

SPECIFICATION OF ROBOT

KJ314UWE35

KJ314UTE35

KJ264UFE35

KJ264UGE35

KJ264UTE35

KJ264UVE35

1st Edition : Sep.10.2013

KAWASAKI HEAVY INDUSTRIES LTD.

ROBOT DIV.

Doc, No:90101-2133DEA

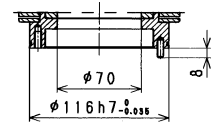
1. Specification of Robot

[1-1] Robot Arm (KJ314U)

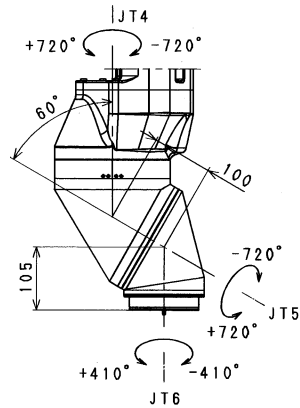
1. Model	KJ314U-D4 , KJ314U-D5 (Fix Installation) KJ314U-D0 , KJ314U-D1 (Flexible Installation)		
2. Type	Articulated robot + Swing unit		
3. Degree of freedom	7 axes (6 axes + 1axis)		
4. Axis specification	Operating axis	Max. operating range	
	Arm rotation (JT1)	+120° ~ -120°	
	Arm out-in (JT2)	+130° ~ -80°	
	Arm up-down (JT3)	+90° ~ -65°	
	Wrist roll (JT4)	+720° ~ -720°	
	Wrist roll (JT5)	+720° ~ -720°	
	Wrist roll (JT6)	+410° ~ -410°	
Swing (JT7)	+90° ~ -90°		
5. Repeatability	±0.5 mm (at the tool mounting surface)		
6. Playback Accuracy	±1.0 mm (at the tool mounting surface)		
7. Max. payload	Wrist : 15 kg (at the tool mounting surface) Upper arm : 25 kg (on the Upper Arm :Include painting equipments in pressurized compartment)		
8. Max. painting speed	1500 mm/s (at the center of tool mounting surface)		
9. Load capacity of wrist			
		Max. torque	Moment of inertia*
	JT4	56.2 N·m	2.19 kg·m ²
	JT5	43.4 N·m	1.31 kg·m ²
JT6	22.0 N·m	0.33 kg·m ²	
Note* Each value in this table shows allowable payload moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki.			
10. Driving motor	Brushless AC Servomotor		
11. Working range	See attached drawing		
12. Mass	720 kg (without options)		
13. Color	Munsell 10GY9/1 equivalent		
14. Installation	Wall mounting		
	KJ314U-D4 , KJ314U-D5	Fix Installation (install on fixed plane)	
	KJ314U-D0 , KJ314U-D1	Flexible Installation (install on traverse unit)	
15. Environment cond.	(Temperature) 0 ~ 40 °C, (Humidity) 35 ~ 85 %, no dew, nor frost allowed		
16. Explosion proof	Pressurized and intrinsically safe		
17. Air supply to the manipulator	Clean & dry air : 0.5 Nm ³ /min, 0.4~0.7 MPa Dew point : -17 °C or less at atmospheric pressure. Solid material : 0.01 μm or less Oil content : Mist separation 99.9999% or more		
18. Options	Adjustable Mechanical Stopper : JT1/JT2/JT3		
	Jig set for Zeroing		
	Painting equipment		
	FGP motor (1 unit can be equipped with)		
	Solenoid valve for painting (up to 3 units can be equipped with)		
	Electro pneumatic converter for painting (up to 3 units can be equipped with)		
	Upper Arm cover		
	Application hose protection unit		
19. Others	Consult Kawasaki about maintenance parts and spare parts.		

[1-2] Robot Arm (KJ264U)													
1. Model	[Fix Installation] KJ264U-B4 , KJ264U-B5 (Floor) KJ264U-D4 , KJ264U-D5 (Mounting wall is left side) KJ264U-F4 , KJ264U-F5 (Mounting wall is right side) KJ264U-H4 , KJ264U-H5 (Shelf)												
	[Flexible Installation] KJ264U-B0 , KJ264U-B1 (Floor) KJ264U-D0 , KJ264U-D1 (Mounting wall is left side) KJ264U-F0 , KJ264U-F1 (Mounting wall is right side) KJ264U-H0 , KJ264U-H1 (Shelf)												
2. Type	Articulated robot												
3. Degree of freedom	6 axes												
4. Axis specification	Operating axis	Max. operating range											
	Arm rotation (JT1)	KJ264U-B□	+120° ~ -120°										
		KJ264U-D□	+120° ~ -30°										
		KJ264U-F□	+30° ~ -120°										
		KJ264U-H□	+120° ~ -120°										
	Arm out-in (JT2)		+130° ~ -80°										
	Arm up-down (JT3)		+90° ~ -65°										
	Wrist roll (JT4)		+720° ~ -720°										
Wrist roll (JT5)		+720° ~ -720°											
Wrist roll (JT6)		+410° ~ -410°											
5. Repeatability	±0.5 mm (at the tool mounting surface)												
6. Playback Accuracy	±1.0 mm (at the tool mounting surface)												
7. Max. payload	Wrist : 15 kg (at the tool mounting surface) Upper arm : 25 kg (on the Upper Arm :Include painting equipments in pressurized compartment)												
8. Max. painting speed	1500 mm/s (at the center of tool mounting surface)												
9. Load capacity of wrist	<table border="1"> <thead> <tr> <th></th> <th>Max. torque</th> <th>Moment of inertia*</th> </tr> </thead> <tbody> <tr> <td>JT4</td> <td>56.2 N·m</td> <td>2.19 kg·m²</td> </tr> <tr> <td>JT5</td> <td>43.4 N·m</td> <td>1.31 kg·m²</td> </tr> <tr> <td>JT6</td> <td>22.0 N·m</td> <td>0.33 kg·m²</td> </tr> </tbody> </table>		Max. torque	Moment of inertia*	JT4	56.2 N·m	2.19 kg·m ²	JT5	43.4 N·m	1.31 kg·m ²	JT6	22.0 N·m	0.33 kg·m ²
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	Note* Each value in this table shows allowable payload moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki.												
10. Driving motor	Brushless AC Servomotor												
11. Working range	See attached drawing												
12. Mass	KJ264U-B□ 540 kg (without options) KJ264U-D□ , -F□ , -H□ 530 kg (without options)												
13. Color	Munsell 10GY9/1 equivalent												
14. Installation	KJ264U-B□(Floor) KJ264U-D□(Mounting wall is left side) KJ264U-F□(Mounting wall is right side) KJ264U-H□(Shelf)												
	KJ264U-□4 , KJ264U-□5 Fix Installation (install on fixed plane) KJ264U-□0 , KJ264U-□1 Flexible Installation (install on traverse unit)												
15. Environment cond.	(Temperature) 0 ~ 40 °C, (Humidity) 35 ~ 85 %, no dew, nor frost allowed												
16. Explosion proof	Pressurized and intrinsically safe												
17. Air supply to the manipulator	Clean & dry air : 0.5 Nm ³ /min, 0.4~0.7 MPa Dew point : -17 °C or less at atmospheric pressure. Solid material : 0.01 μm or less Oil content : Mist separation 99.9999% or more												
18. Options	Adjustable Mechanical Stopper : JT1/JT2/JT3												
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	Upper Arm cover												
Application hose protection unit													
19. Others	Consult Kawasaki about maintenance parts and spare parts.												

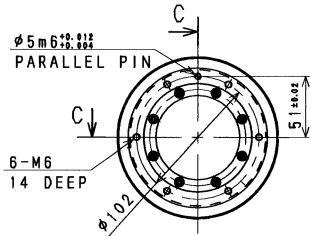
[2] Controller		
1. Model	E35/E37	
2. Enclosure	Enclosed structure / Indirect cooling system	
3. Dimensions	See attached drawing	
4. Number of controlled axes	6 axes 7/8/9 axes(built-in addition, option)	
5. Servo control and drive system	Full Digital Servo System	
6. Type of control	Teach mode	Joint, Base, Tool, Fixed Tool (option) operation mode
	Repeat mode	PTP, CP control mode Joint, Linear, Circular (option) interpolation
7. Teaching method	Teaching or AS language programming	
8. Memory capacity	8 MB	
9. External operation signals	External Motor Power Off, External Hold, etc.	
10. General purpose signals	Input signals	32 channels (Includes dedicated signals)
	Output signals	32 channels (Includes dedicated signals)
11. Operation panel	Basic Operation Switches (Teach/Repeat SW, Emergency Stop SW, Control power lamp)	
12. Cable length	Power/Signal cable in non hazardous area	3 m
	Power/Signal cable in hazardous area	3 m
	Teach Pendant cable	10 m
13. Mass	See attached drawing	
14. Power requirement	AC 440 - 480 V \pm 10%, 60 Hz, 3 phases, Max 5.1 kVA(E37), Max 7.3 kVA(E35)	
15. Ground	PE (Standard for Robots) Leakage current: max. 10 mA	
16. Ambient temperature	0 - 45 °C	
17. Relative humidity	35 - 85 % (non-condensation)	
18. Color	Munsell: 10GY9/1 equivalent	
19. Teach Pendant	Intrinsically safe construction, Color display (7.2 inch LCD) with touch panel Emergency Stop, Teach Lock and Deadman Switches	
20. Options		
General purpose signals	Input signals	64/96/128 channels (Includes dedicated signals)
	Output signals	64/96/128 channels (Includes dedicated signals)
I/O connector	D-SUB 37pin(male,female) with cover	
Operation panel	Motor Power ON, Cycle start, RUN/HOLD, Error reset, Error lamp	
Power/Signal cable	in non hazardous area	} Total length: max. 40 m
	in hazardous area	
Teach Pendant cable	5m, 15m, 20m, 25m	} Total length: max. 50 m
Teach pendant Connector Box	in non hazardous area 3,5,7,10,15,20,25,30m in hazardous area 1,3,5,7,10,15,20,25,30m	
Power requirement	AC 380 - 415 V, AC 440 - 480 V, AC 515 V, AC 575 V \pm 10%, 50/60 Hz, 3 phases, Max 7.3 kVA(E35/E37)	
Auxiliary storage	USB memory	
AC Outlet	AC110 - 120V Outlet (depends on Primary input voltage)	
PC cable	1.5 m, 3 m	
Teach Pendant option	Cable hook, connector for TP less	
Others	LED Light, Field BUS, Software PLC, Analog input/output, Conveyor Synchronization, Paint Equipment Control and so on	
21. Others	Consult Kawasaki about maintenance parts and spare parts.	



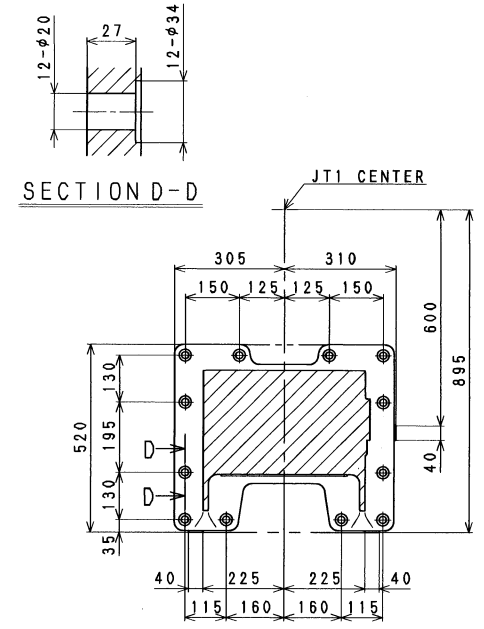
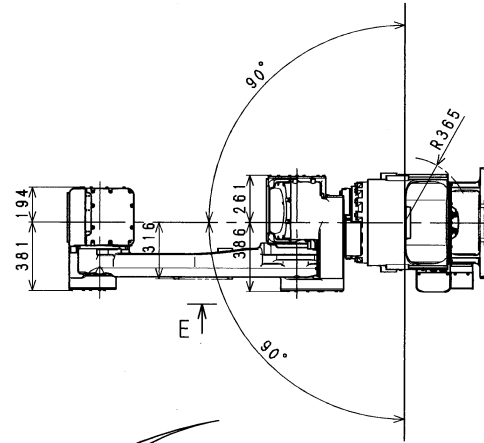
SECTION C-C



DETAIL A

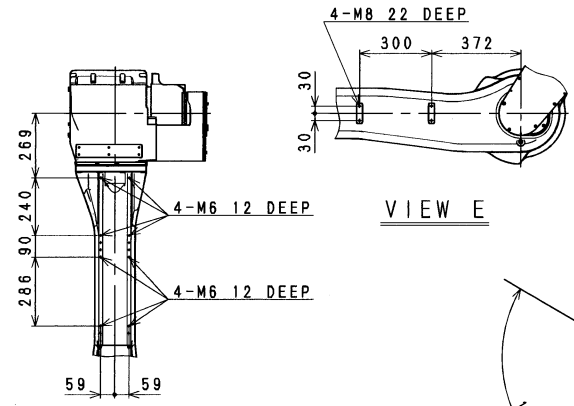


VIEW B



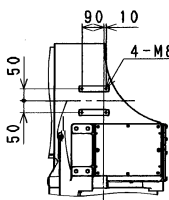
SECTION D-D

Base Installation Dimensions

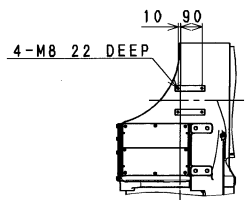


VIEW E

VIEW F

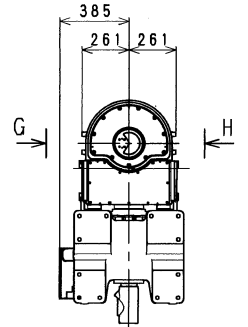
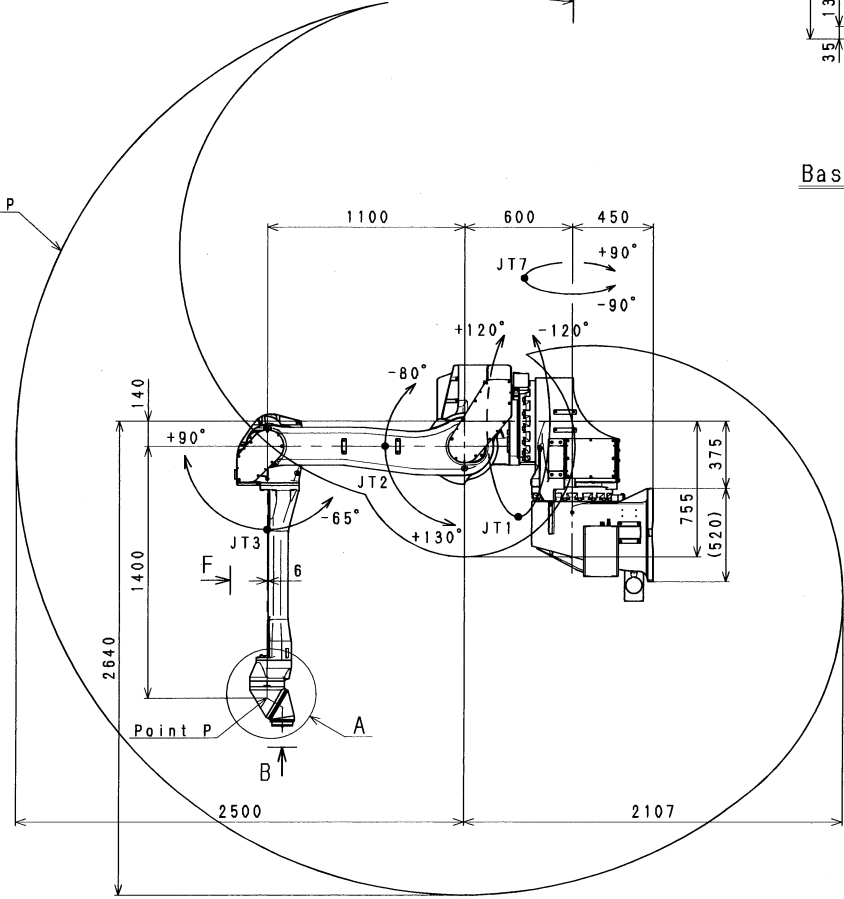


