Three fingers type

YRG-2004T

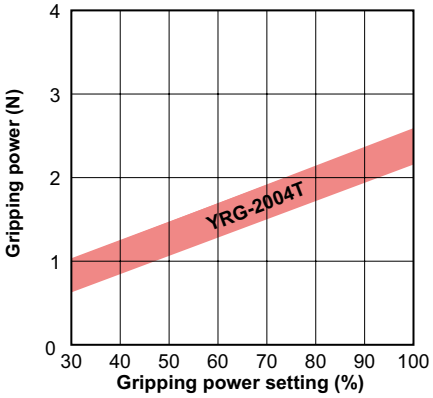
Basic specifications

Model name		YRG-2004T
Holding power	Max. continuous rating (N)	2.5
	Min. setting (% (N))	30 (0.75)
	Resolution (% (N))	1 (0.025)
Open/close stroke (mm)		3.5
Speed	Max. rating (mm/sec)	100
	Min. setting (% (mm/sec))	20 (20)
	Resolution (% (mm/sec))	1 (1)
	Holding speed (Max.) (%)	50
Repetitive positioning accuracy (mm)		+/-0.03
Guide mechanism		Linear guide
Max. holding weight Note 1 (kg)		0.02
Weight (g)		90

• Hoding power control : 30 to 100% (1% steps) • Speed control : 20 to 100% (1% steps)
• Acceleration control : 1 to 100% (1% steps) • Multipoint position control : 10,000 max.
Note. Design the finger as short and lightweight as possible.
Note. Set the parameters and holding power (%) of the holding movement command so that any excessive shock is not applied to the finger during operation.
Note. When installing or uninstalling the finger, tighten the bolts while the finger is being held securely so that any excessive force or shock is not applied to the guide block.
Note. Workpiece weight that is able to be held may greatly vary depending on the material, shape, and/or holding surface conditions of the finger.

Note 1. Design the weight of a workpiece to be held so that it is approximately 1/10 to 1/20 of the holding power. (Consider further allowance when moving and swinging the gripper that keeps holding a workpiece.)

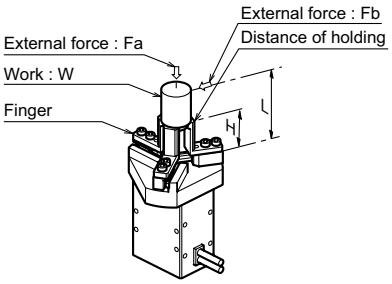
Gripping power vs. gripping power setting (%)



• Graph shows a general guide to gripping power versus gripping power setting (%). Variations will appear in the actual gripping power.

Allowable load and load moment

				YRG-2004T
Finger	Allowable load		N	6
	Allowable pitching moment		N•m	0.02
	Max. weight (1 pair)		g	10
	Max. holding position	L	mm	15



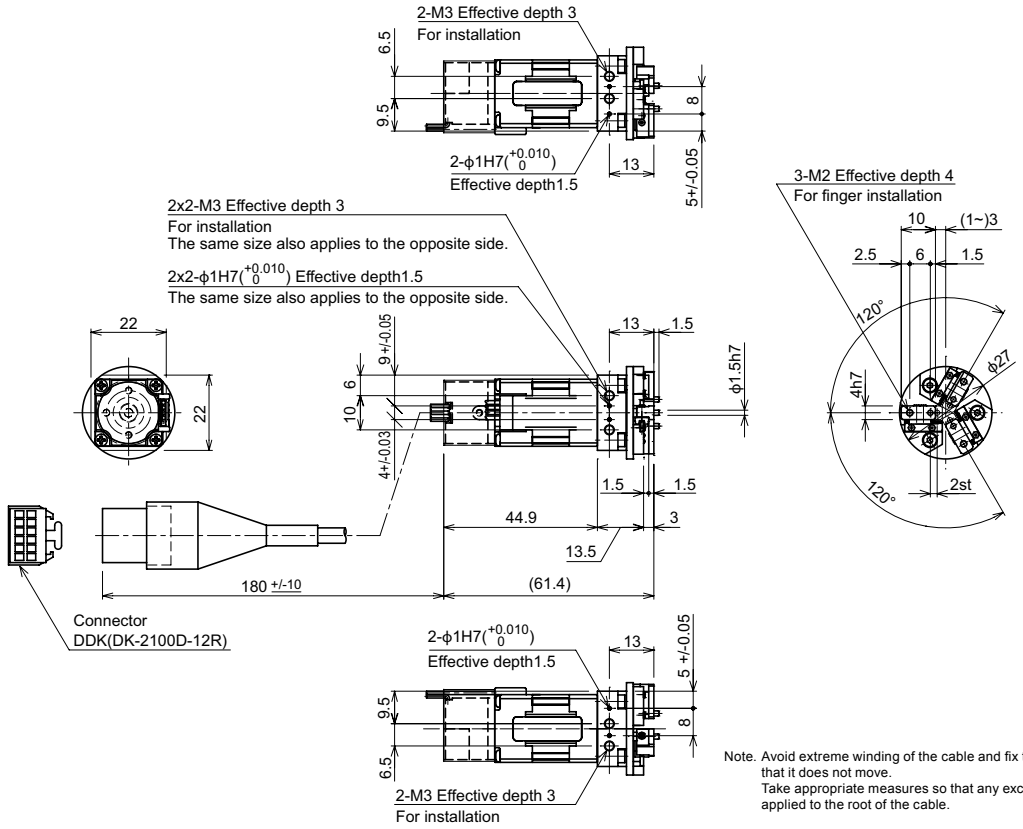
• When the external forces Fa and Fb are applied to a potion the distance (L) apart from the finger installation surface, the load (F) and moment (M) are calculated from the formulas shown below.

