vista : 1GB, Windows® 7 / Windows® 8(X86) : 2GB, Windows® 7 / Windows® 8 (X64) : 4GB or above - Hard disk (Recommended) Server PC: "3GB + number of the maximum connection × (4.8GB*1 + 6.5GB*2)" or above Client PC: 3GB or above - LAN 1,000 Mbit(s)/sec or faster Ethernet card - USB One USB port is required for the license activation of ROBOSHOT-LINKi. - Optical drive Optical drive (DVD-R) is required for software installation. - UPS Installation of UPS is recommended - Microsoft Office*3 Excel® : Required for a report output function / Access® : Recommended to database maintenance
Network	<ul style="list-style-type: none"> - LAN Recommends to prepare independent LAN for this system. - Ethernet cable Recommends shielded Ethernet cable in a factory. - RS-232-C/Ethernet converter Connect ROBOSHOT α-C series or earlier machine to this system. And need RS-232C cable. - HUB Recommends switching HUB of transmission speed above 100Mbit/sec

2. System configuration

Items	Contents
Number of PCs	<ul style="list-style-type: none"> - Server PC 1 PC(Mandatory) - Client PC Maximum 3 PCs
Connectable machine number*4	<ul style="list-style-type: none"> One ROBOSHOT-LINKi system Maximum 128 machines Two or more ROBOSHOT-LINKi system 129 machines or more
Connectable molding machine*5	ROBOSHOT series.
Quality monitor data record capacity	Amount of preservation / items Maximum 1.20 million shots/machine / 30 items or more
Wave data record capacity	Amount of preservation / items S-2000i A 2,000 shots, / 3 kinds of wave data S-2000i B, α-SiA 7 days in automatic / Specific wave data among 18 kinds

3. Main functions

3.1. ROBOSHOT-LINKi Standard functions

Functions	Contents
Production information	Various production information is monitored.
Process monitor	<ul style="list-style-type: none"> Realtime ROBOSHOT operation status display Production and quality management function launcher Realtime power consumption display / Demand alarm display Work list display
Alarm log	Alarm log display and alarm analysis
Molding results	Production and molding result display per job code, per lot, per shift, per day, per week or per month.
Consumption power log	Displays Demand power or consumption power of each machine or multiple machines.
Data output	Molding(Production) results / Monitored data / Alarm log / Molding parameter change log / Molding parameter output
Lot management	<ul style="list-style-type: none"> Production record sheet output to printer at every lot change Quality data tracking by production record sheet
ROBOSHOT viewer	ROBOSHOT operator's screen (α-SiA or later) display on PC.
Quality information	Various quality information is monitored.
Quality monitor	Realtime quality monitor data display
Molding parameter change log	<ul style="list-style-type: none"> Molding parameter change log display A set of past molding parameters restoring at specified time
Wave data display and analysis	Various wave data are drawn in a colored graph or a pile, and 3 dimensional graph. Wave data detached from the threshold value is extracted.
Quality report output	<ul style="list-style-type: none"> Quality data report output per shift or day Production report output per shift, day or month(a shift / daily / weekly / monthly report) Molding parameter output in Excel format Report customization capability
Data master	A setup of information required in order to employ a system, and maintenance of a database
Database utility	<ul style="list-style-type: none"> Periodical quality monitor data and wave data backup The data includes the following. Monitor data / Molding file / Parameter change log / Wave data / Alarm log / Molding results / Consumption power / Machine master
Package	The function operated on the ROBOSHOT screen (FACTOLINK script screen)
Tool for ISO9000 management	Quality data management tool according to requirements in ISO9000
Remote mold file	Molding parameters storage operated on PC
Instruction manual display	Instruction manual display on the ROBOSHOT screen. Alarm release manual / Molding parameter setup manual of ROBOSHOT school
Production information entry	Mold file name and number of cavity entry on the ROBOSHOT screen.
Molding test report output	Molding test report outputs to external storage or printer
JOB code	JOB code entry on the ROBOSHOT screen. JOB code log and display in the Molding result display.
Change lot	Manual lot change operation (Exchange of a box)

3.2. ROBOSHOT-LINKi Optional functions

Functions	Contents
E-mail transmit	Reports the machine stop caused by an alarm and periodical operational status. (Available E-mail server is required for this function)
Resin evaluation system	Resin characteristic analysis function / Database of resin
System link interface	<ul style="list-style-type: none"> Production plan of a production management system display on ROBOSHOT screen. Molding parameter setup corresponding to the production plan. Molding result data output corresponding to the production plan.
Data interface for external quality management system	<ul style="list-style-type: none"> Data output for external quality management system The data includes the followings. Molding(Product) result / Monitor data / Molding parameter / Alarm log / Molding parameter change log
EUROMAP63 interface	Quality monitor data and molding parameter interface according to EUROMAP63

*1 Monitor data capacity is 1.20 million shots/machine

*2 Wave data on default setting (15 kinds of wave data x 7 days [Auto state] per machine)

*3 64-bit Office is not supported.

*4 The maximum number of machine dependent on communication environment or equipment.

According to number of connection machine, the environment of a mass high-speed hard disk, a high-speed personal computer, and high-speed LAN is required.

*5 Function may be restricted by machine type or installed software. Please contact FANUC for the details.

*6 Windows®, Excel® and Access® are a registered trademark of U.S. Microsoft Corp.

REVISION RECORD

07	Dec. 2014	Add 15ton, 30ton, 130ton, 220ton, 250ton, 300ton (Tentative)
02B	May. 2013	Correction of erroneous description (Locating ring diameter)
02	Dec. 2012	Add lifting hole diameter
01	2012/07	New
Edition	Date	Contents

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