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 / α-S450*i*A

Second Injection Unit
SI-20A / SI-300HA

Specifications

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

ROBOSHOT α-S*i*A(E)-09
2018.08

FANUC ROBOSHOT α-S15*i*A

Mechanical specifications

Item			Unit	Data		
Clamping unit	Clamping mechanism		---	Double toggle		
	Tonnage		kN	Standard 150 (15 tonf)		
	Maximum and minimum die height		mm	Standard 260 - 130		
	Clamping stroke		mm	160		
	Locating ring diameter		mm	φ60		
	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	230
		Maximum pack pressure *2)	MPa	250	230	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 *4)			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/cm^2.
*6) The molding condition might be limited by the resin.(Contact sales for detail)

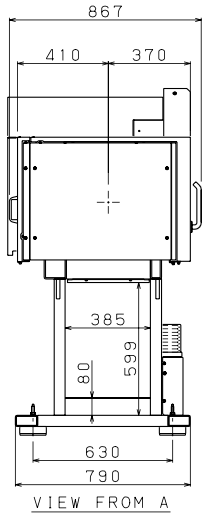
Installation conditions

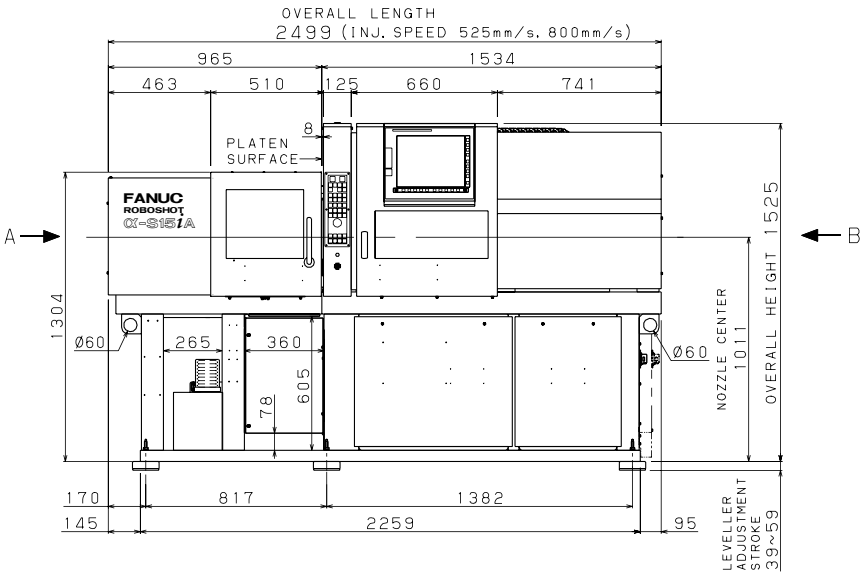
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *7)	Inj.speed 525mm/s	100A (With peripheral devices) *9)
		40A (With no peripheral device) *9)
	Inj.speed 800mm/s	100A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
Ground		Follow 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.

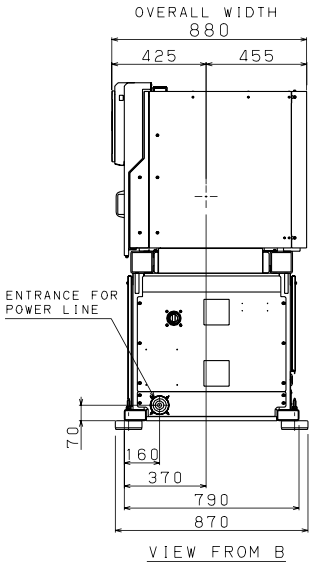
*7) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*8) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

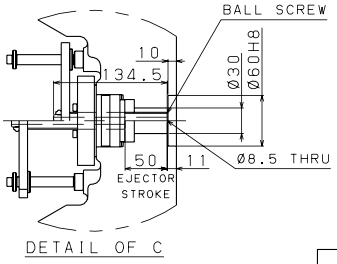
All specifications are subject to change without notice.

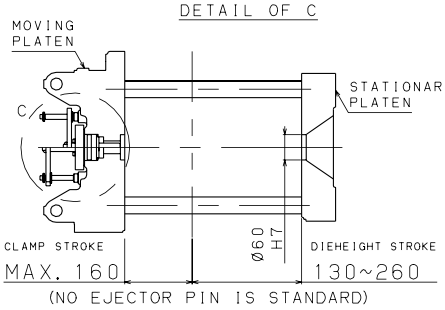
FANUC ROBOSHOT α-S15*i*A

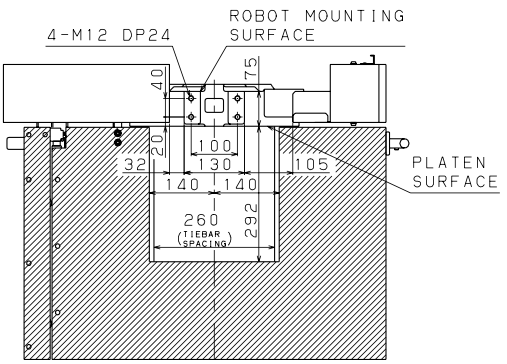


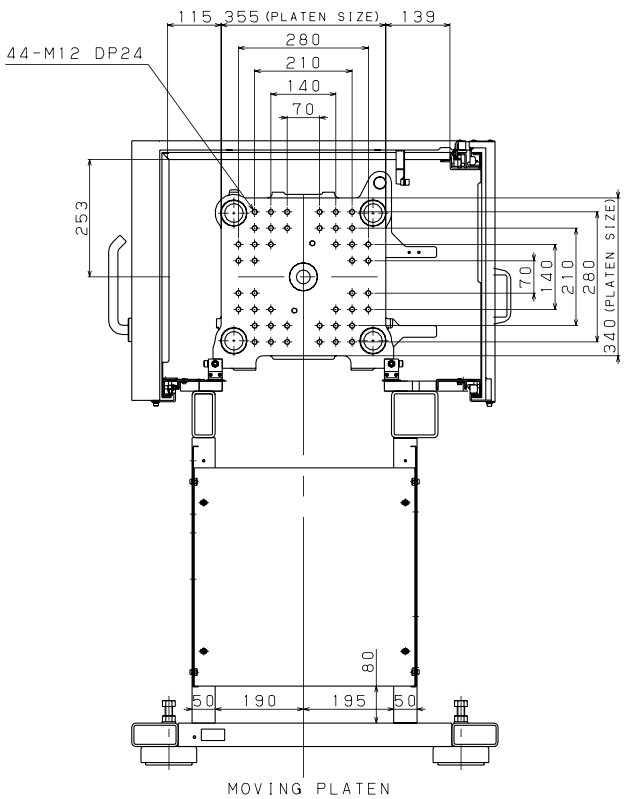


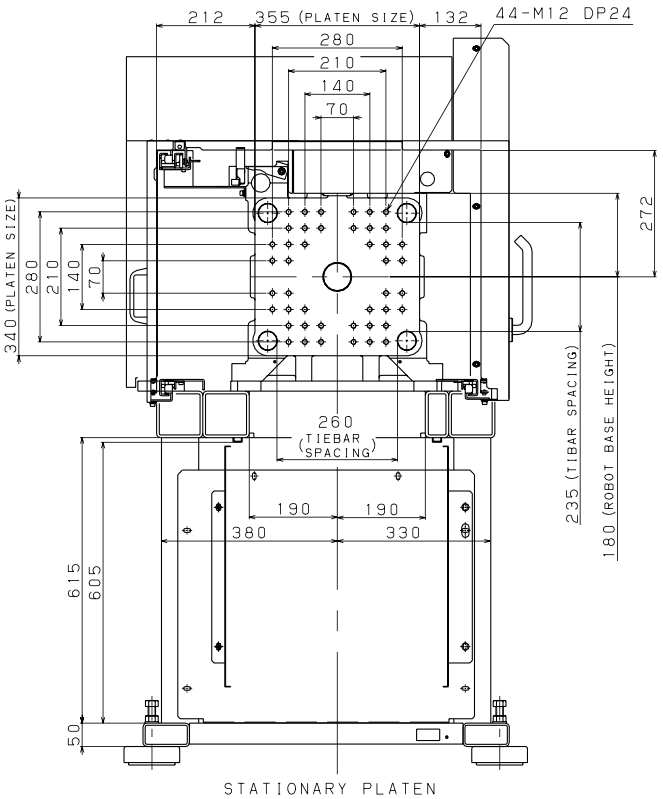












Mechanical specifications

Item			Unit	Data				
Clamping unit	Clamping mechanism		---	Double toggle				
	Tonnage		kN	Standard 300 (30tonf)				
	Maximum and minimum die height		mm	Standard 330 - 150				
	Clamping stroke		mm	230				
	Locating ring diameter		mm	φ60				
	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	---	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	123	160	203	251	304
		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)				

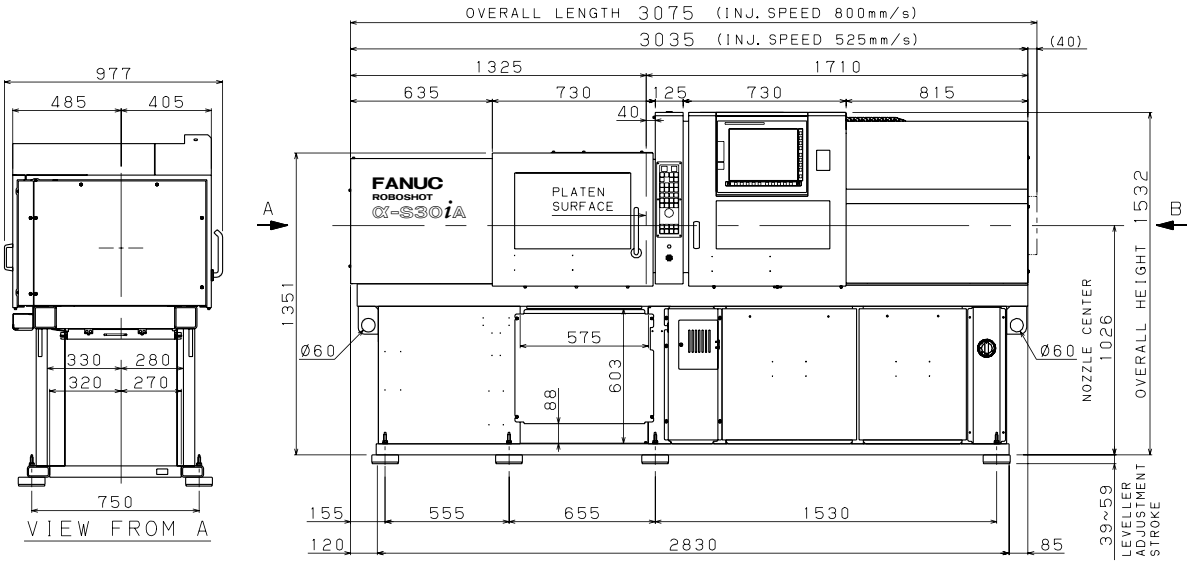
*1) Smaller mold than this size may limit clamp force.
*2) The maximum injection pressure setting at high pressure filling mode option.
There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)
High pressure resistance 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/cm^2.
*7) The molding condition might be limited by the resin.(Contact sales for detail)

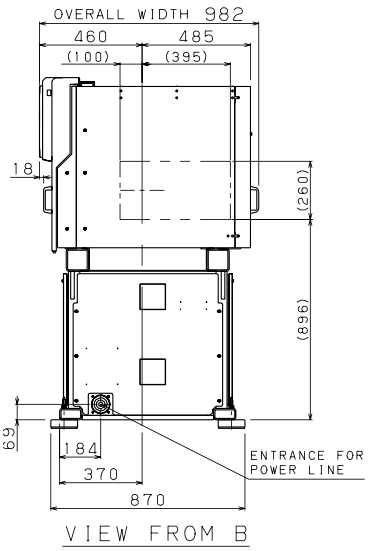
Installation conditions

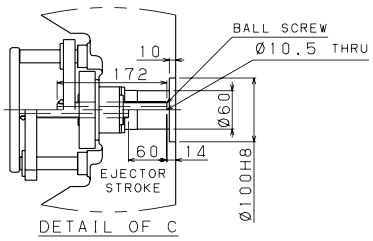
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 525mm/s	100A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
	Inj.speed 800mm/s	100A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
Ground		Follow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

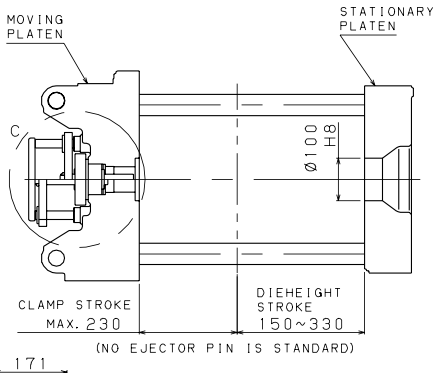
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

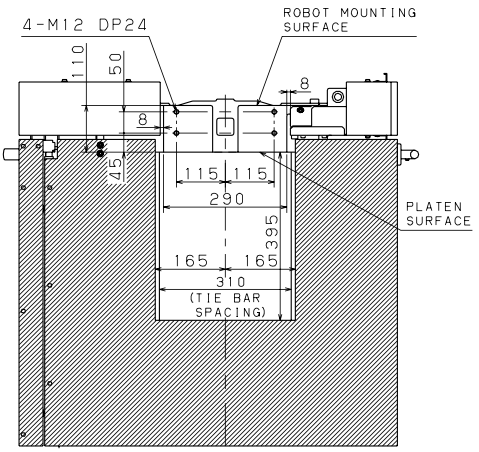
All specifications are subject to change without notice.

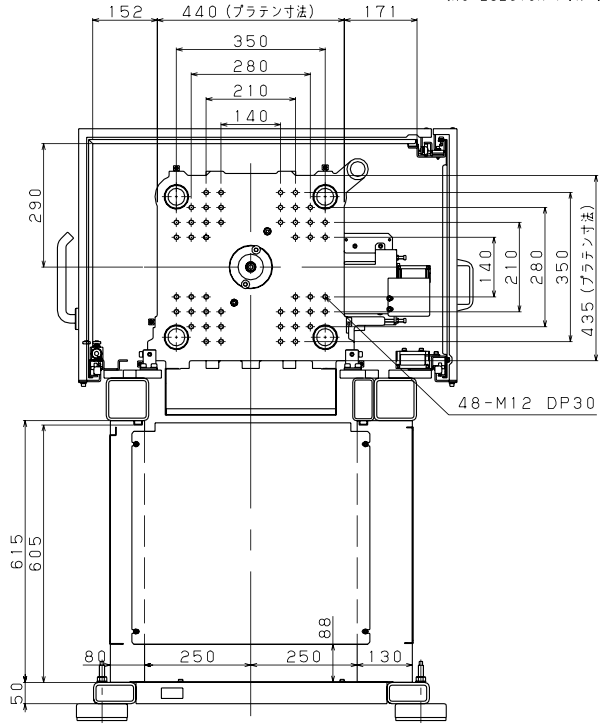

OVERALL LENGTH 3075 (INJ. SPEED 800mm/s)
3035 (INJ. SPEED 525mm/s)
(40)
1325
1710
635
730
125
730
815
40
977
485
405
FANUC
ROBOSHOT
α-S30iA
PLATEN
SURFACE
A
B
1351
1532
OVERALL HEIGHT
NOZZLE CENTER
1026
Ø60
Ø60
575
603
88
330
280
320
270
750
VIEW FROM A
155
555
655
1530
120
2830
85
39~59
LEVELLER
ADJUSTMENT
STROKE

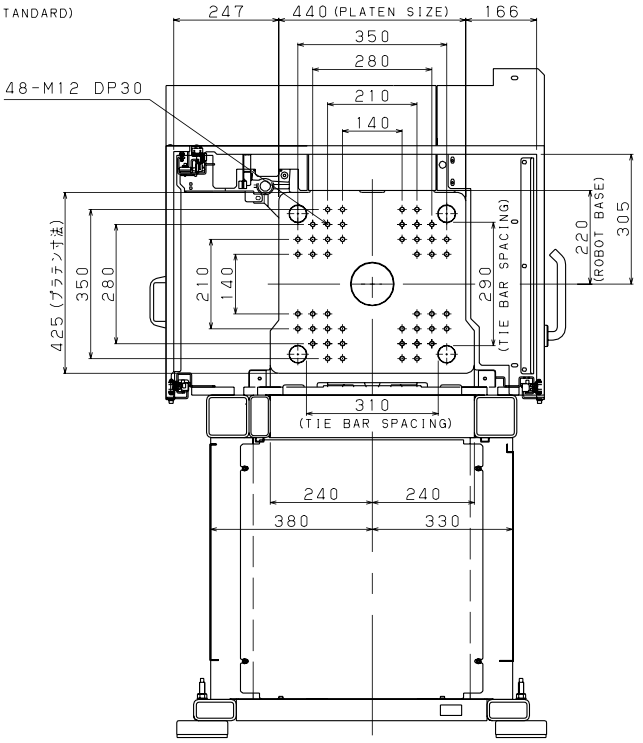

OVERALL WIDTH 982
460
485
(100)
(395)
18
(260)
(896)
69
184
370
870
ENTRANCE FOR
POWER LINE
VIEW FROM B


BALL SCREW
Ø10.5 THRU
10
172
Ø60
60
14
Ø100H8
EJECTOR
STROKE
DETAIL OF C


MOVING
PLATEN
STATIONARY
PLATEN
C
Ø100
H8
CLAMP STROKE
MAX. 230
DIEHEIGHT
STROKE
150~330
(NO EJECTOR PIN IS STANDARD)


4-M12 DP24
ROBOT MOUNTING
SURFACE
110
50
α
8
45
115
115
290
395
165
165
310
(TIE BAR
SPACING)
PLATEN
SURFACE


152
440 (プラテン寸法)
171
350
280
210
140
290
140
210
280
350
435 (プラテン寸法)
48-M12 DP30
615
605
88
80
250
250
130
50
MOVING PLATEN


247
440 (PLATEN SIZE)
166
350
280
210
140
48-M12 DP30
425 (プラテン寸法)
350
280
210
140
290
(TIE BAR SPACING)
220
(ROBOT BASE)
305
310
(TIE BAR SPACING)
240
240
380
330
STATIONARY PLATEN

FANUC ROBOSHOT α-S50*i*A

Mechanical specifications

Item			Unit	Data				
Clamping unit	Clamping mechanism		---	Double toggle				
	Tonnage		kN	Standard 500 (50tonf) / Incleased 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	φ125				
	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	Standard 20 (2.0tonf) / Incleased 60 (6.0tonf) (Option)				
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 φ20-φ28mm cannot install φ32mm.
The machine equipped with screw diameter φ32mm can install φ26-φ32mm and cannot install φ20mm and φ22mm.
The molding condition might be limited by the resin.(Contact sales for detail)

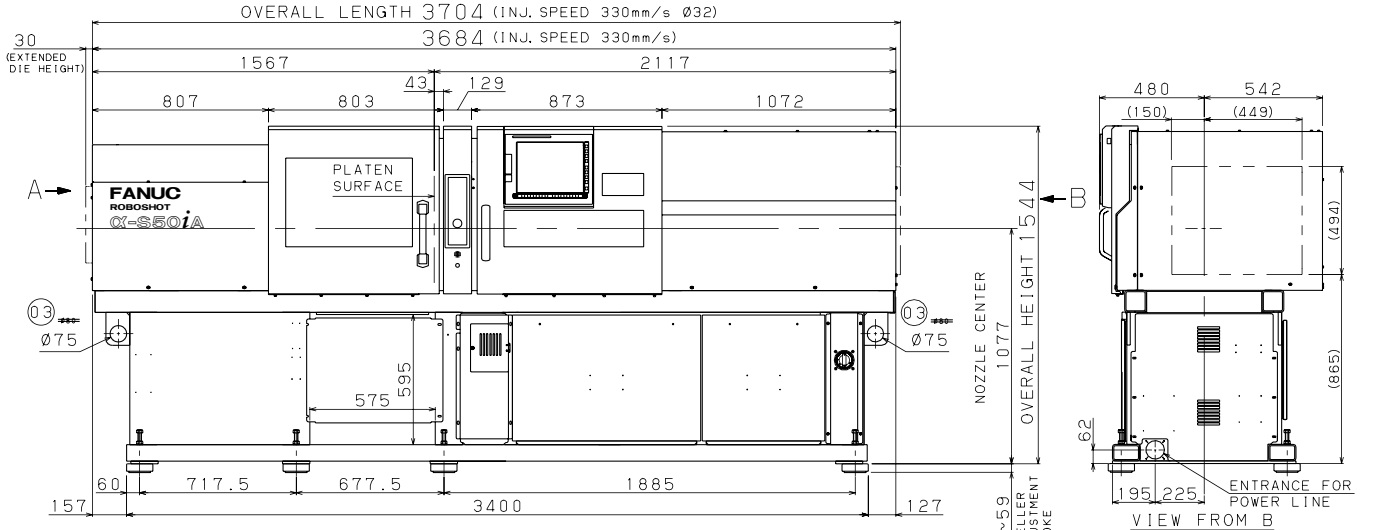
Installation conditions

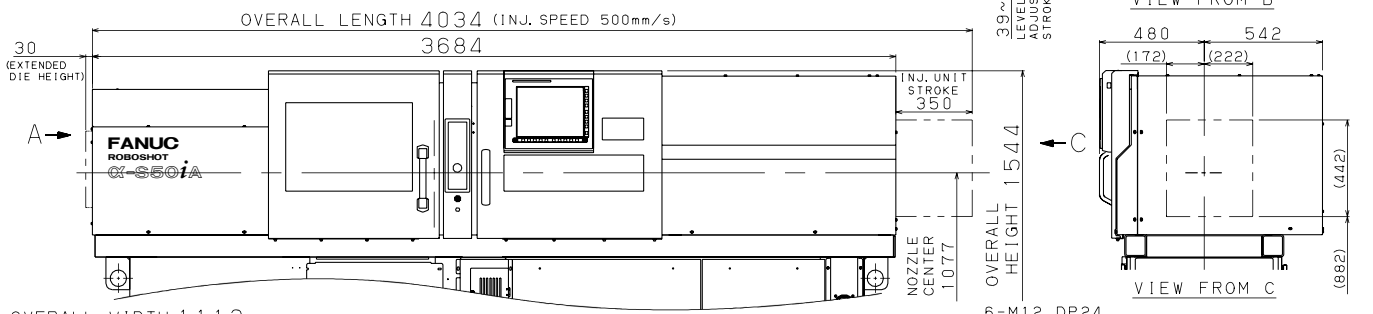
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 330mm/s	150A (With peripheral devices) *9)
		50A (With no peripheral device) *9)
	Inj.speed 500mm/s	175A (With peripheral devices) *9)
		75A (With no peripheral device) *9)
Ground		Follow 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.

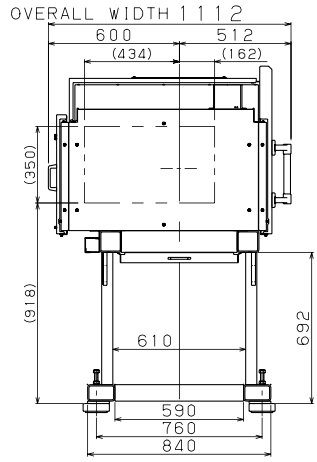
*8) Connect power cable to the machine's main breaker directly.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

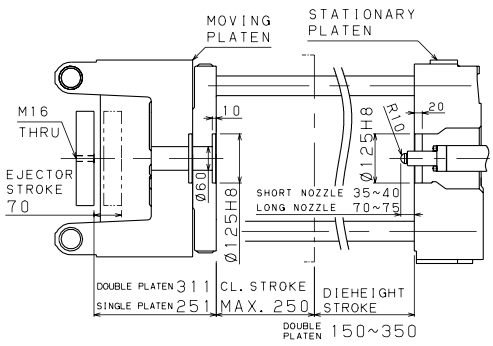
All specifications are subject to change without notice.