VIEW G

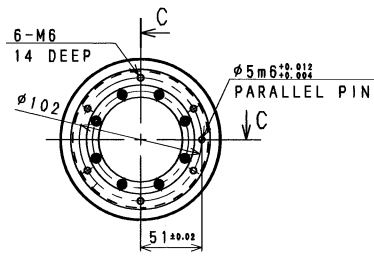


VIEW H

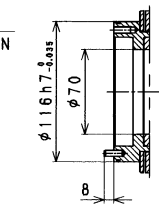
Working range based on point P



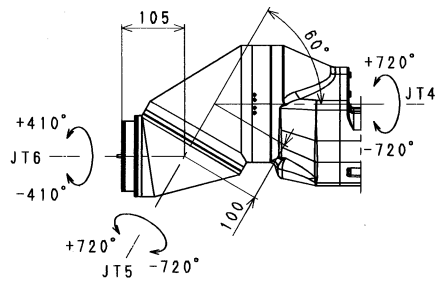
KJ314U-D4
(FIX INSTALLATION)
WORKING RANGE



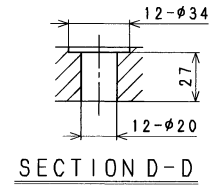
VIEW B



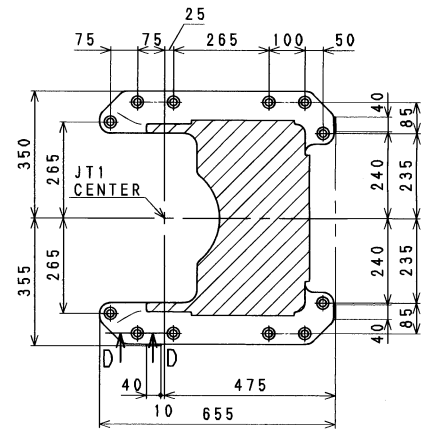
SECTION C-C



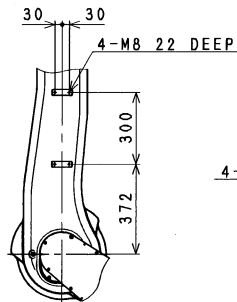
DETAIL A



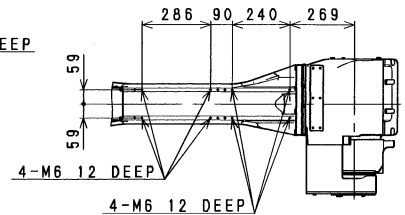
SECTION D-D



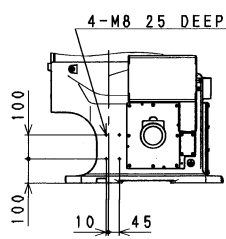
Base Installation Dimensions



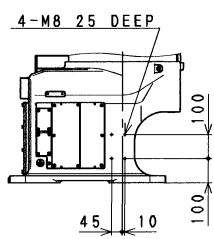
VIEW E



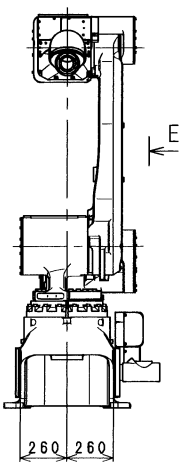
VIEW F



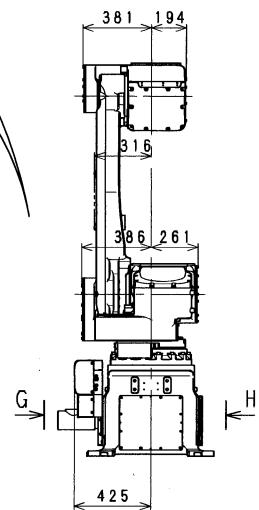
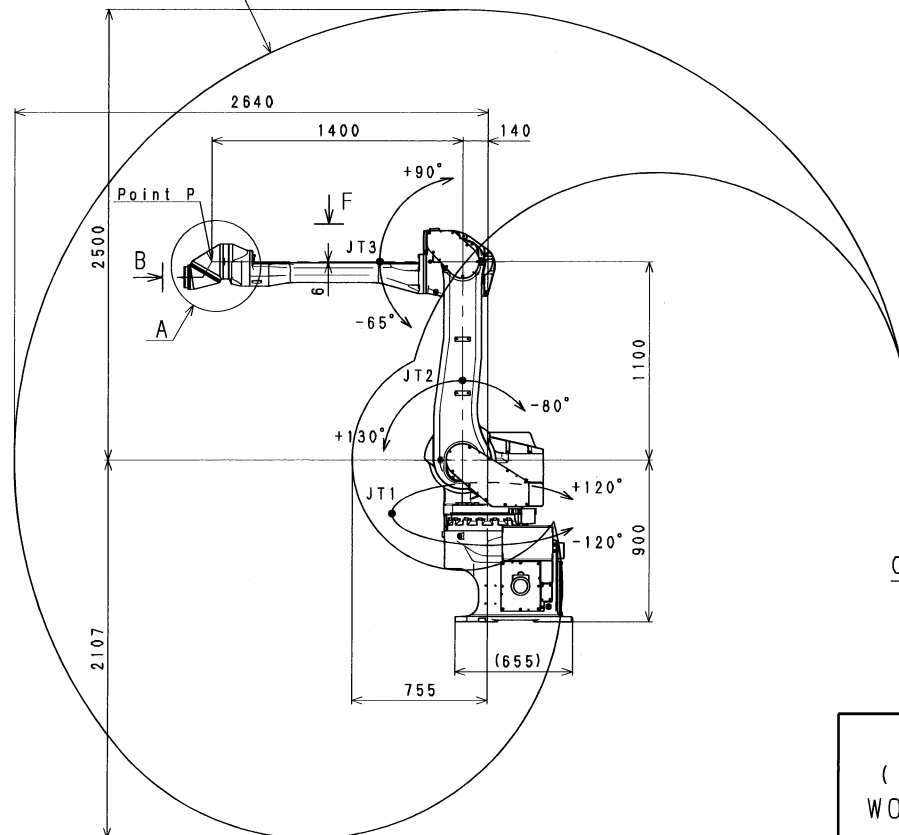
VIEW G



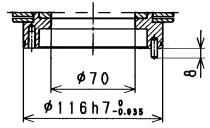
VIEW H



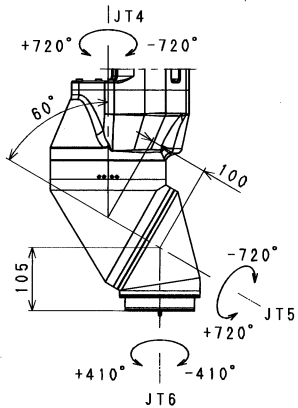
Working range based on point P



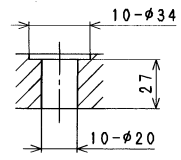
KJ264U-B4
(FIX INSTALLATION)
WORKING RANGE



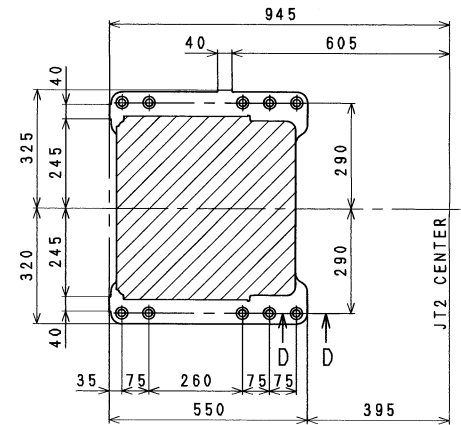
SECTION C-C



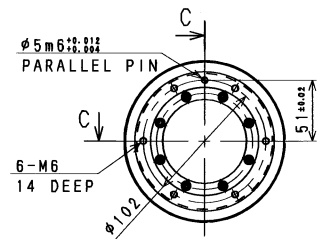
DETAIL A



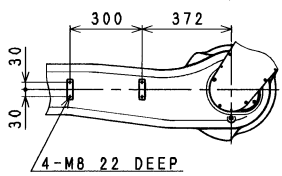
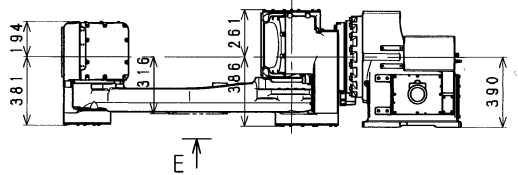
SECTION D-D



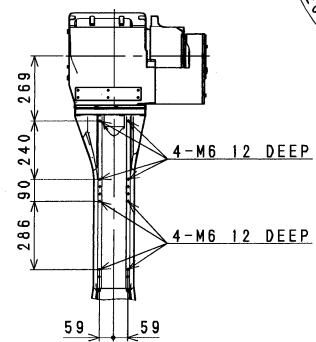
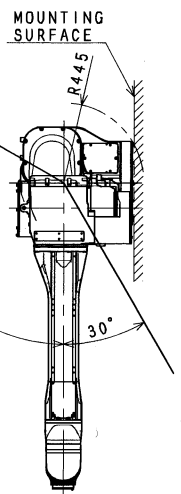
Base Installation Dimensions



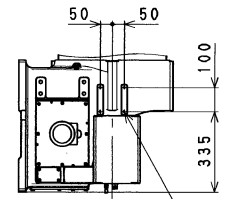
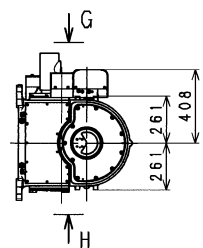
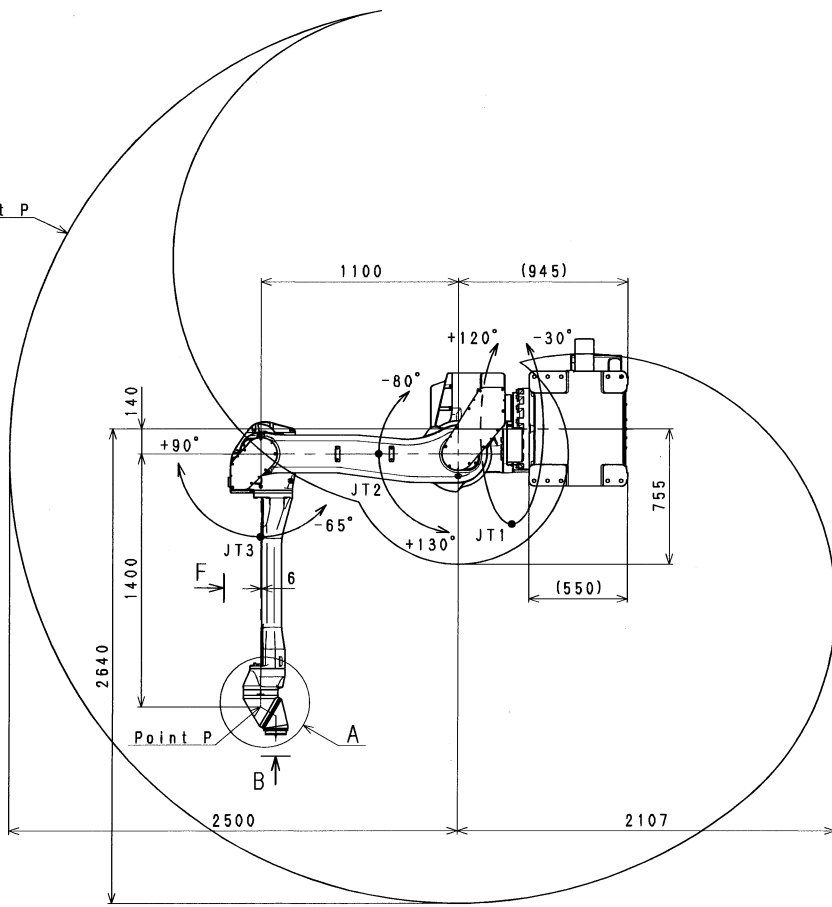
VIEW B



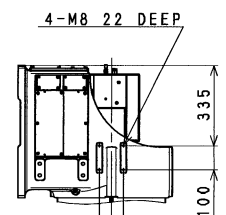
VIEW E



VIEW F

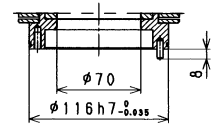


VIEW G

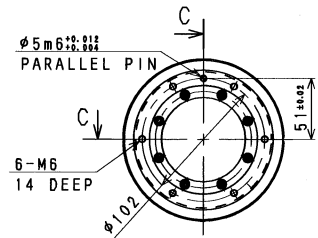


VIEW H

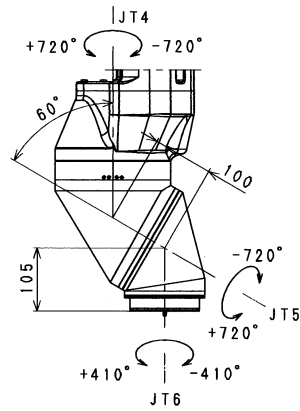
KJ264U-D4
(FIX INSTALLATION)
WORKING RANGE



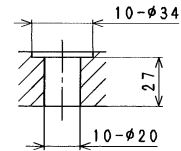
SECTION C-C



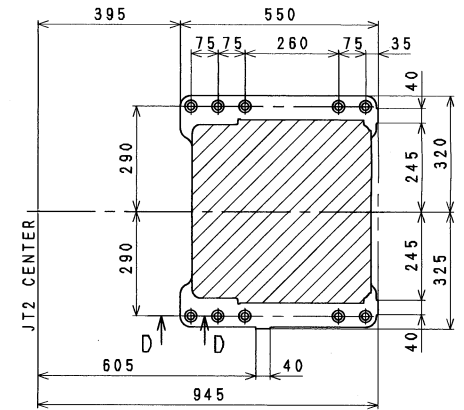
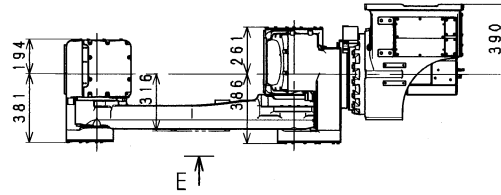
VIEW B



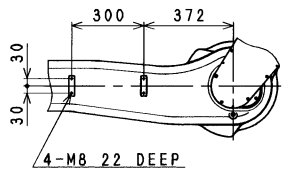
DETAIL A



SECTION D-D

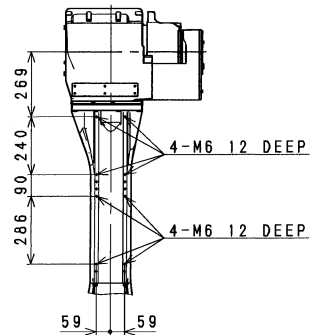
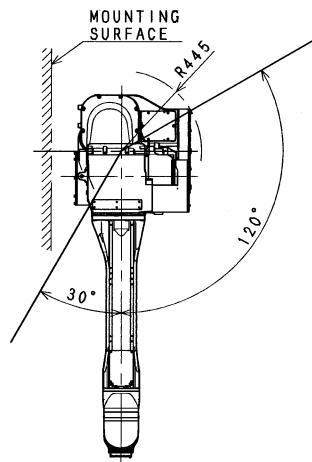


Base Installation Dimensions

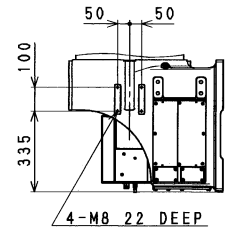
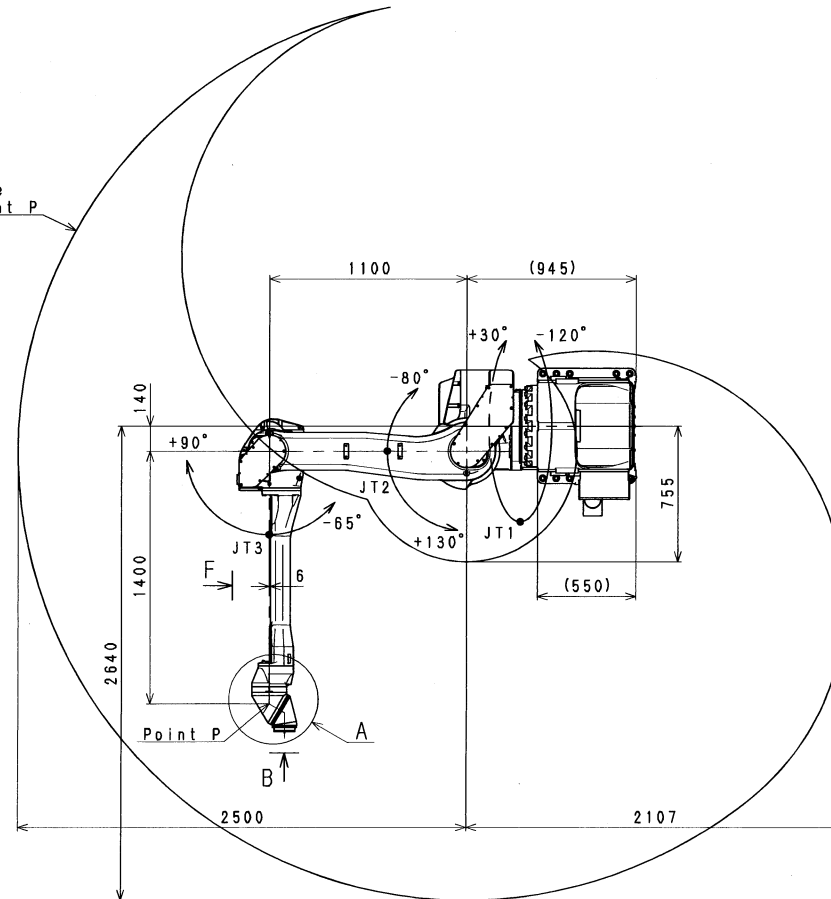


VIEW E

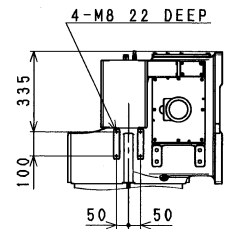
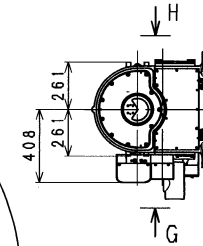
Working range based on point P



