

# YRG Series

Screw type straight style

# YRG-2020FS/2840FS



## Basic specifications

Model name	YRG-2020FS	YRG-2840FS
Model number	KCF-M2013-A0	KCF-M2013-B0
Holding power	Max. continuous rating (N)	50
	Min. setting (% (N))	30 (15)
	Resolution (% (N))	1 (0.5)
Speed	Open/close stroke (mm)	19
	Max. rating (mm/sec)	50
	Min. setting (% (mm/sec))	20 (10)
	Resolution (% (mm/sec))	1 (0.5)
	Holding speed (Max.) (%)	50
Repetitive positioning accuracy (mm)	+/-0.01	+/-0.01
Guide mechanism	Linear guide	
Max. holding weight <sup>Note 1</sup> (kg)	0.5	1.5
Weight (g)	420	880

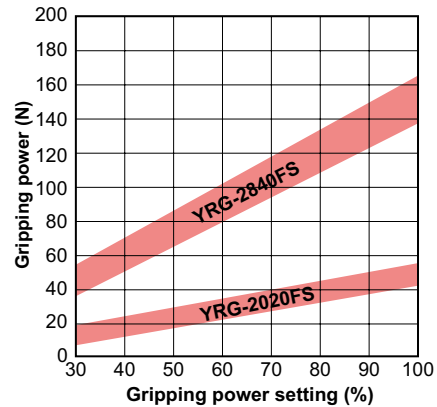
- Holding power control : 30 to 100% (1% steps)
- Speed control : 20 to 100% (1% steps)
- Acceleration control : 1 to 100% (1% steps)
- Multipoint position control : 10,000 max.

Note. Design the finger as short and lightweight as possible. 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. 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 (%)

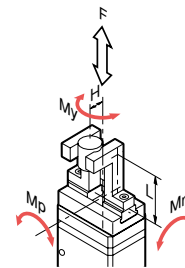


- Graph shows a general guide to gripping power versus gripping power setting (%). Variations will appear in the actual gripping power.

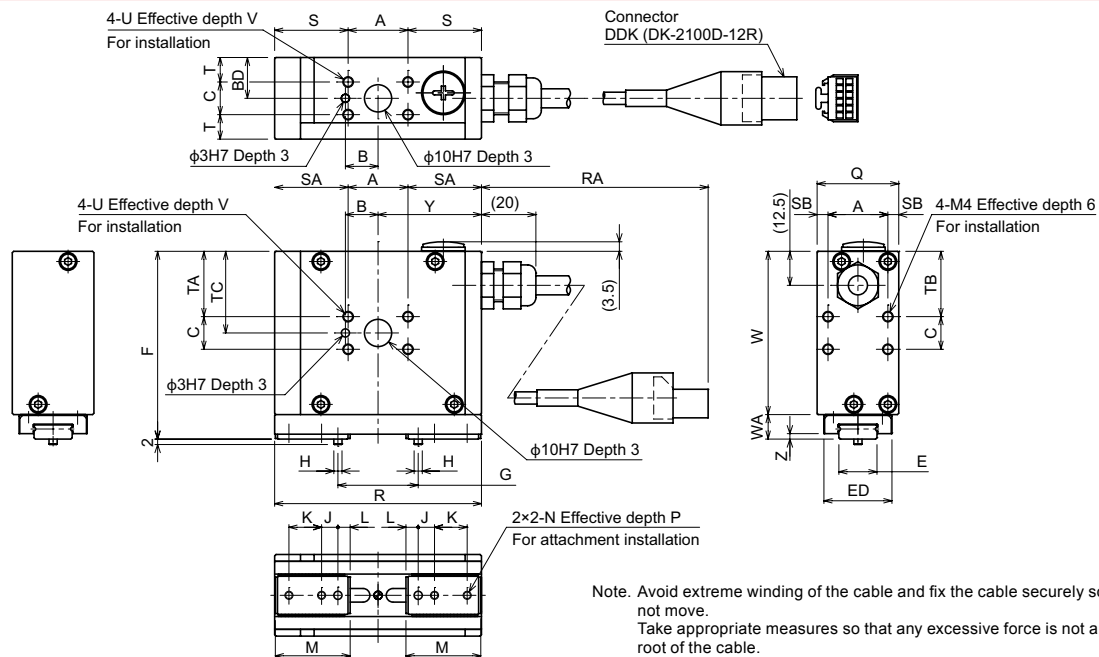
## Allowable load and load moment

			YRG-2020FS	YRG-2840FS
Guide	Allowable load	F N	1000	1300
	Allowable pitching moment	Mp N·m	3.5	5
	Allowable yawing moment	My N·m	4.2	6
	Allowable rolling moment	Mr N·m	7.3	12.7
Finger	Max. weight (1 pair)	g	40	80
	Max. holding position	L mm	30	30
	Max. overhang	H mm	20	20

- Mount the finger so that the allowable load and load moment of the guide do not exceed the values stated in the table above.
- Make the adjustment so that the finger weight, holding length (L) from the installation surface to the holding point, and overhang (H) do not exceed the values stated in the table above.
- Please contact your YAMAHA sales dealer for further information on combination of L and H.



## YRG-2020FS/2840FS



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.

	A	B	BD	C	D	E	ED	F	G	H	J	K	L	M	N
YRG-2020FS	22	12	15	12	2	14 <sup>0</sup> <sub>-0.05</sub>	25	69	10.5 to 29.5	φ3 <sup>0</sup> <sub>-0.01</sub>	6	12	4.5	27.5	M3
YRG-2840FS	30	15	20	16	2	18 <sup>0</sup> <sub>-0.05</sub>	30	84	13 to 51	φ4 <sup>0</sup> <sub>-0.012</sub>	8	14	5.5	34.5	M4

	P	Q	R	RA	S	SA	SB	T	TA	TB	TC	TD	U	V	W	WA	Y	Z
YRG-2020FS	5	30	76	175+/-10	27	27	4	9	24	24	30	12.5	M4	6	60	9	38	2
YRG-2840FS	7.5	40	110	135+/-10	40	40	5	12	28	28	36	14	M5	7.5	72	12	55	3