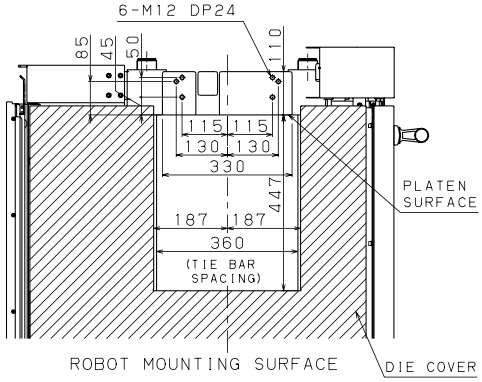
FANUC ROBOSHOT α-S50*i*A

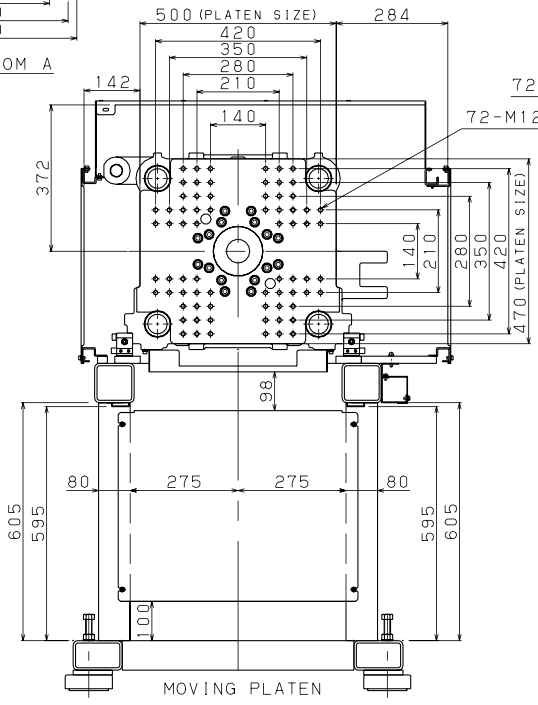


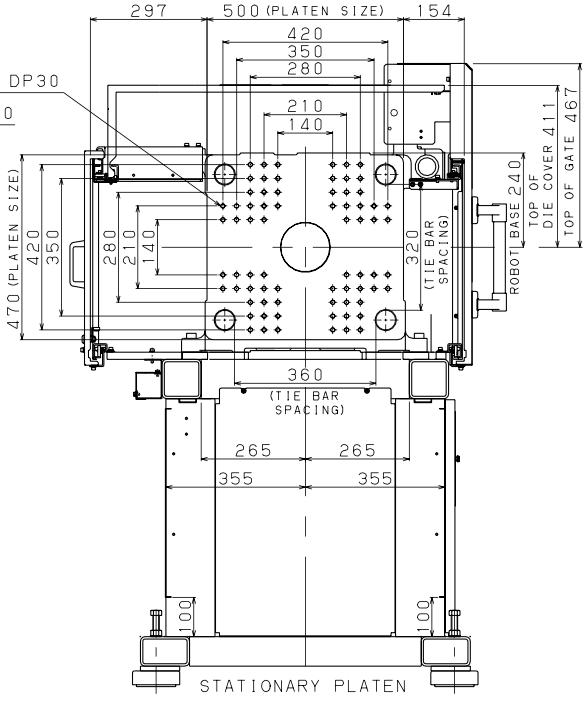












FANUC ROBOSHOT α-S100*i*A

Mechanical specifications

Item			Unit	Data					
Clamping unit	Clamping mechanism		---	Double toggle					
	Tonnage		kN	Standard 1000 (100tonf) / Inclesed 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	φ125					
	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	Standard 25 (2.5tonf) / Incleased 60 (6.0tonf) (Option)					
Injection unit	Screw diameter		mm	22	26	28	32	36	40
	Injection stroke		mm	75	95	95	128	144	144
	Maximum injection volume		cm^3	29	50	58	103	147	181 *7)
	Inj.speed 200mm/s	Maximum injection pressure *3)	MPa	260	260	240	220	190	160 *7)
		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 200mm/s (High duty)	Maximum injection pressure *3)	MPa	---	---	---	220	200	180 *7)
		Maximum pack pressure *3)	MPa	---	---	---	200	180	160 *7)
		Maximum injection rate *4)	cm^3/s	---	---	---	161	204	251
		Maximum injection speed *4)	mm/s	200					
		Maximum screw rotation speed	min^{-1}	450					
	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 *7)
		Maximum pack pressure *3)	MPa	260	260	220	200	170	140 *7)
		Maximum injection rate *4)	cm^3/s	125	175	203	265	336	415
		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	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	---
		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	3.8	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 200mm/s(High duty) 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)					

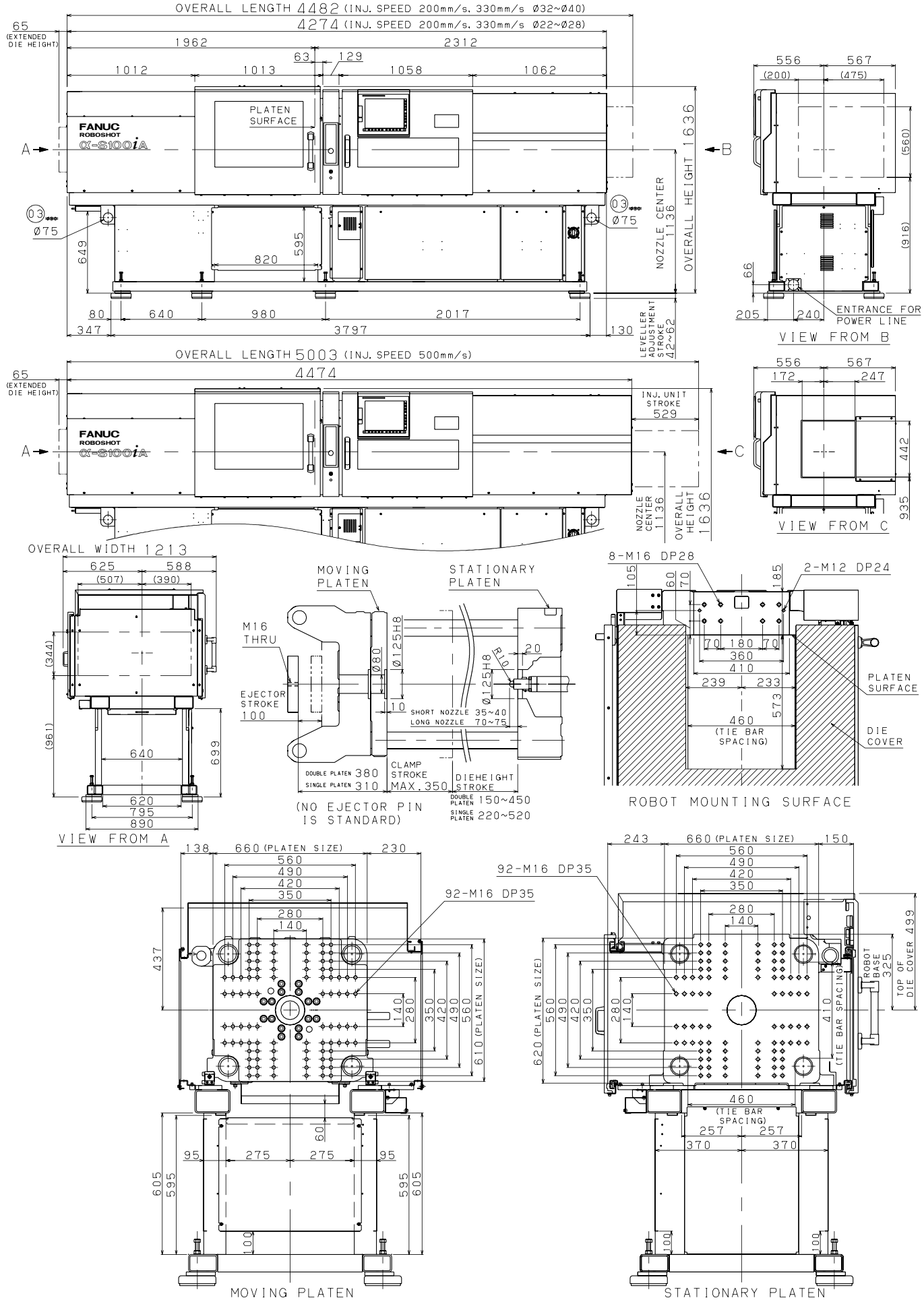
*1) Smaller mold than this size may limit clamp force.
*2) The maximum injection pressure setting at high pressure filling mode option.
There is a limitation in injection time setting and pack time setting, when high pressure filling mode option is selected.(Contact sales for detail)
High pressure resistance 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/cm^2.
*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 200mm/s (High duty)	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 molding machine
With no peripheral device: When only the molding machine is used

All specifications are subject to change without notice.


OVERALL LENGTH 4482 (INJ. SPEED 200mm/s, 330mm/s Ø32~Ø40)
4274 (INJ. SPEED 200mm/s, 330mm/s Ø22~Ø28)
65 (EXTENDED DIE HEIGHT)
1962
2312
63
129
1012
1013
1058
1062
PLATEN SURFACE
FANUC ROBOSHOT α-S100iA
A
B
Ø75
649
595
820
NOZZLE CENTER 1136
OVERALL HEIGHT 1636
80
640
980
2017
347
3797
130
LEVELLER ADJUSTMENT STROKE 42~62
556
567
(200)
(475)
(560)
(916)
66
205
240
ENTRANCE FOR POWER LINE
VIEW FROM B
OVERALL LENGTH 5003 (INJ. SPEED 500mm/s)
4474
INJ. UNIT STROKE 529
C
172
247
442
935
VIEW FROM C
OVERALL WIDTH 1213
625
588
(507)
(390)
(344)
(961)
640
699
620
795
890
VIEW FROM A
MOVING PLATEN
STATIONARY PLATEN
M16 THRU
Ø80
Ø125H8
EJECTOR STROKE 100
10
R10
20
SHORT NOZZLE 35~40
LONG NOZZLE 70~75
DOUBLE PLATEN 380
SINGLE PLATEN 310
CLAMP STROKE MAX. 350
DIEHEIGHT STROKE
DOUBLE PLATEN 150~450
SINGLE PLATEN 220~520
(NO EJECTOR PIN IS STANDARD)
8-M16 DP28
2-M12 DP24
105
60
70
185
70
180
70
360
410
239
233
573
460
(TIE BAR SPACING)
PLATEN SURFACE
DIE COVER
ROBOT MOUNTING SURFACE
138
660 (PLATEN SIZE)
230
560
490
420
350
280
140
92-M16 DP35
437
610 (PLATEN SIZE)
60
95
275
275
95
605
595
100
MOVING PLATEN
243
660 (PLATEN SIZE)
150
620 (PLATEN SIZE)
410
(TIE BAR SPACING)
ROBOT BASE
325
TOP OF DIE COVER 499
257
257
370
370
STATIONARY PLATEN

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	φ125				
	Tie bar spacing (H×V)		mm	530 × 530				
	Platen size (H×V)		mm	730 × 730				
	Minimum mold size (H×V) *1)		mm	300 × 300				
	Ejector stroke		mm	100				
	Maximum ejector force		kN	Standard 25 (2.5tonf) / Incleased 60 (6.0tonf) (Option)				
Injection unit	Screw diameter		mm	26 *7)	28 *7)	32 *7)	36 *7)	40 *7)
	Injection stroke		mm	95	95	128	144	144
	Maximum injection volume		cm^3	50	58	103	147	181
	Inj.speed 200mm/s	Maximum injection pressure *3)	MPa	260	240	220	190	160 *8)
		Maximum pack pressure *3)	MPa	260	220	200	170	140 *8)
		Maximum injection rate *4)	cm^3/s	106	123	160	203	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	320	270	220	---
		Maximum injection pressure *3)	MPa	260	240	220	190	160 *8)
		Maximum pack pressure *3)	MPa	260	220	200	170	140 *8)
		Maximum injection rate *4)	cm^3/s	175	203	265	335	414
		Maximum injection speed *4)	mm/s	330				
		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	6.5	7.2	8.4	9.1	9.9
Machine Weight *4)			t	Inj.speed 200mm/s 4.9 (Approximately) Inj.speed 330mm/s 4.9 (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/cm^2.
*7) After shipment, the machine equipped with screw diameter φ26-φ28mm cannot install φ32-φ40mm.
After shipment, the machine equipped with screw diameter φ32-φ40mm cannot install φ26-φ28mm.
*8) The molding condition might be limited by the resin.(Contact sales for detail)

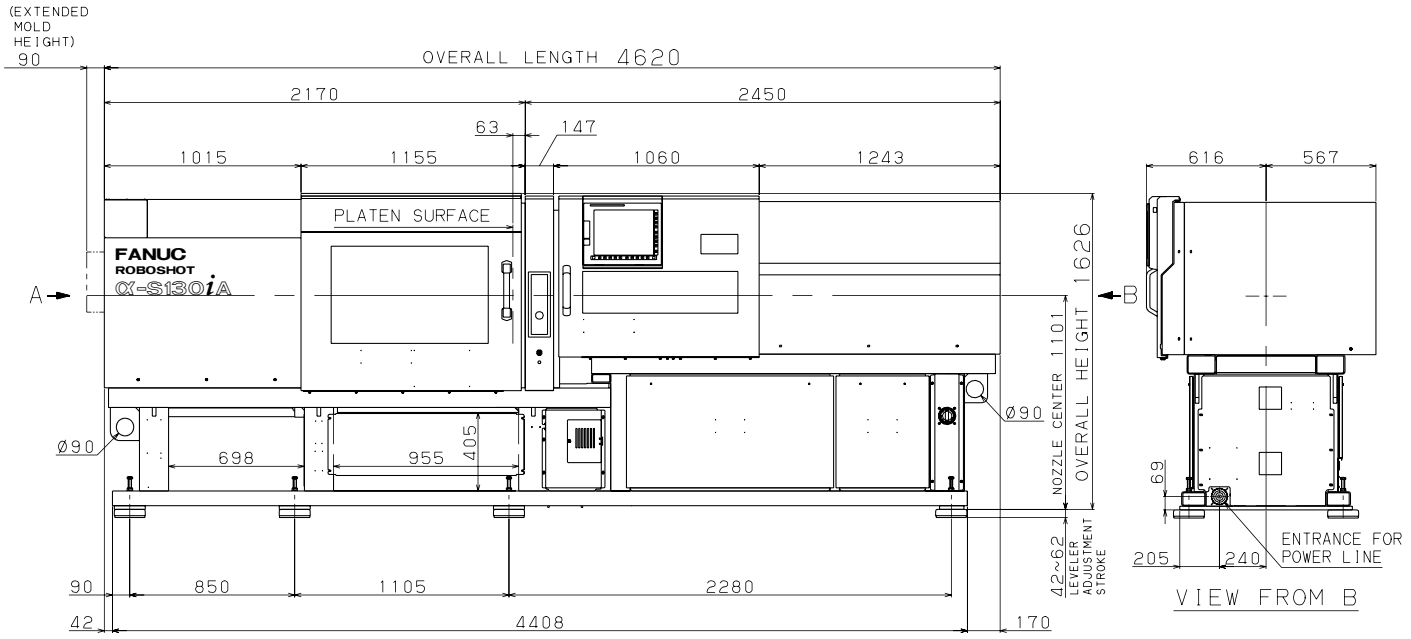
Installation conditions

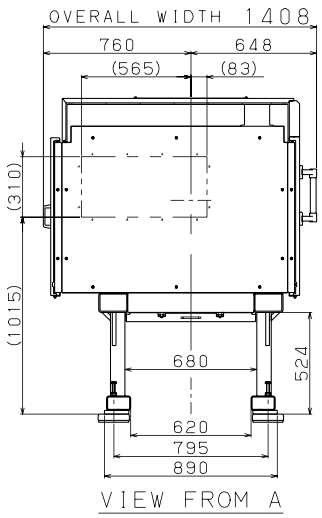
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *9)	Inj.speed 200mm/s	150A (With peripheral devices) *10)
		60A (With no peripheral device) *10)
	Inj.speed 330mm/s	150A (With peripheral devices) *10)
		60A (With no peripheral device) *10)
Ground		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.

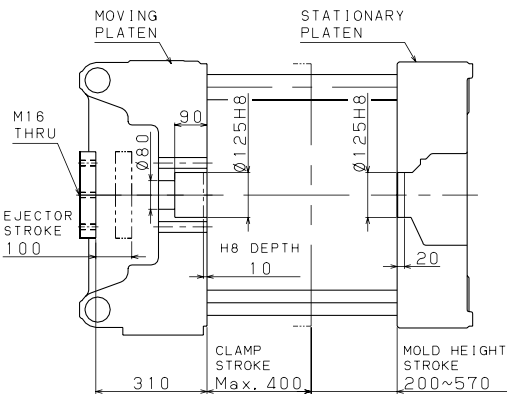
*9) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*10) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

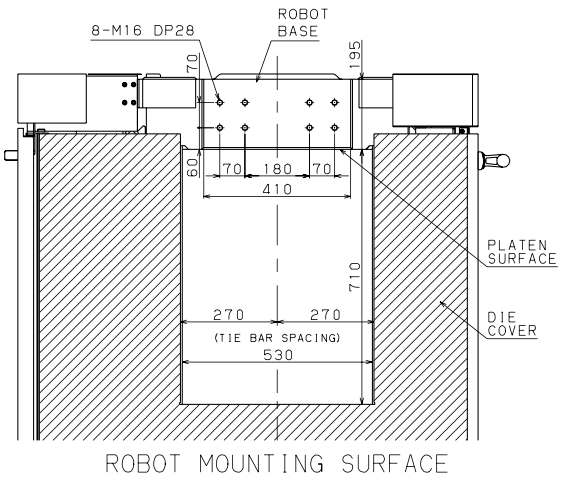
All specifications are subject to change without notice.

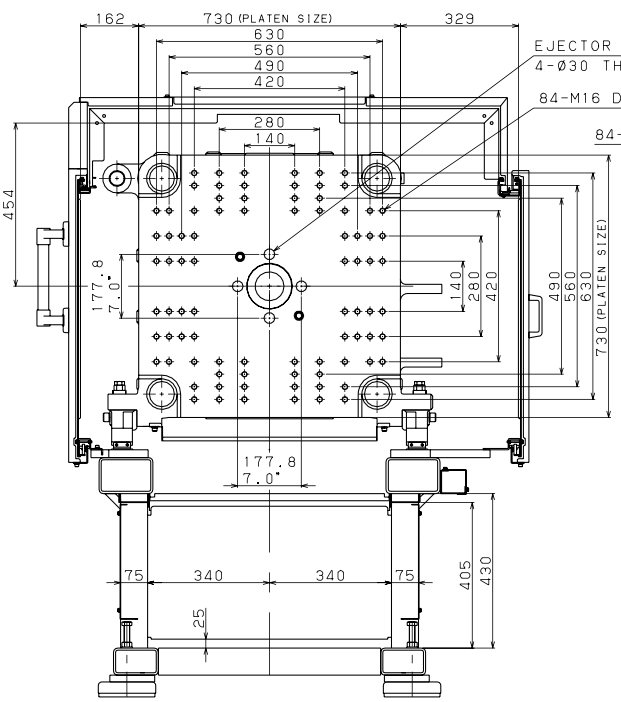
FANUC ROBOSHOT α-S130iA

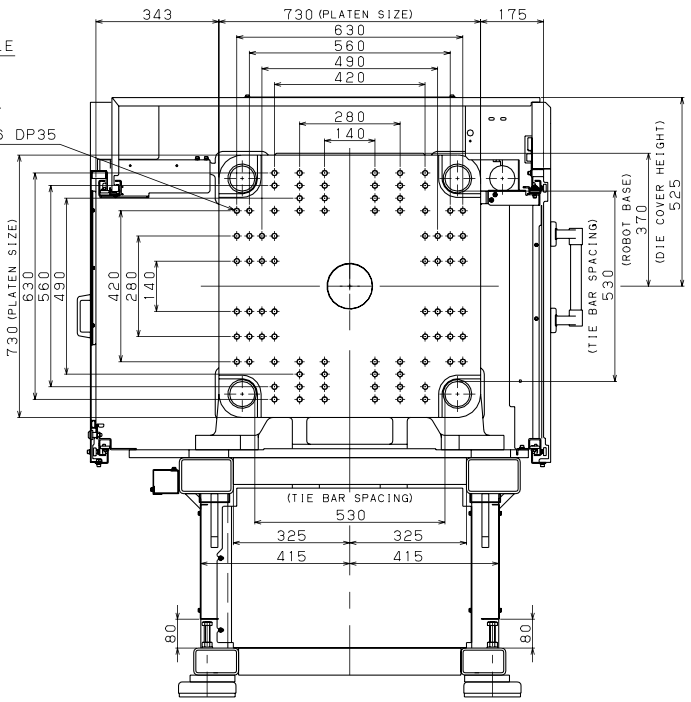












FANUC ROBOSHOT α-S150*i*A

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	φ160					
	Tie bar spacing (H×V)		mm	560 × 510					
	Platen size (H×V)		mm	800 × 750					
	Minimum mold size (H×V) *1)		mm	325 × 300					
	Ejector stroke		mm	150					
	Maximum ejector force		kN	Standard 35 (3.5tonf) / Incleased 80 (8.0tonf) (Option)					
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 270mm/s (High duty)	Maximum injection pressure *2)	MPa	280	280	260	220	190	160 *7)
		Maximum pack pressure *2)	MPa	280	280	260	220	190	160 *7)
		Maximum injection rate *3)	cm^3/s	217	274	339	410	488	573
		Maximum injection speed *3)	mm/s	270					
		Maximum screw rotation speed	min^{-1}	400					
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *2),*4)	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			t	Inj.speed 200mm/s 7.05 (Doubleplaten) 6.8 (Singleplaten) (Approximately) Inj.speed 270mm/s(High duty) 7.2 (Doubleplaten) 6.95 (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/cm^2.
*7) The molding condition might be limited by the resin.(Contact sales for detail)

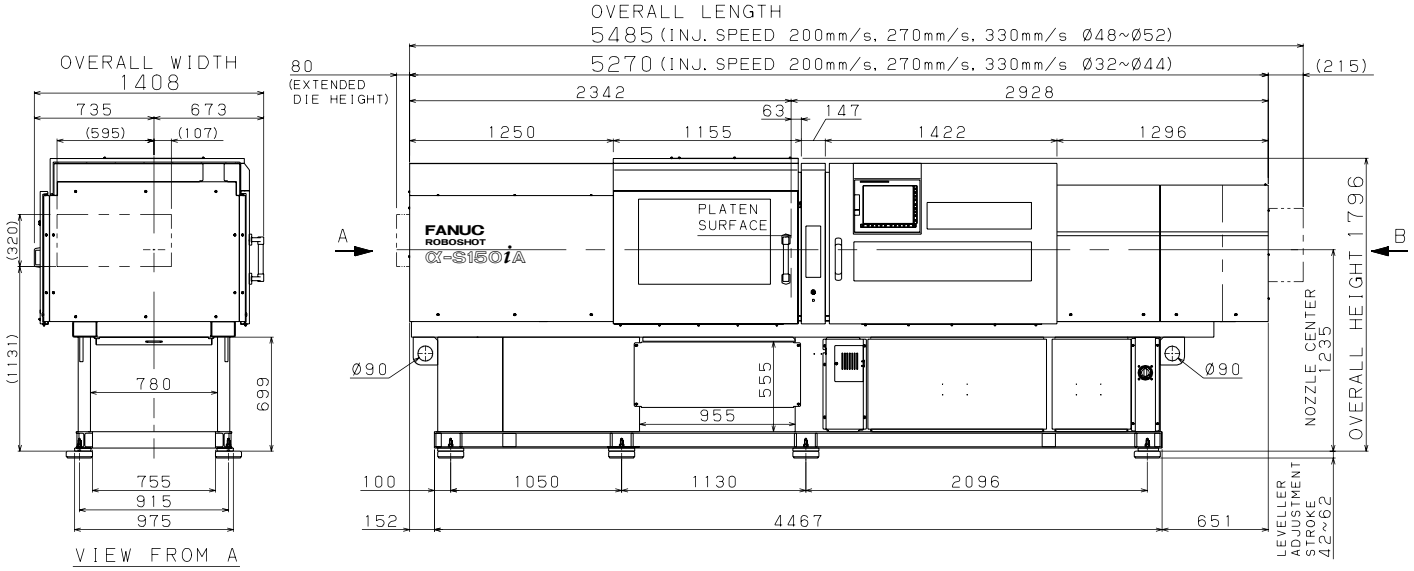
Installation conditions

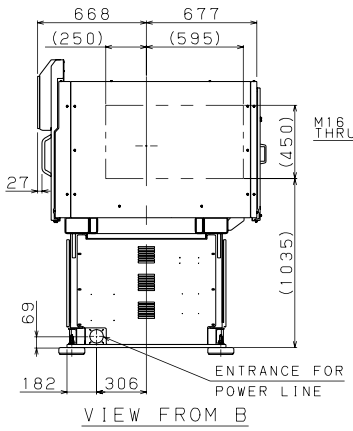
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 200mm/s	175A (With peripheral devices) *9)
		75A (With no peripheral device) *9)
	Inj.speed 270mm/s (High duty)	225A (With peripheral devices) *9)
		125A (With no peripheral device) *9)
	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.

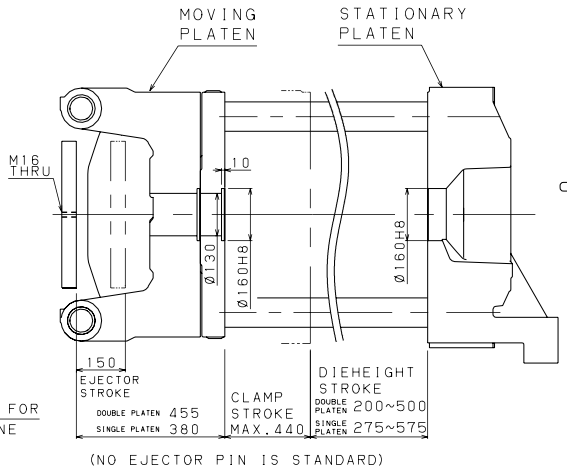
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

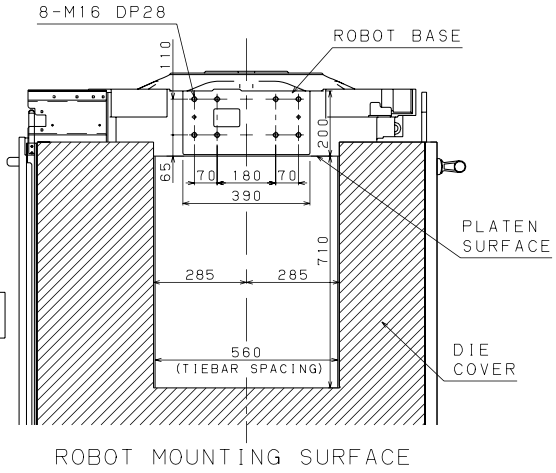
All specifications are subject to change without notice.

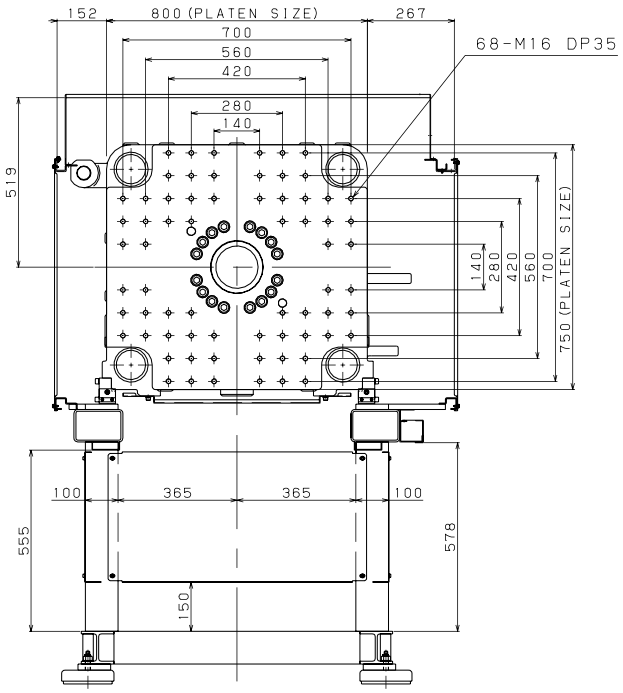
FANUC ROBOSHOT α-S150*i*A

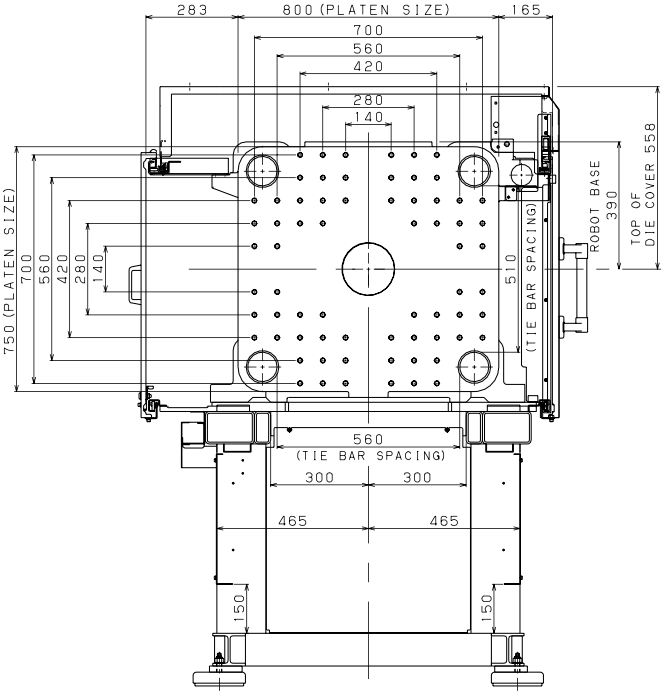












FANUC ROBOSHOT α-S150iA Small capacity injection specification

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	φ160					
	Tie bar spacing (H×V)		mm	560 × 510					
	Platen size (H×V)		mm	800 × 750					
	Minimum mold size (H×V) *1)		mm	325 × 300					
	Ejector stroke		mm	150					
	Maximum ejector force		kN	Standard 35 (3.5tonf) / Incleased 80 (8.0tonf) (Option)					
Injection unit (Small capacity injection)	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/cm^2.
*7) The molding condition might be limited by the resin.(Contact sales for detail)

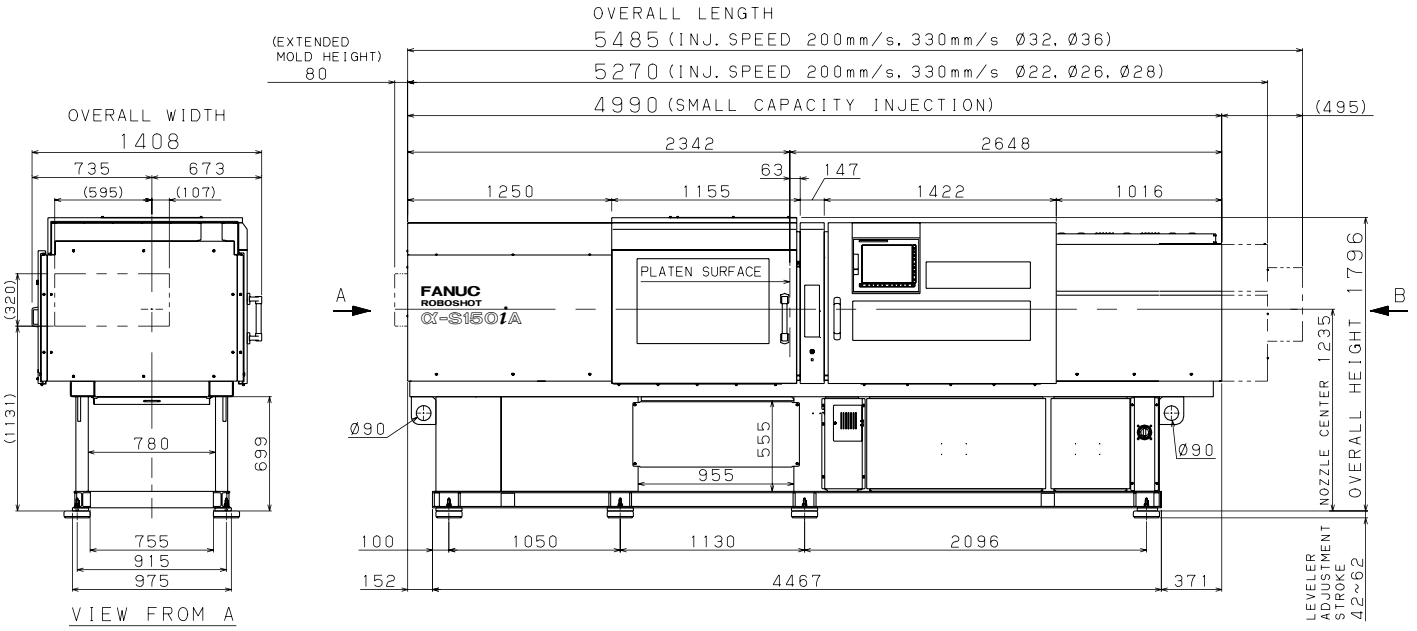
Installation conditions

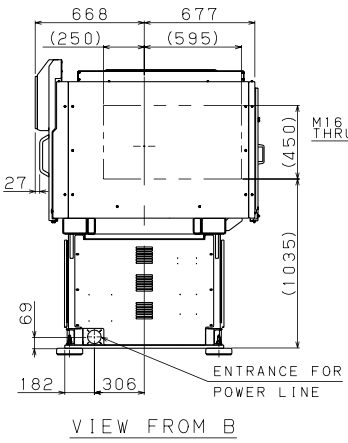
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 330mm/s	150A (With peripheral devices) *9)
		60A (With no peripheral device) *9)
	Inj.speed 500mm/s	200A (With peripheral devices) *9)
		100A (With no peripheral device) *9)
Ground		Follow 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.

