

DHF Series Compact Motor Hand

Well-Performed Gripper in Pneumatic-Free Environment

Key Features

■ Stepper motor

This model can be used in pneumatic-free environment

■ High grip force

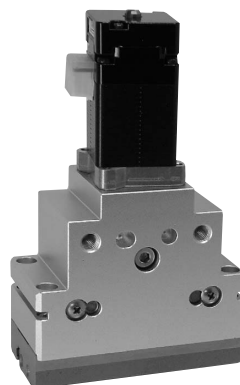
High grip force almost equivalent to pneumatic gripper

■ Replacement for LHA series

High rigid linear guide

■ Our special controller and software

Maximum 31-step programmable motion



DHF-05A

How To Order

Standard ----- **DHF-05A**

Option ----- **DHF - 05A - G** ----- DHF-05AS with rubber cover

Size		Option	
Symbol		Symbol	Name
04A		G	Rubber Cover
05A		GT	Heat (Silicon Rubber) Cover
06A		GH	Oil (Fluororubber) Cover

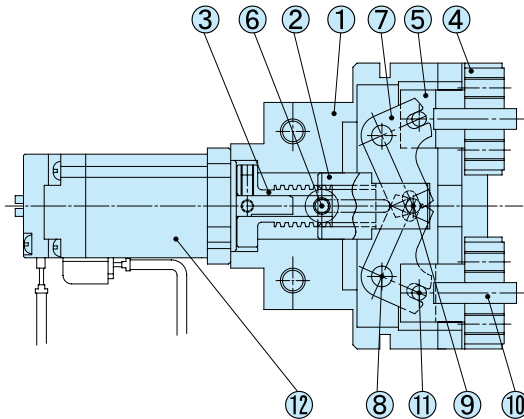
For option detail
▶ 36P

Specification

Model	DHF-04A For Layout Drawing ▶311P	DHF-05A For Layout Drawing ▶312P	DHF-06A For Layout Drawing ▶313P
Working Pressure	DC24V ± 10% 3A or more		
Ambient Temperature (°C)	0 to 40		
Total Jaw Stroke (mm)	11	15	20
Grip Force (N)	100	110	250
Motion Time (Total Stroke) (second)	MAX 0.4	MAX 0.6	MAX 0.8
Repeatability (mm)	±0.03		
Weight (kg)	0.43	0.7	1.1
Controllable Item	Position, Speed, and Grip Force Control		
Driver	DSL28W100BAA		DSL42W100BAA
Input Terminal	6-Point		
Output	4-Point		
Control Mode	Pressing Control Mode		
Option Cable	PC Communication Cable Cable for Power Source Cable for Interface		

*Please contact us for details.

Internal Structure / Parts & Seals



Parts List

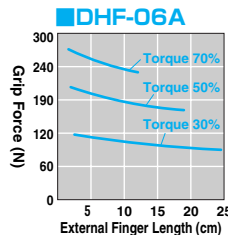
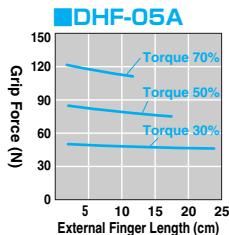
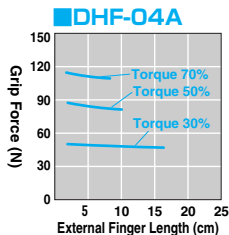
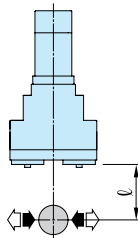
No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	5	Master Plate	Stainless Steel	9	Operating Shaft A	Bearing Steel
2	Piston	Stainless Steel	6	Rotation Stopper	Stainless Steel	10	Locating Pin	Bearing Steel
3	Connecting Shaft	Brass	7	Arm	Carbon Steel	11	Operating Shaft B	Bearing Steel
4	Linear Guide		8	Fulcrum Shaft	Bearing Steel	12	Stepper Motor	

