

NFHD2 Series

Parallel Opening and Closing Type Air Chuck / **With Dust Cover**

Bore size : Ø10, Ø16, Ø20, Ø25, Ø32, Ø40



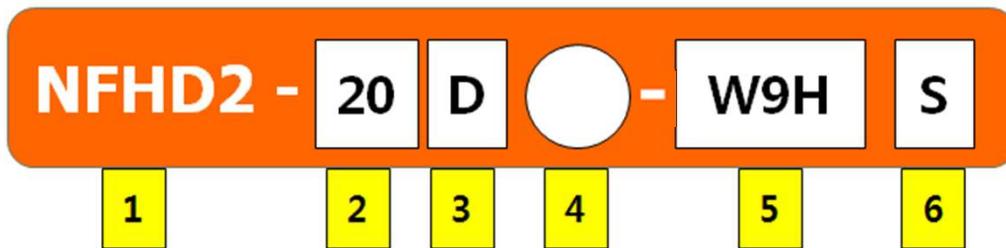
- Optimized for secondary battery industries
- Dust cover attached to prevent foreign substance inflow/outflow
- Three types of dust covers can be selected by industry group
- Various types of installation possible
- High rigidity and high precision secured
- Excellent durability with low dew point grease application

3 Types of Dust Cover Material

- Chloroprene rubber (black)
- Fluoro rubber (brown)
- Silicone rubber (milky white)



How to Order



1 Air Chuck Series

New
Finger
Horizontal
Dust Cover
2 : Number of fingers

2 Bore Size (mm)

Title	Bore Size	Operating range
10	10	4
16	16	6
20	20	10
25	25	14
32	32	22
40	40	30

3 Action

D	Double acting type
S	Single acting type (normally opened)
T	Single acting type (normally closed)

(Single acting is not available with Ø32, 40)

4 Dust Cover Material / Color

Blank	Chloroprene rubber (CR) - black
F	Fluoro rubber (FKM) - brown
S	Silicone rubber (Si) - milky white

5 Auto Switch

Blank	No auto switch (built-in magnet)
W9H	Mini solid state auto switch (horizontal type)
W9V	Mini solid state auto switch (vertical type)
W20H	Mini solid state auto switch (horizontal type),