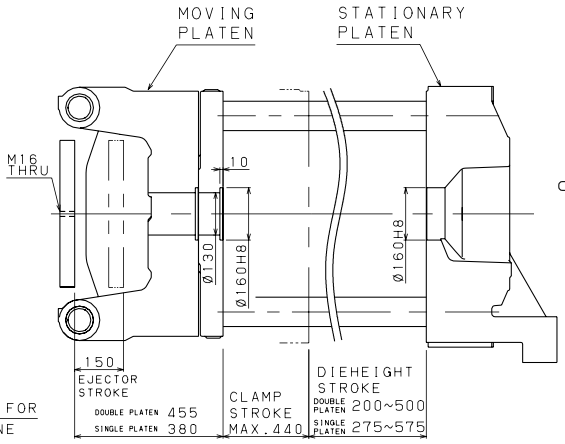
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

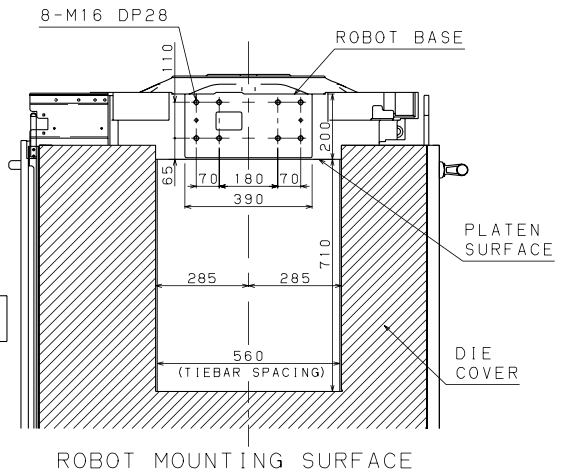
All specifications are subject to change without notice.

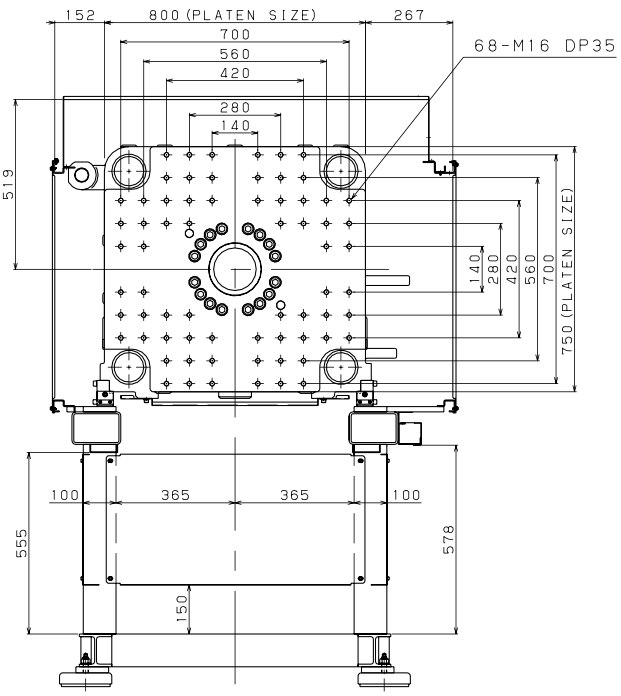
FANUC ROBOSHOT α-S150iA Small capacity injection specification

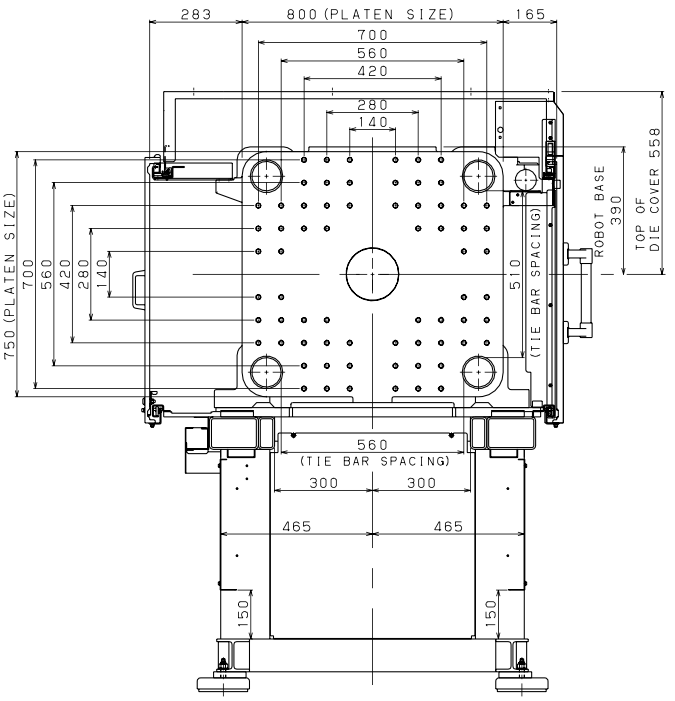












Mechanical specifications

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	φ160					
	Tie bar spacing (H×V)		mm	650 × 650					
	Platen size (H×V)		mm	900 × 900					
	Minimum mold size (H×V) *1)		mm	375 × 375					
	Ejector stroke		mm	150					
	Maximum ejector force		kN	Standard 35 (3.5tonf) / Incleased 80 (8.0tonf) (Option)					
Injection unit	Screw diameter		mm	32 *7)	36 *7)	40 *7)	44 *7)	48 *7)	52 *7)
	Injection stroke		mm	150	176	176	176	176	208
	Maximum injection volume		cm^3	121	179	221	268	318	442
	Inj.speed 200mm/s	Maximum injection pressure *2)	MPa	190	190	190	190	190	160 *8)
		Maximum pack pressure *2)	MPa	160	160	160	160	160	130 *8)
		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 (High pressure filling mode) *4)	MPa	380	345	280	---	---	---
		Maximum injection pressure *2)	MPa	280	280	260	220	190	160 *8)
		Maximum pack pressure *2)	MPa	280	280	260	220	190	160 *8)
		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 8.7 (Approximately) Inj.speed 330mm/s 8.7 (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/cm^2.
*7) After shipment, the machine equipped with screw diameter φ32-φ36mm cannot install φ40-φ52mm.
After shipment, the machine equipped with screw diameter φ40-φ52mm cannot install φ32-φ36mm.
*8) The molding condition might be limited by the resin.(Contact sales for detail)

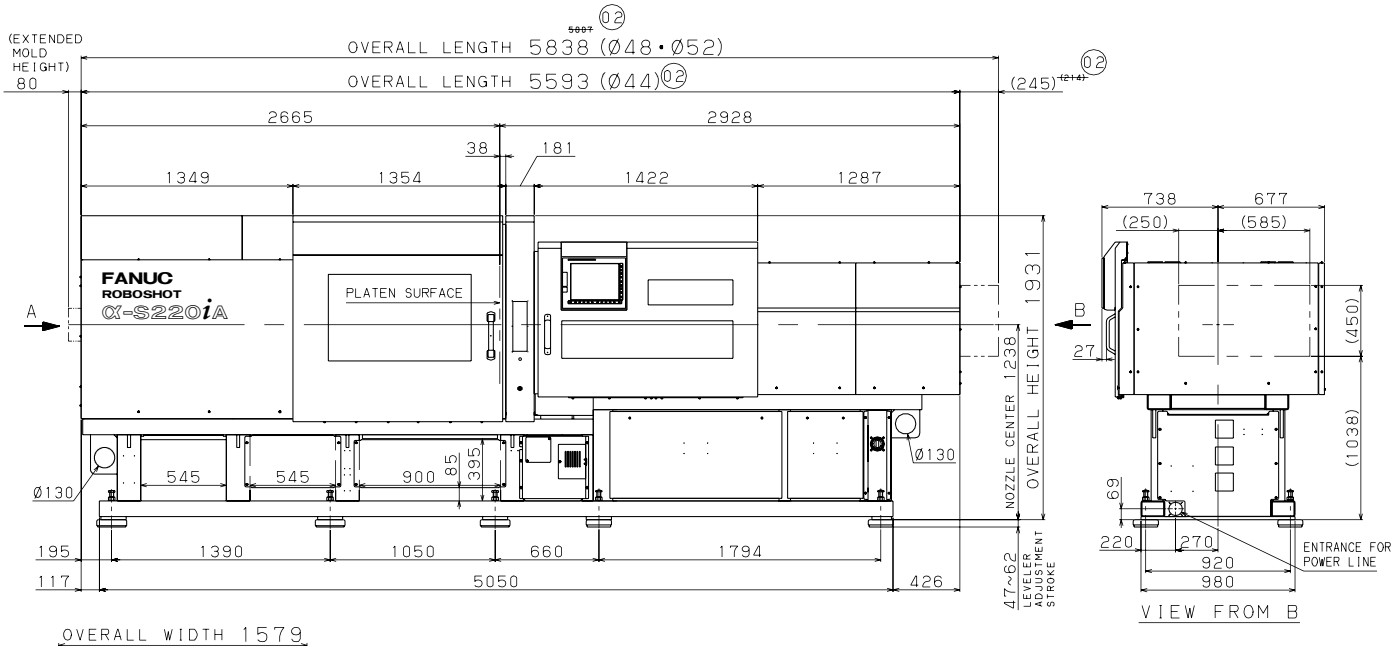
Installation conditions

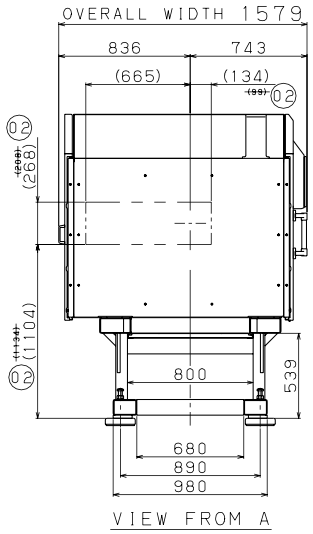
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *9)	Inj.speed 200mm/s	175A (With peripheral devices) *10)
		75A (With no peripheral device) *10)
	Inj.speed 330mm/s	225A (With peripheral devices) *10)
		125A (With no peripheral device) *10)
Ground		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.

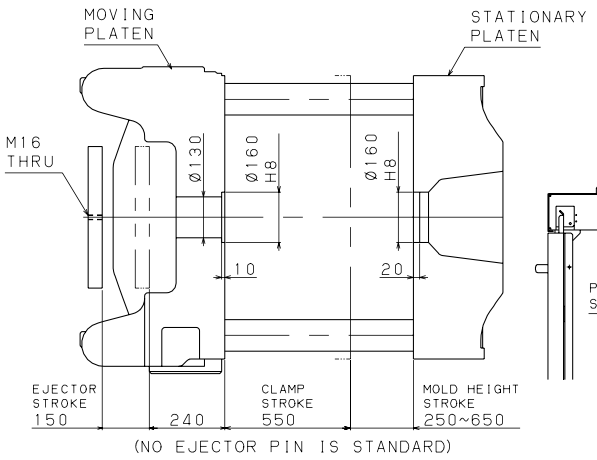
*9) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*10) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

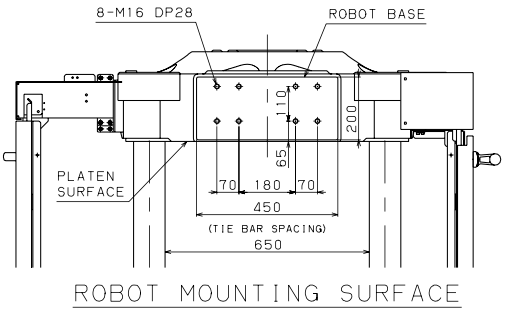
All specifications are subject to change without notice.

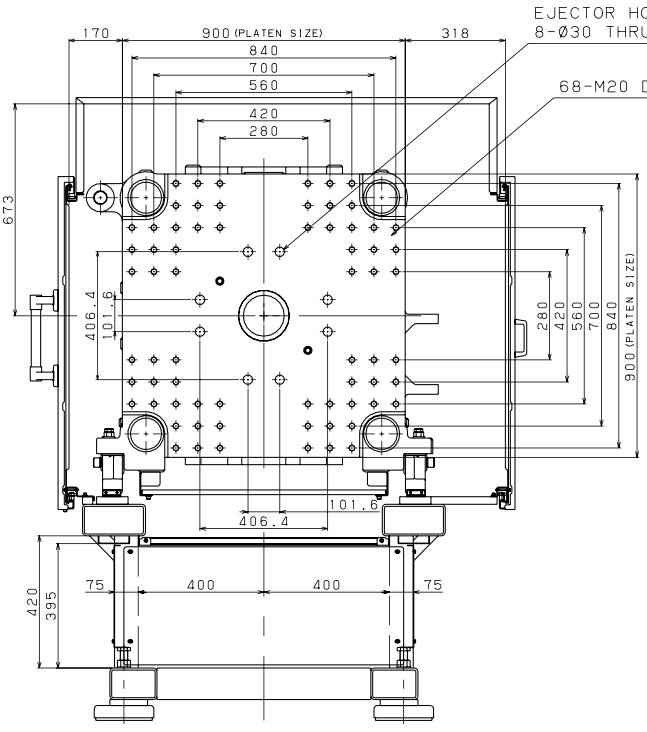
FANUC ROBOSHOT α-S220*i*A

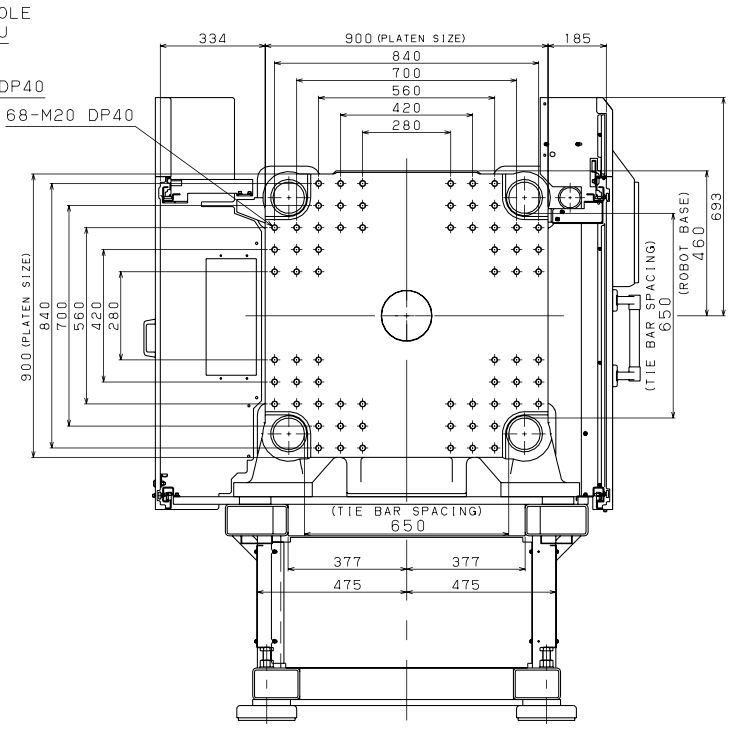












Mechanical specifications

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	φ160						
	Tie bar spacing (H×V)		mm	710×635						
	Platen size (H×V)		mm	1030×960						
	Minimum mold size (H×V) *1)		mm	420×385						
	Ejector stroke		mm	200						
	Maximum ejector force		kN	80 (8.0tonf)						
Injection unit	Screw diameter		mm	32	36	40	44	48	52	56
	Injection stroke		mm	150	150	150	176	176	208	260
	Maximum injection volume		cm^3	121	153	188	268	318	442	640
	Inj.speed 270mm/s (High duty)	Maximum injection pressure *2)	MPa	280	280	280	260	230	200	172 *7)
		Maximum pack pressure *2)	MPa	280	280	280	260	230	200	172 *7)
		Maximum injection rate *3)	cm^3/s	217	274	339	410	488	573	665
		Maximum injection speed *3)	mm/s	270						
		Maximum screw rotation speed	min^{-1}	400						300
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *2),*4)	MPa	380	345	280	---	---	---	---
		Maximum injection pressure *2)	MPa	280	280	260	220	190	160 *7)	140 *7)
		Maximum pack pressure *2)	MPa	280	280	260	220	190	160 *7)	140 *7)
		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	Inj.speed 270mm/s(High duty) 12.5 (Approximately) Inj.speed 330mm/s 12.5 (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 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/cm^2.
*7) The molding condition might be limited by the resin.(Contact sales for detail)

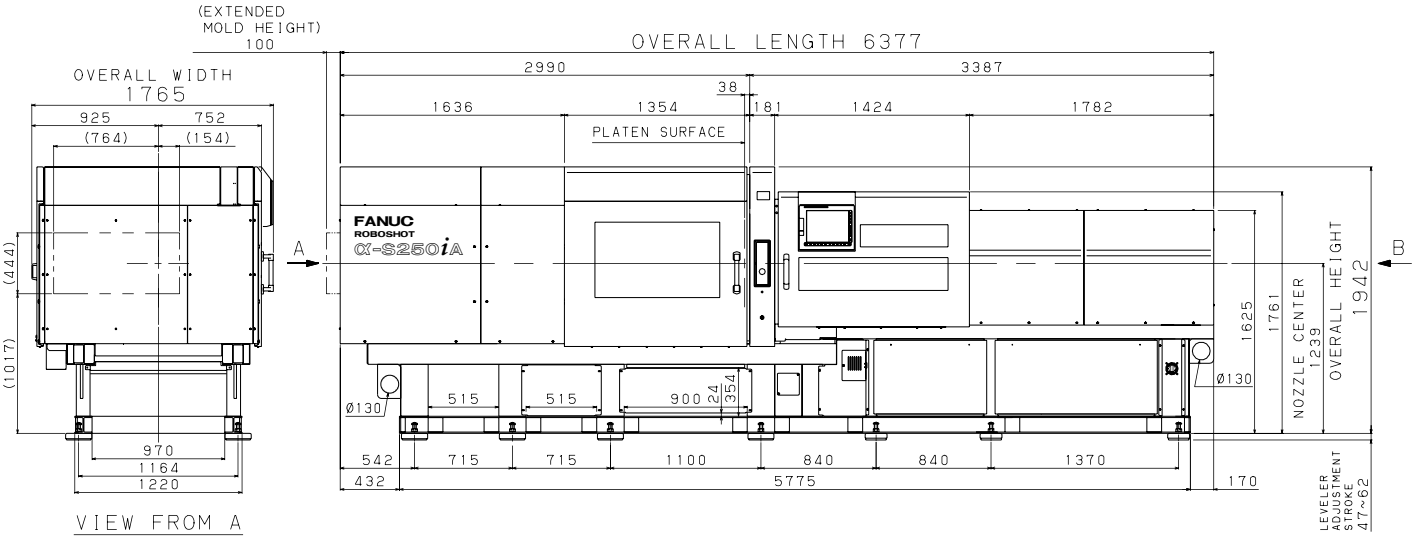
Installation conditions

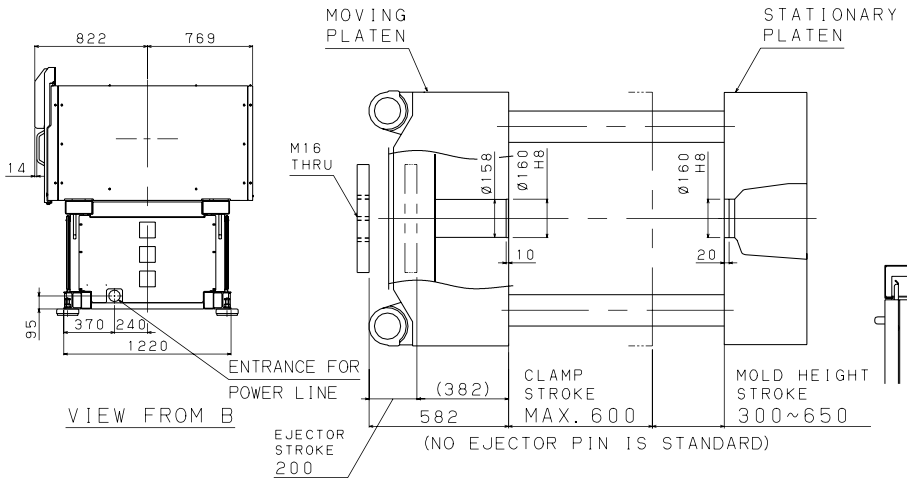
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 270mm/s (High duty)	225A (With peripheral devices) *9)
		125A (With no peripheral device) *9)
	Inj.speed 330mm/s	225A (With peripheral devices) *9)
		125A (With no peripheral device) *9)
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.

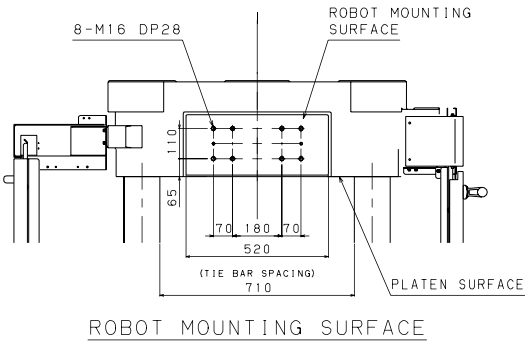
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

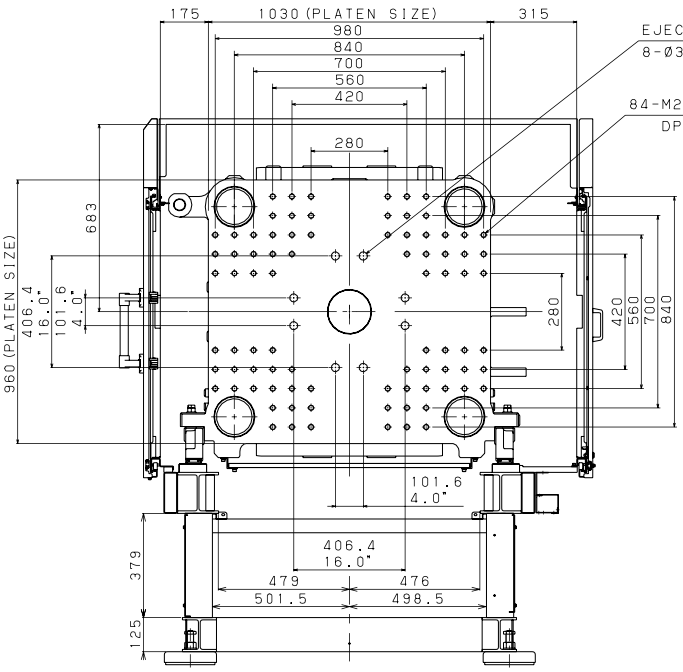
All specifications are subject to change without notice.

