

N15/N18

Standard

N15 / N15D Ordering method

Single carriage

N15 - 20 - RH - S - 2000 - 3L - SR1-X - 20 - E - R - N - B											
Model	Lead designation	Cable carrier take out direction	Cable carrier specification	Stroke	Cable length	Applicable controller	Driver	Usable for CE	Regenerative unit	Inputs/Outputs selection	Battery
	20 : 20mm	-RH : Horizontal, right -LH : Horizontal, left -RW : Wall hanging, right Note1 -LW : Wall hanging, left Note1	-S : Standard cable carrier specification -M : Optional cable carrier specification	500 to 2000 (100mm pitch)	-3L : 3.5m (Standard) -5L : 5m -10L : 10m	-SR1-X -RDX (see page 52)		-No entry : Standard -E : CE specification	-No entry : Standard -R : RG1	-N : NPN -P : PNP -CC : CC-Link -DN : DeviceNet -PB : Profibus -YC : YC-Link Note 3	-No entry : None (Incremental specification) -B : Battery (Absolute specification)

Note 1 : It will be a customer's choice.
Note 2 : Optional regenerative unit is required for YAMAHA-designated models and when operating a load with a large inertia.
Note 3 : Available only for the slave.

Double carriage

N15D - 20 - H - S - 1750 - 3L - RCX222HP - E - R - N - N1										
Model	Lead designation	Cable carrier take out direction	Cable carrier specification	Stroke	Cable length	Applicable controller	Usable for CE	Regenerative unit	Inputs/Outputs selection 1	Inputs/Outputs selection 2
	20 : 20mm	-H : Horizontal installation -W : Wall hanging installation Note1	-S : Standard cable carrier specification -M : Optional cable carrier specification Note 2	250 to 1750 (100mm pitch)	-3L : 3.5m (Standard) -5L : 5m -10L : 10m	-SR1-X Note 1 -RCX222HP -DRCX -RCX142 -RDX (see page 52)	-No entry : Standard -E : CE specification	-No entry : Standard -R : RG2	-N : NPN Note 5 -P : PNP -CC : CC-Link -DN : DeviceNet -PB : Profibus -EN : Ethernet Note 5 -YC : YC-Link Note 4	-No entry : None (Incremental specification) -N1 : OP.DIO 24/16 (PNP) Note 5 -P1 : OP.DIO 24/17 (PNP) Note 5 -EN : Ethernet Note 5 Note 6

Note 1 : 2 units are required when using SR1-X or RDX.
Note 2 : It will be a customer's choice.
Note 3 : Optional regenerative unit is required for YAMAHA-designated models and when operating a load with a large inertia.
RG1 for SR1-X, RG2 for DRCX/RCX142, RG2 for RCX222HP.
Note 4 : Available only for the master.
Note 5 : It is not selectable for the CE model.
Note 6 : Only when you have selected CC, DN or PB for Input/Output selection 1, you can select EN for Input/Output selection 2.

N18 / N18D Ordering method

Single carriage

N18 - 20 - RH - S - 2500 - 3L - SR1-X - 20 - E - R - N - B											
Model	Lead designation	Cable carrier take out direction	Cable carrier specification	Stroke	Cable length	Applicable controller	Driver	Usable for CE	Regenerative unit	Inputs/Outputs selection	Battery
	20 : 20mm	-RH : Horizontal, right -LH : Horizontal, left -RW : Wall hanging, right Note1 -LW : Wall hanging, left Note1	-S : Standard cable carrier specification -M : Optional cable carrier specification	500 to 2500 (100mm pitch)	-3L : 3.5m (Standard) -5L : 5m -10L : 10m	-SR1-X -RDX (see page 52)		-No entry : Standard -E : CE specification	-No entry : Standard -R : RG1	-N : NPN -P : PNP -CC : CC-Link -DN : DeviceNet -PB : Profibus -YC : YC-Link Note 3	-No entry : None (Incremental specification) -B : Battery (Absolute specification)

Note 1 : It will be a customer's choice.
Note 2 : Optional regenerative unit is required for YAMAHA-designated models and when operating a load with a large inertia.
Note 3 : Available only for the slave.