6 Number of Switches

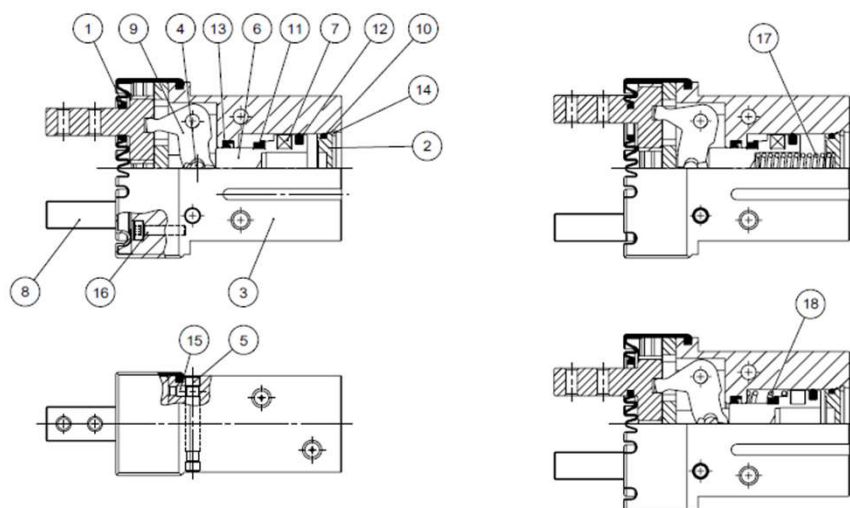
Blank	2 pcs
S	1 pc
N	N pcs

Specifications

Model		NFHD2-10			NFHD2-16			NFHD2-20			NFHD2-25			NFHD2-32	NFHD2-40
Action		D	S	T	D	S	T	D	S	T	D	S	T	D	D
Bore Size (mm)		10			16			20			25			32	40
Opening/Closing Stroke (mm)	Closing width	11.2			14.9			16.3			19.3			26	30
	Opening width	15.2			20.9			26.3			33.3			48	60
	Stroke	4			6			10			14			22	30
Theoretical Gripping Force (N)	Closed	12	6.4	-	31	27	-	42	33	-	69	55	-	167	280
	Opened	18	-	16	49	-	46	73	-	62	120	-	108	208	352
Port Size		M3			M5			M5			M5			M5	M5
Main Body Weight (gf)		60			140			260	265		490	495		876	1,522
Maximum gripping length (mm)		30			35			60			80			100	100
Fluid		Air													
Operating Pressure (MPa)		0.3 ~ 0.7													
Lubricant Applied		Unnecessary													
Ambient and Fluid Temperature (°C)		5 ~ 60													
Repeat	Initial Value	±0.01			±0.01			±0.01			±0.01			±0.02	±0.02
Opening/Closing	After 1 million times	±0.1			±0.05			±0.05			±0.05			±0.05	±0.05
Critical Performance Times (C.P.M)		160			160			160			160			60	60
Auto Switch for Checking		Solid state switch (W9H, W9V, W20H)													

Note 1) Theoretical gripping force is the value at stroke center.