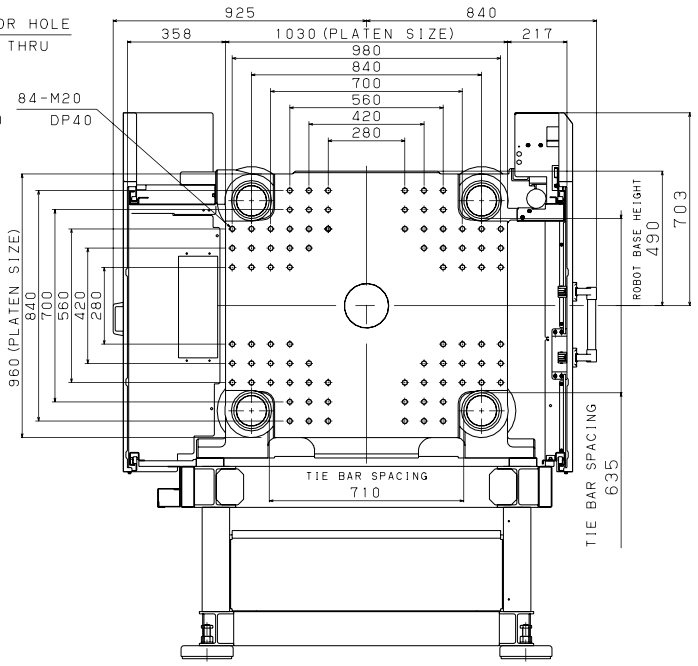
FANUC ROBOSHOT α-S250*i*A











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 (H×V)		mm	810×710							
	Platen size (H×V)		mm	1130×1030							
	Minimum mold size (H×V) *1)		mm	470×420							
	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 200mm/s (High duty)	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	251	304	362	425	493	643	726	814
		Maximum injection speed *3)	mm/s	200							
		Maximum screw rotation speed	min^{-1}	400							300
	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
	Inj.speed 270mm/s	Maximum injection pressure *2)	MPa	280	260	230	200	172	---	---	---
		Maximum pack pressure *2)	MPa	280	260	230	200	172	---	---	---
		Maximum injection rate *3)	cm^3/s	339	411	489	573	665	---	---	---
		Maximum injection speed *3)	mm/s	270					---	---	---
		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
				14.9	15.9	17.9	20.2	23.5	---	---	---
Machine weight			*5) t	Inj.speed 200mm/s (High duty) 14.2(Approximately) Inj.speed 240mm/s 14.2(Approximately) Inj.speed 270mm/s 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/cm^2.
*7) The molding condition might be limited by the resin.(Contact sales for detail)

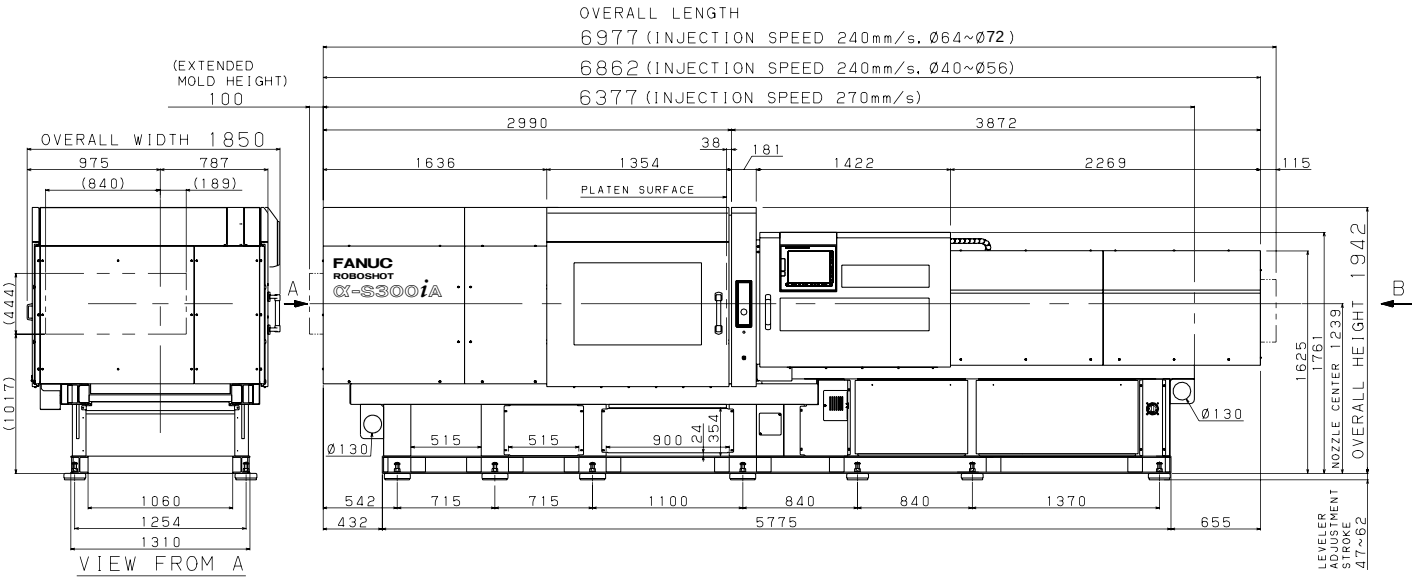
Installation conditions

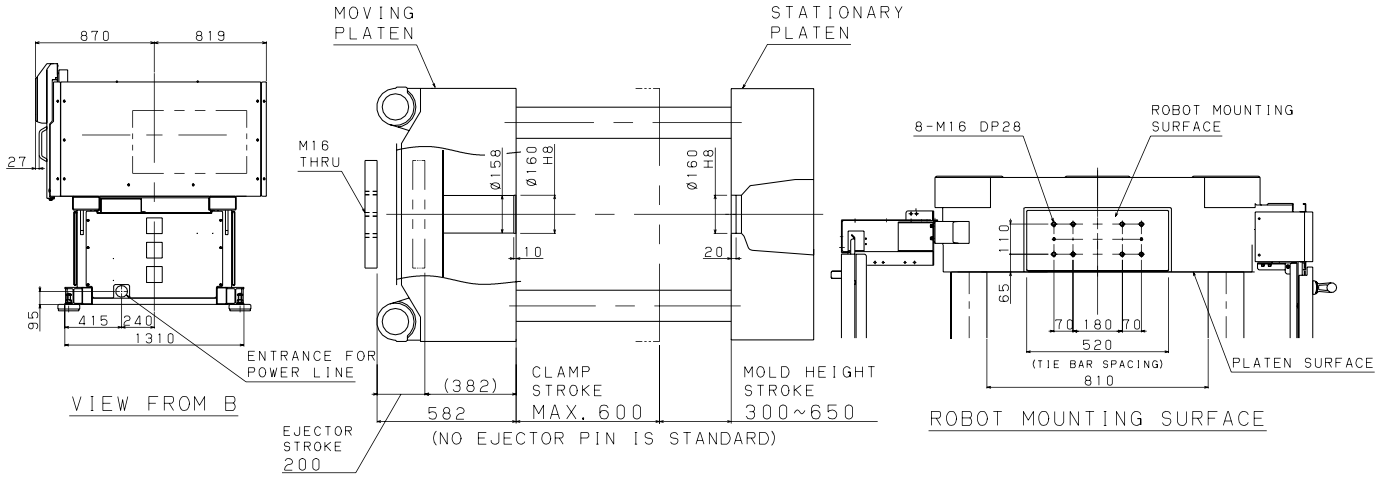
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *8)	Inj.speed 200mm/s (High duty)	225A (With peripheral devices) *9)
		150A (With no peripheral device) *9)
	Inj.speed 240mm/s	225A (With peripheral devices) *9)
		150A (With no peripheral device) *9)
	Inj.speed 270mm/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.

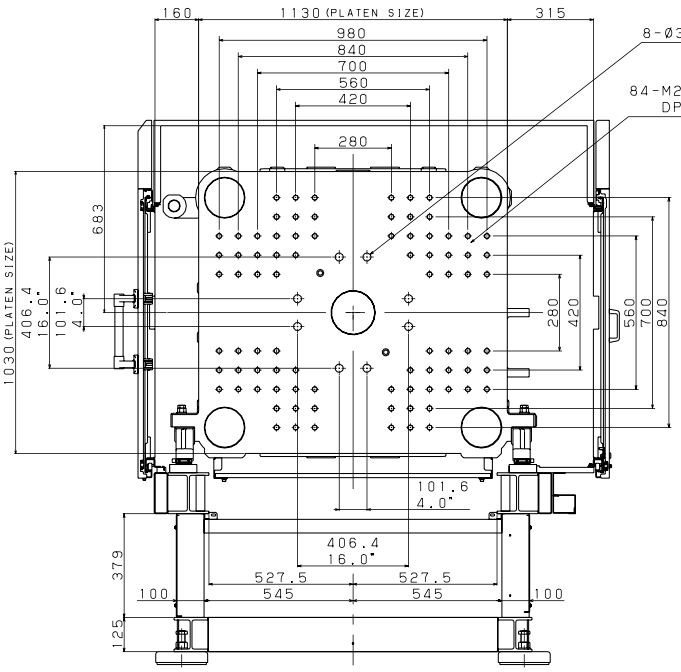
*8) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*9) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine

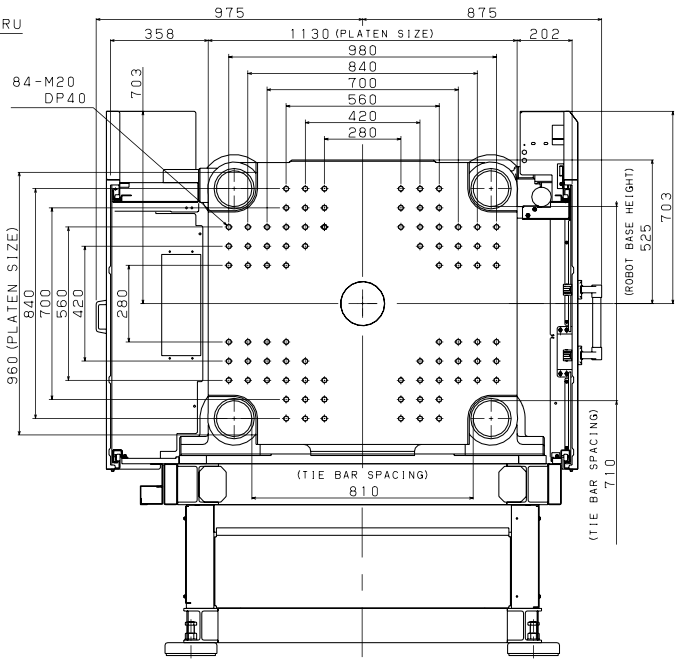
With no peripheral device: When only the molding machine is used

FANUC ROBOSHOT α-S300*i*A









FANUC ROBOSHOT α-S450*i*A Small capacity injection specification

Mechanical specifications

Item			Unit	Data			
Clamping unit	Clamping mechanism		---	Double toggle			
	Tonnage		kN	Standard 4500 (450 tonf)			
	Maximum and minimum die height		mm	Doubleplaten 1000 - 350			
	Clamping stroke		mm	900			
	Locating ring diameter		mm	φ200			
	Tie bar spacing (H×V)		mm	920×920			
	Platen size (H×V)		mm	1300×1300			
	Minimum mold size (H×V) *1)		mm	535×535			
	Ejector stroke		mm	250			
	Maximum ejector force		kN	150 (15.0tonf)			
Injection unit (Small capacity injection)	Screw diameter		mm	56	64	68	72 *6)
	Injection stroke		mm	260	260	260	260
	Maximum injection volume		cm^3	640	836	944	1059
	Inj.speed 240mm/s	Maximum injection pressure *2)	MPa	225	175	155	135
		Maximum pack pressure *2)	MPa	195	150	130	120
		Maximum injection rate *3)	cm^3/s	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	4			
			Nozzle	1			
		Total heater wattage	kW	23.9	27.2	27.8	27.2
Machine weight *4)			t	24(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/cm^2.
*6) The molding condition might be limited by the resin.(Contact sales for detail)

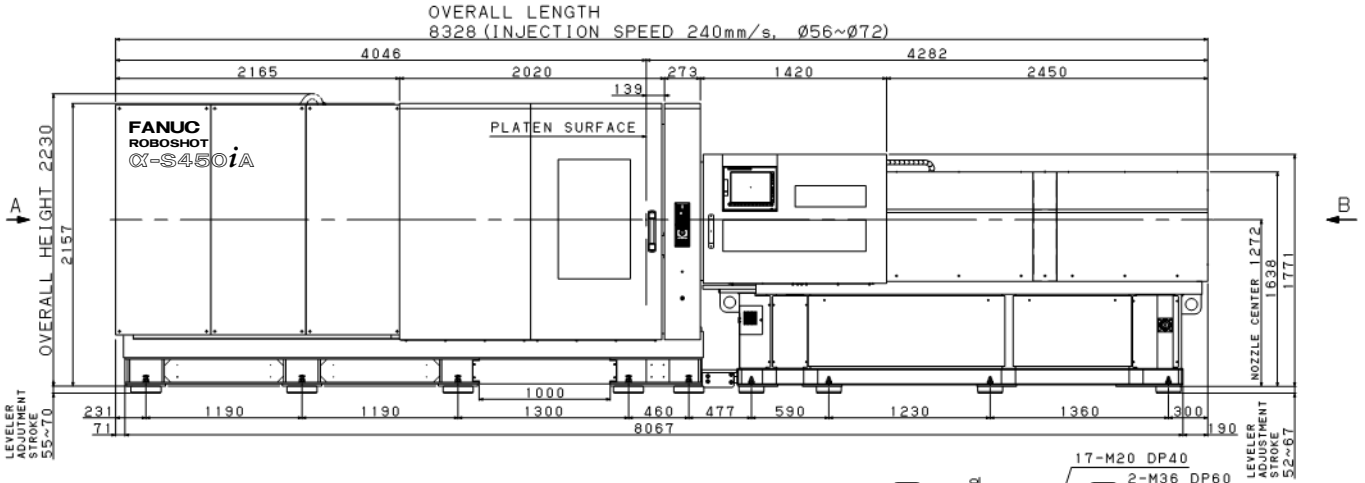
Installation conditions

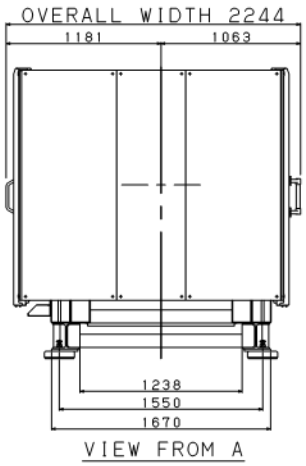
Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *7)	Inj.speed 240mm/s	250A (With peripheral devices) *8)
		150A (With no peripheral device) *8)
Ground		Follow relevant laws and standards of the country where the machine is installed when performing 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.

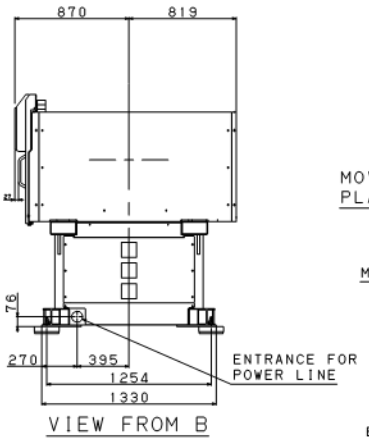
*7) Connect power cable to the machine's main breaker directly. The breaker is ground fault type with 100mA of sensitivity.
*8) With peripheral devices: When peripheral devices "External outlet + Mold heater controller" or "External outlet + Integrated hotrunner controller" are used in addition to the molding machine
With no peripheral device: When only the molding machine is used

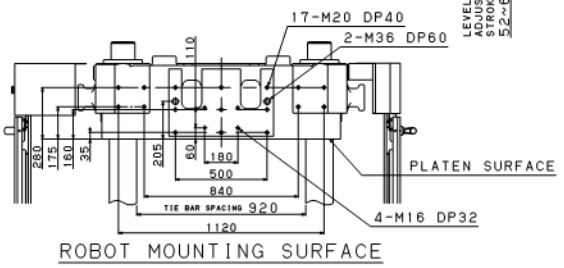
All specifications are subject to change without notice.

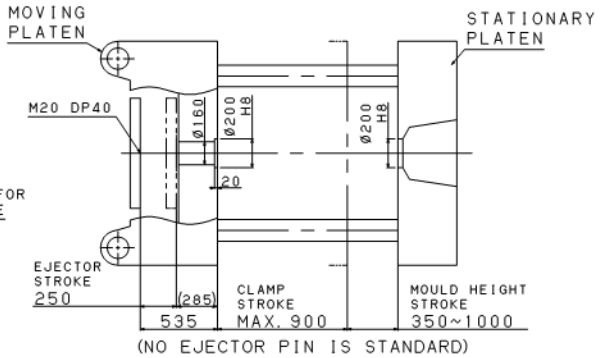
FANUC ROBOSHOT α-S450iA Small capacity injection specification

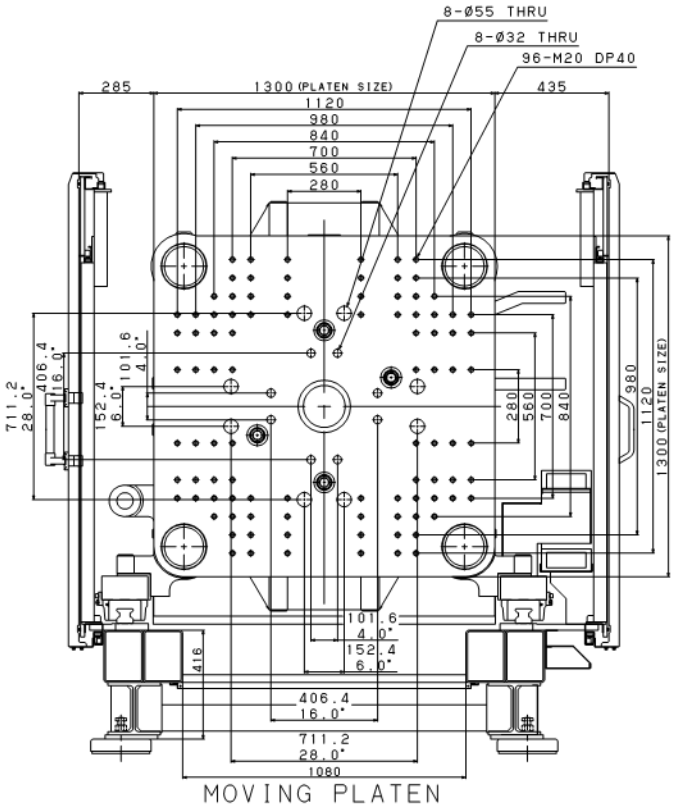


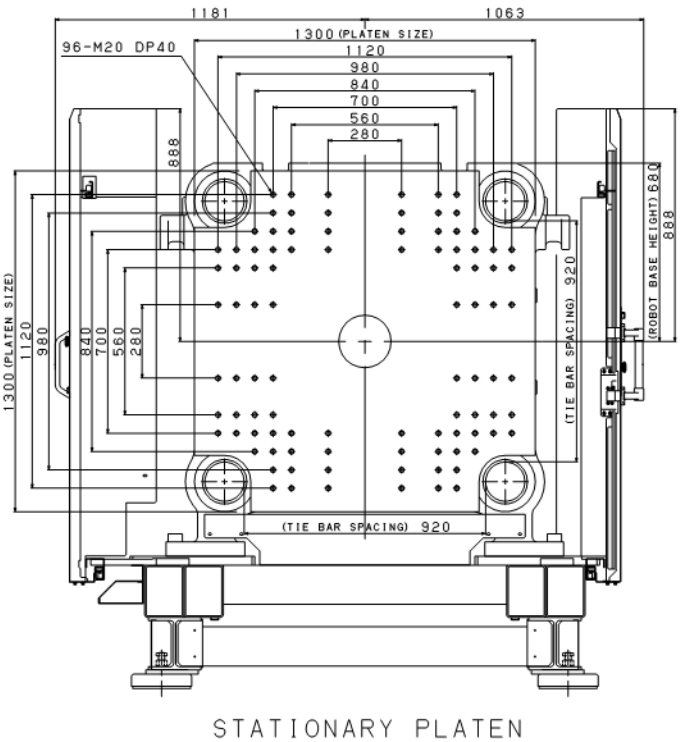












Mechanical specifications

Item			Unit	Data				
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 300mm/s	Maximum injection pressure *1)	MPa	200	180	140	130	120
		Maximum pack pressure *1)	MPa	180	160	120	110	100
		Maximum injection rate *2)	cm^3/s	46	60	76	94	114
		Maximum injection speed *2)	mm/s	300				
		Maximum screw rotation speed	min^{-1}	250				
	Nozzle touch force		kN	3 (0.3tonf)				
	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		*3)	t	Injection unit 0.65 (Approximately) Control unit 0.15 (Approximately)				

*1) 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.
*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 machine without option.
*4) The pressure conversion is 1MPa=10kgf/cm2.
*5) The molding condition might be limited by the resin.(Contact sales for detail)

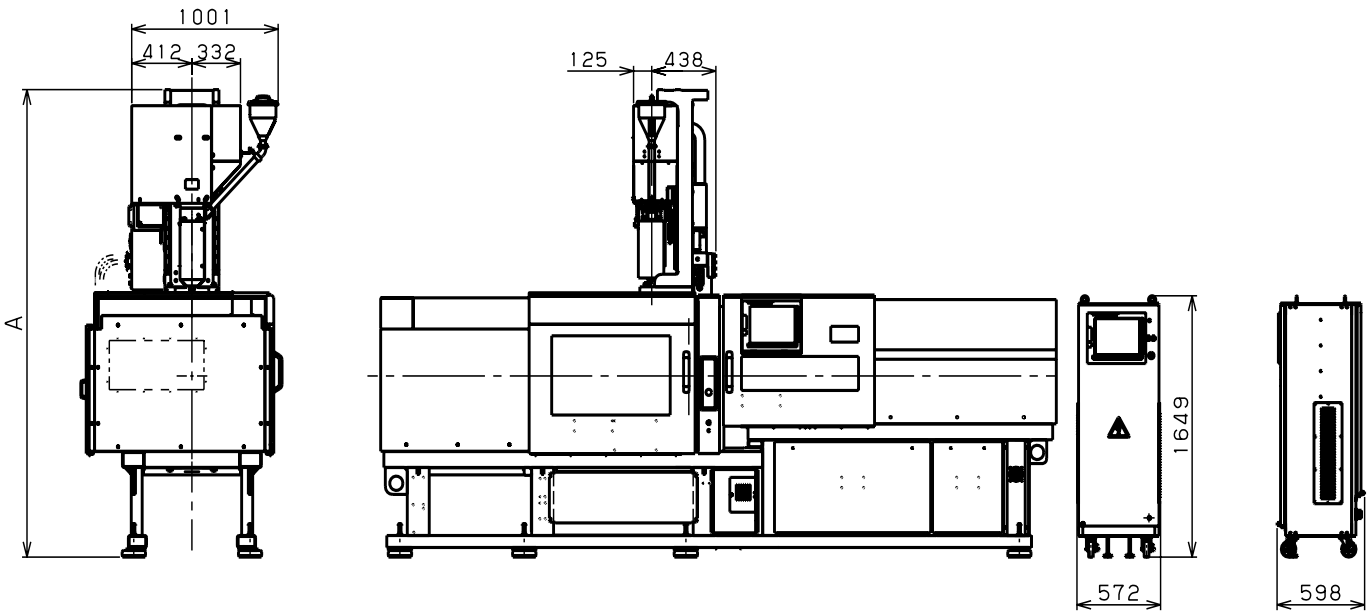
Installation conditions

Item		Data
Input power source		3-phase AC200V±10% 50/60Hz±1Hz 3-phase AC220V±10% 60Hz±1Hz
Main breaker *6)	Inj.speed 300mm/s	30A
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.

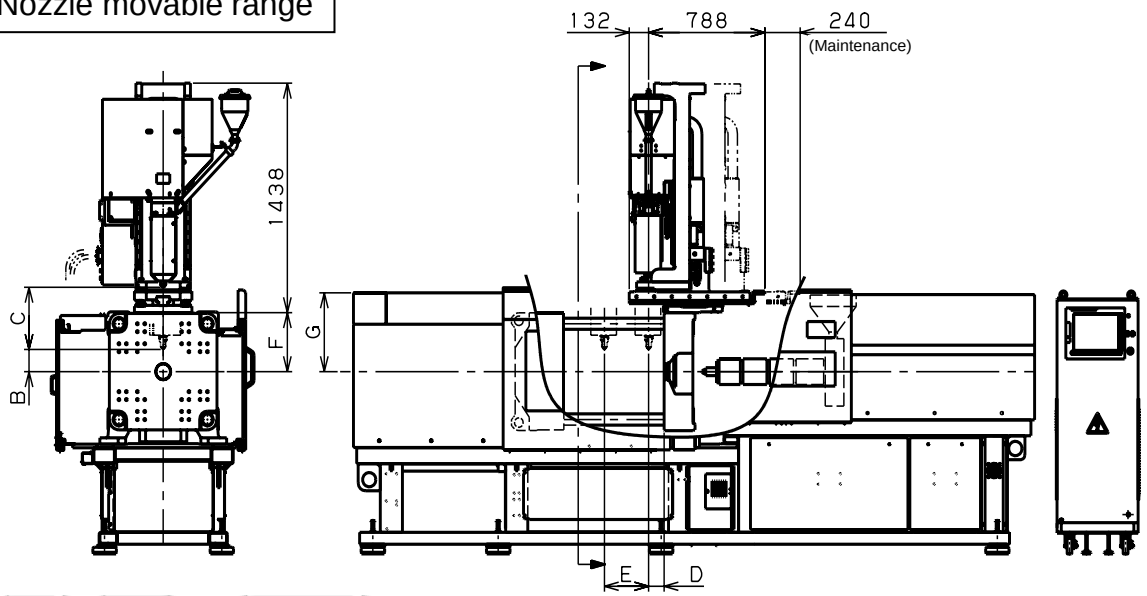
*6) Connect power cable to the machine's main breaker directly.
*7) Connect power cable of SI-20A to the ROBOSHOT.

All specifications are subject to change without notice.

Nozzle movable range



Nozzle movable range



Model	Overall Height	Nozzle movable range (Vertical)				Nozzle movable range (Mold height)		Mounting surface height
		Minimum			Stroke	Mimimum	Stroke	
	A (mm)	**B** (mm)			**C** (mm)	**D** (mm)	**E** (mm)	**F** (mm)
		φ14-18	φ20	φ22				
α-S50iA	2,854	135	89	51	320	125	150	240
α-S100iA	2,961	180	134	96		85		325
α-S130iA	2,971	225	179	141		85		370
α-S150iA	3,125	245	199	161		85		390
α-S220iA	3,203	315	269	231		85		460
α-S250iA	3,229	345	299	261		85		490
α-S300iA	3,264	380	334	296		85		525

*1) The minimum value of the nozzle movable range (vertical direction) varies depending on the screw diameter.

Mechanical specifications

Item			Unit	Data			
Injection unit	Screw diameter		mm	26	28	32	36
	Injection stroke		mm	95	95	128	144
	Maximum injection volume		cm^3	50	58	103	147
	Inj.speed 330mm/s	Maximum injection pressure (High pressure filling mode) *1)	MPa	340	320	270	220
		Maximum injection pressure *1)	MPa	260	240	220	190
		Maximum pack pressure *1)	MPa	260	240	200	170
		Maximum injection rate *2)	cm^3/s	175	203	265	336
		Maximum injection speed *2)	mm/s	330			
		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	6.5	7.2	8.4	9.1
Machine Weight		*3)	t	2.0 (Approximately)			

*1) 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.
*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 machine without option.
*4) The pressure conversion is 1MPa=10kgf/cm2.
*5) 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 *6)	Inj.speed 300mm/s	75A
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.

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

All specifications are subject to change without notice.