Double carriage

N18D - 20 - H - S - 2250 - 3L - RCX222HP - E - R - N - N1										
Model	Lead designation	Cable carrier take out direction	Cable carrier specification	Stroke	Cable length	Applicable controller	Usable for CE	Regenerative unit	Inputs/Outputs selection 1	Inputs/Outputs selection 2
	20 : 20mm	-H : Horizontal installation -W : Wall hanging installation Note1	-S : Standard cable carrier specification -M : Optional cable carrier specification Note 2	250 to 2250 (100mm pitch)	-3L : 3.5m (Standard) -5L : 5m -10L : 10m	-SR1-X Note 1 -RCX222HP -DRCX -RCX142 -RDX (see page 52)	-No entry : Standard -E : CE specification	-No entry : Standard -R : RG2	-N : NPN Note 5 -P : PNP -CC : CC-Link -DN : DeviceNet -PB : Profibus -EN : Ethernet Note 5 -YC : YC-Link Note 4	-No entry : None (Incremental specification) -N1 : OP.DIO 24/16 (PNP) Note 5 -P1 : OP.DIO 24/17 (PNP) Note 5 -EN : Ethernet Note 5 Note 6

Note 1 : 2 units are required when using SR1-X or RDX.
Note 2 : It will be a customer's choice.
Note 3 : Optional regenerative unit is required for YAMAHA-designated models and when operating a load with a large inertia.
RG1 for SR1-X, RG2 for DRCX/RCX142, RG2 for RCX222HP.
Note 4 : Available only for the master.
Note 5 : It is not selectable for the CE model.
Note 6 : Only when you have selected CC, DN or PB for Input/Output selection 1, you can select EN for Input/Output selection 2.

Basic specifications

Model	N15, N15D	N18, N18D
AC servo motor output(W)	400	
Repeatability(mm)	+/- 0.01	
Deceleration mechanism	Ball screw 15	Ball screw 20
Ball screw lead(mm)	20	
Maximum speed(mm/sec)	1200 Note 1	
Maximum payload(kg)	50	80
Rated thrust(N)	312	
Stroke(mm)	N15 : 500 to 2000 N15D : 250 to 1750	N18 : 500 to 2500 N18D : 250 to 2250
Overall length(mm)	Stroke length + 330	Stroke length + 362
Width / Height(mm)	145 / 120	180 / 115
Cable length(m)	3.5 (Standard), 5, 10	
Controller	N15, N18	SR1-X-20-R
	N15D, N18D	SR1-X-20-R Note 2, RCX222HP, RCX142
Robot driver	RDX-20-RBR1 Note 2	

Note 1 : The maximum speed may not be reached when the moving distance is short.
Note 2 : 2 units are required for the double carriage type.

Tolerable overhang amount

N15 / N15D During horizontal use (Unit : mm)

	0 °	45 °	90 °
Lead 20	10kg	1082	1316
	30kg	394	568
	50kg	256	422

N15 / N15D During wall installation use (Unit : mm)

	0 °	45 °	90 °
Lead 20	10kg	1718	750
	30kg	621	222
	50kg	368	109

N18 / N18D During horizontal use (Unit : mm)