VIEW F

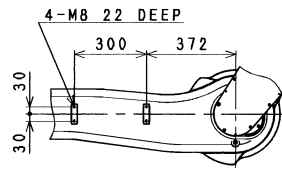
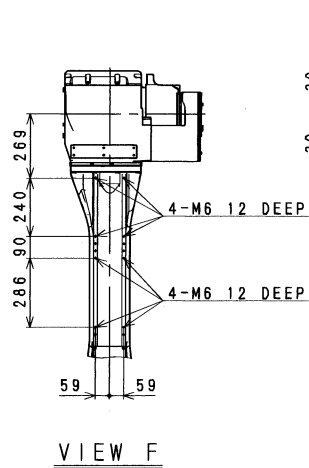
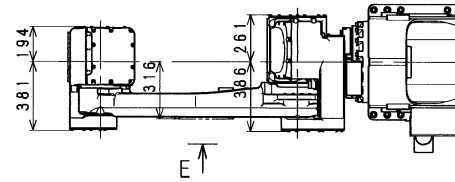
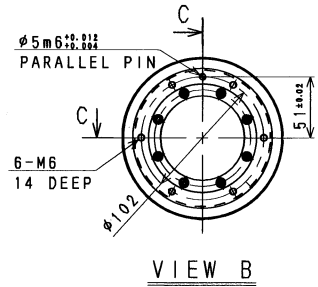
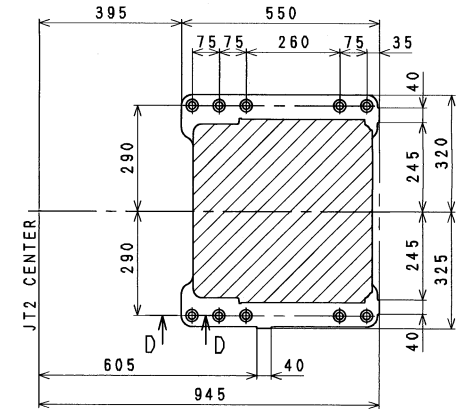
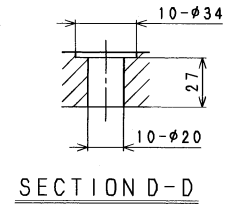
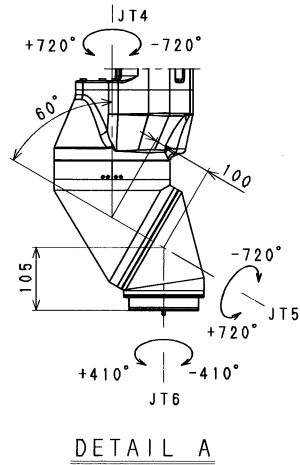
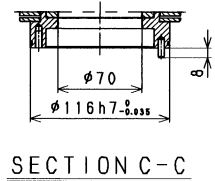


VIEW H

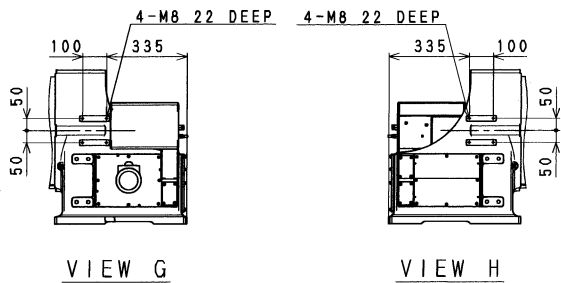
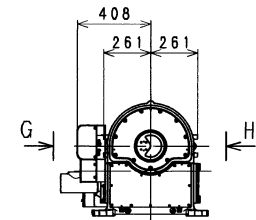
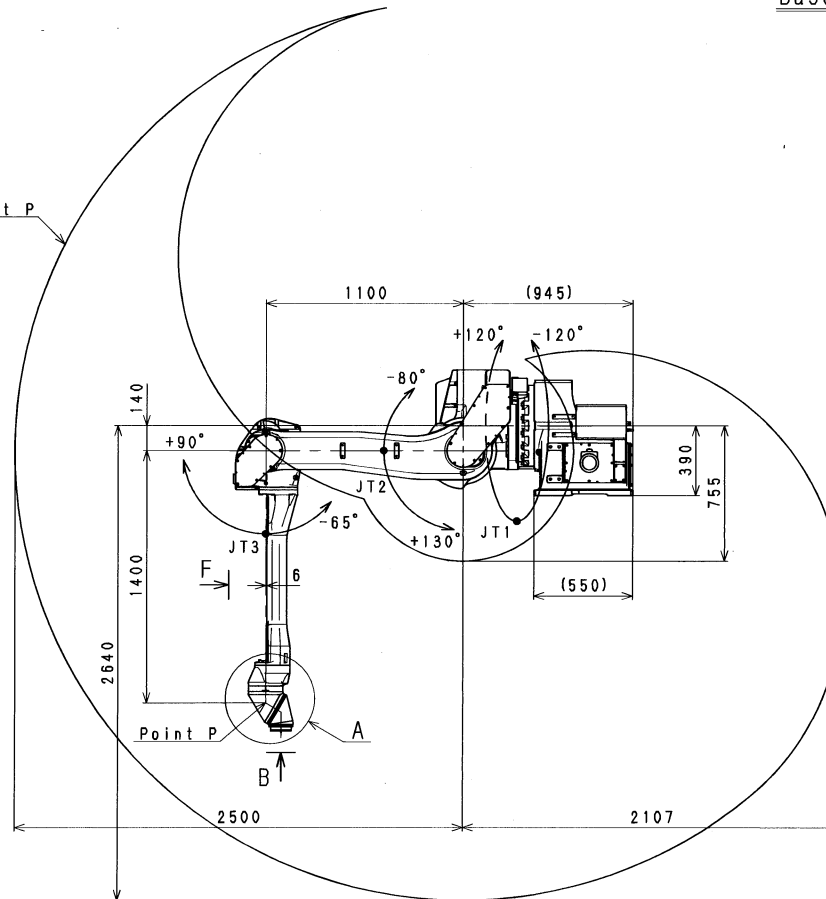
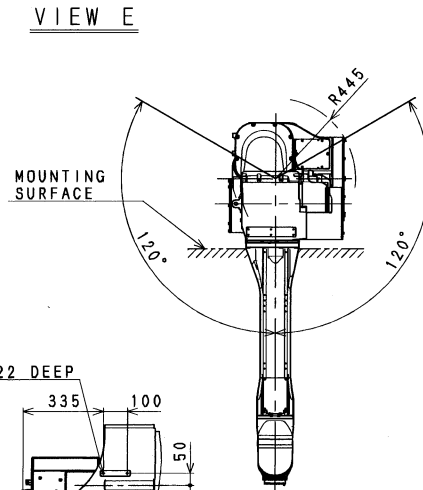


VIEW G

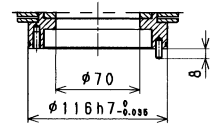
KJ264U-F4
(FIX INSTALLATION)
WORKING RANGE



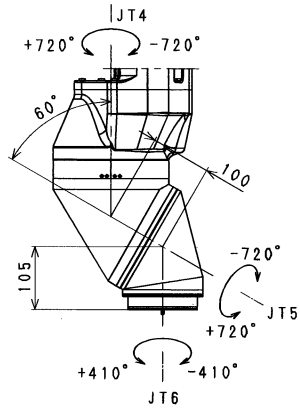
Working range based on point P



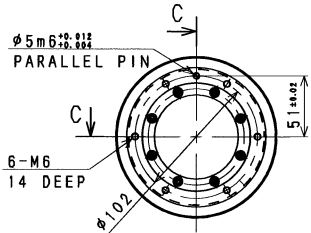
KJ264U-H4
(FIX INSTALLATION)
WORKING RANGE



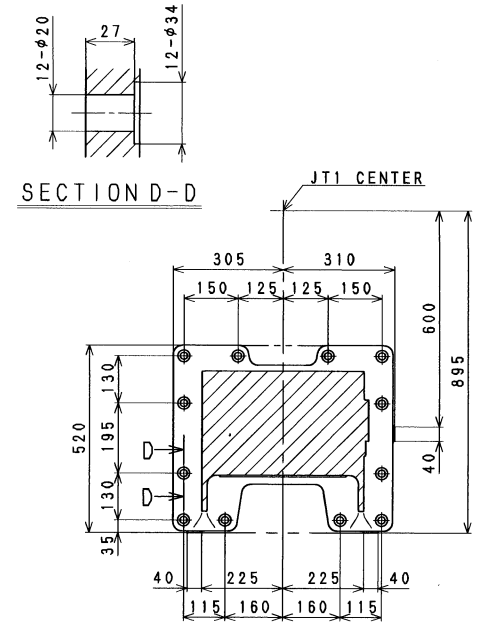
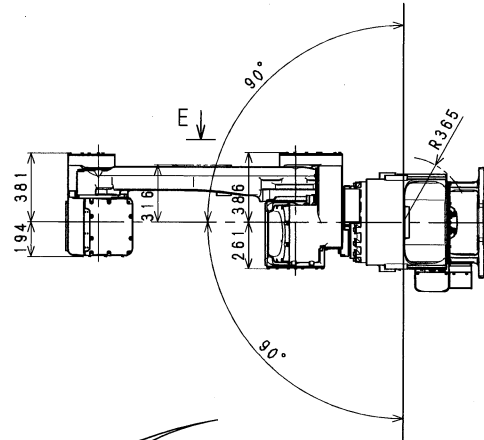
SECTION C-C



DETAIL A

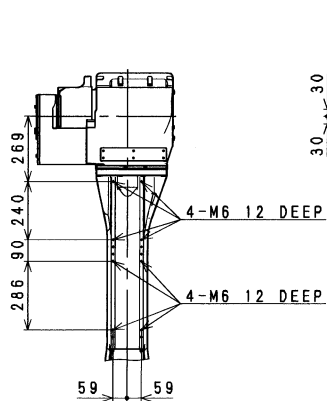


VIEW B

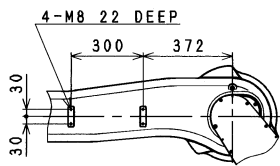


SECTION D-D

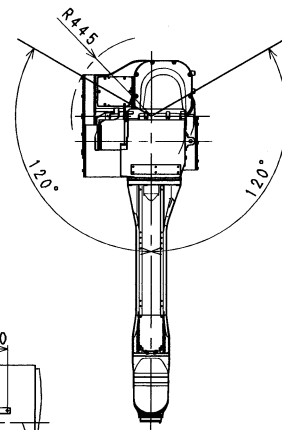
Base Installation Dimensions



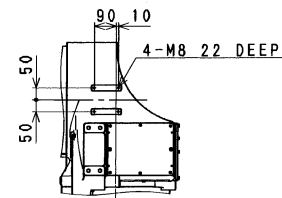
VIEW E



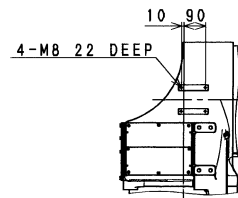
VIEW F



VIEW G

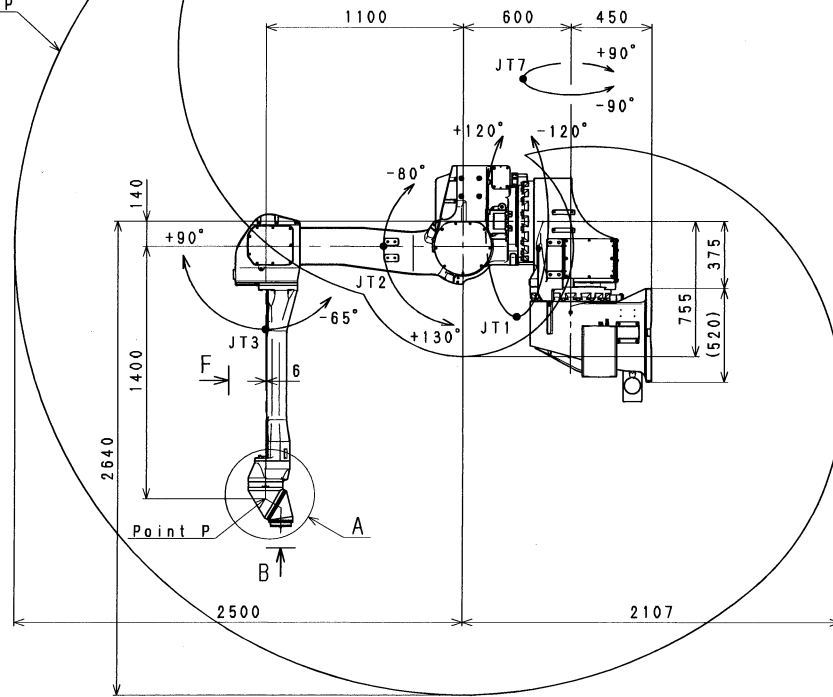


VIEW H

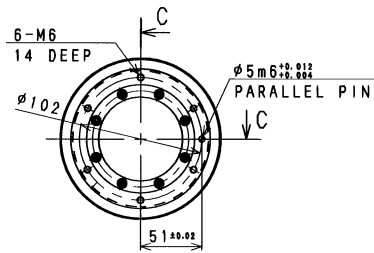


VIEW I

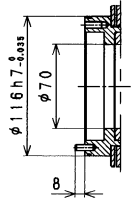
Working range based on point P



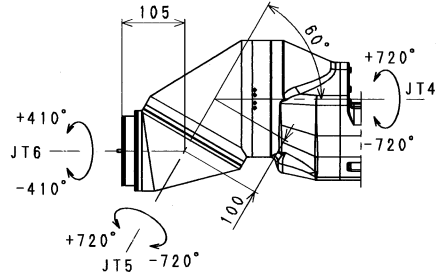
KJ314U-D5
(FIX INSTALLATION)
WORKING RANGE



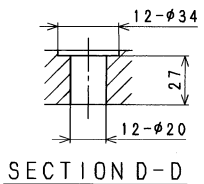
VIEW B



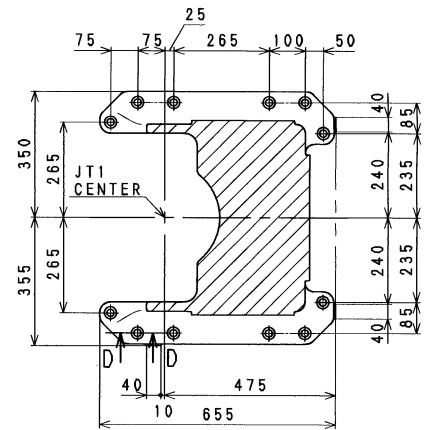
SECTION C-C



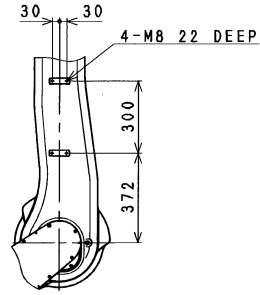
DETAIL A



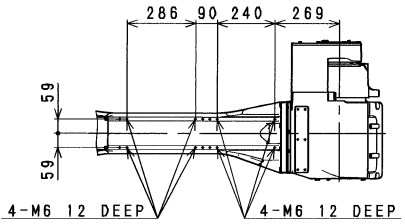
SECTION D-D



Base Installation Dimensions

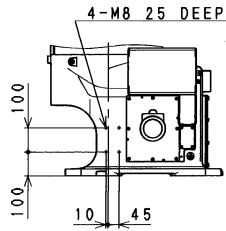
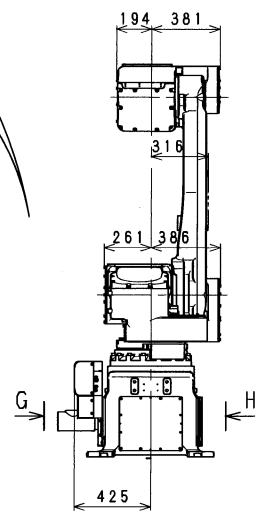
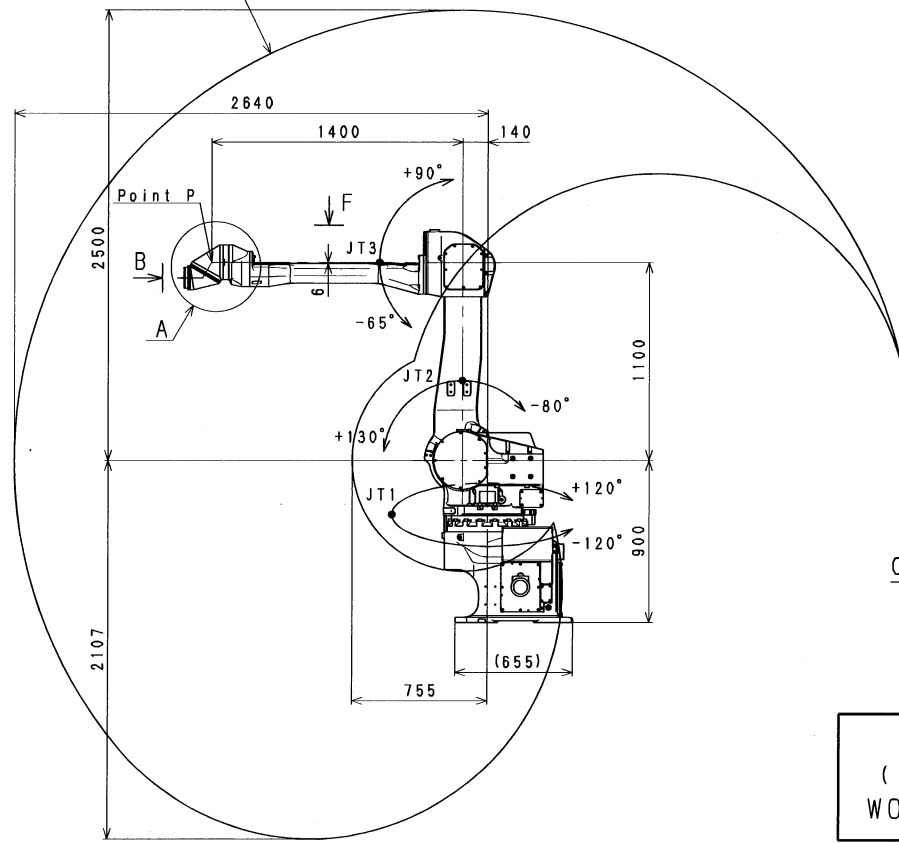