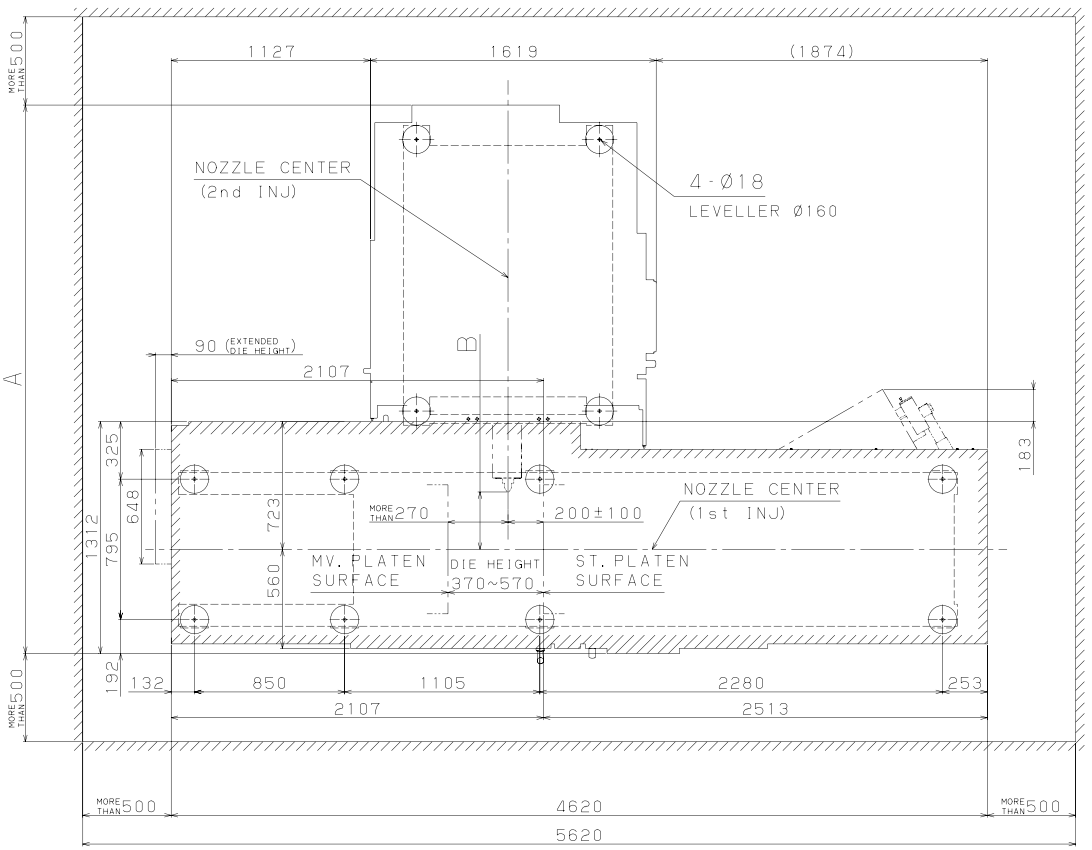


Fig.1. α-S130iA

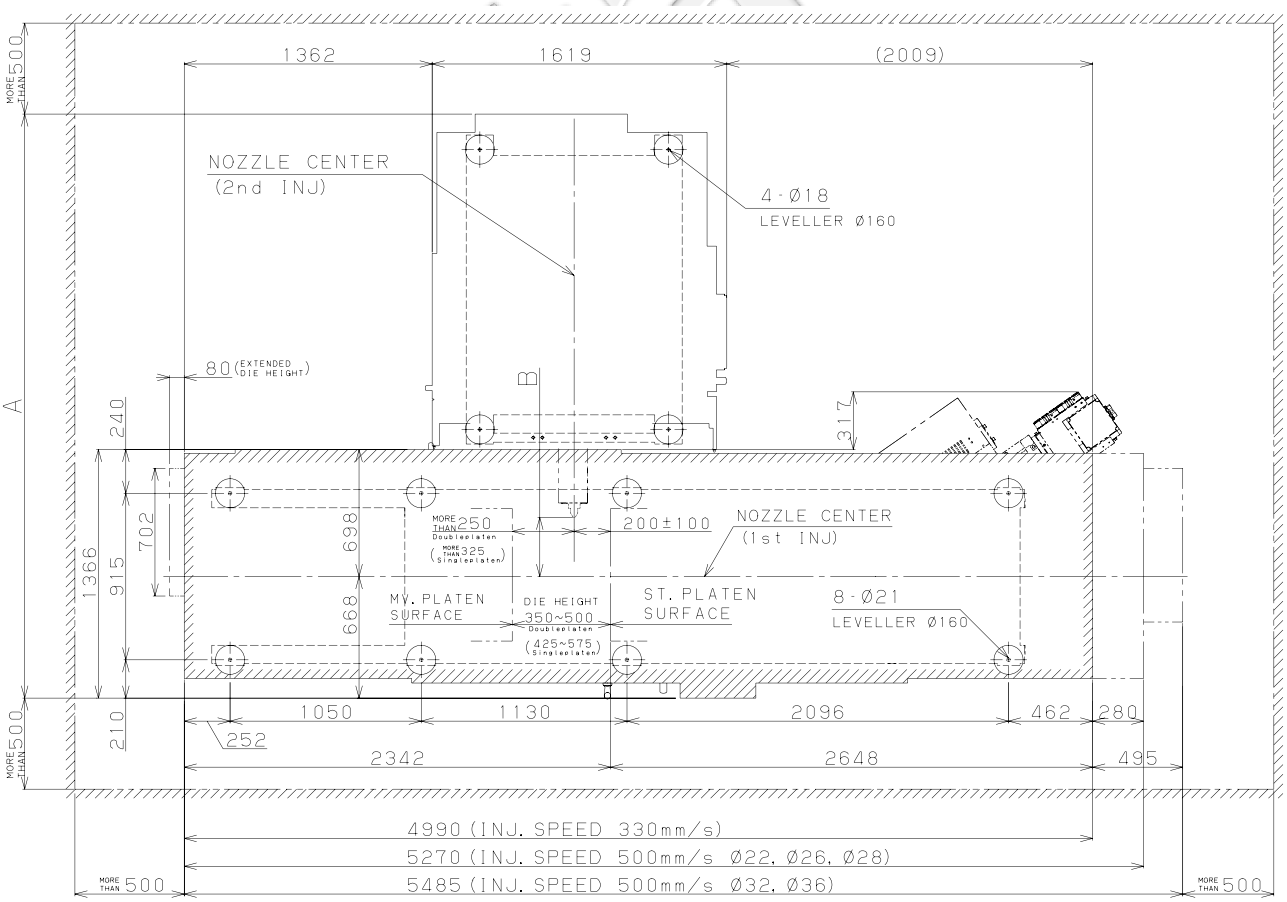


Fig.2 α-S150iA Small capacity injection

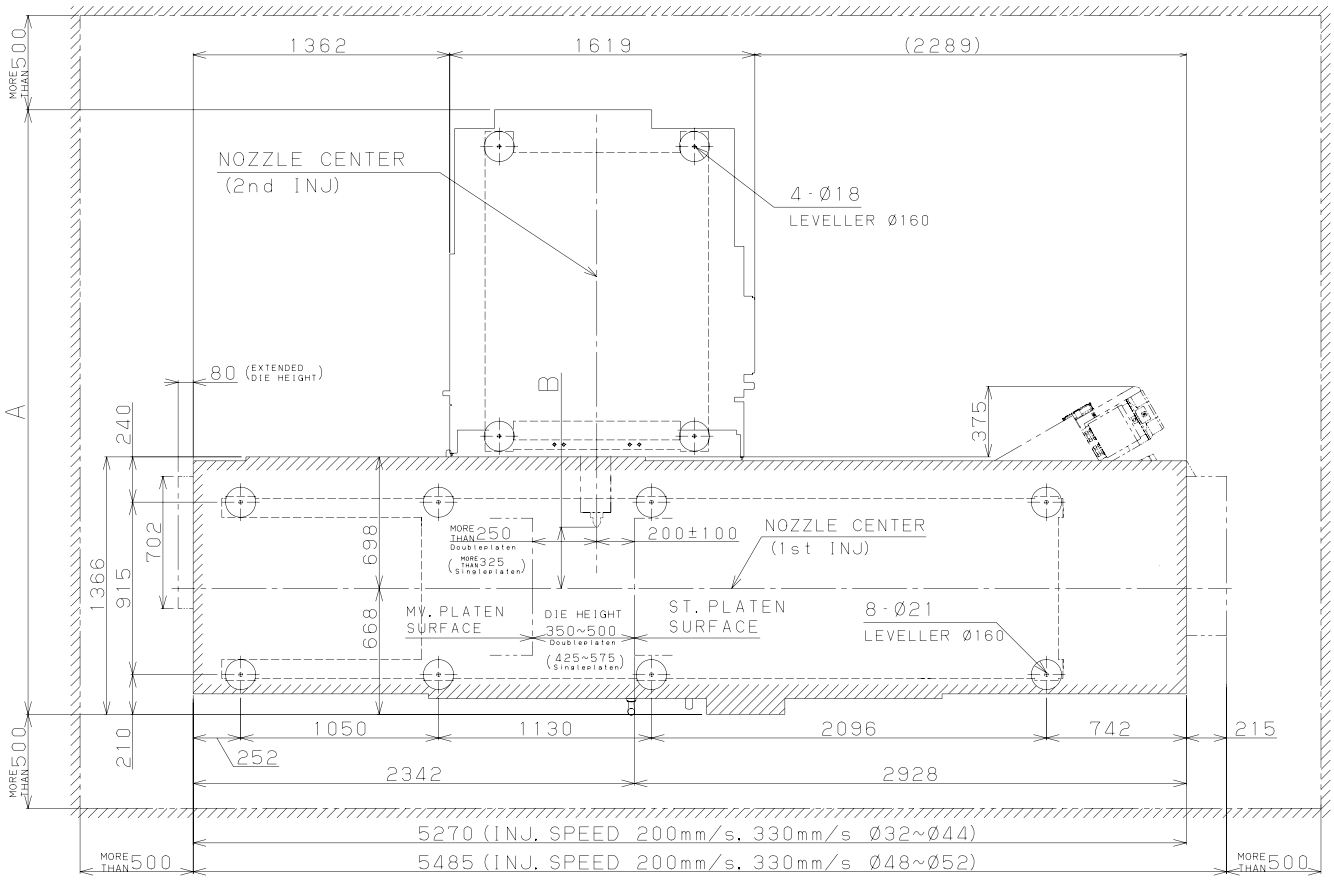


Fig.3 α-S150*i*A

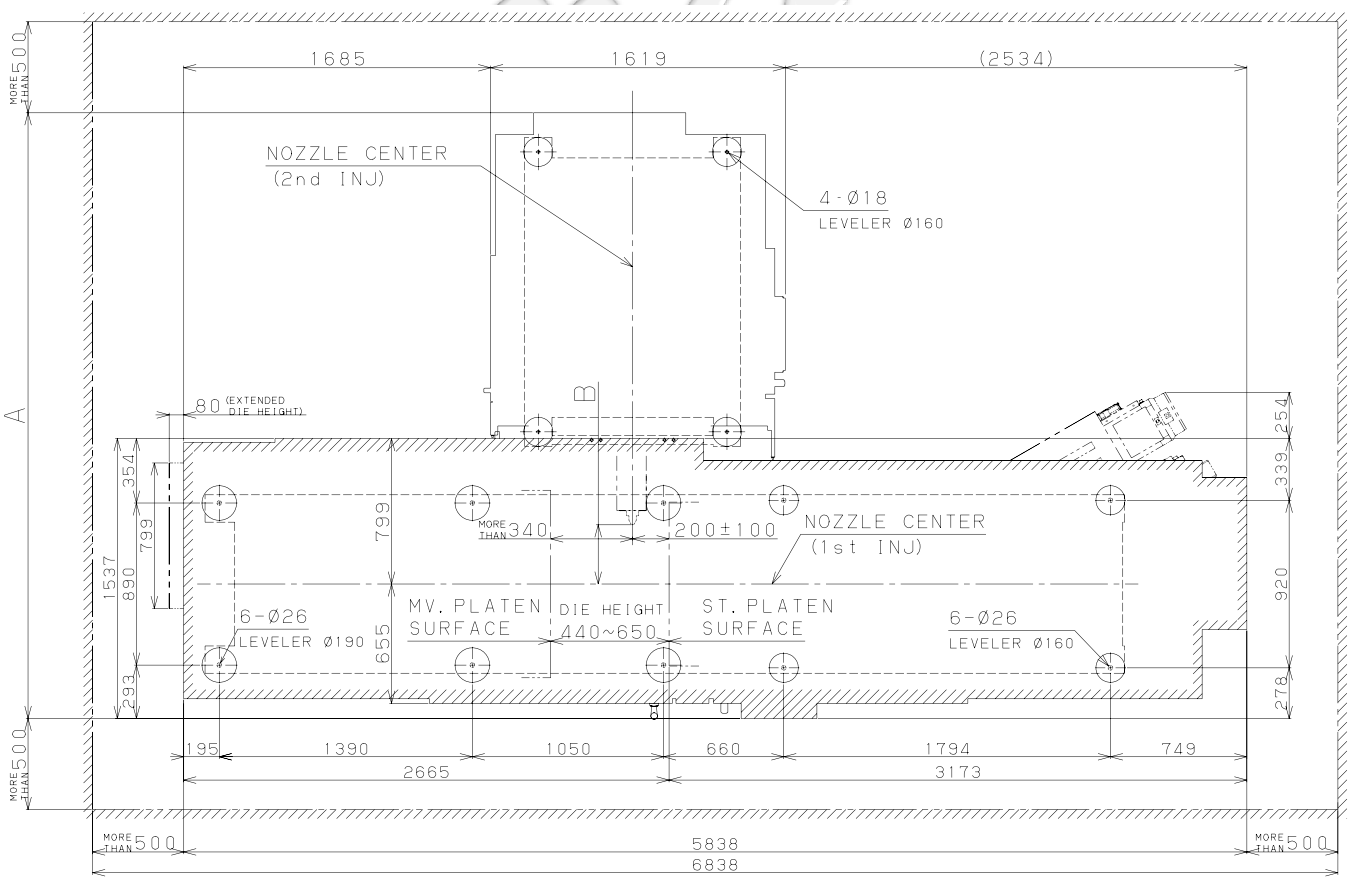


Fig.4 α-S220*i*A

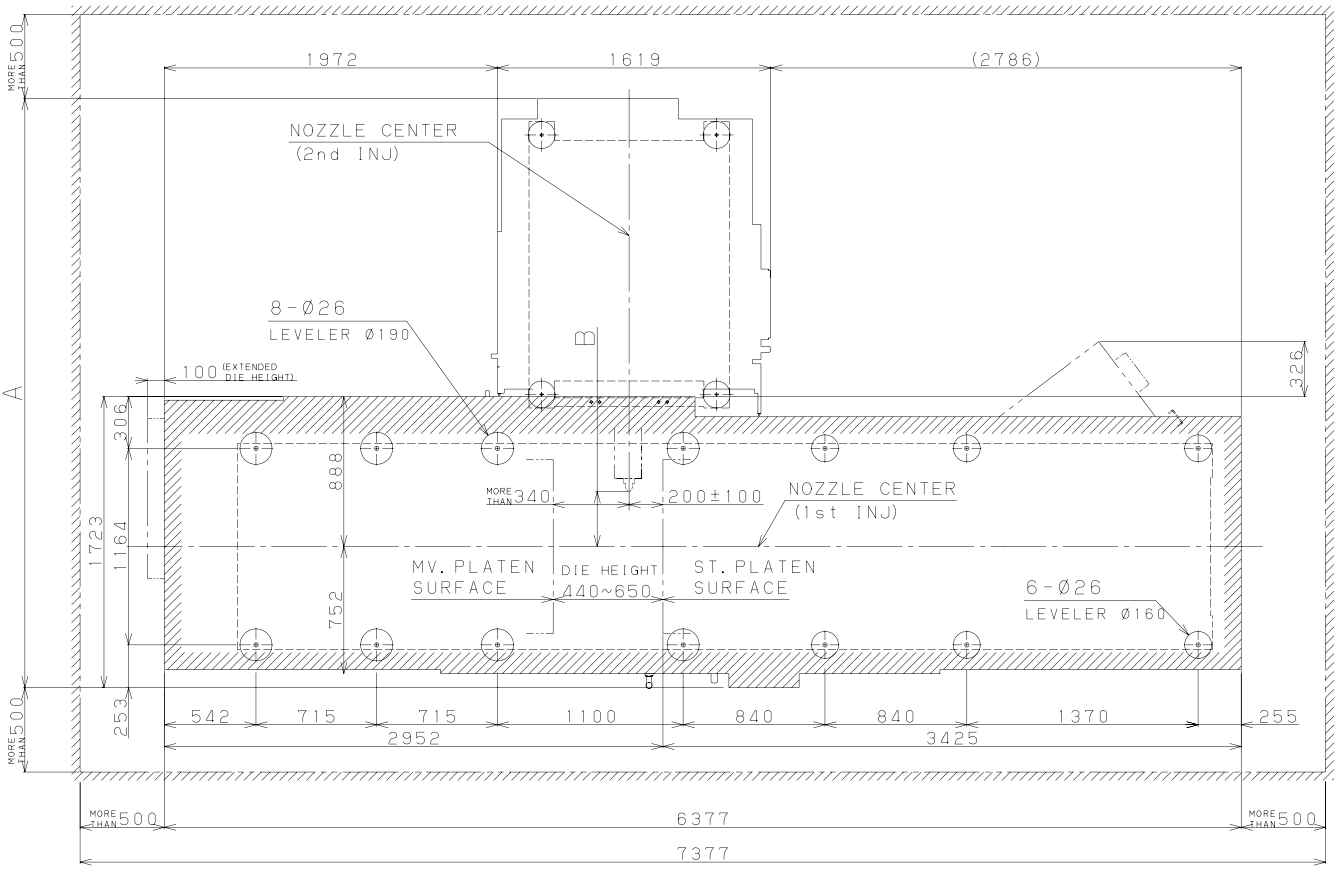


Fig.5 α-S250*i*A

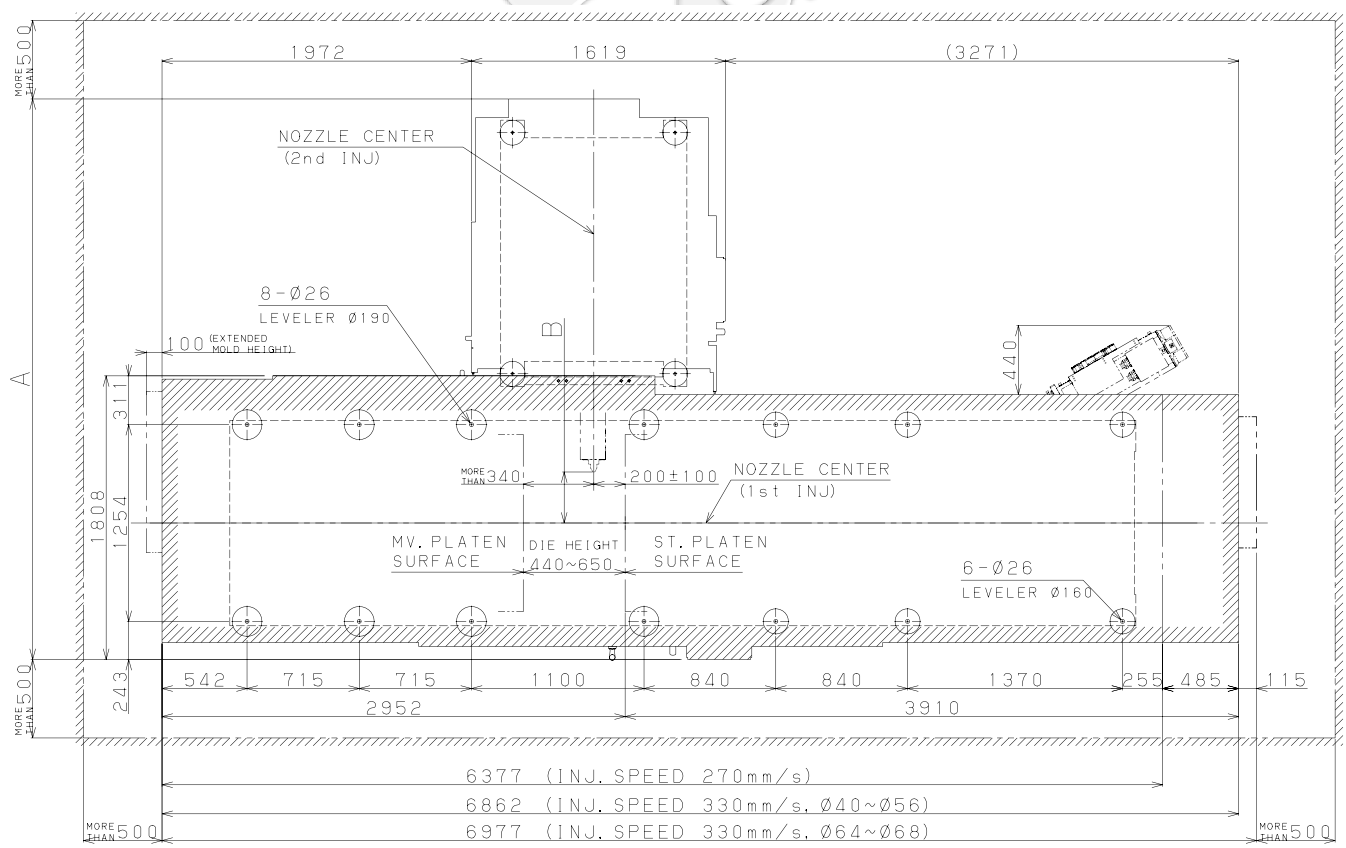


Fig.6 α-S300*i*A

SI-300HA External dimensions and Nozzle movable range

Model	Overall Width A (mm)				Distance from nozzle to locate center Minimum distance B (mm)			
	φ26	φ28	φ32	φ36	φ26	φ28	φ32	φ36
α-S130iA	3200		3435		95			
α-S150iA Small	3250		3485		120			
α-S150iA	3250		3485		120			
α-S220iA	3350		3585		120			
α-S250iA	3510		3745		190			
α-S300iA	3595		3830		240			

Features of α-*si*A series

Item		Suitable category						Detail
		Thin-wall	Lens	Connector	Automotive	Medical	Container	
High Performance								
FANUC standard CNC	Selectable injection acceleration profile	○	○	○				B-14
	Precise injection/Pack switch over	○	○	○	○	○		
	Decompression control in Injection/Packing	○		○				B-18
	Backflow monitor	○	○	○	○	○	○	B-58
	Precise metering			○	○			B-21
	AI pressure profile trace control		○		○			B-22
	AI metering control				○	○		B-23
High rigidity, Low friction mechanism	Selectable 2 types of moving platen	○	○	○	○	○	○	A-23
	Moving platen support by Linear Guide	○	○	○				A-19
Additional servo axes control	Suitable feeding device		○	○	○	○		B-85
	Servo nozzle touch		○	○				
	Mold core drive				○	○	○	
High Reliability								
Safety, Usability	Fully covered mechanism	○	○	○	○	○	○	A-13
Operation rate improvement	AI mold protection	○	○	◎	◎	○	◎	B-34
	Start up function				○		○	B-24
Global support	Conformation to safety requirements	○	○	○	◎	◎	◎	A-17
	Multi language display	○	○	○	◎	◎	◎	B-4
High Productivity								
Energy saving	Low electricity heat up				○	○	○	B-46
	Power consumption monitor	◎	○	◎	◎	◎	◎	B-57
	Precise clamping force control	○	○					B-31
Cycle time reduction	Simultaneous motion	○		○	○		○	B-33
	Cycle diagnosis			○	○		○	B-56
Product/Quality management	**ROBOSHOT-LINK*i***	○	○	○	◎	◎	○	B-62
System integration	Customizable machine status signals				○	○		B-65
	Customizable core motion				○	○	○	B-66
	External sensor connection		○	○	○			B-88

Standard and Optional features (Mechanical unit)

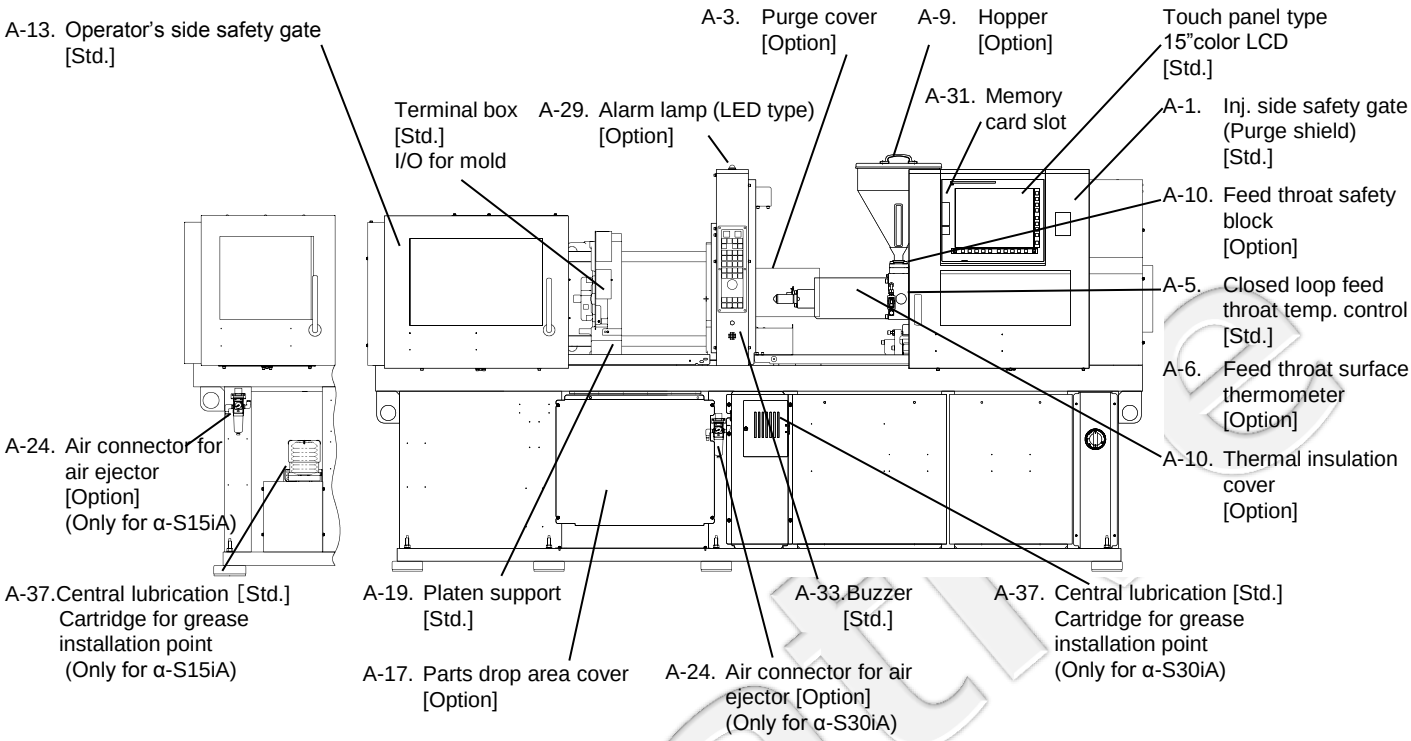
Std : Standard feature
●:Option with no retrofitting capability
○:Option with retrofitting capability note1)