	0 °	45 °	90 °
Lead 20	30kg	1498	1666
	50kg	897	1037
	80kg	552	665

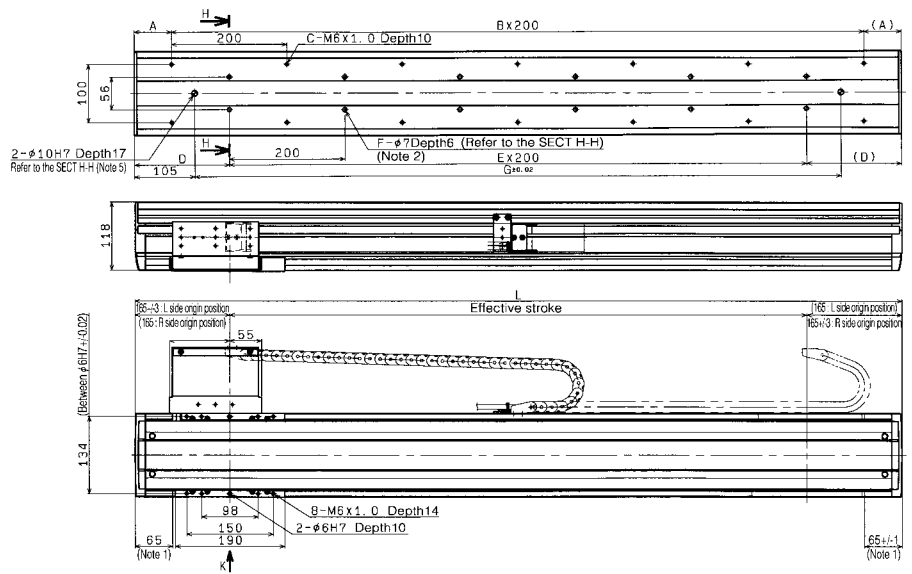
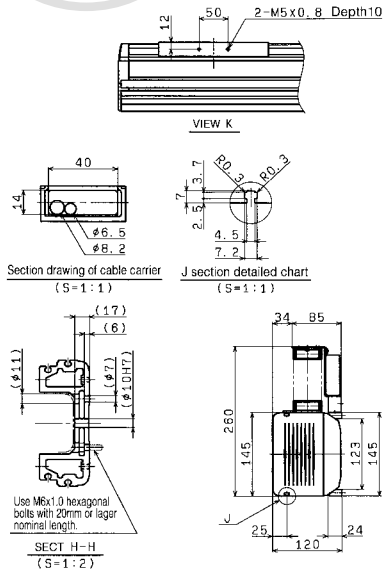
N18 / N18D During wall installation use (Unit : mm)

	0 °	45 °	90 °
Lead 20	30kg	2462	977
	50kg	1673	596
	80kg	1190	370

Note : Distance from center of slider top to center of gravity of object being transported.

N15 Wall hanging

N15 Installation method : Wall hanging / Standard cable carrier specification **RW**



Note 1 : Distance from both ends to the mechanical stopper.

Note 2 : When using 7 holes for installation, you must not use a washer, spring washer, etc. in the main unit.

Note 3 : The L-side origin specification is used at the time of shipping. (This diagram shows the machine whose cable carrier taken out from right.)

Note 4 : When using the standard specifications as shown in this diagram, you can pass through 3 or less 6 x 4 urethane air tubes.

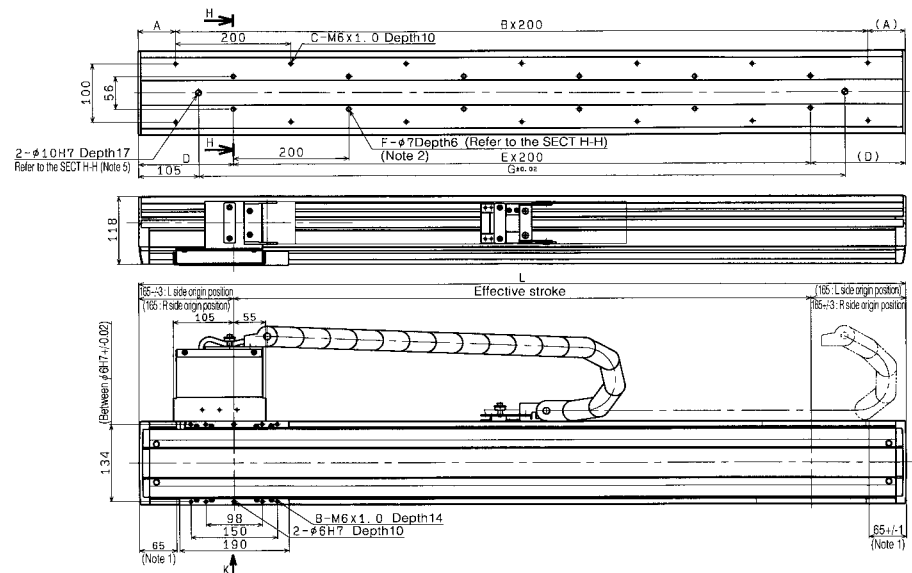
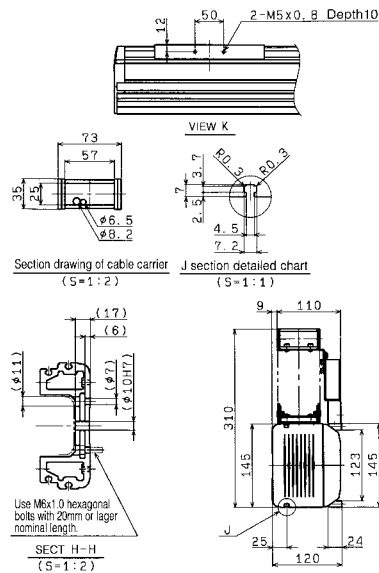
Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.