Performance Data

Grip Force

The graph shows grip force in opening and closing with effective external finger lengths ℓ from gripper cover surface under different air pressure (MPa)

Open (←) ————
 Closed (→) —————

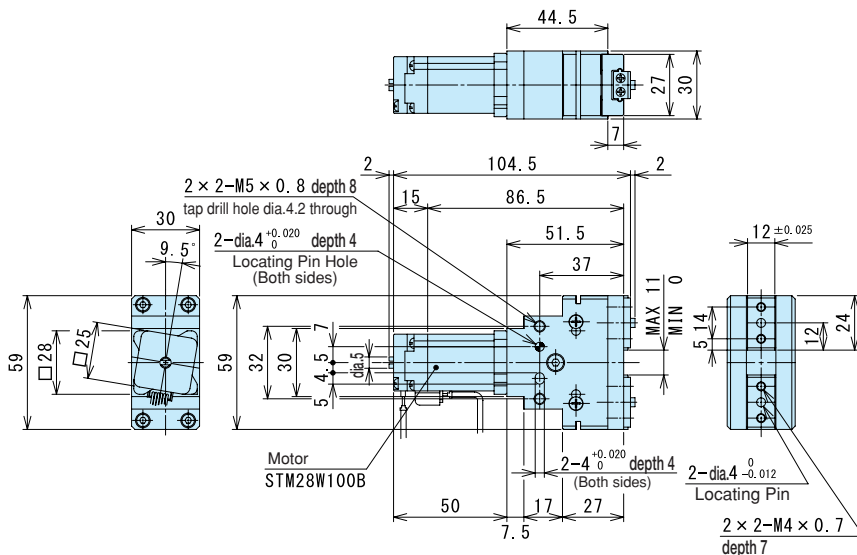


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Layout Drawing

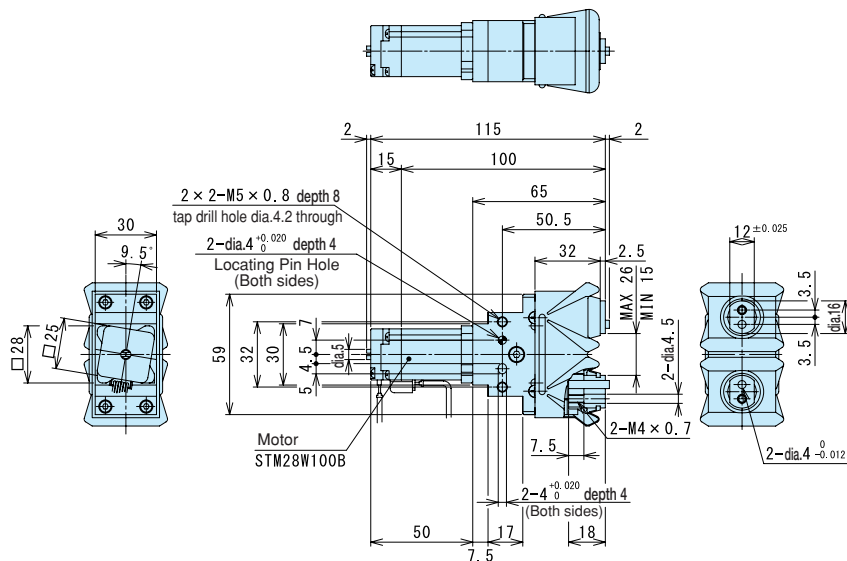
■ DHF-04A (Optimal Grip Force 70N to 100N)

DHF-04A Standard



■ DHF-04A-G (Optimal Grip Force 70N to 100N)