Refer to the other pages for the barrel/screw options

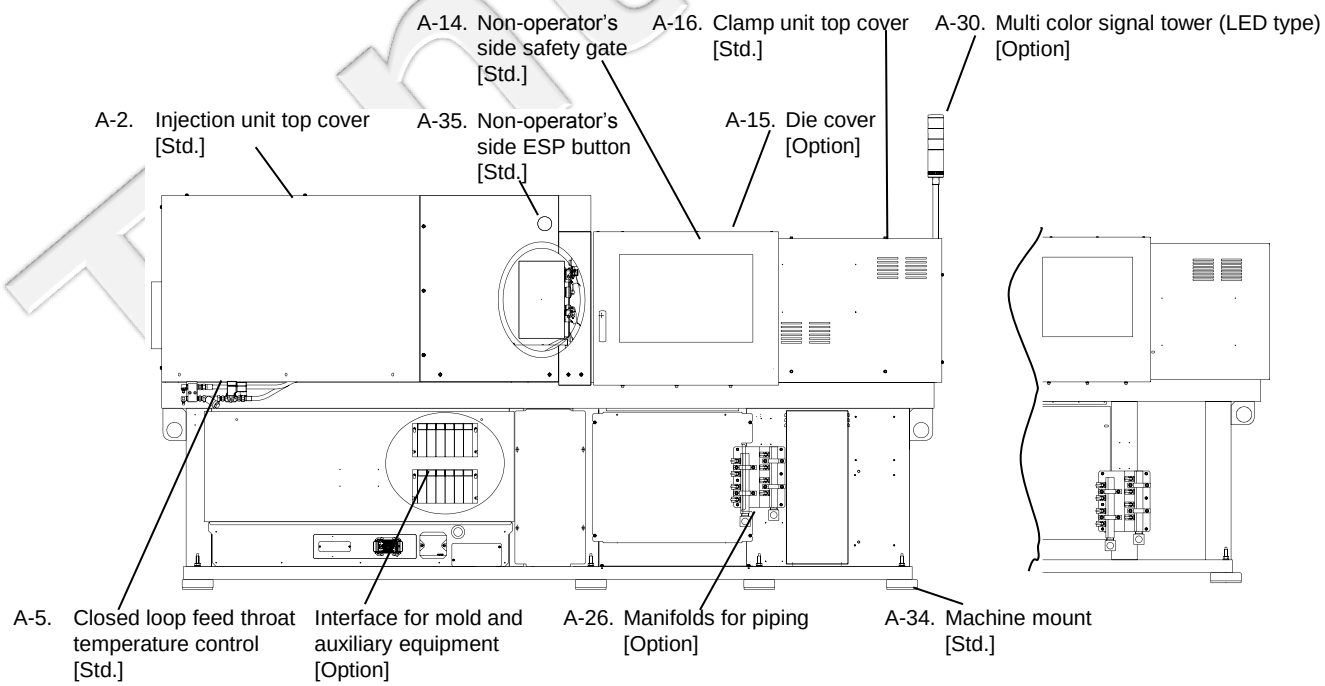
No	Item		15*i*A	30*i*A	50*i*A	100*i*A	130*i*A	150*i*A	220*i*A	250*i*A	300*i*A	450*i*A
Injection unit												
A-1	Safety gate, covers	① Slide type safety gate	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-2		② Injection unit top cover (Covering mechanical portion away from dust)	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-3		③ Purge cover (Allows the injection unit to move even if the safety gate on the operator's side is open.) Convenient for adjusting nozzle center alignment)	○	○	○	○	○	○	○	○	○	○
A-4	Injection unit swivel	Swivels the injection unit to the operator's side in changing screw / barrel. With the safety stopper.	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-5	Closed loop feed throat temperature control	Using the solenoid valve with strainer. Effective in reducing the deviation of the metering time	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-6	Feed throat surface temperature	Thermometer mounted on the side of the water jacket	○	○	○	○	○	○	○	○	○	○
A-7	Increased nozzle touch force	3.0 ton type（Increased to 3.0 ton from standard 1.5 ton）Sprue break function is not available	--	--	○	○	○	○	--	--	--	--
		5.0 ton type（Increased to 5.0 ton from standard 3.0ton）Sprue break function is not available	--	--	--	--	--	○	○	○	○	○
A-8	Suitable feeding device	Additional servo axisi control achieves optimal amount of resin supply with feedback control and long term molding repeatability	●	●	●	●	●	●	●	●	●	●
A-9	Hopper	① 15 litter aluminum or stainless hopper with shutter (φ28 or smaller diameter)	○	○	○	○	○	○	○	--	--	--
		② 30 litter aluminum or stainless hopper with shutter (φ32 or larger diameter)	--	--	--	○	○	○	○	○	○	○
		③ 50 litter aluminum or stainless hopper with shutter (φ32 or larger diameter)	--	--	--	○	○	○	○	○	○	○
A-10	Feed throat safety block	With safety pin	○	○	○	○	○	○	○	○	○	○
A-11	Thermal insulation cover	Heat cover with the thermal insulator (Thermal insulation cover cannot be used on ceramic heater)	○	○	○	○	○	○	○	○	○	○
A-12	Additional temperature control zone for nozzle or barrel	Add nozzle temperature control (Zone2) or barrel temperature control (Zone4)	○	○	○	○	○	○	○	○	○	○
Clamp unit												
A-13	Safety gate, covers	Operator's side safety gate (Immediate stop by the gate open.)	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-14		Non-operator's side safety gate (Immediate stop by the gate open.)	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-15		Die cover for safety and die protection	Std	Std	Std	Std	Std	Std	--	--	--	--
A-16		Clamp unit top cover for safety (Covering mechanical portion away from dust)	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-17		Parts drop area covers for safety	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-18	Ejector servo motor equipped with brake	Keep position when safety gate open and emergency stop condition	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-19	Platen support	Improves parallelism at mold open/close and preciseness at mold touch	Std	Std	Std	Std	Std	Std	Std	Std	Std	--
		Further advanced parallelism at mold open/close by using linear guide	●	●	●	●	●	●	●	●	●	Std
A-20	Robot mounting holes	Refer to the other page for the detail dimension	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-21	Clamp force sensor	Optimize clamp force automatically	●	●	●	●	●	●	●	●	●	Std
A-22	Clamp force variation	65 ton package	--	--	○	--	--	--	--	--	--	--
		125 ton package	--	--	--	●	--	--	--	--	--	--
		180 ton package	--	--	--	--	--	○	--	--	--	--
		300 ton package	--	--	--	--	--	--	--	○	--	--
		350 ton package	--	--	--	--	--	--	--	--	●	--
		500 ton package	--	--	--	--	--	--	--	--	--	●
A-23	Extended die height 'No clamp stroke change	Double platen: Maximum die height+50mm (350→400mm)/Minimum die height No change (150mm)	--	--	○	--	--	--	--	--	--	--
		Single platen: Maximum die height+50mm (410→460mm)/Minimum die height No change (210mm)	--	--	○	--	--	--	--	--	--	--
		Double platen: Maximum die height+100mm (450→550mm)/Minimum die height No change (150mm)	--	--	--	○	--	--	--	--	--	--
		Single platen: Maximum die height+100mm (520→620mm)/Minimum die height No change (220mm)	--	--	--	○	--	--	--	--	--	--
		Single platen: Maximum die height+100mm (570→670mm)/Minimum die height No change (200mm)	--	--	--	--	●	--	--	--	--	--
		Double platen: Maximum die height+100mm (500→600mm)/Minimum die height No change (200mm)	--	--	--	--	--	●	--	--	--	--
		Single platen: Maximum die height+100mm (575→675mm)/Minimum die height No change (275mm)	--	--	--	--	--	●	--	--	--	--
		Single platen: Maximum die height+100mm (650→750mm)/Minimum die height No change (250mm)	--	--	--	--	--	--	●	--	--	--
		Double platen: Maximum die height+100mm (650→750mm)/Minimum die height No change (300mm)	--	--	--	--	--	--	--	●	●	--
A-24	Air ejector	Independent 3 outputs control (One on the stationary platen / Two on the moveable platen)	○	○	○	○	○	○	○	○	○	○
A-25	Insulator plate	Package for both halves./ Made by LOSSNA, PGE-6771, PGX-595 or HEG. Select thickness from either 5 or 10mm	○	○	○	○	○	○	○	○	○	○
Auxiliary unit												
A-26	Manifolds for piping	4 lines (with flow control valves)	○	○	○	○	○	○	○	○	○	○
A-27	Mold heater controller	① 4kW 2plugs / ch × 3ch total 6plugs	○	○	--	--	--	--	--	--	--	--
		② 4kW 2plugs / ch × 4ch total 8plugs	--	--	○	○	○	○	○	○	○	○
A-28	Multi-channel hot runner controller Note3) No multiple selection is allowed.	① 3kW / ch × 6ch Total 18kW	--	●	--	--	--	--	--	--	--	--
		② 3kW / ch × 12ch Total 34kW	--	--	●	●	●	●	●	●	●	●
A-29	Alarm lamp Note 2)	Red colored with selectable blinking/no blinking. LED type. Mounted on clamp top cover	○	○	○	○	○	○	○	○	○	○
A-30	Multiple color signal tower Note 2)	Three different colors with selectable flashing/no flashing. LED type. Mounted on clamp top cover	○	○	○	○	○	○	○	○	○	○
A-31	Memory card	Compact flash card for 500 molding condition files storage and screen dump capability	○	○	○	○	○	○	○	○	○	○
A-32	Memory card adaptor	Exclusive card adapter for memory card slot. Memory card can be inserted to the slot without protruding.	○	○	○	○	○	○	○	○	○	○
Overall												
A-33	Audible buzzer		Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-34	Machine mount		Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-35	Emergency stop buttons	Emergency stop buttons on both operator and non-operator side	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-36	Main breaker		Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-37	Central lubrication	Electric type automatic lubrication system performs periodical automatic lubrication which is demanded to maintain the machine accuracy for long term. Grease shortage or tube disconnection can be detected by valve switch. Cartridge grease provides easy refill. One spare cartridge is attached.	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std
A-38	Grease cartridge for maintenance	Specially developed high performance grease for central lubrication（1or 6 units）	○	○	○	○	○	○	○	○	○	○
A-39	Tool kit	Select from followings ① Grease gun only ② Tool set (Std.) : Hex wrench set (1.5-14mm), Spanners (nozzle detaching, width 19/24/32), + screwdriver and Tool box ③ Tool set (Full) : Hex wrench set (1.5-19mm), Spanners (nozzle detaching, width 17/19/24/27/32/36), Screwdriver, T-shape hex wrench (5mm),Precision screwdriver(2.3mm) and tool box ④ Grease gun+Tool set (Std.) ⑤ Grease gun+Tool set (Full)	○	○	○	○	○	○	○	○	○	○
A-40	Fuse kit	Fuse set for control unit and heater	○	○	○	○	○	○	○	○	○	○
A-41	Touch up paint	For painting repair (200cc can)	○	○	○	○	○	○	○	○	○	○
A-42	EUROMAP67 robot interface		Std	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) Cannot be installer alarm lamp and multipul color signal tower at the same time
Note 3) Cannot be installed with mold heater controller option

Operator's side

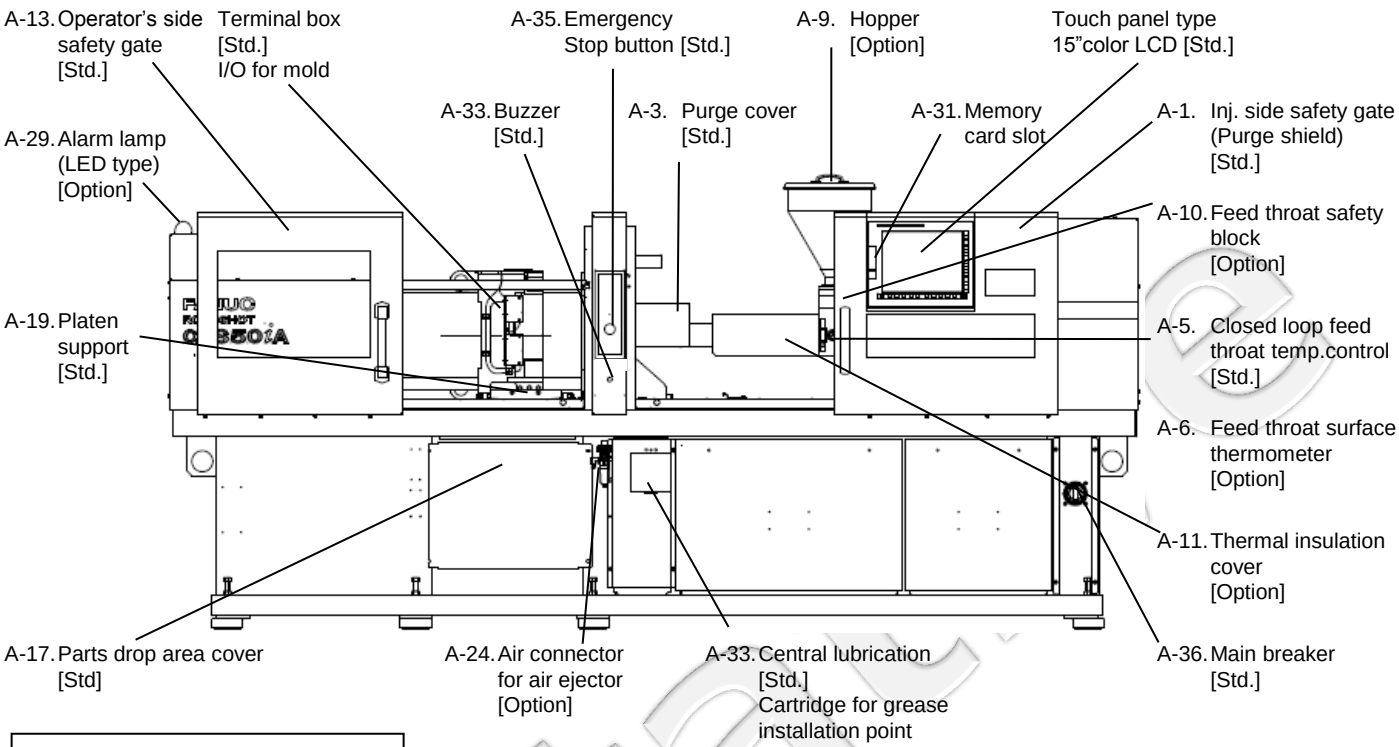


Non-operator's side

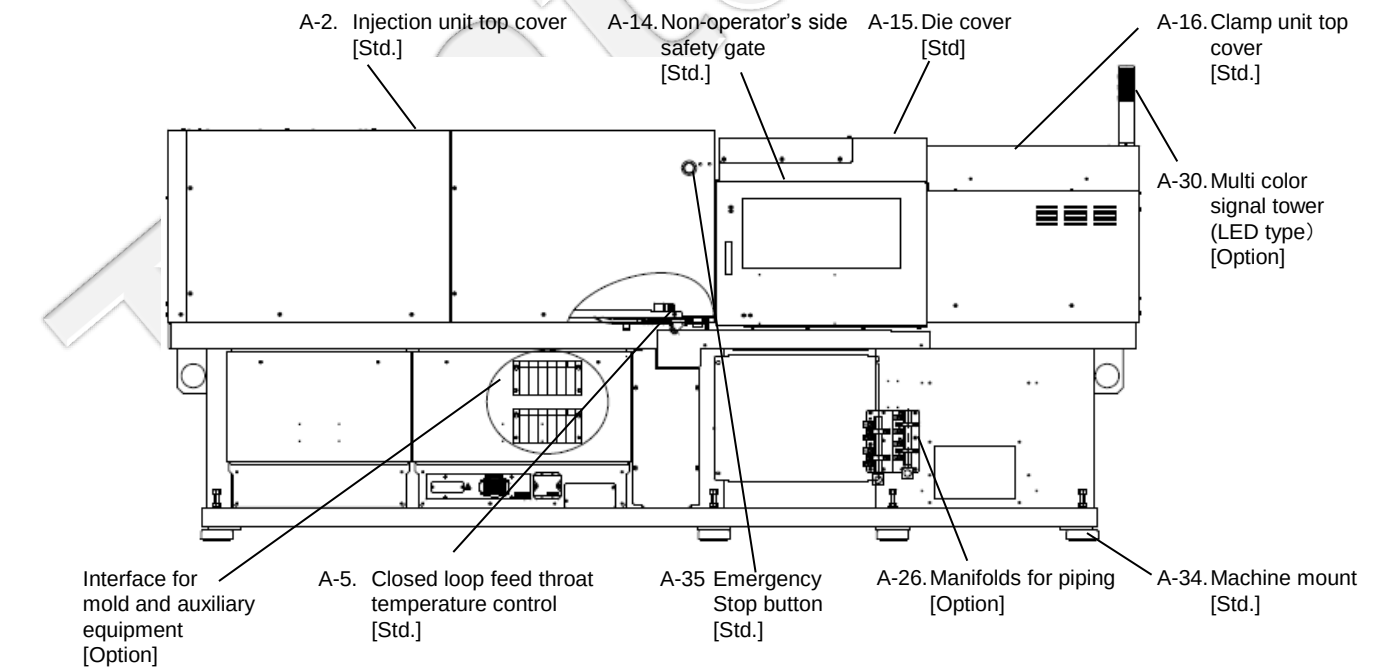


The numbers in above drawing meet with those in the table in "Standard and Optional features (Mechanical unit)".

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		22 languages (Japanese, English, Simplified Chinese, Traditional Chinese, Korean, Thai, Vietnamese, Indonesian, German, French, Italian, Spanish(Mexico), Portuguese, Finnish, Czech, Dutch, Hungarian, Danish, Polish, Russian, Turkish, Swedish)	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	Manage 200 operators with languages by password. Operator name is recorded in Last Change Log	Option
			Operator management with ID card instead of password	Option
B-8	Customization of menu buttons	Custom menu		Standard
B-9	Setting profile display		Injection, Packing, Extruder ,Clamp open/close, Eject, Temperature	Standard
B-10	iHMI home screen Note6)		New graphical user interface	Standard
B-11	Help function Note6)		Context-sensitive help function for settings, signal, alarm	Standard
B-12	Manual viewer Note6)		Display Operator's manual and Maintenance manual on ROBOSHOT screen	Standard
B-13	VNC client function Note6)		Remote operation of VNC enabled devices (Virtual Network Computing)	Option
Injection and Extruder control				
B-14	Injection control		10 steps of pressure and speed control (step can be specified), Constant injection acceleration ratio, Gate flow control	Standard
		Injection response	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-15	Packing control		6 steps of pressure and time control (step can be specified), Maximum pack speed control, Extruder delay timer	Standard
B-16	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-17	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-18	Decompression control in Injection/Packing	HR mode	Selectable 8 modes pressure response	Standard
B-19	Automatic purging of resin	Auto purge	Normal mode/Refresh mode. Automatic calibration of injection pressure sensor is also available.	Standard
			Change purge condition sequentially	Option
B-20	Sprue break			Standard
B-21	Backflow prevention control	Precise metering control	Decompression after metering (Precise metering 2), Compression before injection (Precise metering 3)	Standard
B-22	Pressure curve repeating at good parts molding	AI pressure profile trace control	Injection pressure	Standard
			Cavity pressure, Nozzle pressure	Option
B-23	Recovery process repeating at good parts molding	AI metering control		Standard
B-24	Automatic start up parameter change	Start up function	5 steps : A part of injection, packing, extruding and temperature parameter	Option
Clamp/Ejector				
B-25	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-26	Ejector control		Maximum 10 pulses ejection	Standard
		2 stage ejector	2 stage ejector (4 patterns of ejector motion profile)	
		Ejector delay timer	Delayed ejection	
B-27	In-mold degating	Pre-ejector		Standard
			0.001 mm position settings, 0.001 sec time settings	Option
B-28	Ejector compression function Note 2)	Ejector compression		Option
B-29	Clamp compression function	Clamp compression		Option
B-30	Automatic adjustment of die height	Automatic die height adjustment	0kN - Maximum clamp force	Standard
B-31	Automatic adjustment of optimum clamping force	Precise clamping force control		Option
B-32	Reduction of setup time	Auto product change		Option
B-33	Simultaneous motion	Ejection in clamp opening	Simultaneous ejector forward and clamp open	Standard
		Pre-injection	Simultaneous clamp and injection	Standard
			0.001 sec time settings	Option
		Clamp open and extruder	Simultaneous clamp open and extruder	Standard
		Ejector override	Simultaneous ejector retract and clamp close	Option
B-34	Protection of mold and ejector	AI mold protection	Clamp open and close	Standard
		AI ejector	Ejector forward and backward	Standard
Temperature control				
B-35	Nozzle/Barrel temperature control		High precision PID loop temperature control (0.01 degree resolution)	Standard
B-36	Closed loop feed throat temperature control		Solenoid valve ON/OFF control	Standard
B-37	Temperature alarm detection		Upper/lower band setting	Standard
B-38	PID parameters tuning	Auto-tuning function	Automatic tuning after heat up end	Standard
		Self-tuning function	Automatic tuning during heat up	
B-39	Synchronous nozzle/barrel heat up			Standard
B-40	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-41	Nozzle tip protection by cold resin	Soak timer		Standard
B-42	Nozzle/Barrel temperature holding	Low temperature holding		Standard
B-43	Resin residence time monitoring	Residence time monitor	Heater control when residence time becomes long	Standard
B-44	Thermocouple break detection			Standard
B-45	Heater disconnection detection		Heat up rate detection by software	Standard
			Heater current detection by special hardware	Option
B-46	Reduction of maximum electricity power	Low electricity heat up	Suppress heater output by 50% or 70%	Standard
B-47	Automatic transition to stop mode	Shutdown sequence	Temperature control/Clamp close/Nozzle touch/Auxiliary outlet	Option

Output/Input of mold conditions				
B-48	Mold file		500 files. File name, comment, memo input, reference wave is available.	Standard
B-49	Mold file storage		Output device : memory card / USB flash device, Format : JPEG / text	Standard
B-50	Screen image output		Output device : memory card / USB flash device, Format : BMP	Standard
Monitor/Alarm/Diagnosis				
B-51	Process monitor		Cycle alarm, Parts rejection for 24 items, Trend chart for last 20000 shots	Standard
B-52	Self-diagnostic message/ Alarm message			Standard
B-53	Log management	Alarm log	Alarm (5000 logs), Output:memory card/USB flash device, Format:CSV	Standard
		Last change log	Parameters (10000 logs), Output:memory card/USB flash device,Format:CSV	
		Operation log	Operation (10000 logs), Output:memory card/USB flash device, Format:CSV	
		Production log	Production number (100 logs)	
B-54	Production management	Production management	Production number, Start up NG, Consecutive bad cycles, product completion date calculation	Standard
			Cycle end stop in case of the lower good product rate	Option
		Container management	Number of parts-filled container	Standard
		Counter stop function	Stops production counter temporarily	Standard
B-55	Production information entry		Mold ID, Mold model number, Parts model number, Resin name, Resin grade, Cavity number and Memo	Standard
B-56	Graphical timing chart display of each molding process	Cycle diagnosis	Display with reference data, elapsed time measurement	Standard
B-57	Power consumption monitoring	Power consumption monitor	Power consumption and regeneration of ROBOSHOT	Standard
B-58	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-59	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-60	Function selectable input signals	Machine status input	Standard 12 inputs	Standard
B-61	Function selectable output signals	Machine status output	Standard 8 outputs	Standard
B-62	Ethernet port		100BASE-TX, For ROBOSHOT-LINKi	Standard
B-63	Ethernet HUB		100BASE-TX (5 ports)	Option
B-64	Memory card slot, USB slot Note 3)			Standard
B-65	Configurable machine signals	Custom signal function	Maximum 32 points available	Standard
B-66	Configurable core sequence	Custom core function	Maximum 6 systems are available.	Standard
B-67	Picker interface (11 outputs and 6 inputs)		12 outputs (clamp open limit, etc.), 8 inputs (clamp permission signal, etc.)	Standard
B-68	Core interface		4 systems for each core pull/set	Standard
B-69	Shut off nozzle interface Note 5)			Standard
B-70	Vacuum device interface Note 5)			Standard
B-71	Valve gate interface Note 5)		Maximum 16 circuits are available.	Standard
			Injection, clamp closing interlock by external signal	Option
B-72	Parts removal detector interface Note 5)			Standard
B-73	Monitor camera interface Note 5)		Interlock with ejector is available	Standard
B-74	Air ejector interface		Maximum 6 outputs	Option
B-75	Unscrewing interface Note 5)		2 inputs, 2 outputs	Option
B-76	Injection interface Note 5)	Injection permission	Injection permission signal	Standard
B-77	Extruder interface Note5)	Extruder permission	Extruder permission signal	Option
B-78	Clamp interface Note 5)	External signal clamp	Clamp open and close	Standard
B-79	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-80	Ejector retract confirmation signal Note 5)	Ejector plate retract confirmation		Standard
B-81	Cycle stop by external signals Note 5)	Alarm signal input	Immediate stop signals, Cycle end stop signals, Display only	Standard
B-82	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-83	Forced rejection when bad parts occurs	Bad parts reject function		Standard
B-84	Non-operator's side parts unloading		EUROMAP 73 (HARTING connector is option)	Option
B-85	Additional axes control	Suitable feeding device Note2)	Achieves optiomal 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, Unscrewing	High-speed and accuracy positioning by FANUC servo technorogy No additional control equipment required, Integrated into ROBOSHOT screen	Option
		Rotaly table	Rotate mold, index table	Option
		Servo door	Safety gate open/close by servo motor	Option
B-86	Stationary side ejector signal	Ejector signals	Ejector forward, retract (hydraulic ejector)	Option
B-87	Waveform data output by voltage	Analog output	Maximum 4 points of injection pressure, position (screw, clamp, eject), speed (screw, rotate, clamp, eject)	Option
B-88	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-89	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-90	Shot counter signal output	Shot counter output function	Current shot count output by 4 points of binary data (0-15)	Option
B-91	Barrel cooling fan control signal output		Maximum 4 points are available.	Option
B-92	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) Supported only for iHMI-installed machines.

Cylinder / Screw / Nozzle Specification

1. Cylinder / Screw / Screw Head / Nozzle

Purpose	Major polymer (Moldings)	Cylinder (Barrel)		Screw	Screw head [4]	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 Dia. 32mm and over, Double flight screw is recommended)	YPT42 / KH	Standard / Chrome plating
Transparent polymer I	PS, ABS, AS	PAL (wear-resistance cylinder)		Chrome plating	YPT42	Chrome plating / TiCN
Transparent polymer II	PMMA, Transparent Polyolefin			W/C + Surface treatment	W/C + Surface treatment	
Lens spec. I	PMMA, PC	H503		W/C + Surface treatment	W/C + Surface treatment	
Lens spec. II	Transparent Polyolefin			W/C + Surface treatment		For Polyolefin
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 : KAM31 S150iA : YPT71	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				KH (Standard / Middle Dia. / Slender)
Semi-high pressure resistance	Thin mold parts, Mobile phone (Cover)	S50iA - S150iAs Special spec.		YPT42	YPT42	Standard
High pressure resistance	Mobile phone (Body)	S50iA - S150iAs Special spec.				
Optical high pressure resistance	Light guide panel	S50iA - S150iAs Special spec.		W/C + Surface treatment		Standard / TiCN
Connector spec. I	PPS (GF 30% and under) PBT, Nylon, LCP	C900 / KH		YPT42 / KAM31	YPT42 / KH	Middle Dia. / Slender
Connector spec. II	LCP Screw Dia. 22mm and under					For LCP (Dia.22mm and under)
Connector spec. III	Heat resistant LCP Screw Dia. 22mm and under	C900(High temp.)		W/C + Surface treatment		For LCP (Dia.22mm and under)
High temperature	Polysulfone, PEI	S15iA - S150iAs C900(High temp.)	Max Setting Temp.450°C [3]	YPT42	YPT42	Standard
		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 Tempareture"

Note 4) Screw head is Non-castle type except for [Nitride] and [W/C Surface treatment].

Note 5) 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 6) Custom profile or other surface treatment are also available.

Note 7) Long L/D specification is available for φ36 of S100iA-S150iAs, φ48 of S150iA-S250iA, φ56 of S300iA-S450iAs.

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 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 Screw Dia.22mm and under
	Short / Long	Heater out.dia.28mm Reference Fig.5		S50iA - S150iAs 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 S130iA Screw Dia.32mm and under S150iA Screw Dia.48mm and under S220iA Screw Dia.48mm and under S250iA Screw Dia.52mm and under S300iA Screw Dia.56mm and under S450iA 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
	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.