Note 6 : Contact us for ceiling-hanging / inverse type.

Note 7 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
A	15	65	15	65	15	65	15	65	15	65	15	65	15	65	15	65
B	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
C	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
D	115	165	115	165	115	165	115	165	115	165	115	165	115	165	115	165
E	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
F	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
G	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720	1820	1920	2020	2120
Weight(kg)	19	20	22	23	24	26	27	29	30	32	33	35	36	38	39	40

N15 Installation method : Wall hanging / Optional cable carrier specification **RW**



Note 1 : Distance from both ends to the mechanical stopper.

Note 2 : When using 7 holes for installation, you must not use a washer, spring washer, etc. in the main unit.

Note 3 : The L-side origin specification is used at the time of shipping. (This diagram shows the machine whose cable carrier taken out from right.)

Note 4 : Contact us for ceiling-hanging / inverse type.

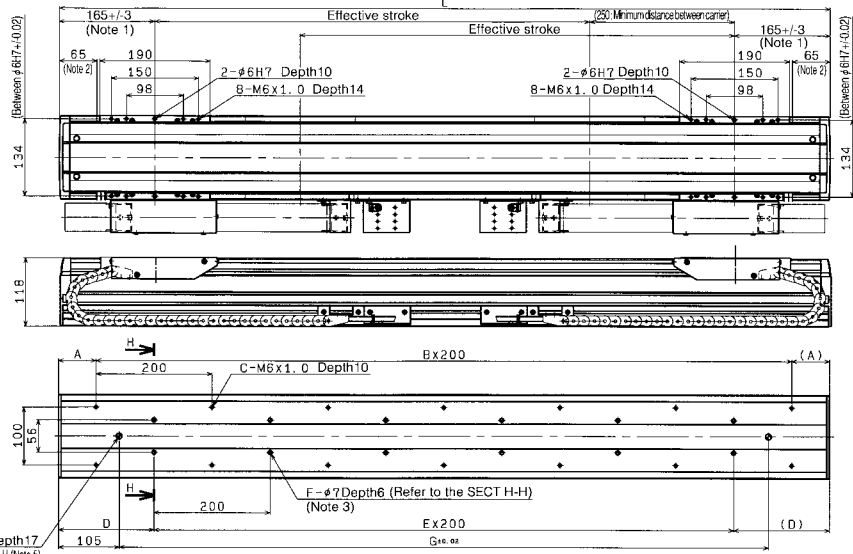
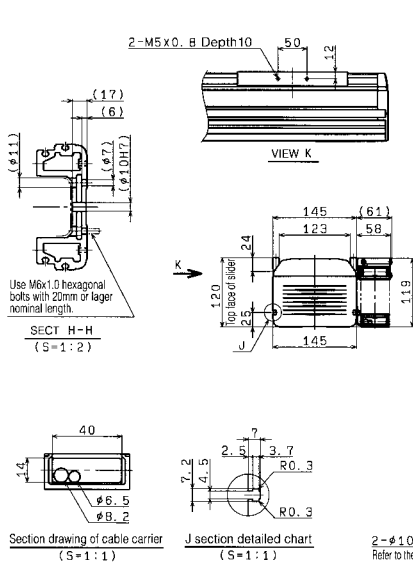
Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.

Note 6 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
A	15	65	15	65	15	65	15	65	15	65	15	65	15	65	15	65
B	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
C	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
D	115	165	115	165	115	165	115	165	115	165	115	165	115	165	115	165
E	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
F	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
G	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720	1820	1920	2020	2120
Weight(kg)	20	21	23	24	25	27	28	30	31	33	34	36	37	39	40	41