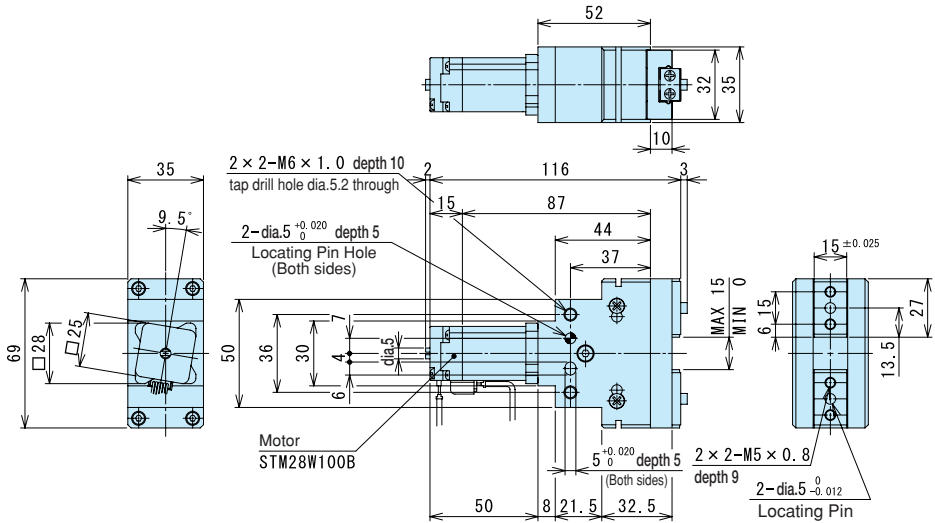
DHF-04A-G Standard



For CAD data, please go to **▶518P**

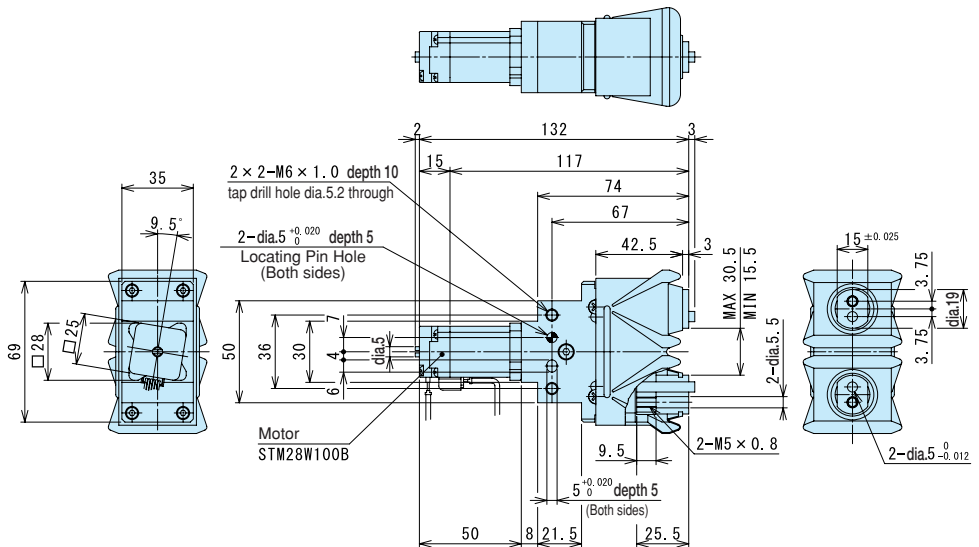
■DHF-05A (Optimal Grip Force 90N to 110N)

DHF-05A Standard



■DHF-05A-G (Optimal Grip Force 90N to 110N)

DHF-05A-G Standard





For CAD data, please go to **▶518P**

Precautions for Usage

1. Torque setting value when maximum torque of motor is 100%
2. Grip force varies $\pm 20\%$.
Please select the model that has enough capability for the application and perform specification
3. Please set 10 to 30% larger for unclamping torque than clamping torque.
(ex. Clamp Torque 70% < Unclamp Torque 100%)
4. Please set speed low for clamping (ex. 90% moving speed & 30% clamp (pressing) speed)
5. Opening and closing motion is set via special driver and software. PC & USB cable (USB↔USB mini) is required
6. Power cables & interface cables are required separately.