VIEW E

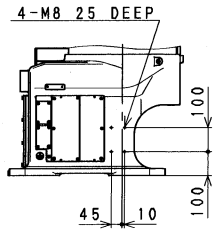


VIEW F

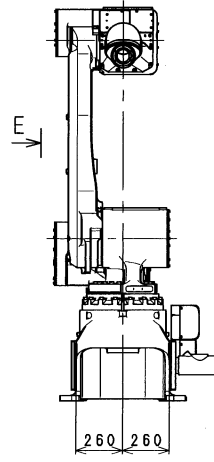
Working range based on point P



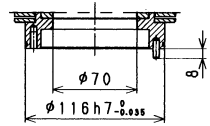
VIEW G



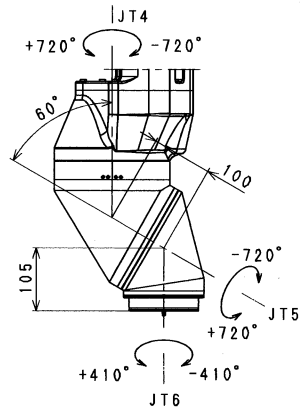
VIEW H



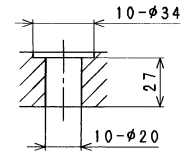
KJ264U-B5
(FIX INSTALLATION)
WORKING RANGE



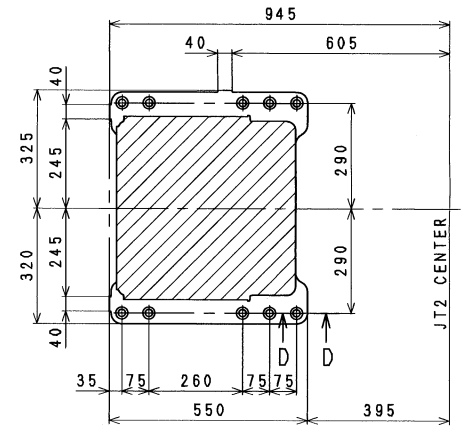
SECTION C-C



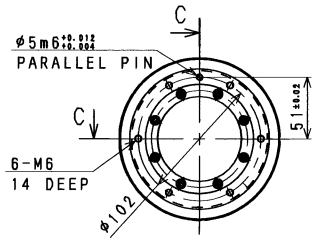
DETAIL A



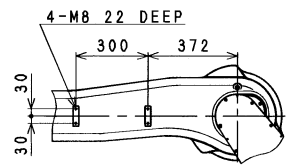
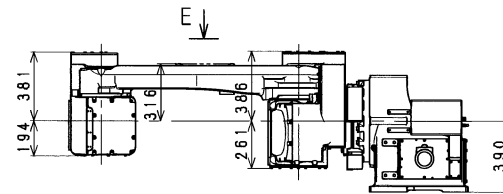
SECTION D-D



Base Installation Dimensions



VIEW B



VIEW E

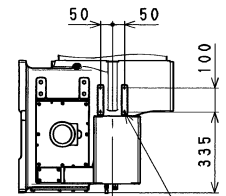
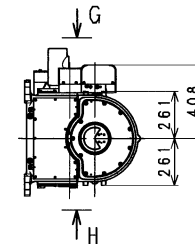
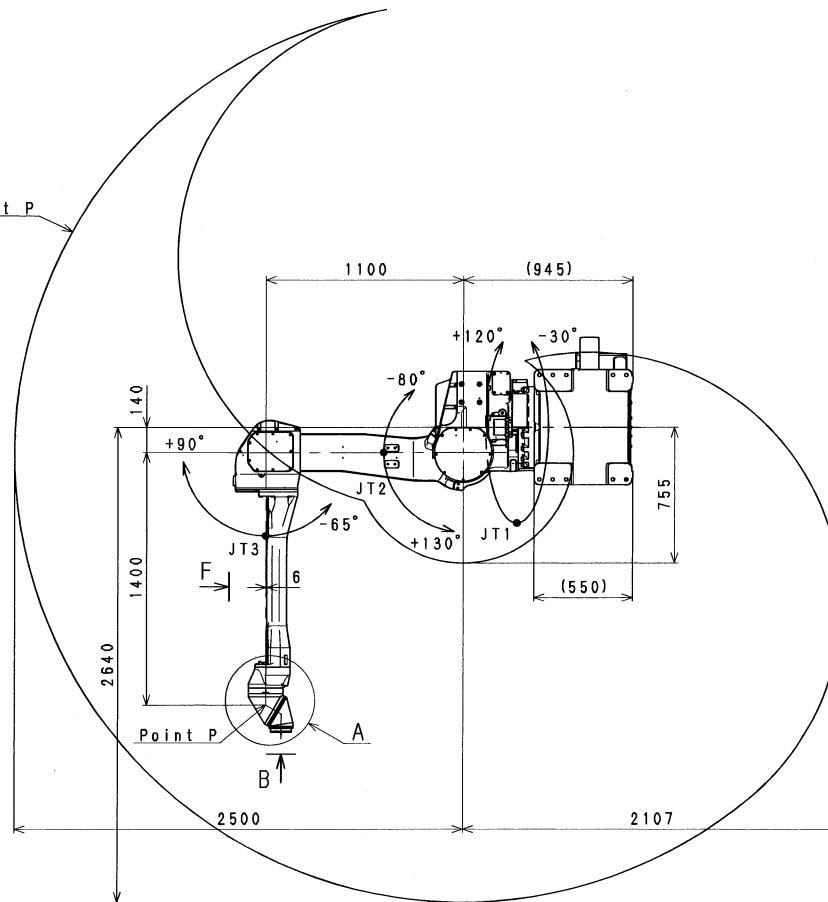
Working range based on point P

MOUNTING SURFACE

RA4.5

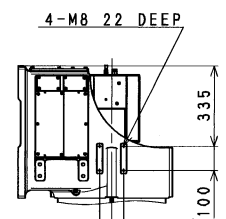
120°

30°



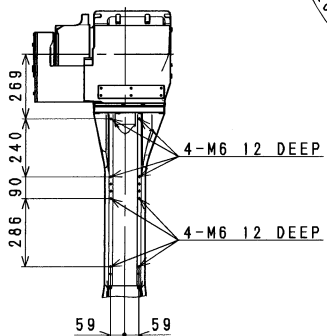
4-M8 22 DEEP

VIEW G



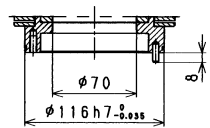
4-M8 22 DEEP

VIEW H

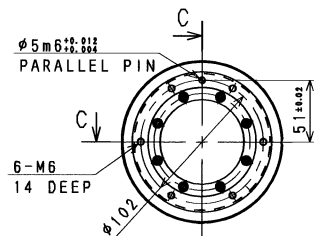


VIEW F

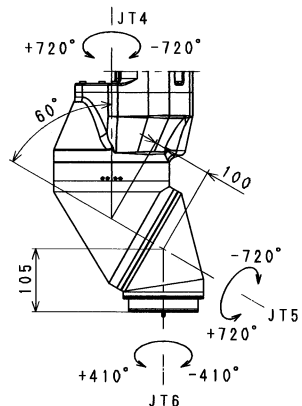
KJ264U-D5
(FIX INSTALLATION)
WORKING RANGE



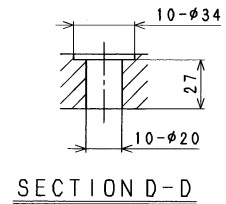
SECTION C-C



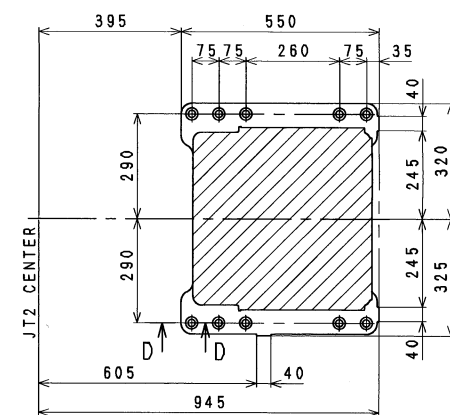
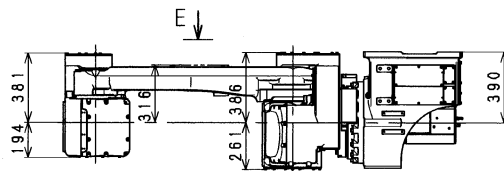
VIEW B



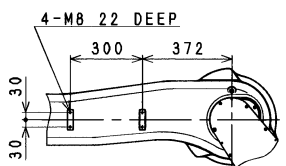
DETAIL A



SECTION D-D

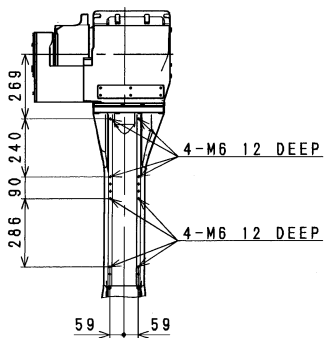
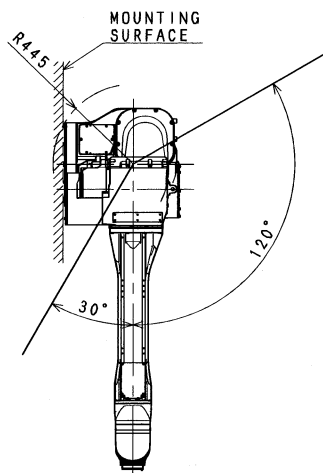


Base Installation Dimensions

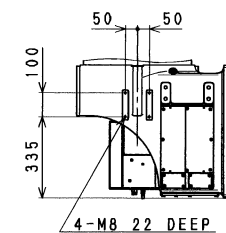
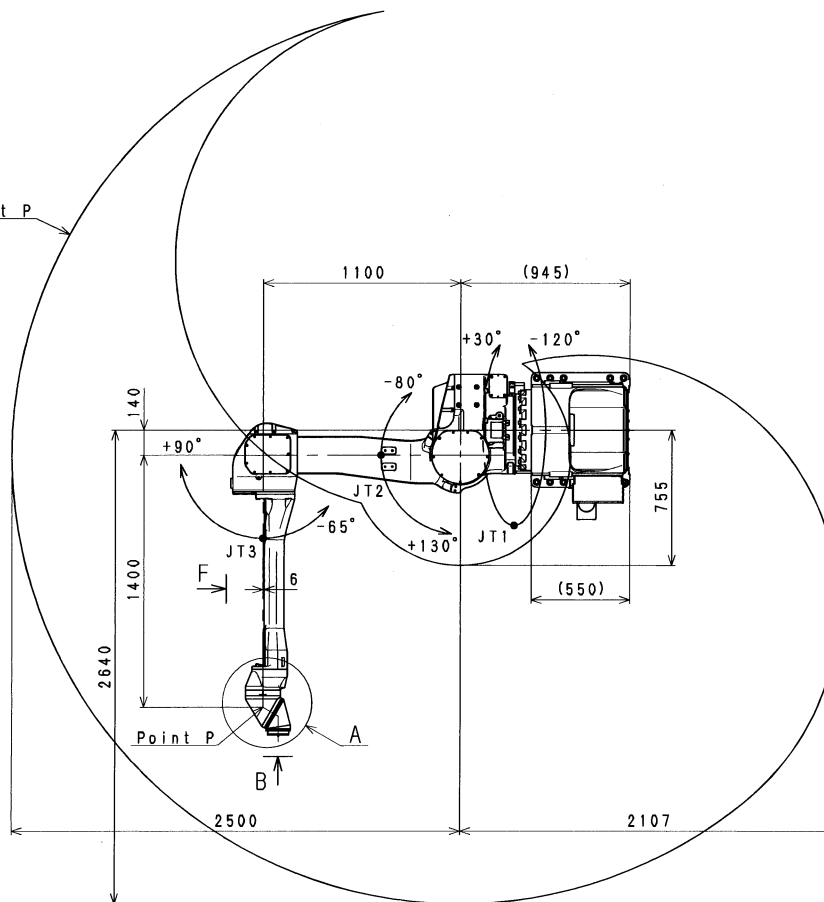


VIEW E

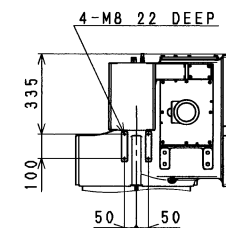
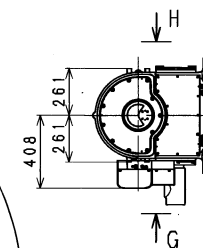
Working range based on point P



VIEW F

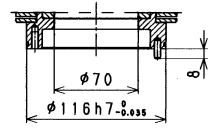


VIEW H

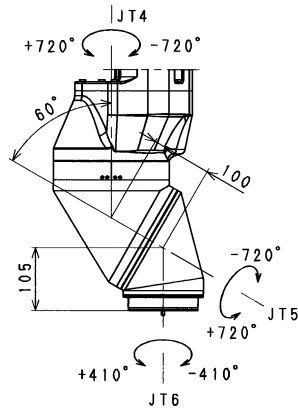


VIEW G

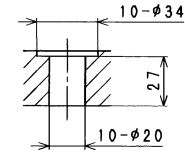
KJ264U-F5
(FIX INSTALLATION)
WORKING RANGE



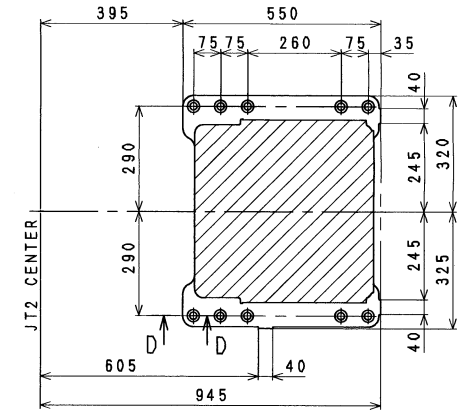
SECTION C-C



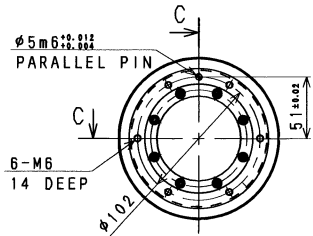
DETAIL A



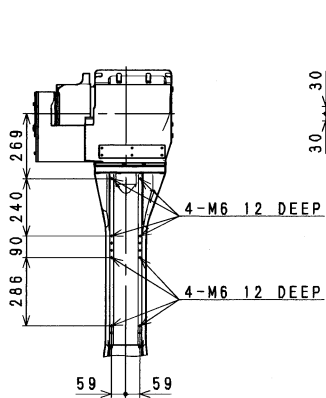
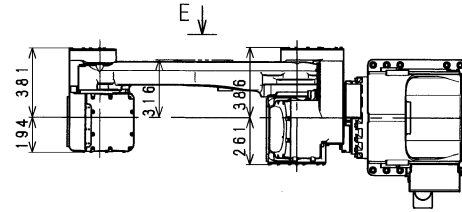
SECTION D-D