N15D Horizontal

N15D Installation method : Horizontal / Standard cable carrier specification

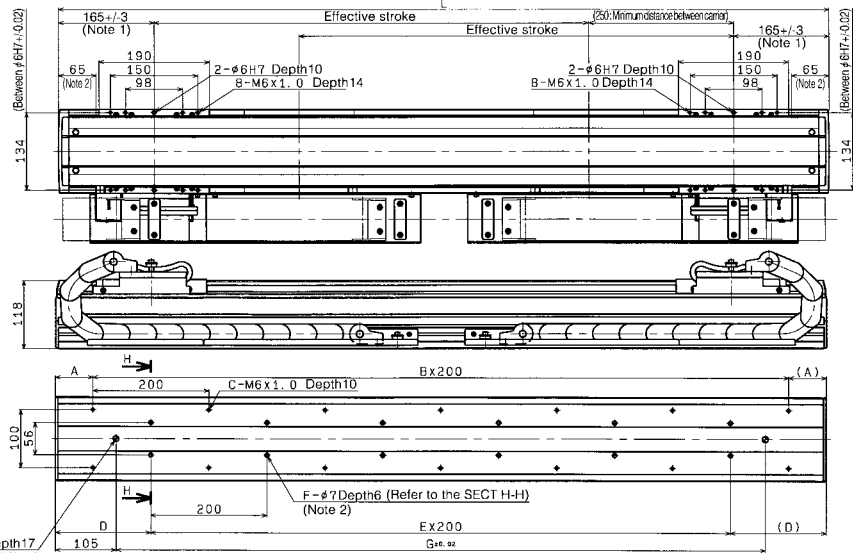
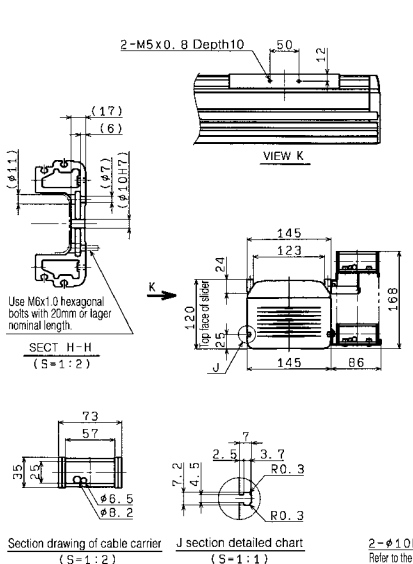


Note 1 : Position of table carriage when returned to the origin.
 Note 2 : Distance from both ends to the mechanical stopper.
 Note 3 : When using 7 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
 Note 4 : When using the standard cable carrier specifications as shown in this diagram, you can pass through 3 or less 6 x 4 urethane air tubes.

Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
 Note 6 : Contact us for ceiling-hanging / inverse type.
 Note 7 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	250	350	450	550	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750
L	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
A	15	65	15	65	15	65	15	65	15	65	15	65	15	65	15	65
B	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
C	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
D	115	165	115	165	115	165	115	165	115	165	115	165	115	165	115	165
E	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
F	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
G	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720	1820	1920	2020	2120
Weight(kg)	24	26	27	29	30	32	33	34	36	37	39	40	42	43	45	46

N15D Installation method : Horizontal / Optional cable carrier specification

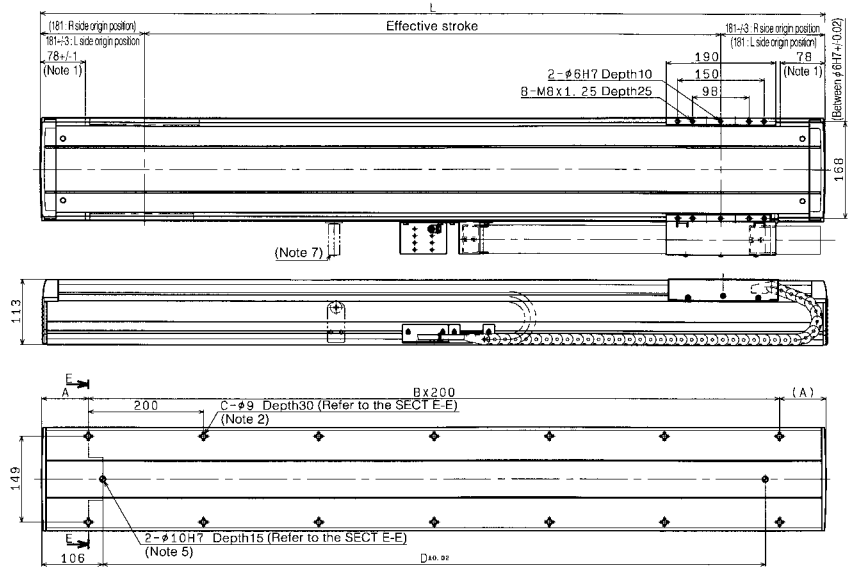
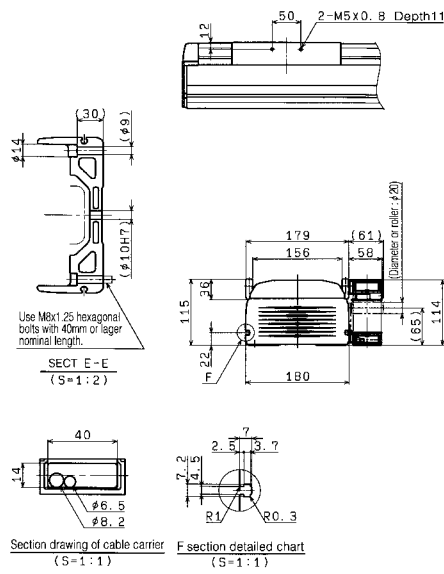