F = Fa + W × g
M = Fb × L

Fa : External force [N]
Fb : External force [N]
W : Workpiece weight [Kg]
g : Gravity acceleration [m/s^2]
H : Distance of holding point [m]

F : Load [N]
M : Moment [N•m]
L : Distance of point of external force application [m]

YRG-2004T



Note. Avoid extreme winding of the cable and fix the cable securely so that it does not move.
Take appropriate measures so that any excessive force is not applied to the root of the cable.

Three fingers type

YRG-2013T/2820T/4230T

Basic specifications

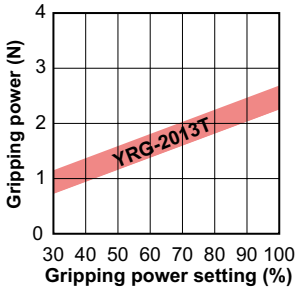
Model name		YRG-2013T	YRG-2820T	YRG-4230T
Holding power	Max. continuous rating (N)	2	10	20
	Min. setting (% (N))	30 (0.6)	30 (3)	30 (6)
	Resolution (% (N))	1 (0.02)	1 (0.1)	1 (0.2)
Open/close stroke (mm)		13	20	30
Speed	Max. rating (mm/sec)	100		
	Min. setting (% (mm/sec))	20 (20)		
	Resolution (% (mm/sec))	1 (1)	1 (1)	1 (1)
	Holding speed (Max.) (%)	50	50	50
Repetitive positioning accuracy (mm)		+/-0.03		
Guide mechanism		Linear guide		
Max. holding weight Note 1 (kg)		0.02	0.1	0.2
Weight (g)		190	340	640

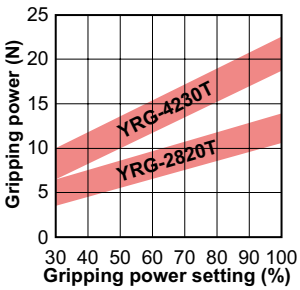
• Hoding power control : 30 to 100% (1% steps) • Speed control : 20 to 100% (1% steps)
• Acceleration control : 1 to 100% (1% steps) • Multipoint position control : 10,000 max.

Note. Design the finger as short and lightweight as possible.
Note. Set the parameters and holding power (%) of the holding movement command so that any excessive shock is not applied to the finger during operation.
Note. When installing or uninstalling the finger, tighten the bolts while the finger is being held securely so that any excessive force or shock is not applied to the guide block.
Note. Workpiece weight that is able to be held may greatly vary depending on the material, shape, and/or holding surface conditions of the finger.

Note 1. Design the weight of a workpiece to be held so that it is approximately 1/10 to 1/20 of the holding power. (Consider further allowance when moving and swinging the gripper that keeps holding a workpiece.)