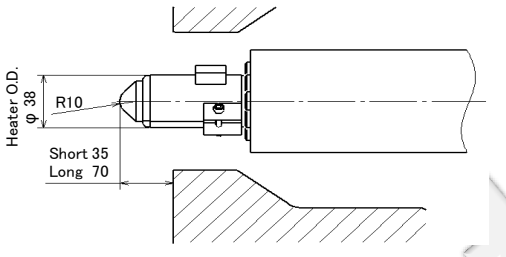


Fig.1 Standard Nozzle (Dia.22mm and under)
(Orifice Dia. ϕ1.5, ϕ2, ϕ2.5, ϕ3, ϕ4)

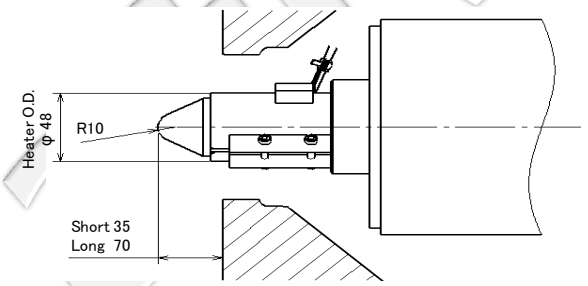


Fig.4 Standard Nozzle (Dia. 26mm and over)
(Including High press. resist.,Semi-high press. resist.,
Optical high press. resist. Nozzle for ϕ22mm and under)
(Orifice Dia. ϕ1.5, ϕ2, ϕ2.5, ϕ3, ϕ4, ϕ5, ϕ6)

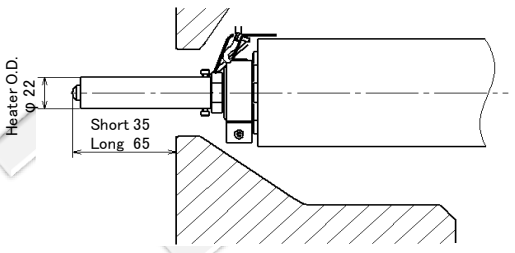


Fig.2 Slender Nozzle
(Orifice Dia. ϕ1.5, ϕ2, ϕ2.5)

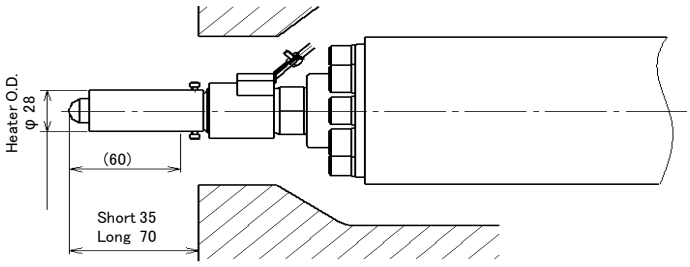


Fig.5 Middle Dia. Nozzle (Dia.26mm and over)
(Orifice Dia. ϕ1.5, ϕ2, ϕ2.5, ϕ3, ϕ4)

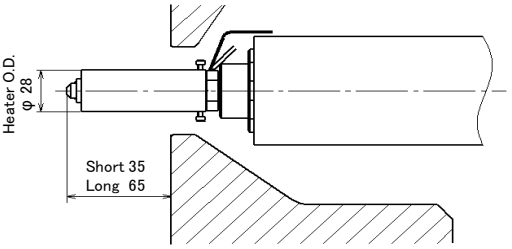


Fig.3 Middle Dia. Nozzle (Dia.22mm and under)
(Orifice Dia. ϕ1.5, ϕ2, ϕ2.5, ϕ3, ϕ4)

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

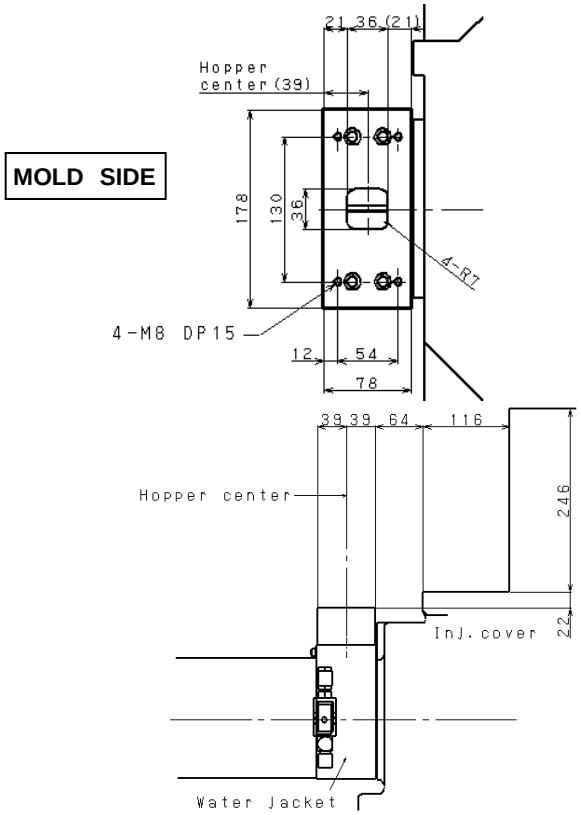


Fig.1 α-S15*i*A/α-S30*i*A

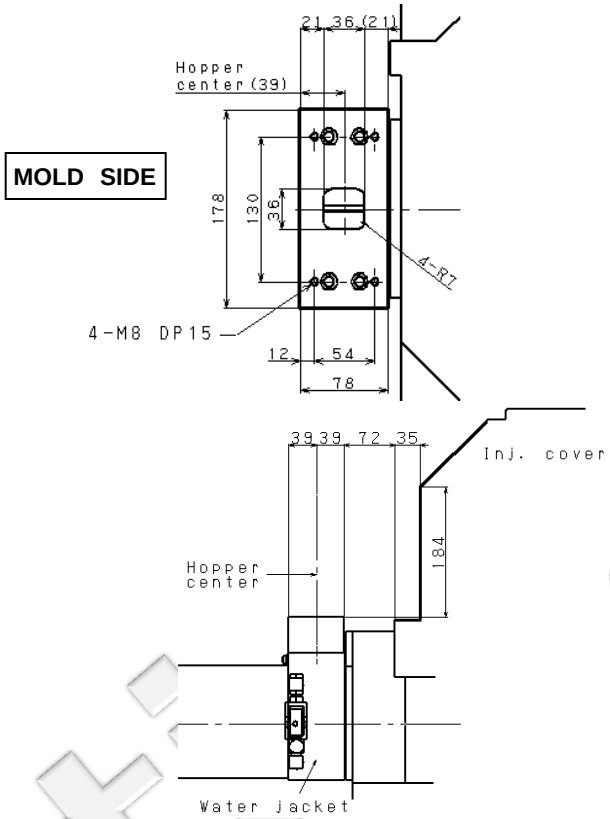


Fig.2 α-S50*i*A/α-S100*i*A
α-S150*i*A (Small capacity injection)
Screw Dia. ϕ22 and under note1)
note1) except for High press. resist., Semi-high press. resist., Optical high press. resist. (refer to Fig.2)

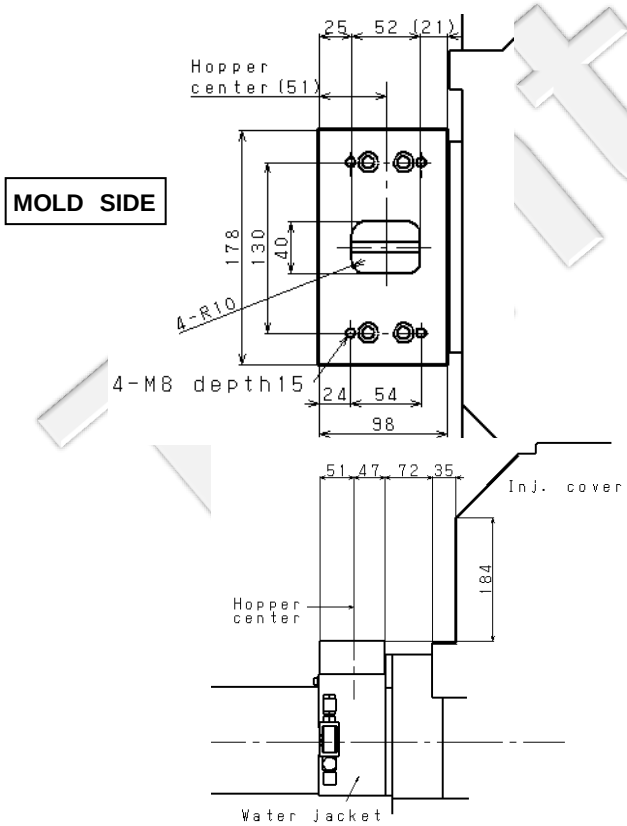


Fig.3 α-S50*i*A/α-S100*i*A
α-S150*i*A (Small capacity injection)
Screw Dia. ϕ26, 28
Screw Dia. ϕ22 and under (High press. resist., Semi-high press. resist, Optical high press. resist.)

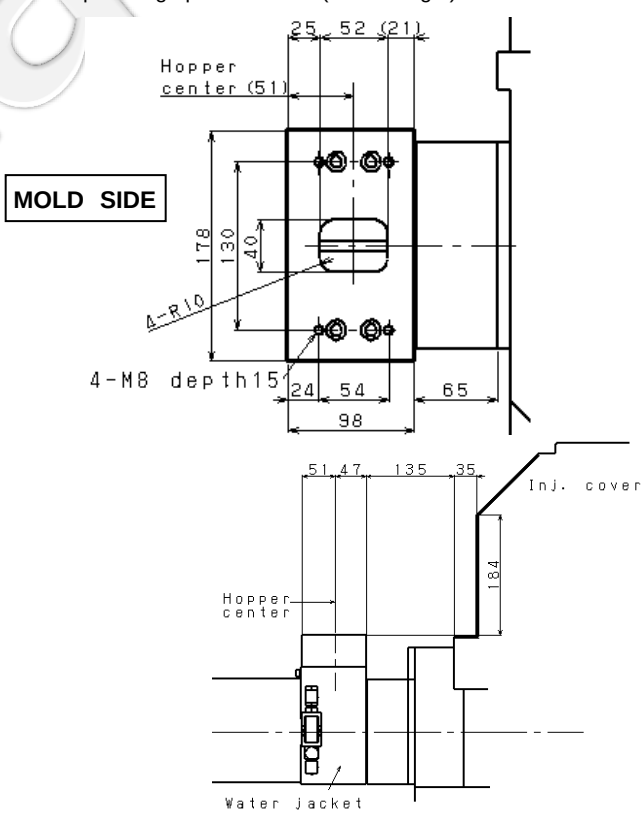


Fig.4 α-S50*i*A/α-S100*i*A/α-S130*i*A
α-S150*i*A (Small capacity injection)
Screw Dia. ϕ32, 36, 40

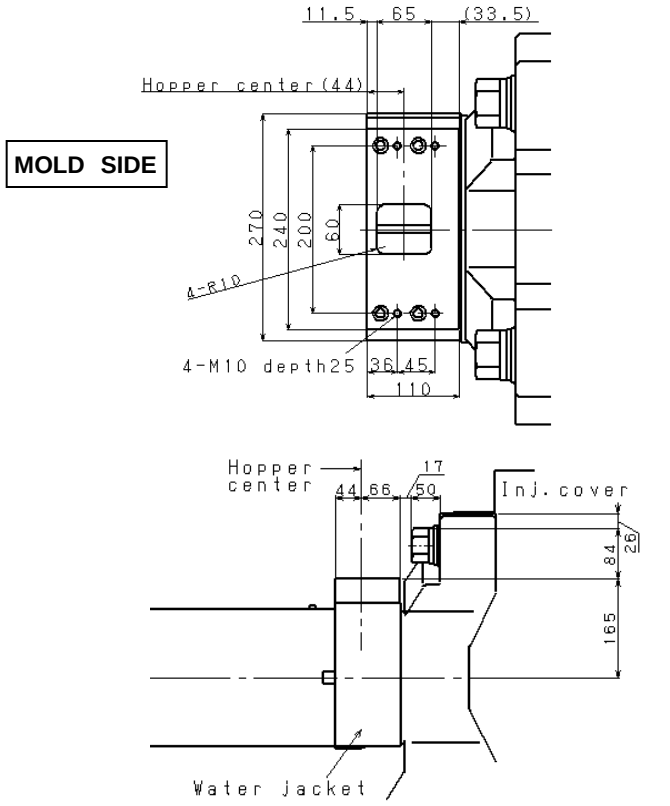


Fig.5 α-S150*i*A/α-S220*i*A/α-S250*i*A
α-S300*i*A (Inj. speed 270mm/s)
Screw Dia. ϕ48 and under

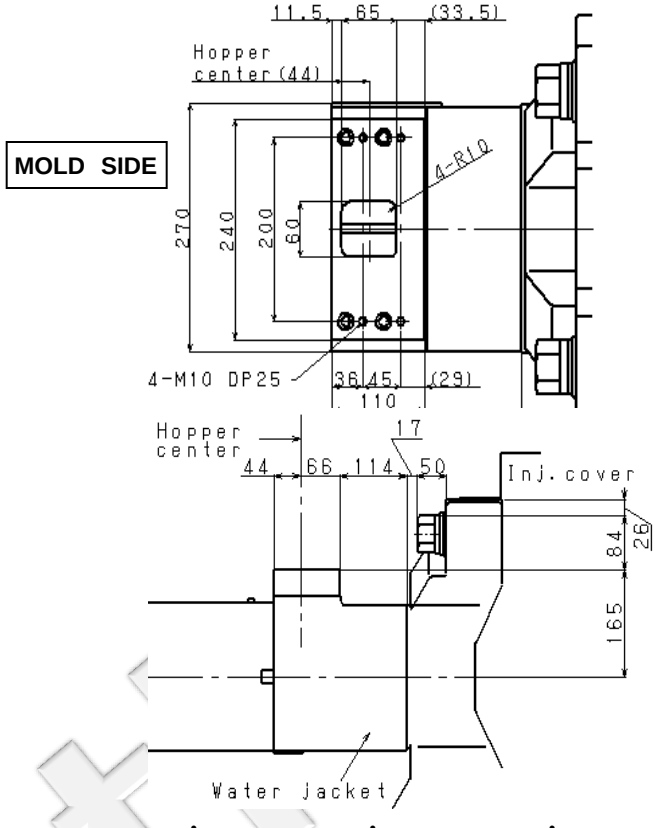


Fig.6 α-S150*i*A/α-S220*i*A/α-S250*i*A
α-S300*i*A (Inj. speed 270mm/s)
Screw Dia. ϕ52 and over

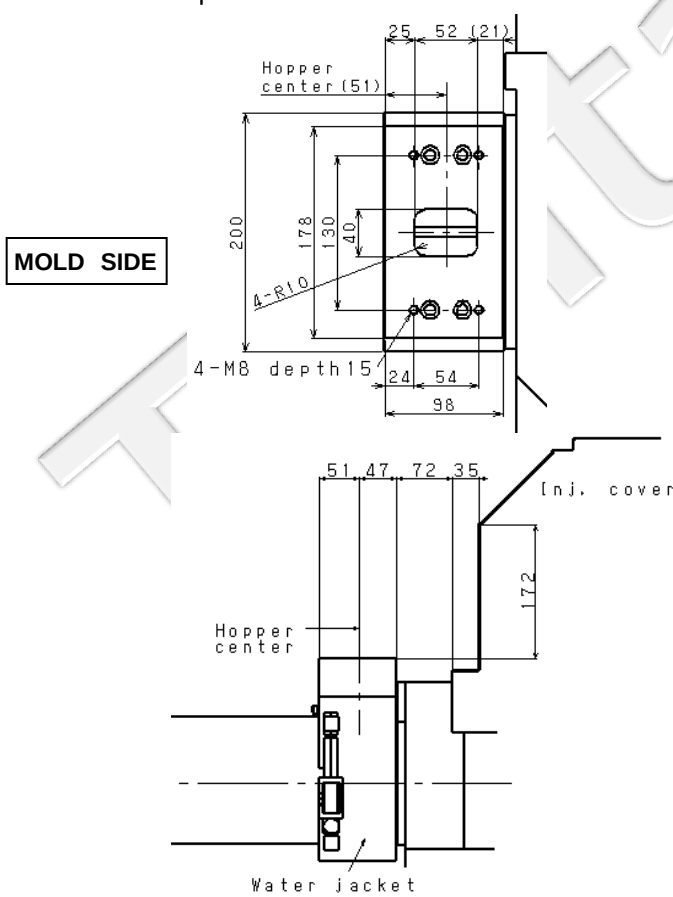


Fig.7 α-S100*i*A
Screw Dia. ϕ28 and under

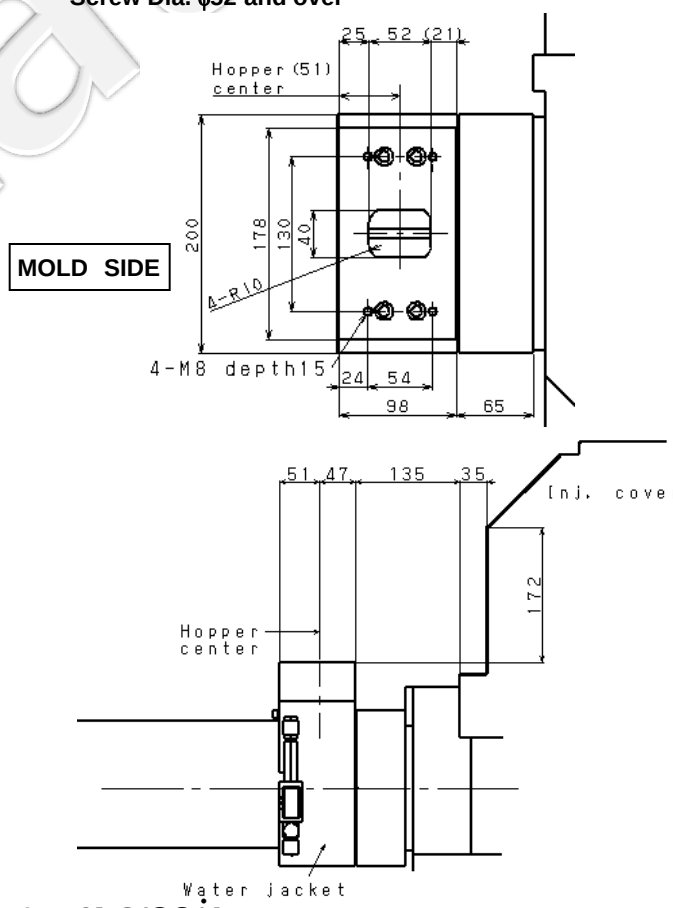


Fig.8 α-S100*i*A
Screw Dia. ϕ32

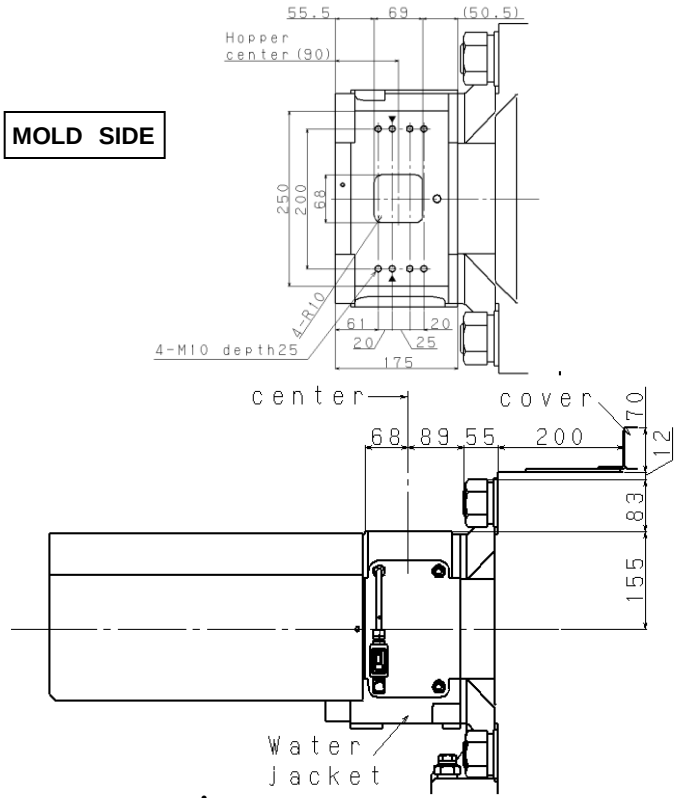
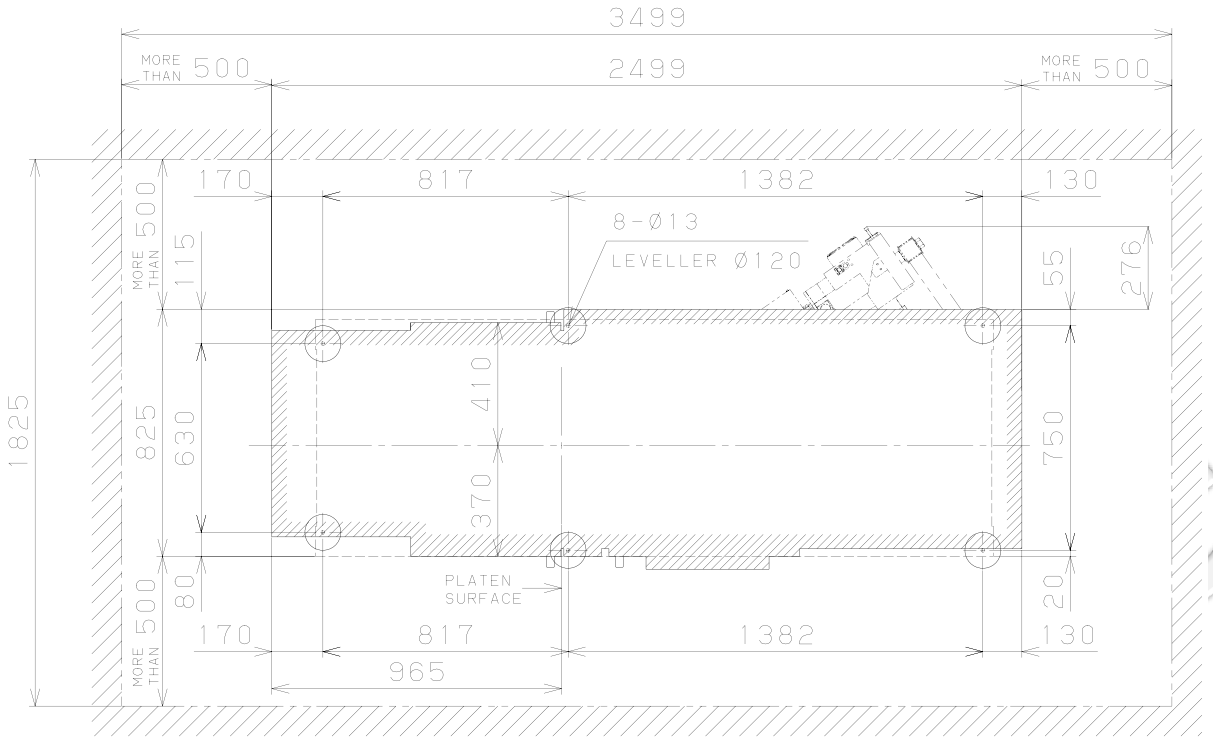


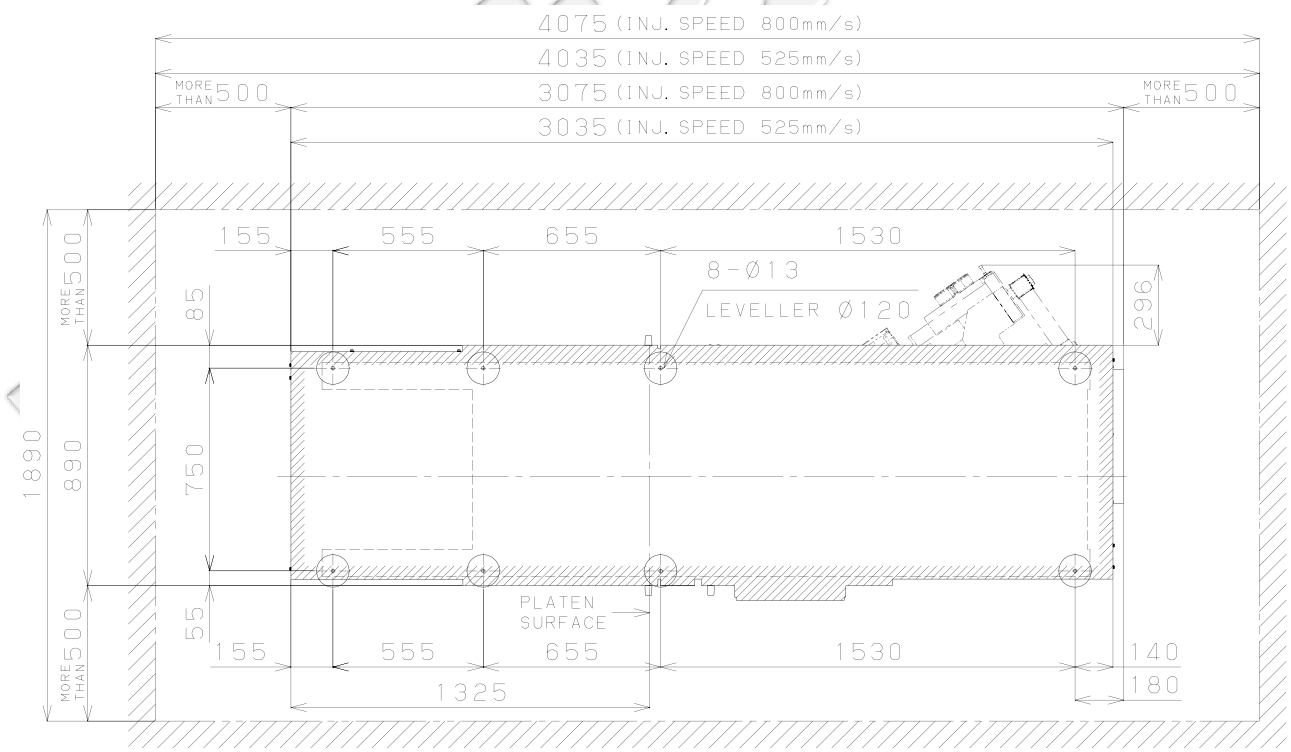
Fig.9 α-S300*i*A
α-S450*i*A (Small capacity injection)