Note 1 : Position of table carriage when returned to the origin.
 Note 2 : Distance from both ends to the mechanical stopper.
 Note 3 : When using 7 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
 Note 4 : Contact us for ceiling-hanging / inverse type.

Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
 Note 6 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	250	350	450	550	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750
L	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
A	15	65	15	65	15	65	15	65	15	65	15	65	15	65	15	65
B	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
C	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
D	115	165	115	165	115	165	115	165	115	165	115	165	115	165	115	165
E	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
F	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22
G	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720	1820	1920	2020	2120
Weight(kg)	25	27	28	30	31	33	34	35	37	38	40	41	43	44	46	47

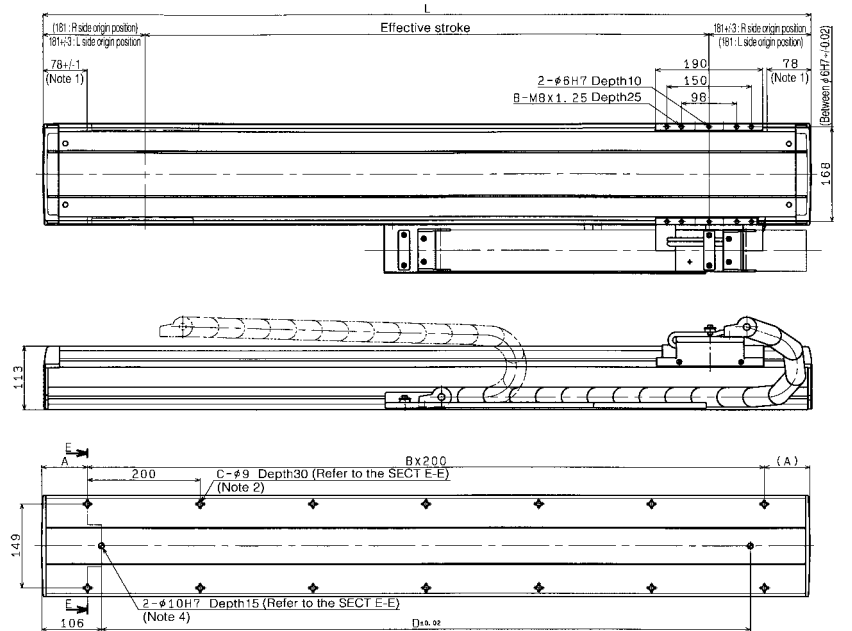
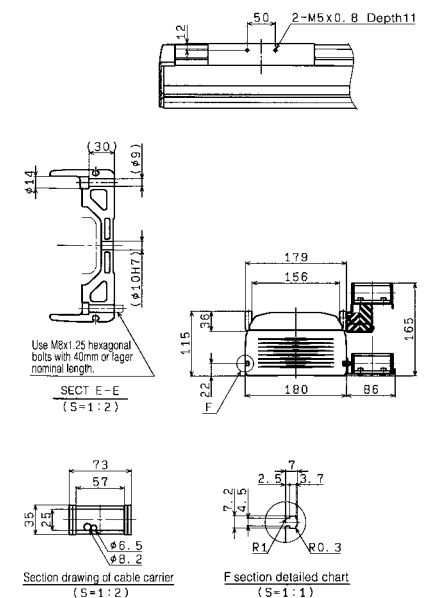
N18 Installation method : Horizontal / Standard cable carrier specification (RH)