Gripping power vs. gripping power setting (%)

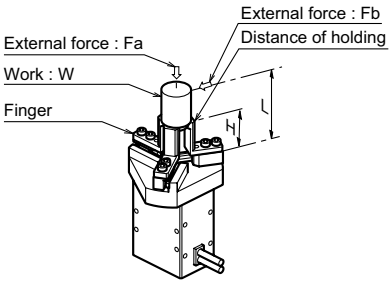




• Graph shows a general guide to gripping power versus gripping power setting (%). Variations will appear in the actual gripping power.

Allowable load and load moment

				YRG-2013T	YRG-2820T	YRG-4230T
Finger	Allowable load		N	20	30	50
	Allowable pitching moment		N•m	0.1	0.2	0.4
	Max. weight (1 pair)		g	20	30	50
	Max. holding position	L	mm	20	30	40



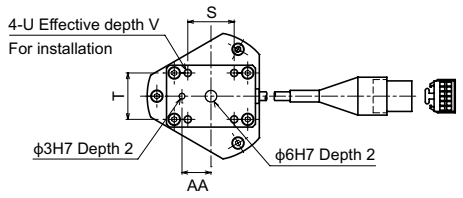
• When the external forces Fa and Fb are applied to a potion the distance (L) apart from the finger installation surface, the load (F) and moment (M) are calculated from the formulas shown below.

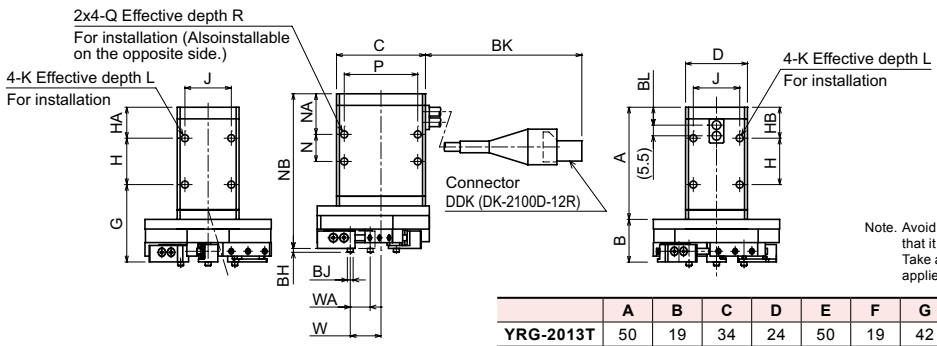
F = Fa + W × g
M = Fb × L

F : Load [N]
M : Moment [N•m]
L : Distance of point of external force application [m]

Fa : External force [N]
Fb : External force [N]
W : Workpiece weight [Kg]
g : Gravity acceleration [m/s^2]
H : Distance of holding point [m]

YRG-2013T/2820T/4230T





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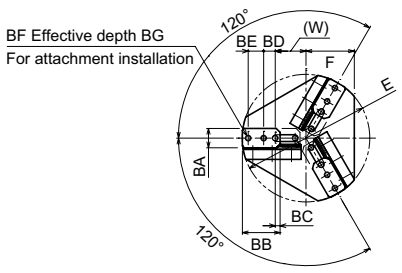

	A	B	C	D	E	F	G	H	HA	HB	J	K	L	N
YRG-2013T	50	19	34	24	50	19	42	17	13	13	17	M3	6	17
YRG-2820T	58	19	46	32	66	25	40	24	16	16	24	M4	8	14
YRG-4230T	59	25	60	46	86	34	45	25	18	18	36	M5	8	13

	NA	NB	P	Q	R	S	T	U	V	W	WA	AA	BA
YRG-2013T	17	72	27	M3	6	17	17	M3	5	11.4 to 4.6	6.8st	12	10 $^{0}_{-0.02}$
YRG-2820T	21	80	38	M4	8	24	24	M4	6	15.9 to 5.6	10.3st	15	10 $^{0}_{-0.02}$
YRG-4230T	24	88	50	M5	10	36	36	M5	7.5	21.9 to 6.6	15.3st	20	14 $^{0}_{-0.02}$

	BB	BC	BD	BE	BF	BG	BH	BJ	BK	BL
YRG-2013T	16	2.5	10	***	3x1-M3	8	2	ϕ3 $^{0}_{-0.01}$	165+/-10	8.3
YRG-2820T	19.5	2.5	6	8	3x2-M3	6	2	ϕ3 $^{0}_{-0.01}$	140+/-10	9.3
YRG-4230T	22.5	2.5	6	10	3x2-M4	8	3	ϕ4 $^{0}_{-0.012}$	235+/-10	10.8