

## RHFRH Series

## Part Number Configuration

RH 1 FRH 2 3 4 D

Must select items 1–4.

## ① Max Load Capacity

Symbol	Maximum Load Capacity
3	3kg
6	6kg
12	12kg
20	20kg

## ② Arm Length

Symbol	Arm Length
35	350mm (3kg/6kg only)
45	450mm (3kg/6kg only)
55	550mm (3kg/6kg/12kg only)
70	700mm (12kg only)
85	850mm (12kg/20kg only)
100	1000mm (20kg only)

## ③ Vertical Stroke Length

Symbol	Vertical Stroke
12	120mm (3kg Cleanroom spec only)
15	150mm (3kg only)
20	200mm (6kg only)
34	340mm (6kg only)
35	350mm (12kg/20kg only)
45	450mm (12kg/20kg only)

## ④ Environment

Symbol	Environment
Blank	Standard specifications
M	Oil mist specifications (IP65) (Excludes 3kg)
N	Oil mist specifications (IP54) (Excludes 3kg)
C	Cleanroom specifications

## RH3FRH

Model Number	RH3FRH3515/12C	RH3FRH4515/12C	RH3FRH5515/12C
Machine Class	Standard / Cleanroom		
Protection Degree (*1)	IP20 / ISO class3 (*5)		
Installation	Floor type		
Structure	Horizontal, multiple-joint type		
Degrees of Freedom	4		
Drive System	AC servo motor		
Position Detection Method	Absolute encoder		
Maximum Load Capacity (Rating) kg	Maximum 3 (Rated 1)		
Arm Length (mm)	N01 Arm	125	225
	N02 Arm	225	325
Maximum Reach Radius (N01 + N02) (mm)	350	450	550
Operating Range (deg)	J1 Deg.	340 (±170)	
	J2 Deg.	290 (±145)	
	J3 (Z) mm	150 (Cleanroom specification : 120) (*1)	
	J4 (ø) Deg	720 (±360)	
Maximum Speed (deg/sec)	J1 Deg/sec	420	
	J2 Deg/sec	720	
	J3 mm/sec	1100	
	J4 Deg/sec	3000	
Maximum Composite Speed (*2)	6800	7500	8300
Cycle Time (*3)	0.41	0.46	0.51
Position Repeatability (mm)	X-Y Composite mm	±0.010	±0.010
	J3 (Z) mm	±0.01	±0.01
	J4 (ø) Deg	±0.004	±0.004
Ambient Temperature (°C)	0 to 40		
Weight (kg)	29	29	32
Tolerable Amount of Inertia	Rating (kg)	0.005	
	Maximum (kgm <sup>2</sup> )	0.06	
Tool Wiring	Gripper: 8 input points/8 output points (20 pins total); Signal cable for the multi-function gripper (2-pin + 2-pin power line) LAN × 1 <100 BASE-TX> (8-pin) (*4)		
Tool Pneumatic Pipes	Primary: ø6 x 2 Secondary: ø4 x 8		
Machine Cable	5m (connector on both ends)		
Connected Controller	CR800-D (iQ-R functionality supported via optional 4F-R16RTCPU and software setting change)		

## Notes:

- The range for vertical movement listed in the environmental resistance specifications (C: Clean specifications) for the RH-3FRH is narrower than for the standard model. Keep this in mind when working with the RH-3FRH. The environment-resistant specifications are factory-set custom specifications.
- The value assumes composition of J1, J2, and J4.
- Value for rated load capacity (kg). The cycle time may increase if specific requirements apply such as high work positioning accuracy, or depending on the operating position. (The cycle time is based on back-and-forth movement over a vertical distance of 25 mm and horizontal distance of 300 mm.)
- Can also be used as a spare line (0.2 sq. mm, 4-pair cable) for conventional models.
- Preservation of cleanliness levels depends on conditions of a downstream flow of 0.3 m/s in the cleanroom and internal robot suctioning. A ø8-mm coupler for suctioning is provided at the back of the base.