- Note 1 : Distance from both ends to the mechanical stopper.
 Note 2 : When using 9 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
 Note 3 : The R-side origin specification is used at the time of shipping. (This diagram shows the machine whose cable carrier taken out from right.)
 Note 4 : When using the standard specifications as shown in this diagram, you can pass through 3 or less 6 x 4 urethane air tubes.
 Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
 Note 6 : Contact us for ceiling-hanging / inverse type.
 Note 7 : For the robot with more than 2100 stroke, a roller to prevent the cable carrier from hanging is provided.
 Note 8 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	862	962	1062	1162	1262	1362	1462	1562	1662	1762	1862	1962	2062	2162	2262	2362	2462	2562	2662	2762	2862
A	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131
B	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
D	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Weight(kg)	27	29	31	33	35	37	39	41	43	45	47	48	50	52	54	56	58	60	62	64	66

N18 Installation method : Horizontal / Optional cable carrier specification (RH)

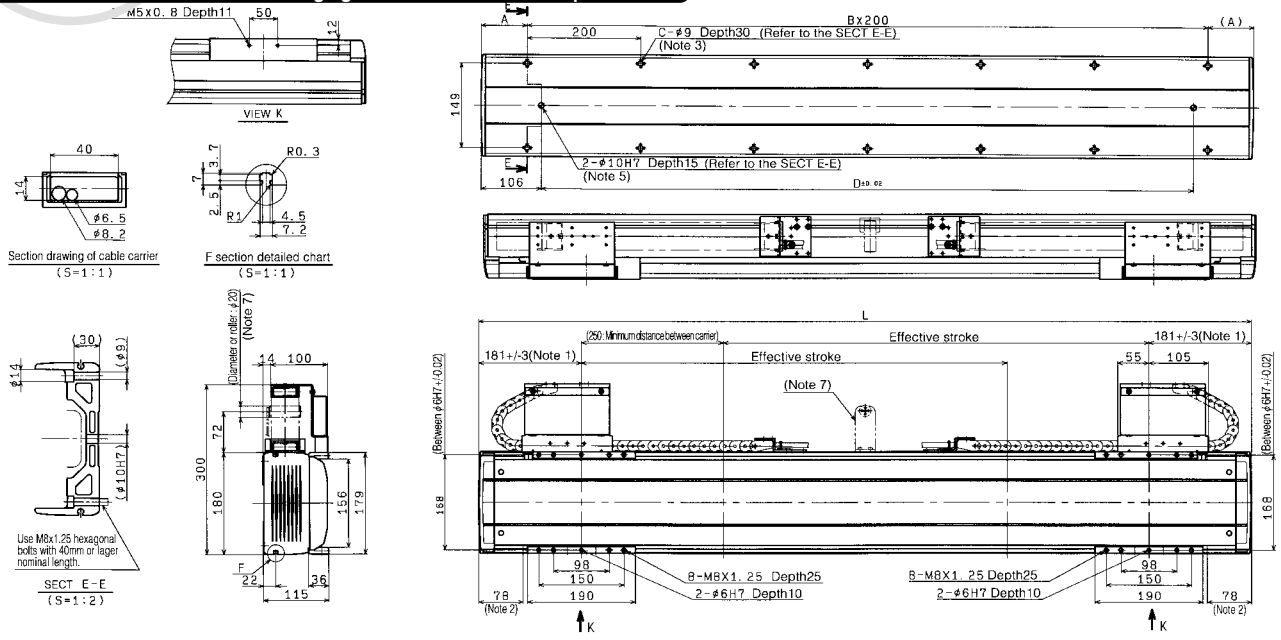


- Note 1 : Distance from both ends to the mechanical stopper.
 Note 2 : When using 9 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
 Note 3 : The R-side origin specification is used at the time of shipping. (This diagram shows the machine whose cable carrier taken out from right.)
 Note 4 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
 Note 5 : Contact us for ceiling-hanging / inverse type.
 Note 6 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	862	962	1062	1162	1262	1362	1462	1562	1662	1762	1862	1962	2062	2162	2262	2362	2462	2562	2662	2762	2862
A	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131
B	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
D	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Weight(kg)	28	30	32	34	36	38	40	42	44	46	48	49	51	53	55	57	59	61	63	65	67