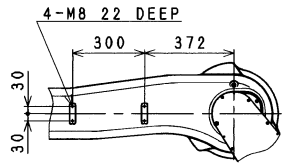
Base Installation Dimensions



VIEW B

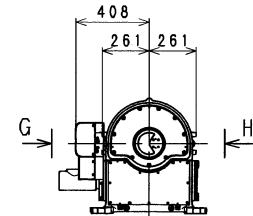
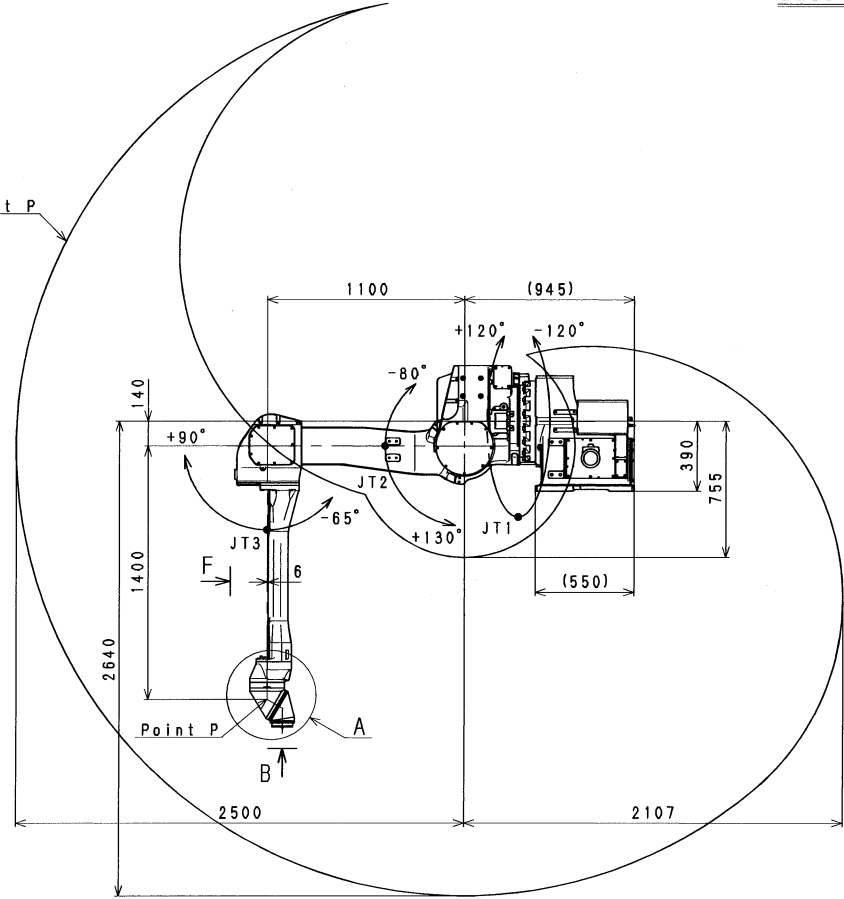
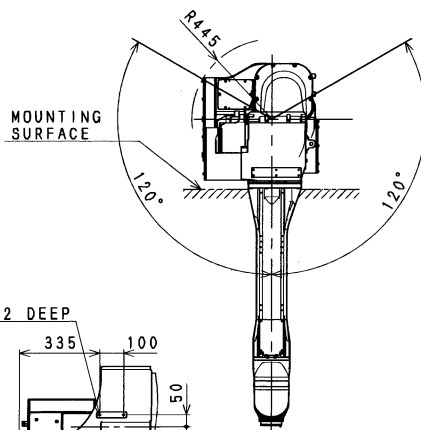


VIEW F

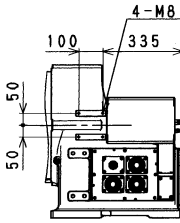


VIEW E

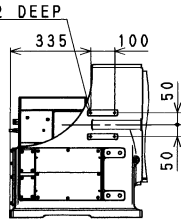
Working range based on point P



VIEW G

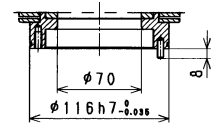


VIEW G

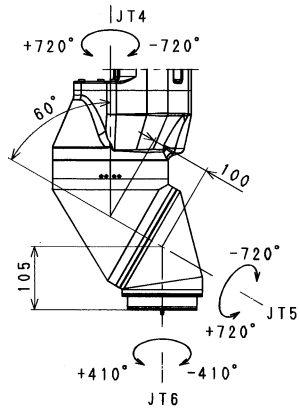


VIEW H

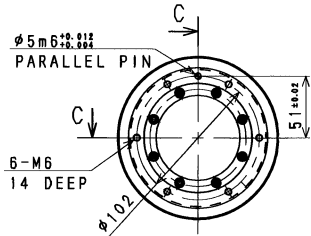
KJ264U-H5
(FIX INSTALLATION)
WORKING RANGE



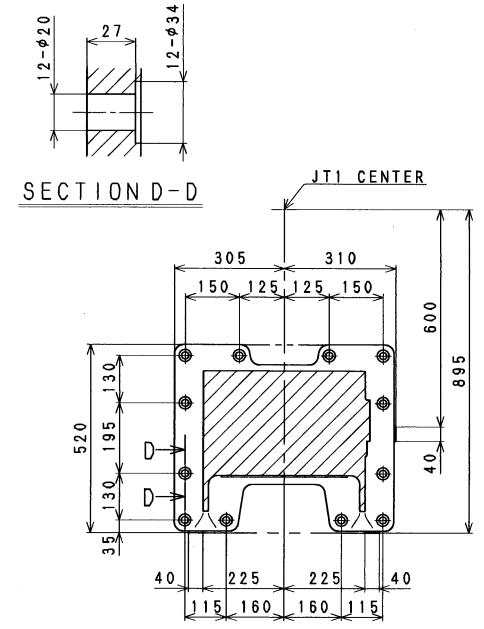
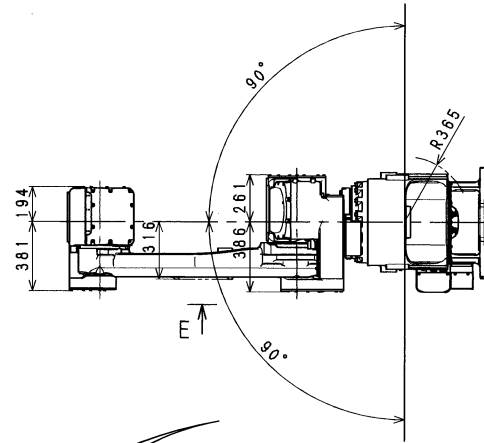
SECTION C-C



DETAIL A

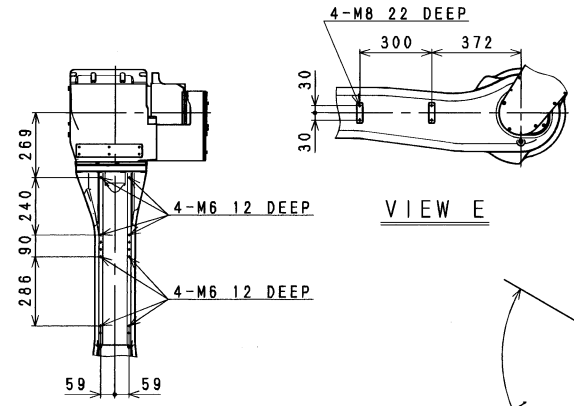


VIEW B



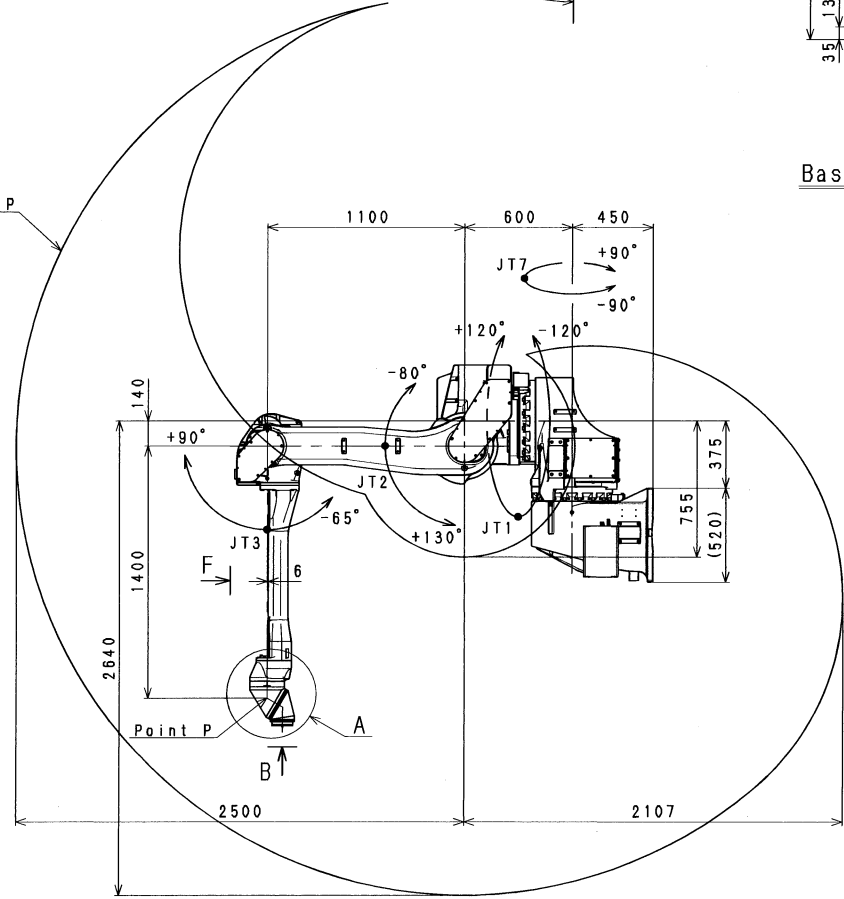
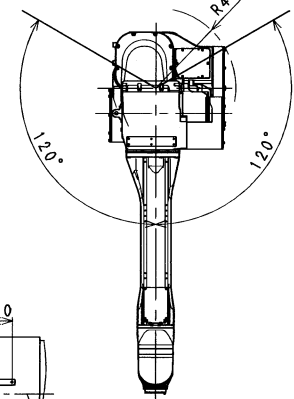
SECTION D-D

Base Installation Dimensions

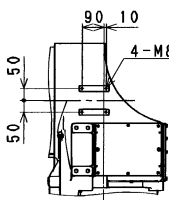


VIEW E

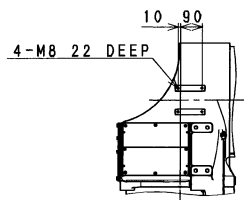
VIEW F



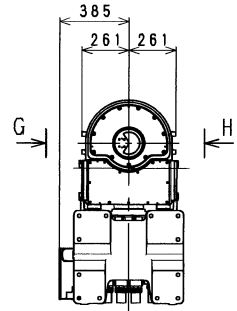
Working range based on point P



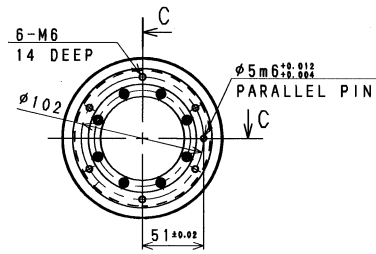
VIEW G



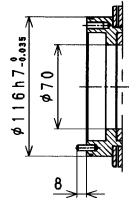
VIEW H



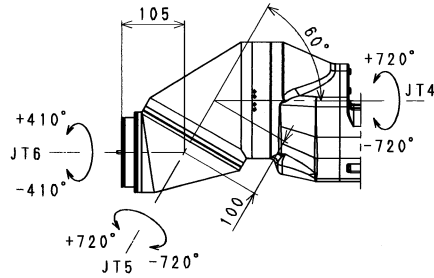
KJ314U-D0
(FLEXIBLE INSTALLATION)
WORKING RANGE



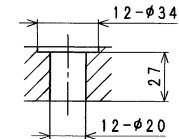
VIEW B



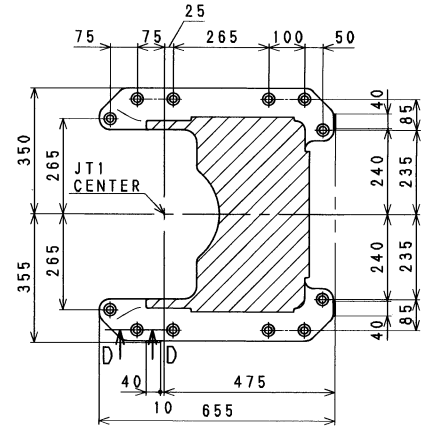
SECTION C-C



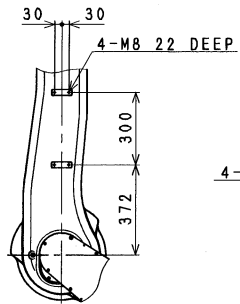
DETAIL A



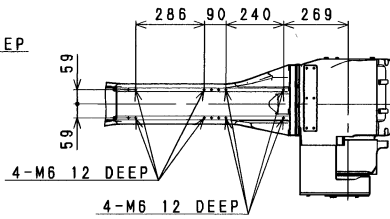
SECTION D-D



Base Installation Dimensions

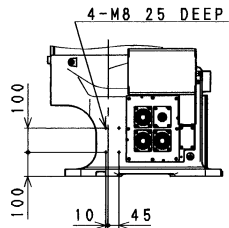
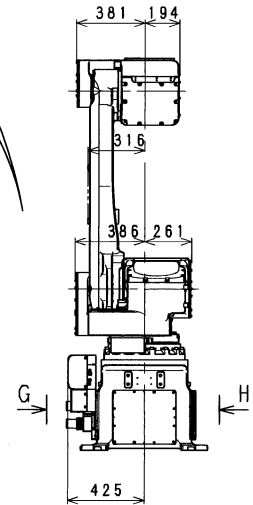
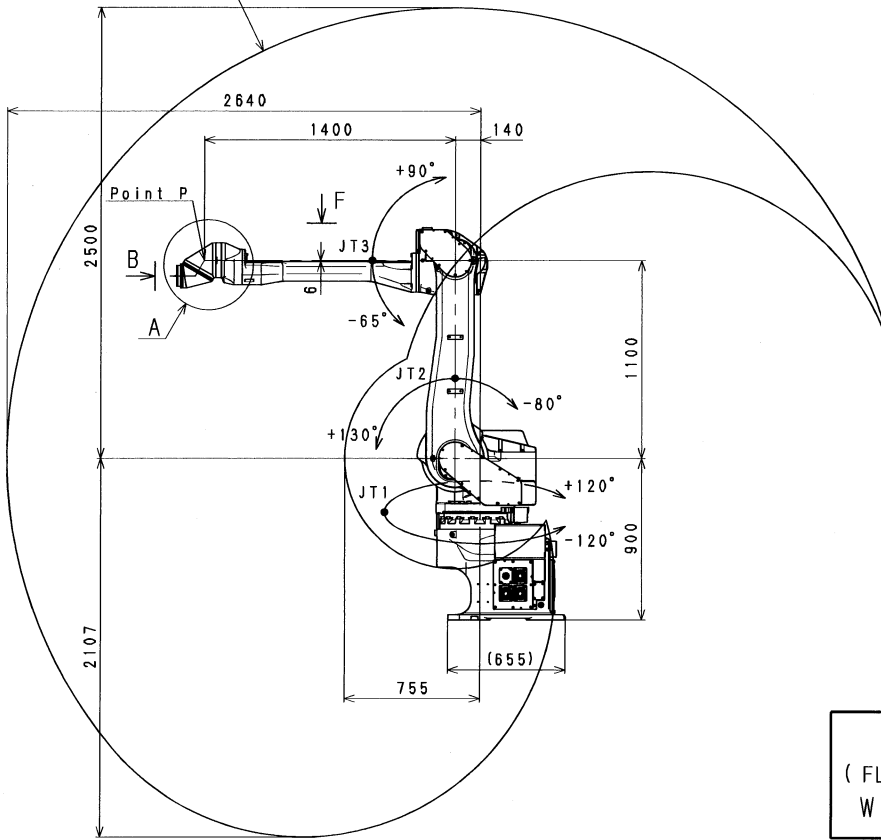


VIEW E

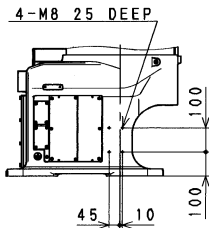


VIEW F

Working range based on point P

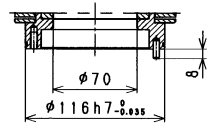


VIEW G

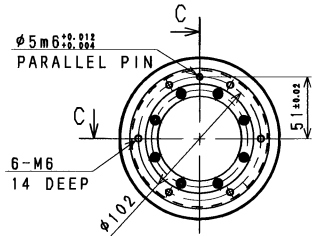


VIEW H

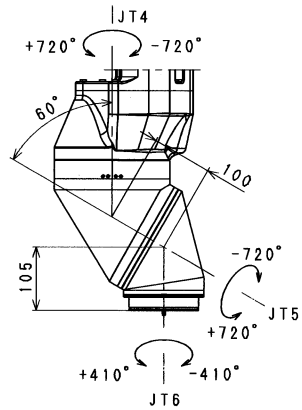
KJ264U-B0
(FLEXIBLE INSTALLATION)
WORKING RANGE



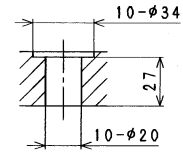
SECTION C-C



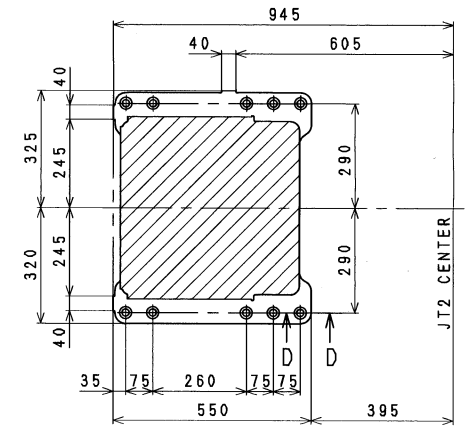
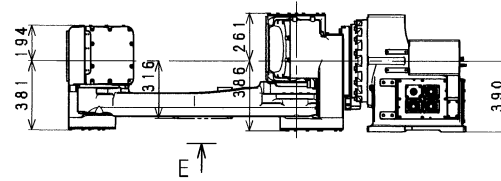
VIEW B