Floor Plan



Clamping side | Operation side | Injection side

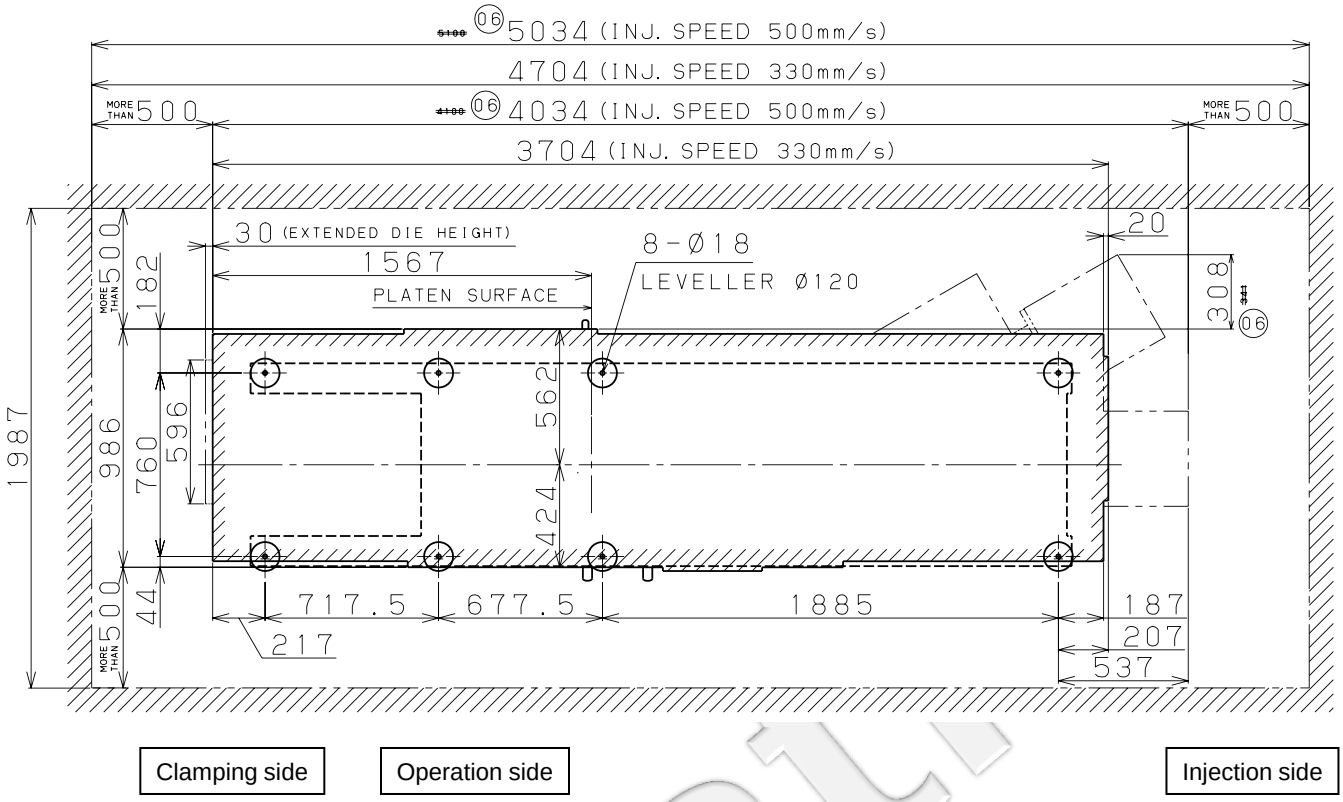
Fig.1 α-S15iA



Clamping side | Operation side | Injection side

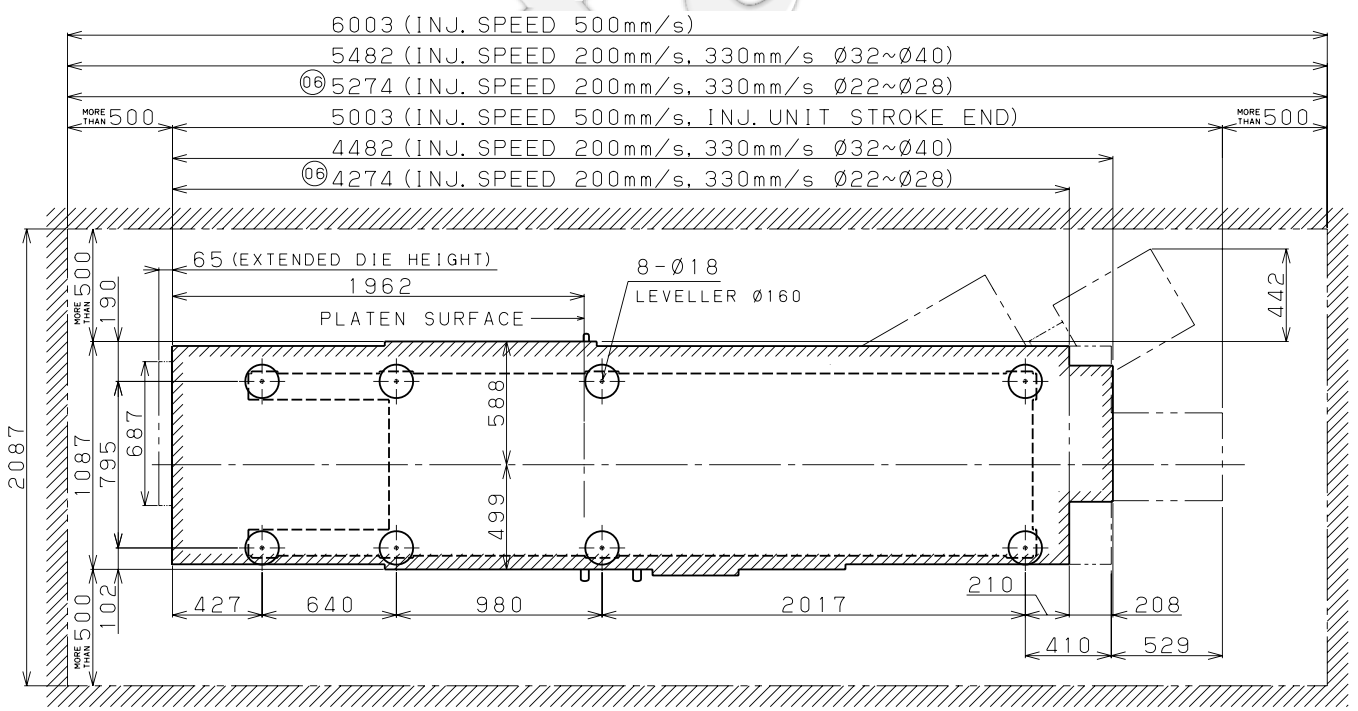
Fig.2 α-S30iA

Floor Plan



Clamping side | Operation side | Injection side

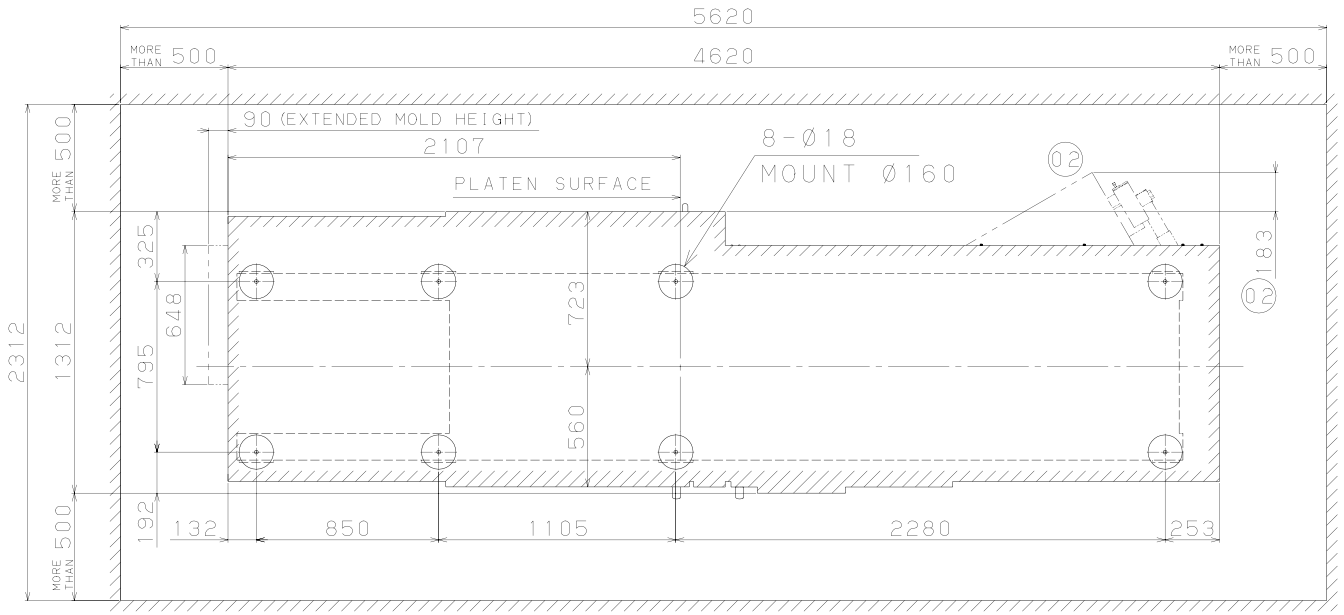
Fig.3 α-S50iA



Clamping side | Operation side | Injection side

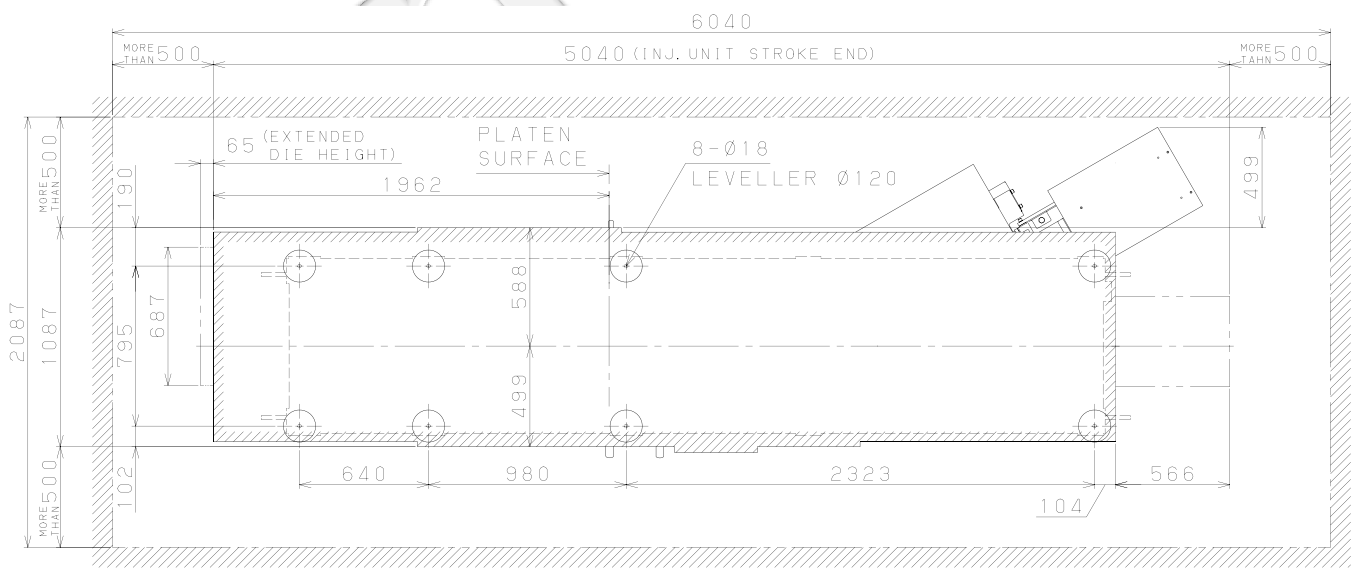
Fig.4 α-S100iA

Floor Plan



Clamping side | Operation side | Injection side

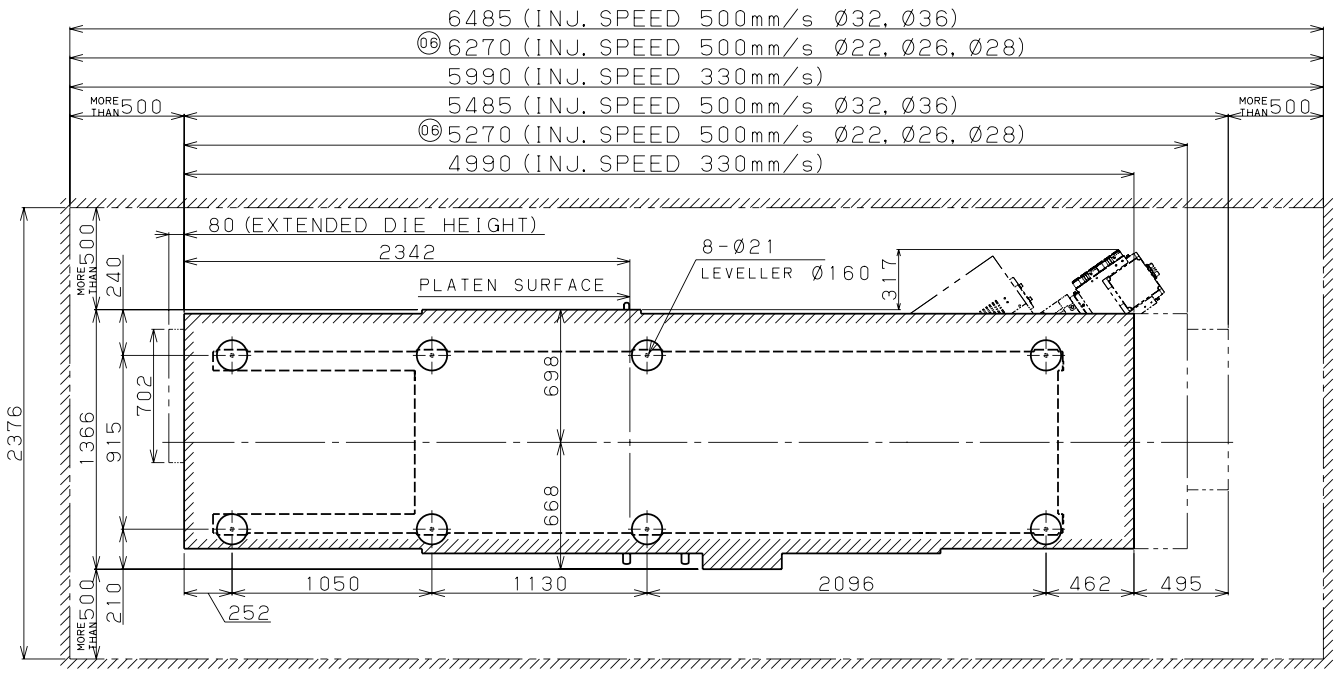
Fig.5 α-S130iA



Clamping side | Operation side | Injection side

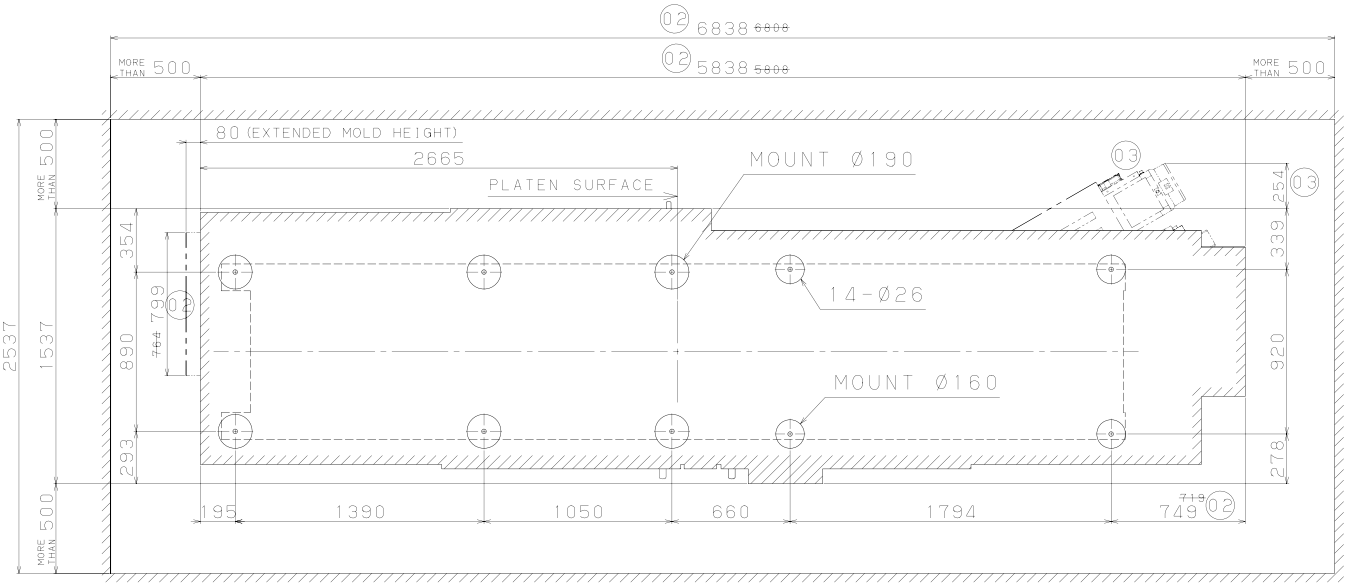
Fig.6 α-S150iA

Floor Plan



Clamping side | Operation side | Injection side

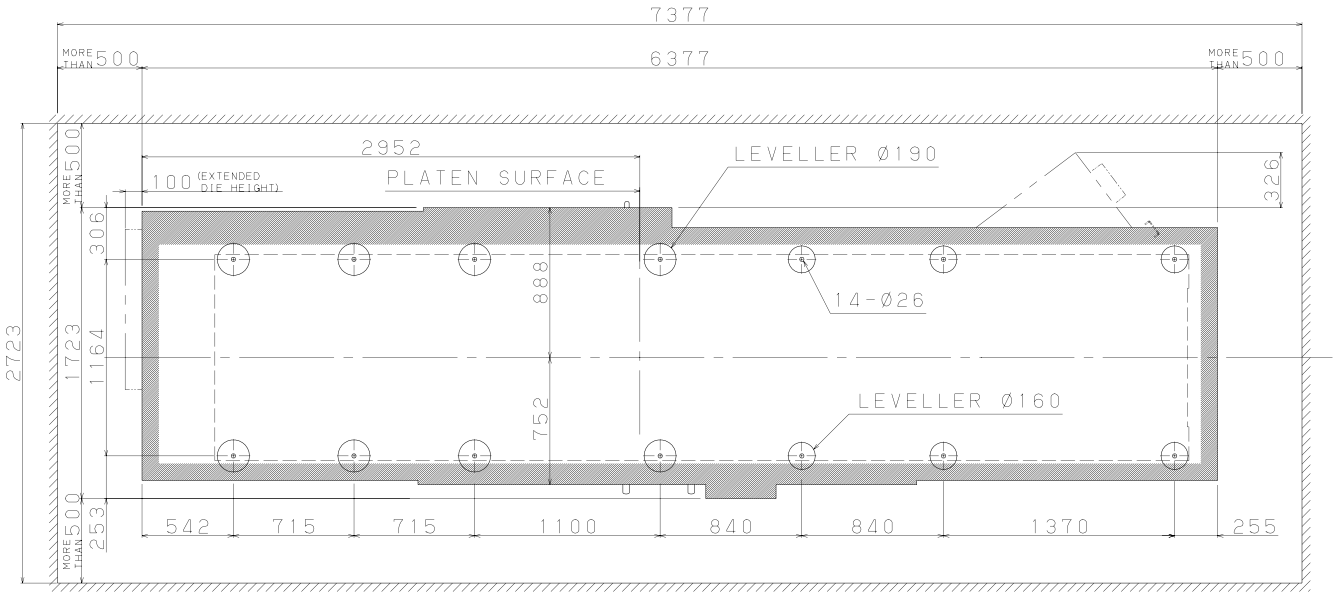
Fig.7 α-S150iA Small capacity injection specification



Clamping side | Operation side | Injection side

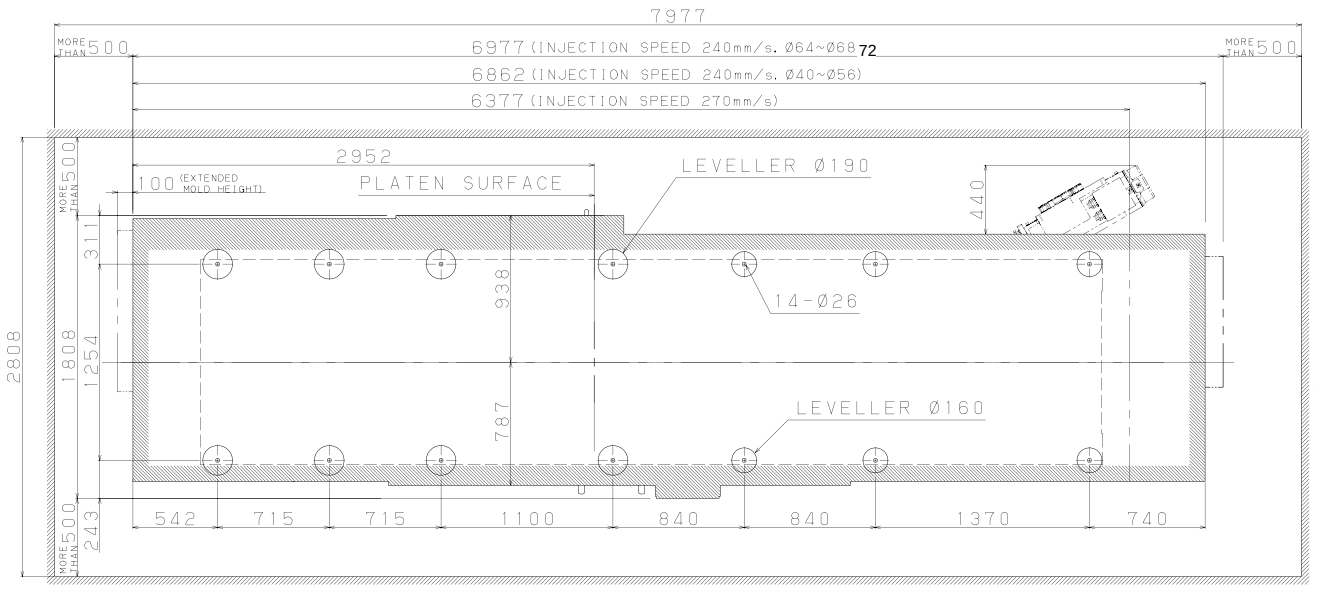
Fig.8 α-S220iA

Floor Plan



Clamping side | Operation side | Injection side

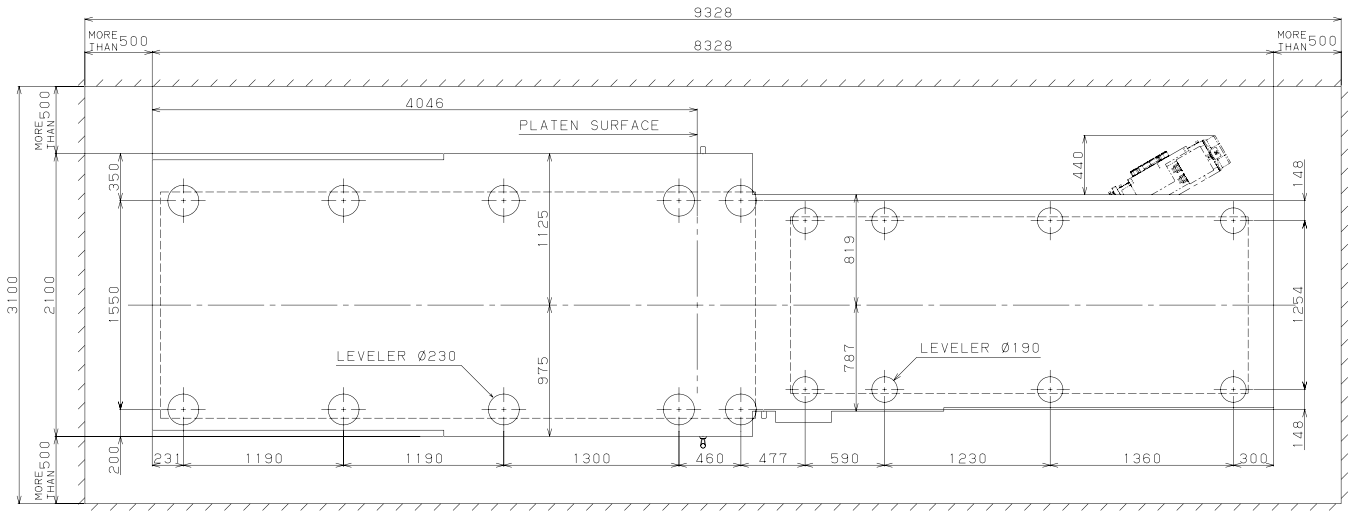
Fig.9 α-S250iA



Clamping side | Operation side | Injection side

Fig.10 α-S300iA

Floor Plan



Clamping side | Operation side | Injection side

Fig.11 α-S450*i*A

Utility

1. Main breaker and primary side power cable

Items	α-S15iA			
	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)	30.6kVA	9.9kVA	34.4kVA	13.6kVA
Power transformer capacity Note5)	35kVA	20kVA	40kVA	30kVA

Items	α-S30iA			
	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)	35.0kVA	14.2kVA	35.0kVA	14.2kVA
Power transformer capacity Note5)	40kVA	30kVA	40kVA	30kVA

Items	α-S50iA			
	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)	50.3kVA	15.7kVA	57.5kVA	22.9kVA
Power transformer capacity Note5)	55kVA	30kVA	65kVA	35kVA

Items	α-S100iA					
	Inj.speed 200mm/s		Inj.speed 200mm/s(High duty)		Inj.speed 330mm/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	150A	60A
Size of primary side power cable	50mm^2	14mm^2	50mm^2	14mm^2	50mm^2	14mm^2
Terminal size of primary side power cable	M8	M6	M8	M6	M8	M6
Terminal size of grounding cable	M8	M8	M8	M8	M8	M8
Power supply capacity Note4)	52.8kVA	18.1kVA	52.8kVA	18.1kVA	52.8kVA	18.1kVA
Power transformer capacity Note5)	55kVA	35kVA	55kVA	35kVA	55kVA	35kVA

Items	α-S100iA	
	Inj.speed 500mm/s	
	With peripheral devices Note1)	With no peripheral device Note1)
Main breaker	200A	100A
Size of primary side power cable	80mm^2	30mm^2
Terminal size of primary side power cable	M8	M8
Terminal size of grounding cable	M8	M8
Power supply capacity Note4)	65.0kVA	30.4kVA
Power transformer capacity Note5)	70kVA	45kVA

Items	α-S130iA			
	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	150A	60A	150A	60A
Size of primary side power cable	50mm^2	14mm^2	50mm^2	14mm^2
Terminal size of primary side power cable	M8	M6	M8	M6
Terminal size of grounding cable	M8	M8	M8	M8
Power supply capacity Note4)	52.8kVA	18.1kVA	52.8kVA	18.1kVA
Power transformer capacity Note5)	55kVA	35kVA	55kVA	35kVA

Items	α-S150iA					
	Inj.speed 200mm/s		Inj.speed 270mm/s(High duty)		Inj.speed 330mm/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	175A	75A	225A	125A	225A	125A
Size of primary side power cable	60mm^2	22mm^2	100mm^2	38mm^2	100mm^2	38mm^2
Terminal size of primary side power cable	M8	M8	M8	M8	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8	M8	M8
Power supply capacity Note4)	59.8kVA	25.1kVA	76.4kVA	41.7kVA	76.4kVA	41.7kVA
Power transformer capacity Note5)	65kVA	35kVA	80kVA	45kVA	80kVA	45kVA

Items	α-S150iA Small capacity			
	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	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)	52.8kVA	18.1kVA	65.0kVA	30.4kVA
Power transformer capacity Note5)	55kVA	35kVA	70kVA	45kVA

Items	α-S220iA			
	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)	59.8kVA	25.1kVA	76.4kVA	41.7kVA
Power transformer capacity Note5)	65kVA	35kVA	80kVA	45kVA

Items	α-S250iA			
	Inj.speed 270mm/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	225A	125A	225A	125A
Size of primary side power cable	100mm^2	38mm^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)	77.8kVA	43.1kVA	74.0～77.8kVA	39.4～43.1kVA
Power transformer capacity Note5)	80kVA	50kVA	80kVA	50kVA

Items	α-S300iA					
	Inj.speed 200mm/s(High duty)		Inj.speed 240mm/s		Inj.speed 270mm/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	225A	150A	225A	150A	225A	125A
Size of primary side power cable	100mm^2	50mm^2	100mm^2	50mm^2	100mm^2	38mm^2
Terminal size of primary side power cable	M8	M8	M8	M8	M8	M8
Terminal size of grounding cable	M8	M8	M8	M8	M8	M8
Power supply capacity Note4)	83.9kVA	49.3kVA	83.9kVA	49.3kVA	77.8kVA	43.1kVA
Power transformer capacity Note5)	85kVA	55kVA	85kVA	55kVA	80kVA	50kVA

Items	α-S450iA Small capacity	
	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)	84.4kVA	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℃ 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
S15iA / S30iA / S50iA / S100iA / S130iA S150iA / S220iA / S250iA / S300iA / S450iA	More than 3.0l/min(Normal)	0.15～0.49MPa	The socket (for I.D.=φ9mm 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-LINK*i*

1.Platform configuration

Items	Contents	
PC	·OS	Windows® Vista Service Pack2 / Windows® 7 Service Pack1(X86/X64)
		Windows® 8(X86/X64) / Windows® 8.1(X86/X64) / Windows® 10(X86/X64)
	·Main memory (Recommended)	Windows® Vista：1GB or above、Windows® 7 / Windows® 8 / Windows® 8.1 / Windows® 10(X86)：2GB or above
		Windows® 7 / Windows® 8 / Windows® 8.1 / Windows® 10(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 Gbit(s)/sec or faster Ethernet card
	·USB	One USB port is required for the license activation of ROBOSHOT-LINK*i*. (Only for server PC)
	·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	·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 1 Gbit/sec

2.System configuration

Items	Contents	
Number of PCs	·Server PC	1 PC(Mandatory)
	·Client PC	Any
Connectable machine number[*4]	One ROBOSHOT-LINK*i* system	Maximum 128 machines
	Two or more ROBOSHOT-LINK*i* system	129 machines or more

3.Main functions

3.1.ROBOSHOT-LINK*i* Standard functions

Functions	Contents
Multi language support	**Japanese / English / Chinese(Simplified, Traditional) / Korean / Germany / French**
Production information	**Various production information is monitored.**
Process monitor	Realtime ROBOSHOT & FANUC ROBOT operation status display
	Realtime power consumption display / Demand alarm display
	Work list display
Mold file management	Mold file can be loaded from ROBOSHOT to PC / Mold file can be sent from PC to ROBOSHOT
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 / Wave form data / Alarm log / Molding parameter change log / Molding parameter output / iRVision image output
Lot management	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
	Maximum 1,200,000 shot / unit
Molding parameter change log	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	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	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)**
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-LINK*i* 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	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	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.

改版履歴

09	Aug. 2018	Add high duty injection (100ton, 150ton, 250ton, 300ton), Add 330mm/s injection (130ton, 220ton), Add second injection unit (SI-20A, SI-300HA), Add 450ton
07	Jan. 2015	Add 15ton, 30ton, 130ton, 220ton, 250ton, 300ton
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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