N18D Wall hanging

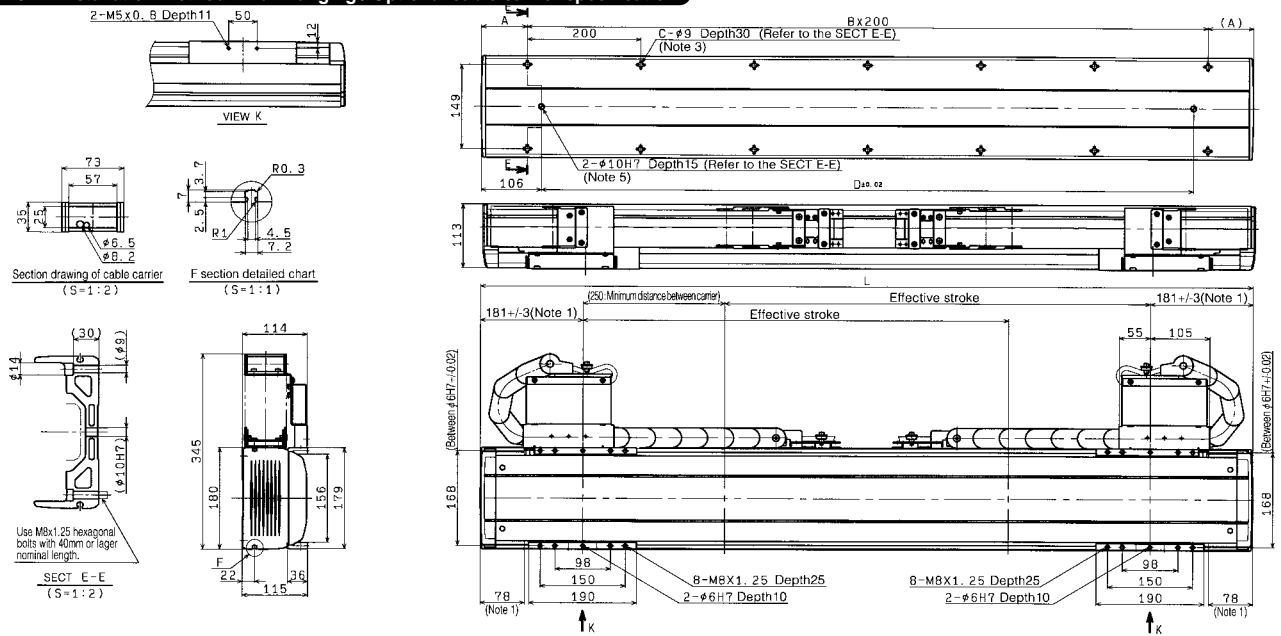
N18D Installation method : Wall hanging / Standard cable carrier specification



- Note 1 : Position of table carriage when returned to the origin.
- Note 2 : Distance from both ends to the mechanical stopper.
- Note 3 : When using 9 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
- Note 4 : When using the standard cable carrier specifications as shown in this diagram, you can pass through 3 or less 6 x 4 urethane air tubes.
- Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
- Note 6 : Contact us for ceiling-hanging / inverse type.
- Note 7 : For the robot with more than 2050 stroke, a roller to prevent the cable carrier from hanging is provided.
- Note 8 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	250	350	450	550	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250
L	862	962	1062	1162	1262	1362	1462	1562	1662	1762	1862	1962	2062	2162	2262	2362	2462	2562	2662	2762	2862
A	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131
B	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
D	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Weight(kg)	35	37	39	41	43	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74

N18D Installation method : Wall hanging / Optional cable carrier specification



- Note 1 : Position of table carriage when returned to the origin.
- Note 2 : Distance from both ends to the mechanical stopper.
- Note 3 : When using 9 holes for installation, you must not use a washer, spring washer, etc. in the main unit.
- Note 4 : Contact us for ceiling-hanging / inverse type.
- Note 5 : When using a 10H7 hole, make sure that the pin does not go into deeper than as shown in the drawing.
- Note 6 : As the carriage is made of extracted aluminum, its width dimension may slightly differ from the value above.

Effective stroke	250	350	450	550	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250
L	862	962	1062	1162	1262	1362	1462	1562	1662	1762	1862	1962	2062	2162	2262	2362	2462	2562	2662	2762	2862
A	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131	81	131
B	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
D	650	750	850	950	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
Weight(kg)	36	38	40	42	44	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75