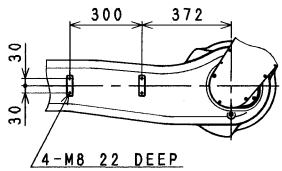
DETAIL A



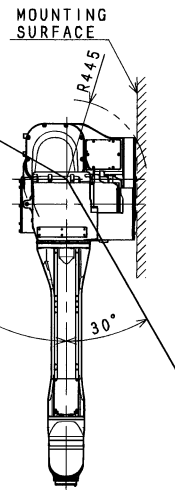
SECTION D-D



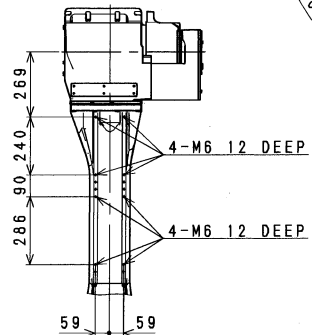
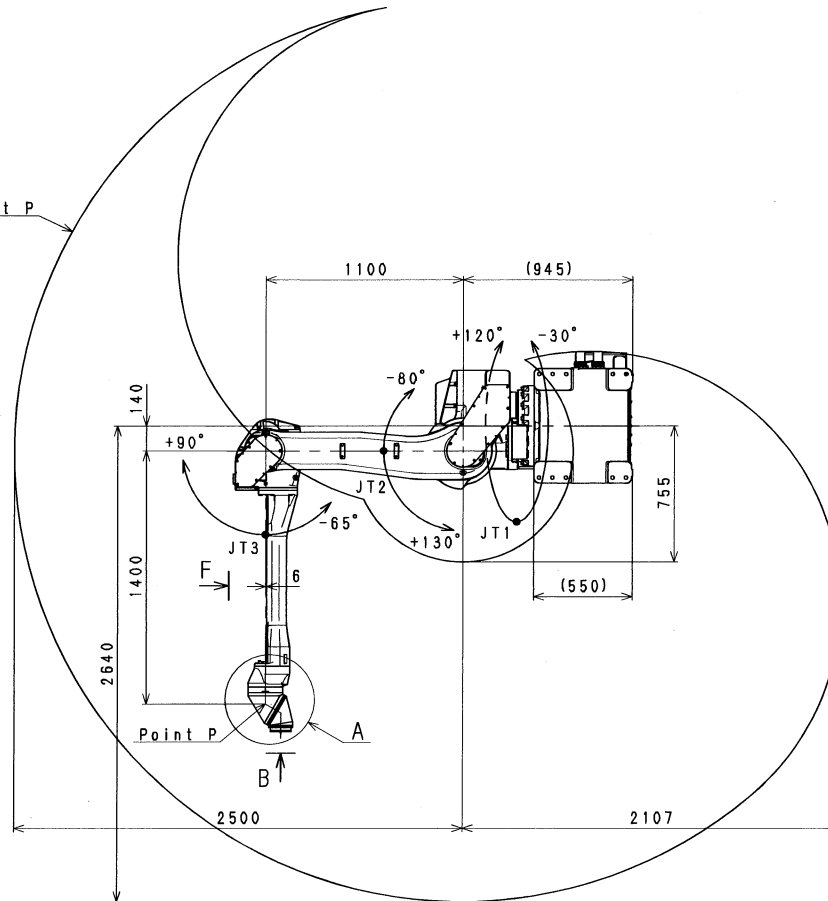
Base Installation Dimensions



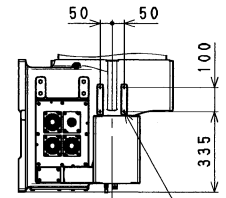
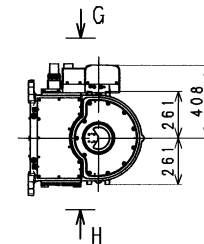
VIEW E



Working range based on point P

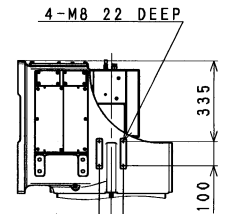


VIEW F



4-M8 22 DEEP

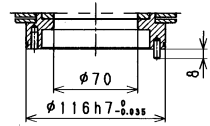
VIEW G



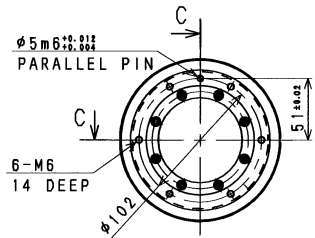
4-M8 22 DEEP

VIEW H

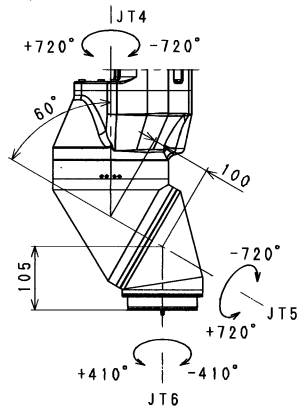
KJ264U-D0
(FLEXIBLE INSTALLATION)
WORKING RANGE



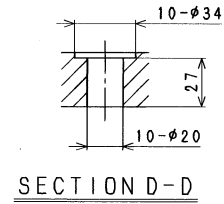
SECTION C-C



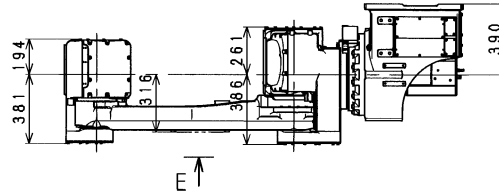
VIEW B



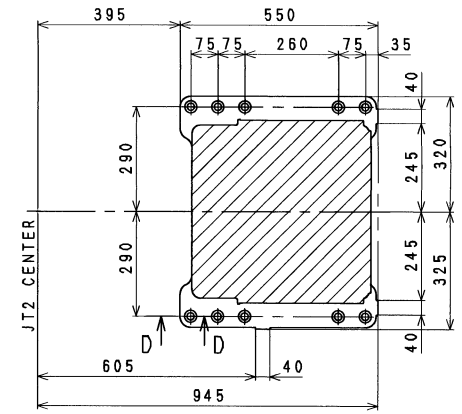
DETAIL A



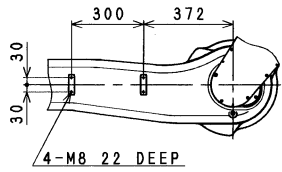
SECTION D-D



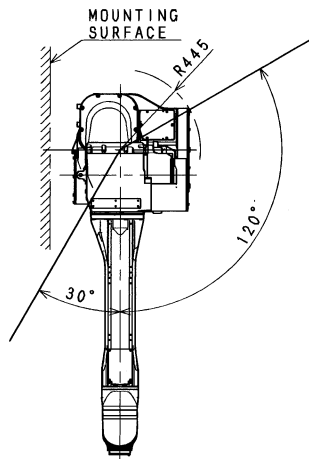
E



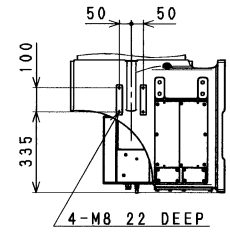
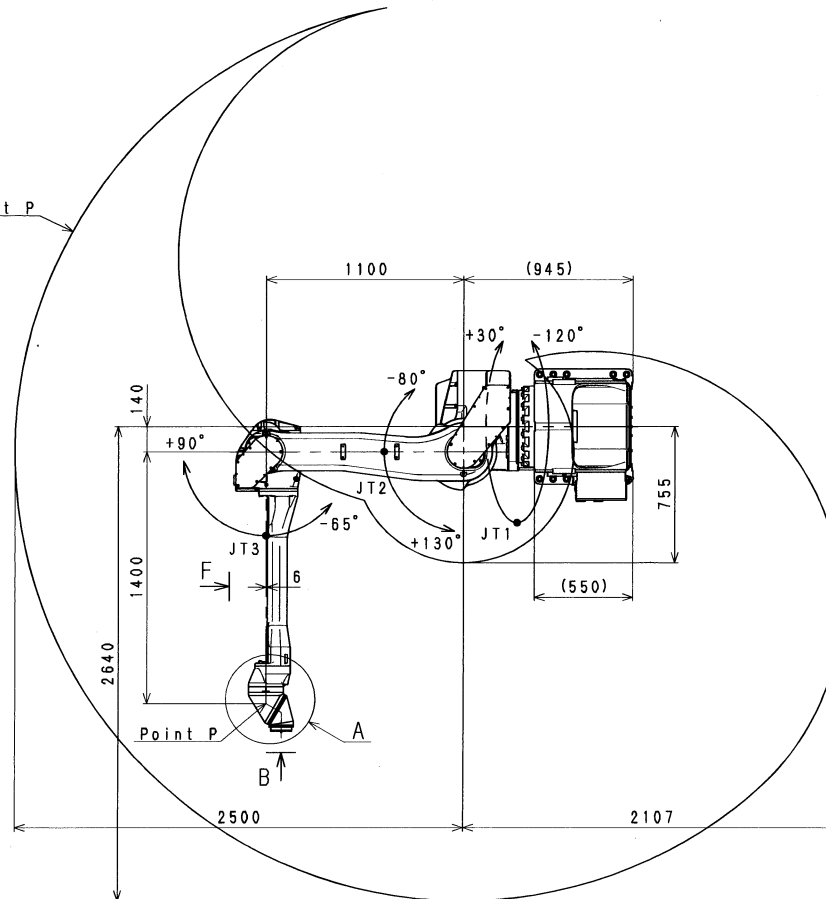
Base Installation Dimensions



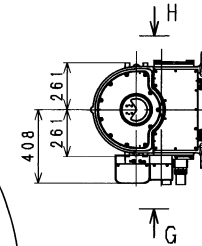
VIEW E



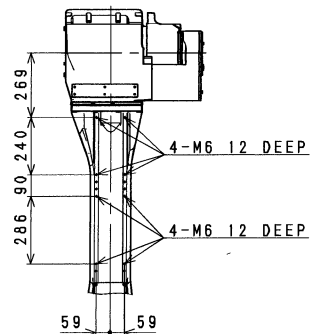
Working range based on point P



VIEW H

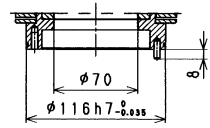


VIEW G

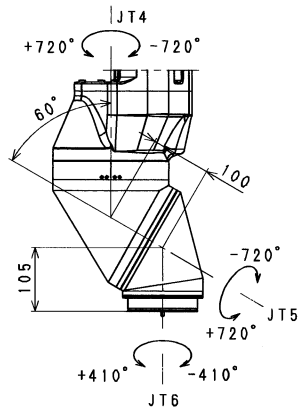


VIEW F

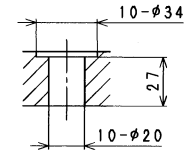
KJ264U-F0
(FLEXIBLE INSTALLATION)
WORKING RANGE



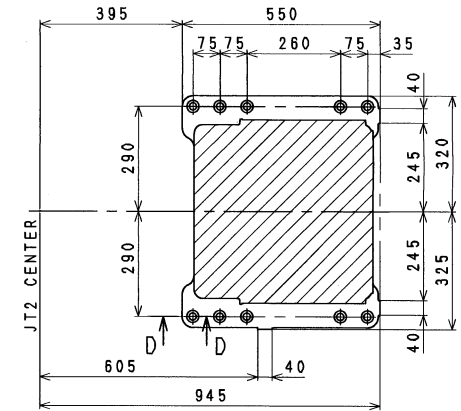
SECTION C-C



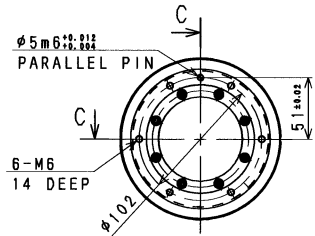
DETAIL A



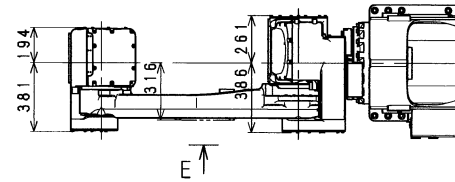
SECTION D-D



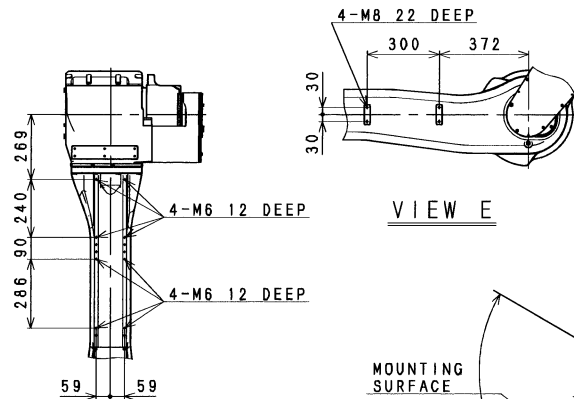
Base Installation Dimensions



VIEW B



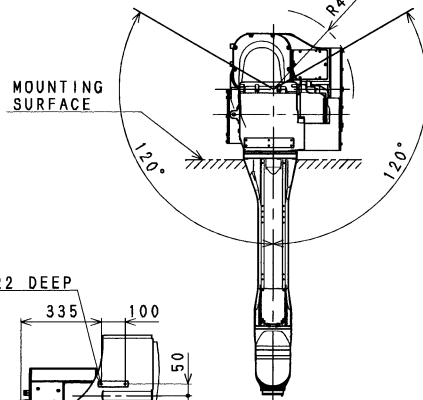
E



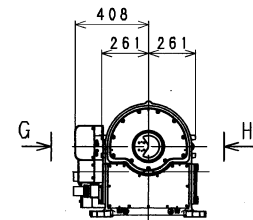
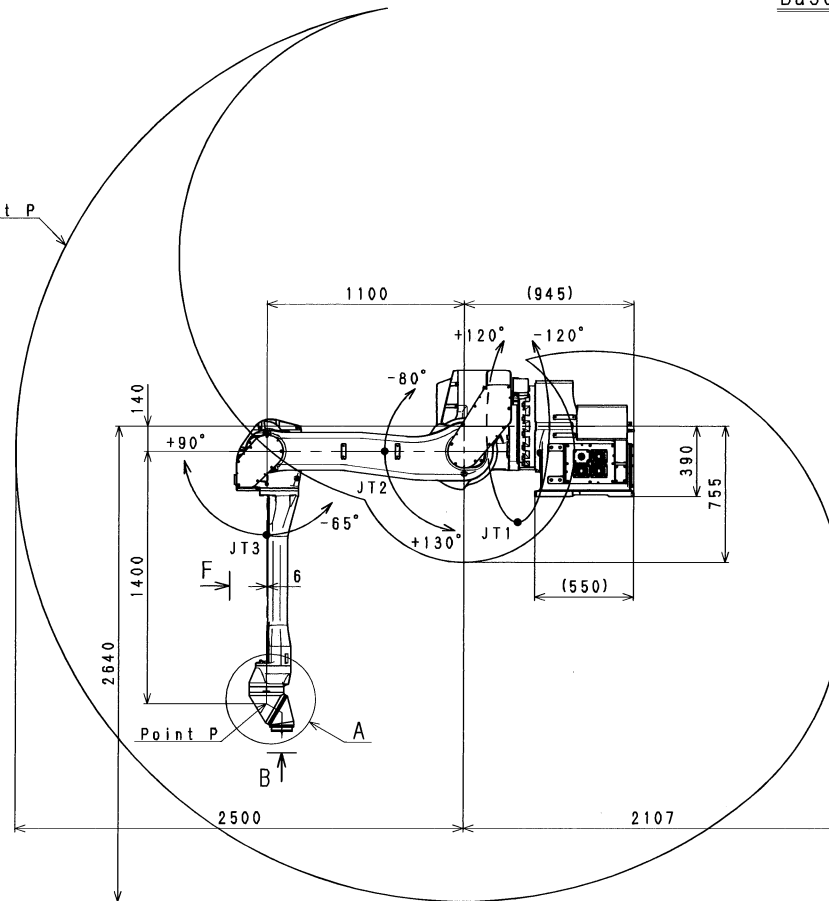
VIEW F

