

F20N



Ordering method

F20N - 20

Model	Lead designation	Origin position change None: Standard Z: Non-motor side	Grease type None: Standard GC: Clean	Stroke 1150 to 2050 (100mm pitch)	Cable length ^{Note 1} 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)
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TSX	220				
Positioner ^{Note 2} TS-X	Driver: Power-supply voltage / Power capacity 220: 200V/400 to 600W	Regenerative unit No entry: None R: With RGT	LCD monitor No entry: None L: With LCD	I/O selection NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ GW: No I/O board ^{Note 3}	Battery B: With battery (Absolute) N: None (Incremental)
SR1-X	20				
Controller	Driver: Power capacity 20: 400 to 600W	Usable for CE No entry: Standard E: CE marking	Regenerative unit No entry: None R: With RG1	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	Battery B: With battery (Absolute) N: None (Incremental)
RDV-X	2		20	RBR1	
Driver	Power-supply voltage 2: AC200V		Driver: Power capacity 20: 600W or less	Regenerative unit	

Note 1. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.510 for details on robot cable.
 Note 2. See P.446 for DIN rail mounting bracket.
 Note 3. Select this selection when using the gateway function. For details, see P.439.

Specifications

AC servo motor output (W)	400
Repeatability ^{Note 1} (mm)	+/-0.04
Deceleration mechanism	Ball screw (Class C10)
Ball screw lead (mm)	20
Maximum speed (mm/sec)	1000 (1200 ^{Note 2})
Maximum payload (kg)	80
Rated thrust (N)	339
Stroke (mm)	1150 to 2050 (100mm pitch)
Overall length (mm)	Stroke+420
Maximum dimensions of cross section of main unit (mm)	W202 x H120
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 2 rail
Position detector	Resolvers ^{Note 3}
Resolution (Pulse/rotation)	16384

Note 1. Positioning repeatability in one direction.
 Note 2. A regenerative unit is needed if using the SR1-X, TS-X at maximum speeds exceeding 1000mm/sec.. If using the RDV-X, then the regenerative unit RBR1 is required regardless of the installation conditions.
 Note 3. Position detectors(resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

Allowable overhang

		Horizontal installation (Unit: mm)		
		A	B	C
Lead 20	20kg	3397	2332	2683
	40kg	2795	1144	1361
	60kg	2443	749	914
	80kg	2193	551	695

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

Static loading moment

			(Unit: N·m)
MY	MP	MR	
1196	1199	1052	

Controller

Controller	Operation method
SR1-X20 ^{Note} RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X220 ^{Note} RDV-X220-RBR1	I/O point trace / Remote command / Pulse train control

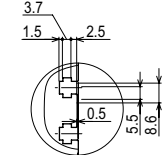
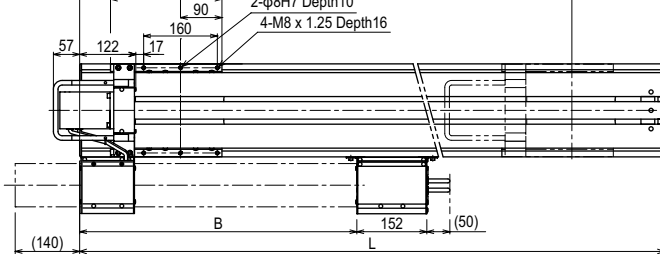
Note. When the unit is operated at a speed exceeding the maximum speed of 1,000mm/sec., a regeneration unit is required.

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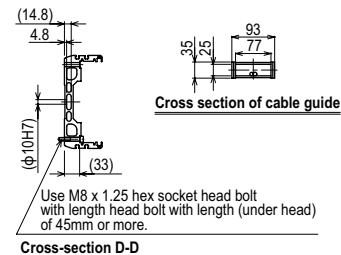
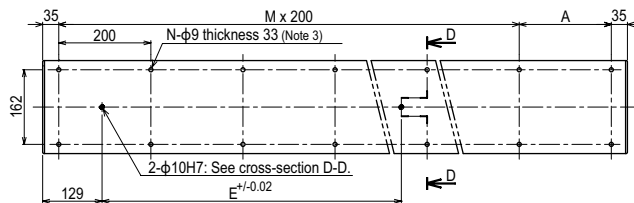
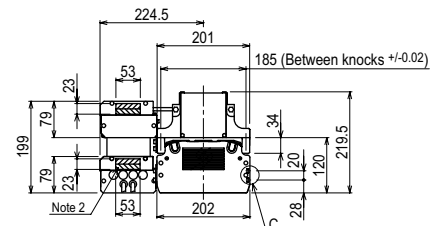
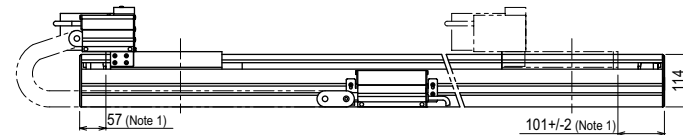
219+/-3: When origin is on L side
 (219: When origin is on R side)

Effective stroke

201+/-3: When origin is on R side
 (201: When origin is on L side)



C section detailed chart



Cross-section D-D

Effective stroke	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050
L	1570	1670	1770	1870	1970	2070	2170	2270	2370	2470
A	100	200	100	200	100	200	100	200	100	200
B	602	648	694	740	786	832	878	924	970	1016
E	1320	1320	1320	1320	1320	1320	1320	1320	1320	1320
M	7	7	8	8	9	9	10	10	11	11
N	18	18	20	20	22	22	24	24	26	26
Weight (kg)	54.0	56.2	58.4	60.6	62.9	65.1	67.3	69.6	71.8	74.0

Note 1. Distance from both ends to the mechanical stopper.
 Note 2. The shaded position indicates the user cable extraction port.
 Note 3. When installing the robot, do not use washers inside the robot body.
 Note 4. The origin is set on the left (L) side at shipping.

APPLICATION
 TRANSERO
 Compact single-axis robots
 FLIP-X
 Single-axis robots
 PHASER
 Linear motor single-axis robots
 XX-X
 Cartesian robots
 YK-X
 SCARA robots
 YP-X
 Pick & place robots
 CLEAN
 CONTROLLER INFORMATION
 T type
 F type
 GF type
 N type
 BR type