VIEW E

Working range based on point P

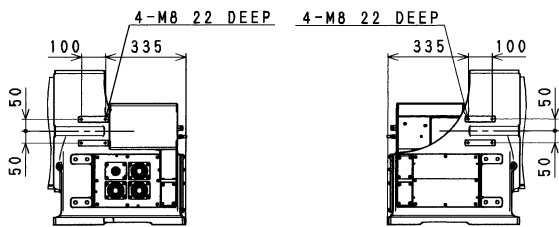


VIEW H



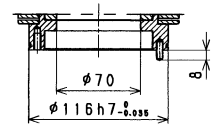
G

H

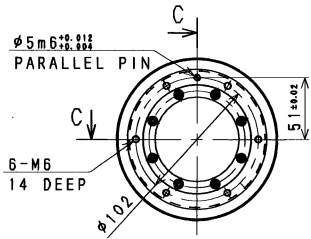


VIEW G

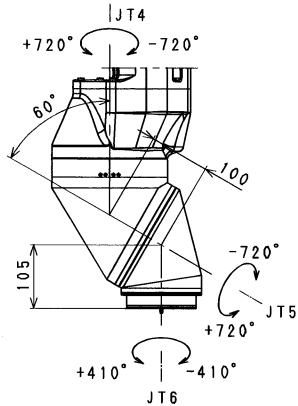
KJ264U-H0
(FLEXIBLE INSTALLATION)
WORKING RANGE



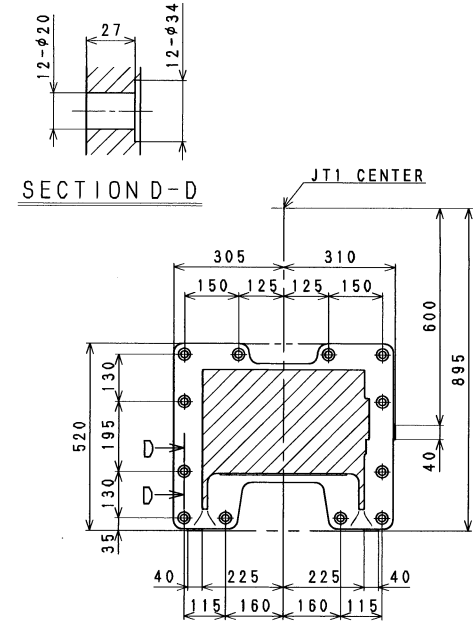
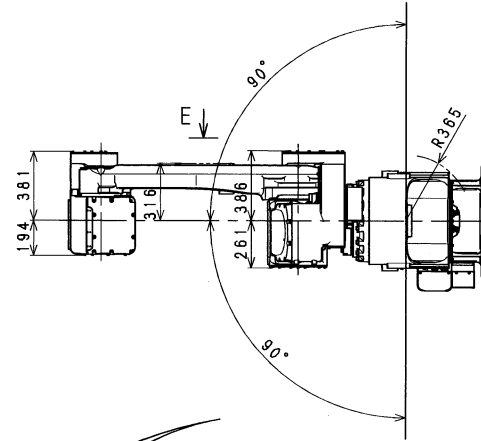
SECTION C-C



VIEW B

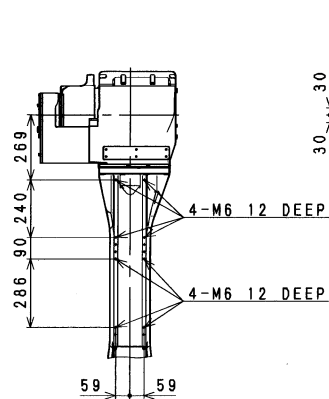


DETAIL A

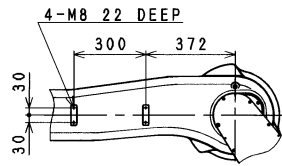


SECTION D-D

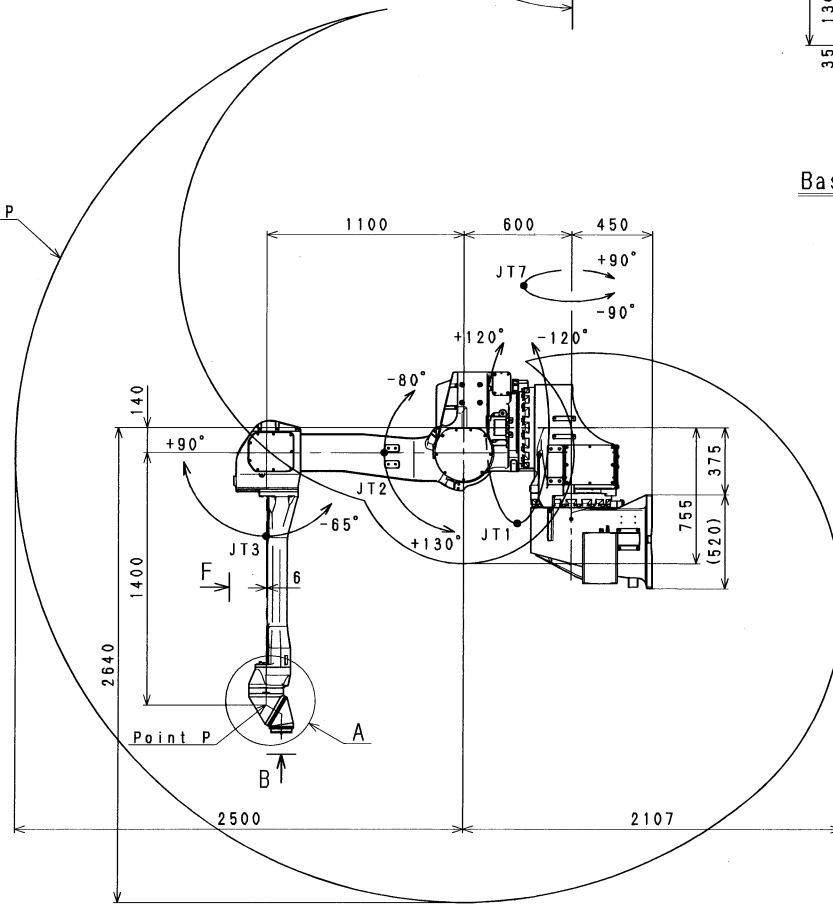
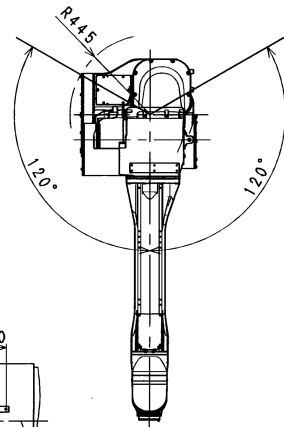
Base Installation Dimensions



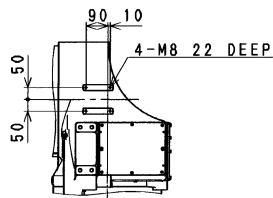
VIEW E



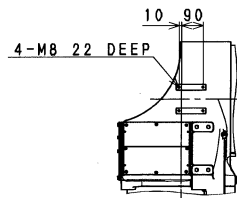
Working range based on point P



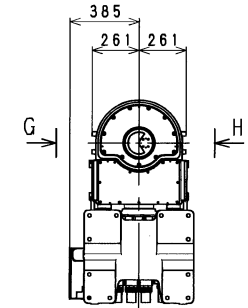
VIEW F



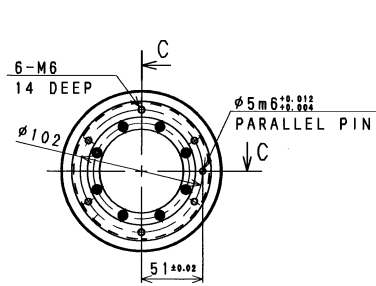
VIEW G



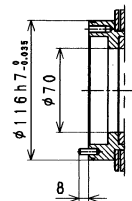
VIEW H



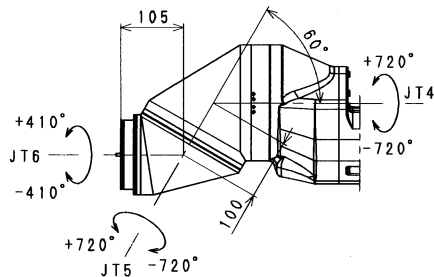
KJ314U-D1
(FLEXIBLE INSTALLATION)
WORKING RANGE



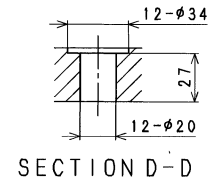
VIEW B



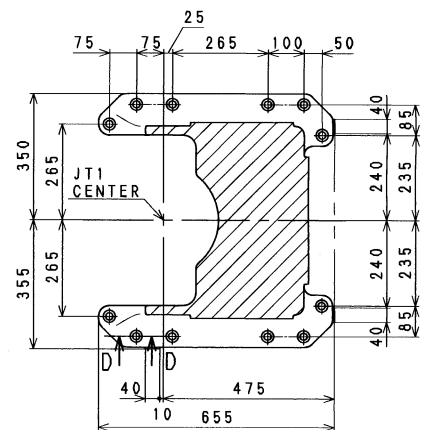
SECTION C-C



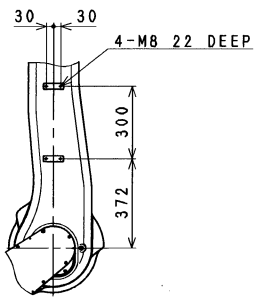
DETAIL A



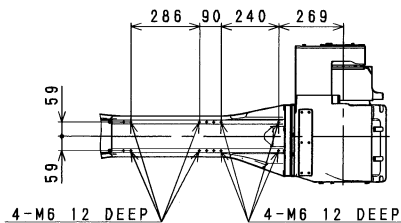
SECTION D-D



Base Installation Dimensions

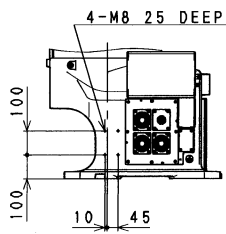
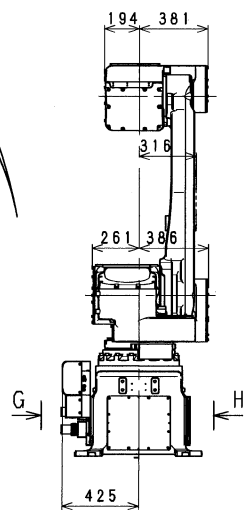
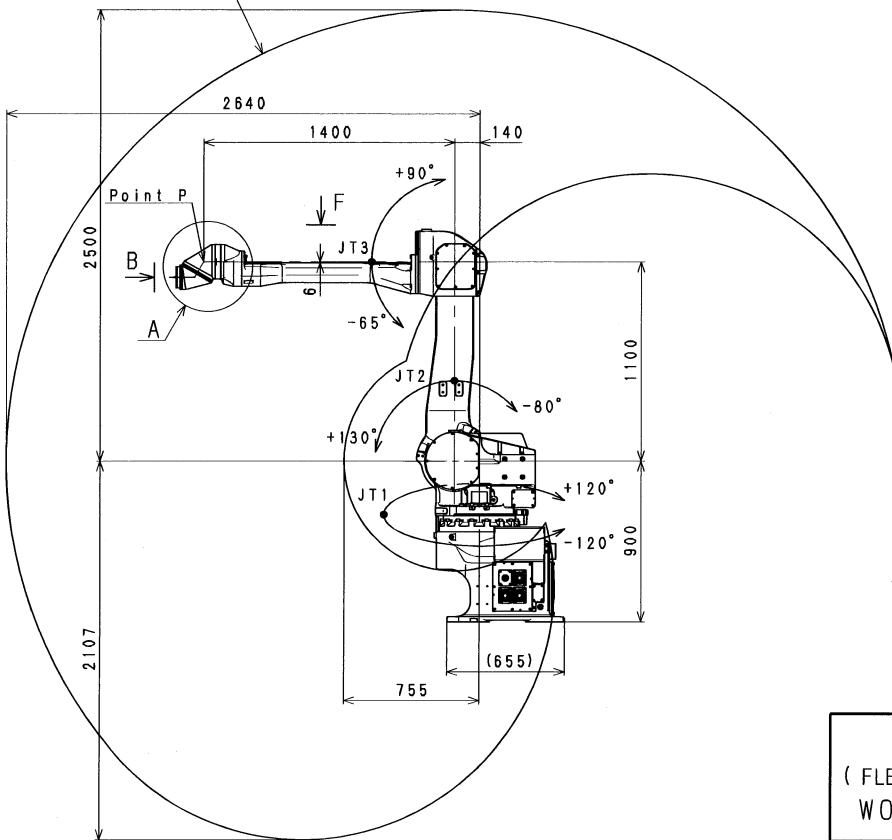


VIEW E

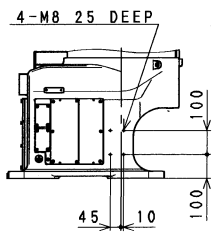


VIEW F

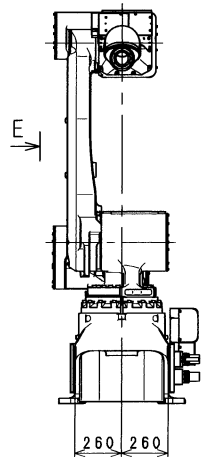
Working range based on point P



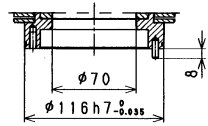
VIEW G



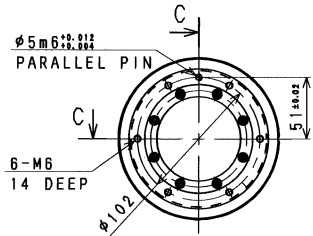
VIEW H



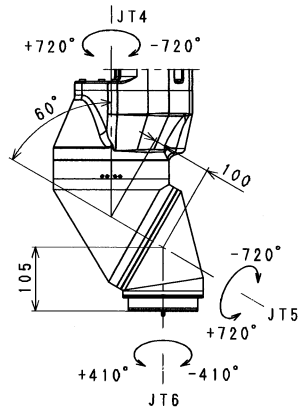
KJ264U-B1
(FLEXIBLE INSTALLATION)
WORKING RANGE



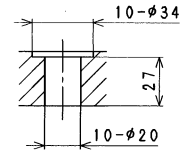
SECTION C-C



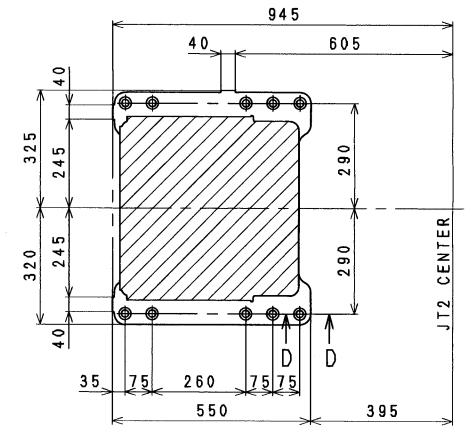
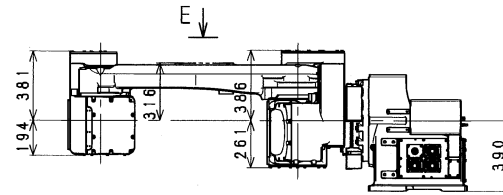
VIEW B



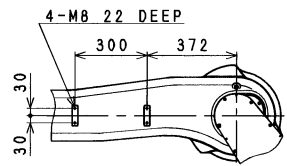
DETAIL A



SECTION D-D



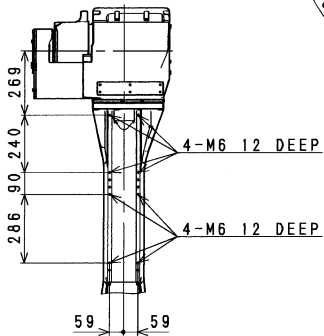
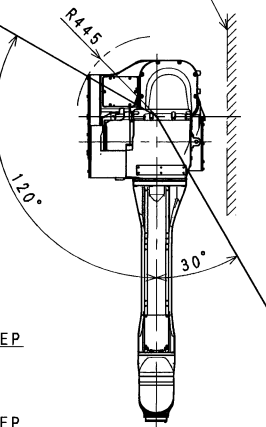
Base Installation Dimensions



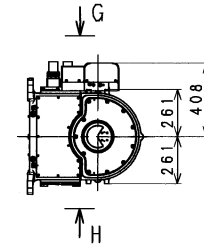
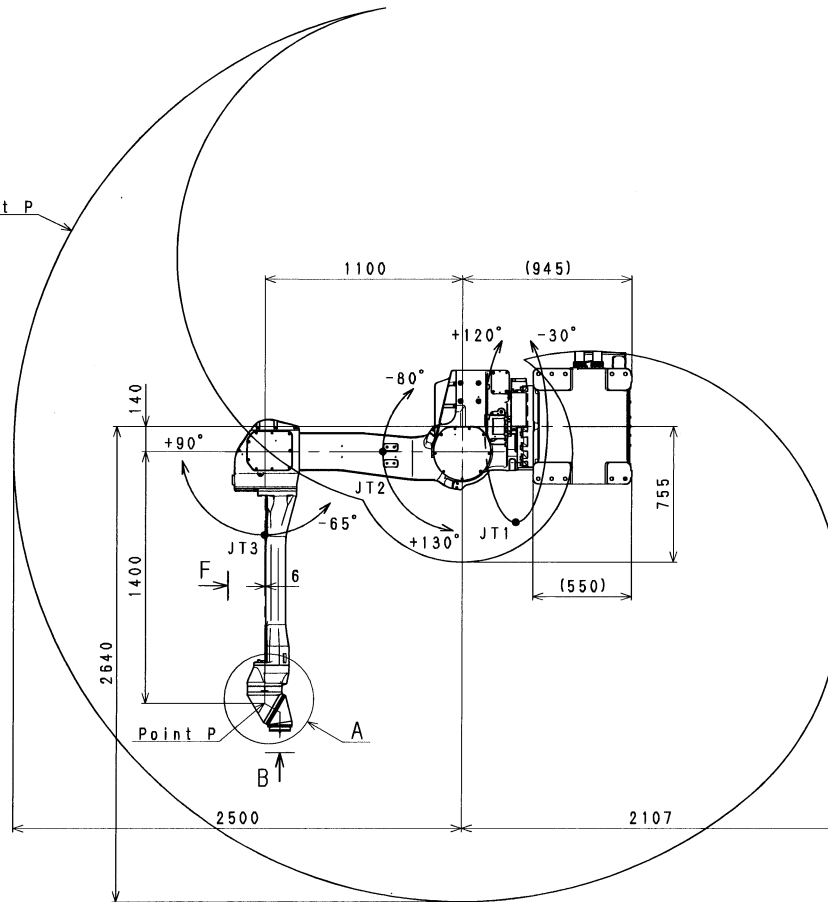
VIEW E

Working range based on point P

MOUNTING SURFACE

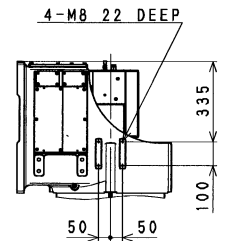


VIEW F



4-M8 22 DEEP

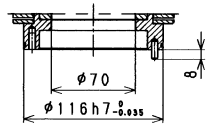
VIEW G



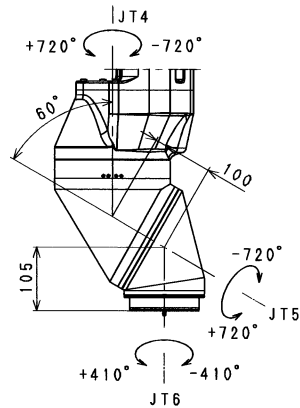
4-M8 22 DEEP

VIEW H

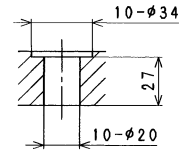
KJ264U-D1
(FLEXIBLE INSTALLATION)
WORKING RANGE



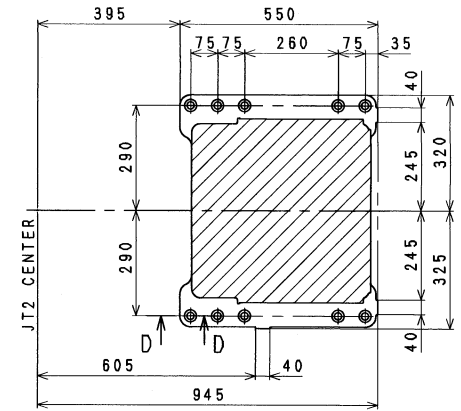
SECTION C-C



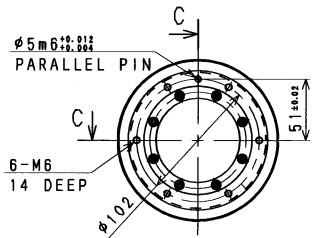
DETAIL A



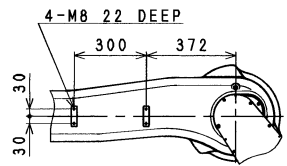
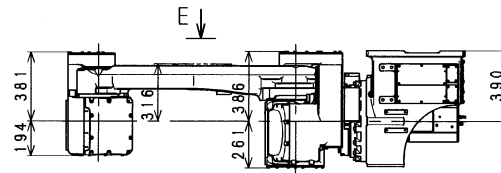
SECTION D-D



Base Installation Dimensions

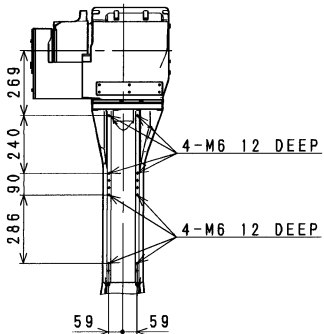
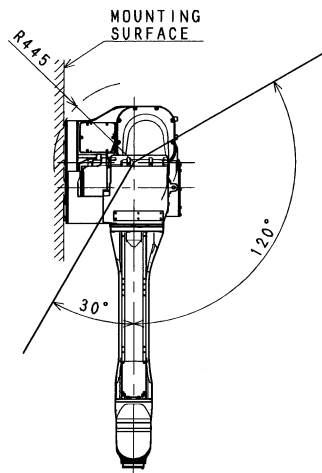


VIEW B

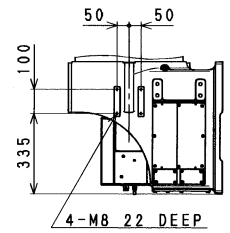
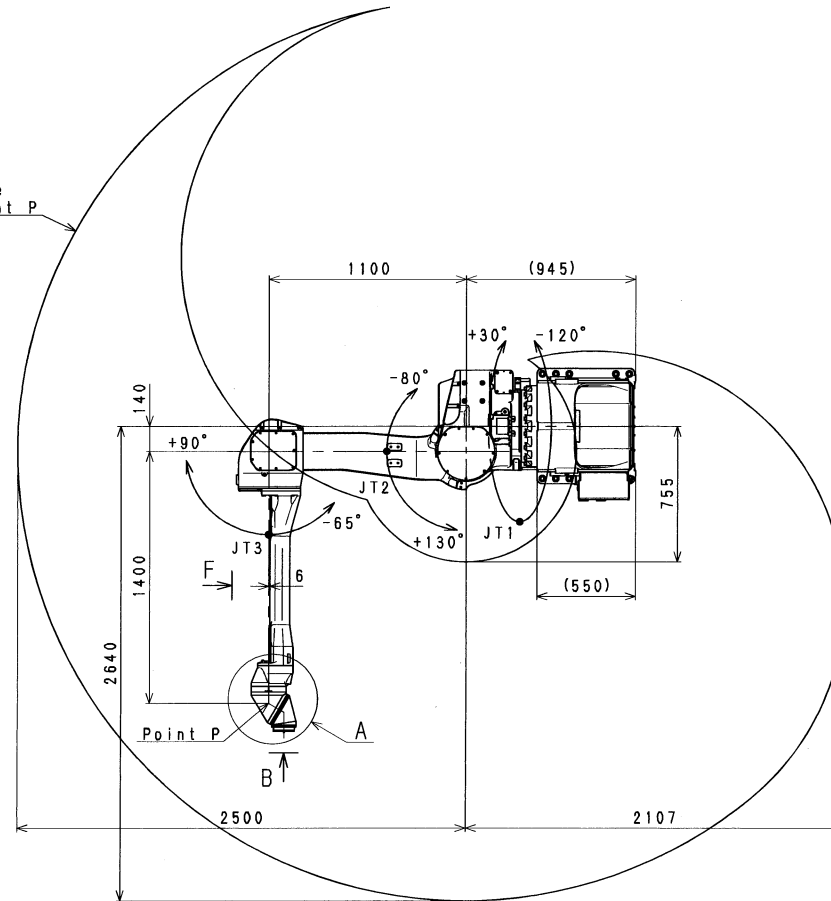


VIEW E

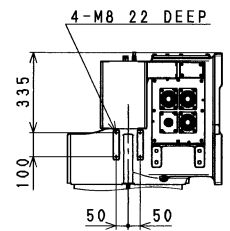
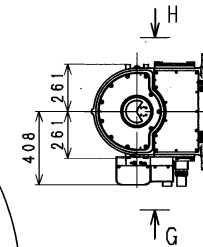
Working range based on point P



VIEW F

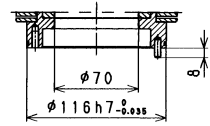


VIEW H

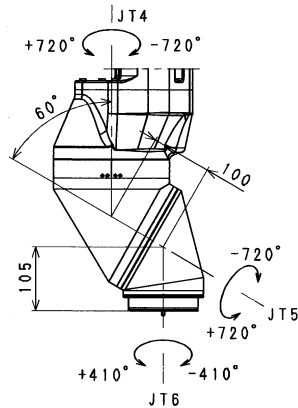


VIEW G

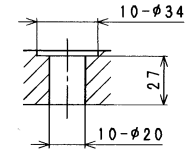
KJ264U-F1
(FLEXIBLE INSTALLATION)
WORKING RANGE



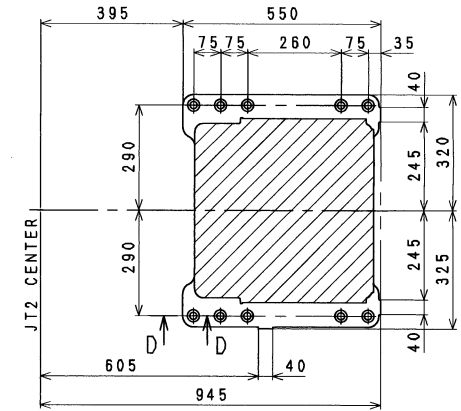
SECTION C-C



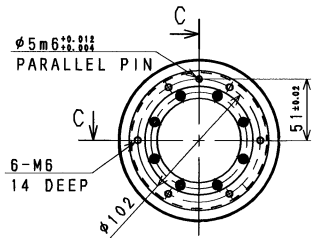
DETAIL A



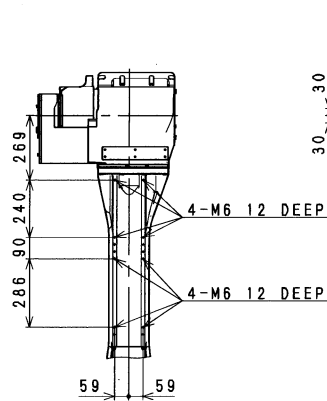
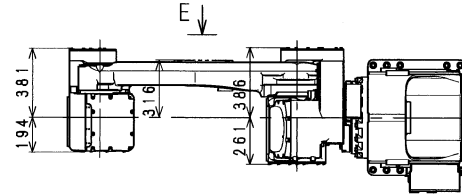
SECTION D-D



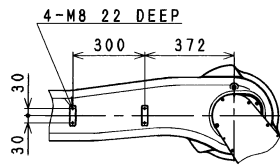
Base Installation Dimensions



VIEW B

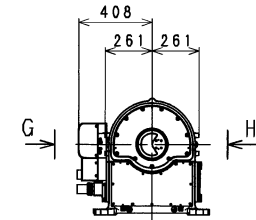
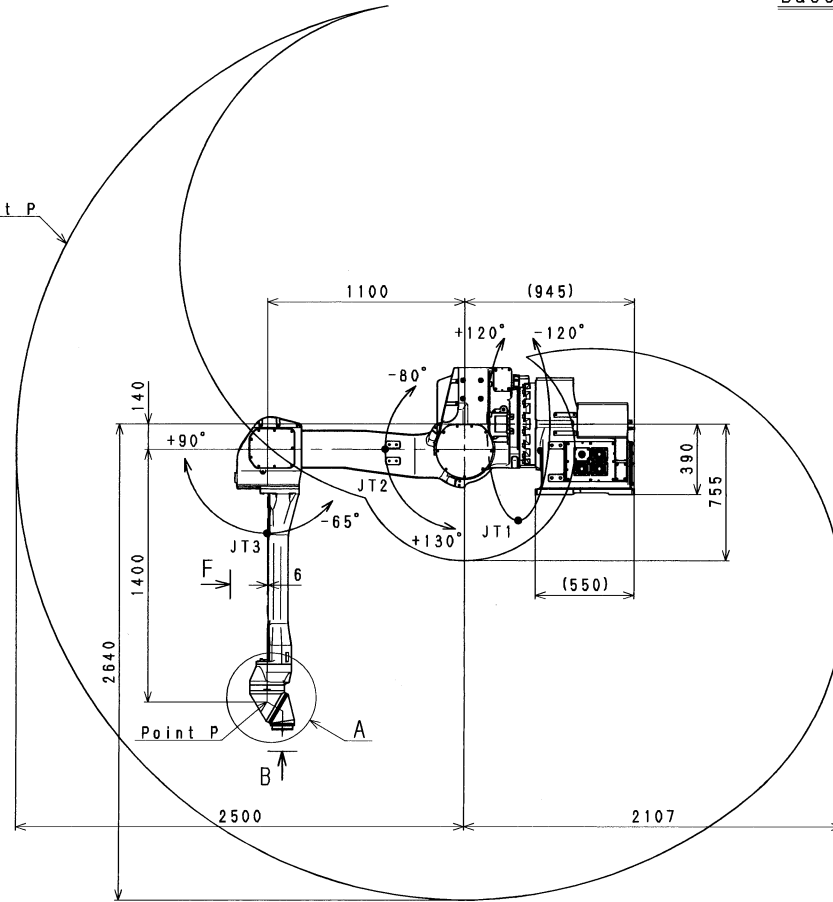
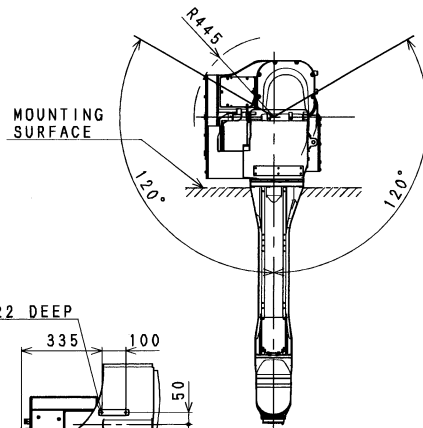


VIEW F

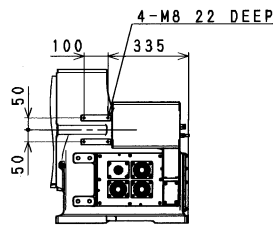


VIEW E

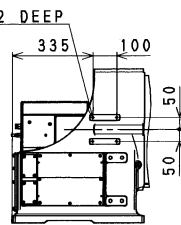
Working range based on point P



VIEW G



VIEW H



VIEW I

KJ264U-H1
(FLEXIBLE INSTALLATION)
WORKING RANGE

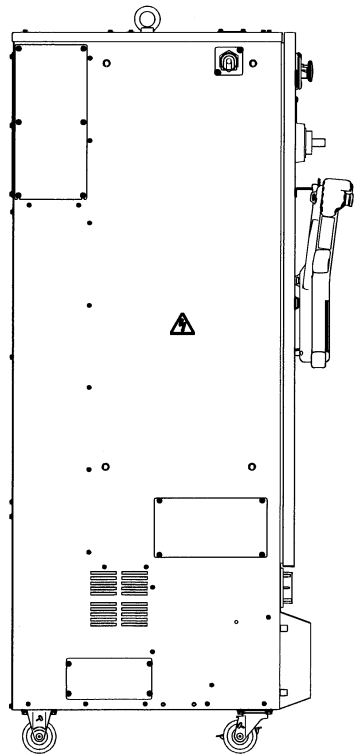
E 3 5 C O N T R O L L E R

M A S S : 1 7 0 K g

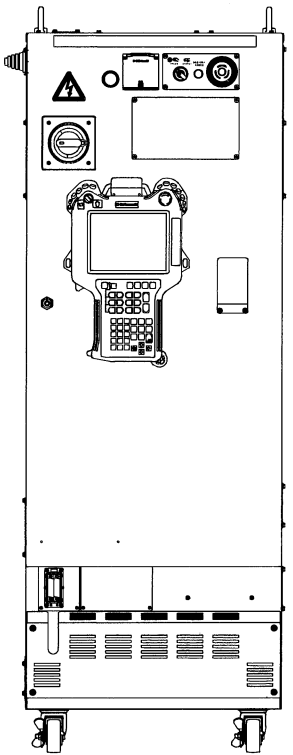
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5 0 0

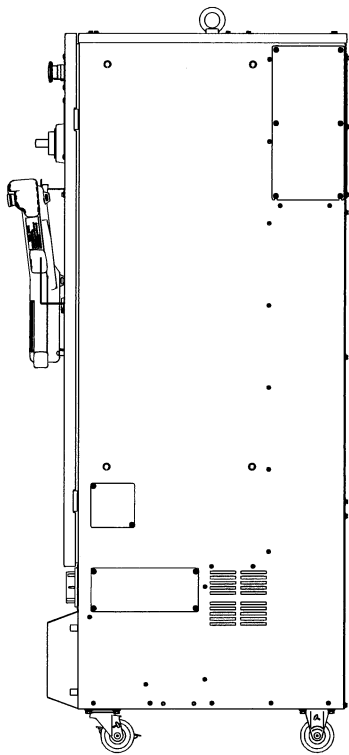
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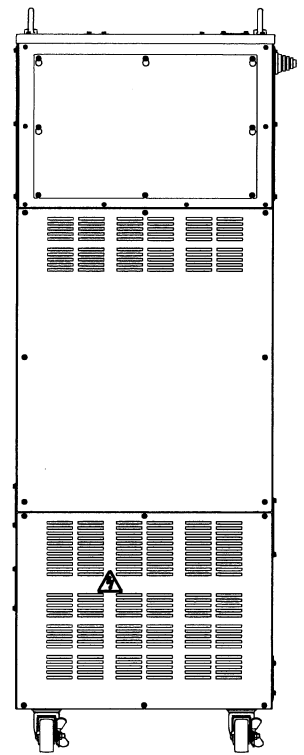
S I D E V I E W



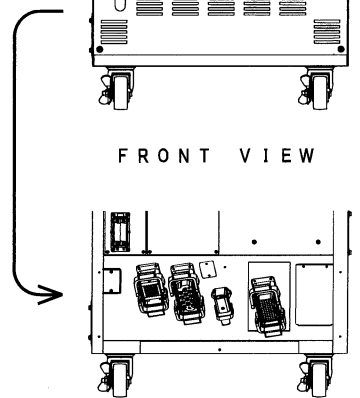
F R O N T V I E W



S I D E V I E W



R E A R V I E W



W I T H O U T C O N N E C T O R C O V E R