NFDH2 Structure

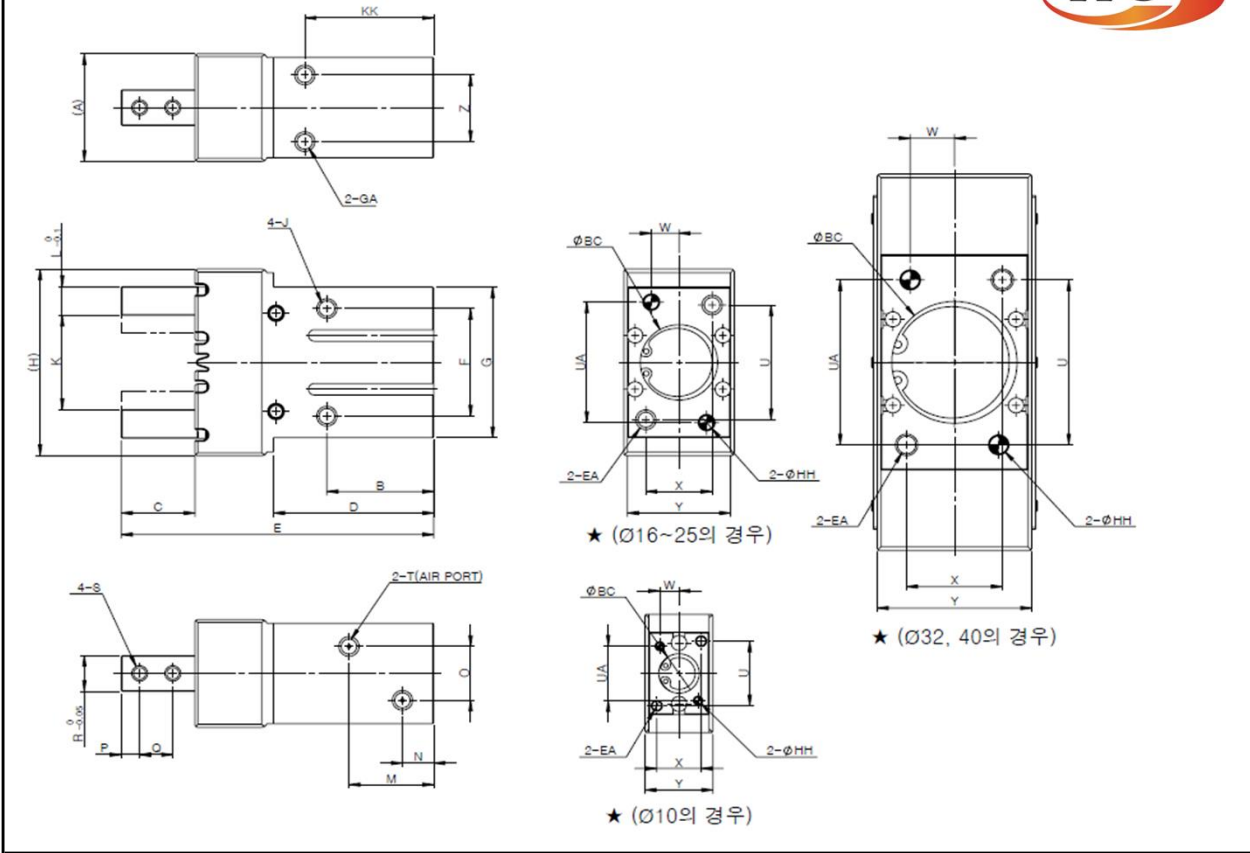


No	Description	Material	Note
1	Dust Cover	CR	Chloroprene rubber
		FKM	Fluoro rubber
		Si	Silicone rubber
2	HEAD COVER	Aluminum alloy	
3	BODY	Aluminum alloy	Hard anodizing
4	HINGE PIN	Bearing steel	Heat treated
5	LINK PIN	Bearing steel	Heat treated
6	PISTON ROD	Ø10 ~ 16 Stainless steel	Ø20 ~ 40
		Ø20 ~ 40 Aluminum alloy	
7	MAGNET	Magnetic material	
8	FINGER ASS'Y	Carbon tool steel	
9	LINK	Mold steel	Nickel plated
10	GASKET	NBR	
11	BUMPER	Urethane	
12	PISTON PACKING	NBR	
13	ROD PACKING	HNBR	
14	SNAP RING	Carbon steel	Nickel plated
15	SET SCREW	Stainless steel	
16	HEX. SOCKET BOLT	Carbon steel	Nickel plated
17	SPRING	Spring steel	
18	SPRING	Spring steel	



Air Chuck Parallel Opening/Closing Type Dimensions

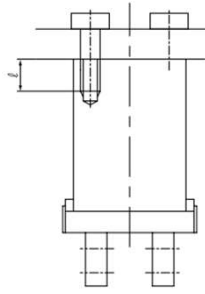
NFHD2 Ø10, Ø16, Ø20, Ø25, Ø32, Ø40



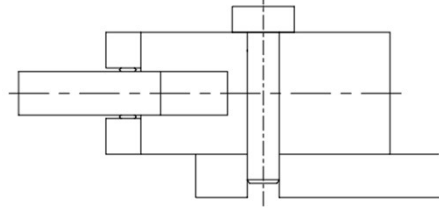
Bore size (mm)	Range of Opening / Closing (mm)	(A)	B	C	D	E	F	G	(H)	J	K	L	M	N	O	P	Q
10	4	18.4	23	12	31	57	16	23	33	M3 DP5	OPEN = 15.2 CLOSE = 11.2	4	19	7	10	3	5.7
16	6	26	24.5	15	34.8	67.3	24	30.6	42	M4 DP8	OPEN = 20.9 CLOSE = 14.9	5	19	7.5	13	4	7
20	10	30	29	20	43.5	84.8	30	42	52	M5 DP10	OPEN = 26.3 CLOSE = 16.3	8	23	8.5	15	5	9
25	14	36	30	25	53	102.7	36	52	66	M6 DP12	OPEN = 33.3 CLOSE = 19.3	10	24	9	20	6	12
32	22	42	40	29	50.5	113	46	60	105	M6 DP13	OPEN = 48 CLOSE = 26	12	30	8.5	24	7	14
40	30	50	49	36	64	139	56	72	127	M8 DP16	OPEN = 60 CLOSE = 30	14	35	9.5	28	9	17

Bore size (mm)	R	S	T	UA	U	W	X	Y	Z	BC	EA	KK	GA	HH
10	5	0 -0.05	M2.5 through hall	M3	18	15.2	5.2	12	16.4	11.4	11 DP1.3	M3 DP6	27	M3 DP6 Ø2 H9 DP3
16	8	0 -0.05	M3 through hall	M5	22	22	6.5	15	24	16	17 DP1.3	M4 DP8	30	M4 DP4.5 Ø3 H9 DP3
20	10	0 -0.05	M4 through hall	M5	32	33.6	7.5	18	28	18.6	21 DP1.5	M5 DP10	35	M5 DP8 Ø4 H9 DP4
25	12	0 -0.05	M5 through hall	M5	40	43.6	10	22	34	22	26 DP1.5	M6 DP12	36.5	M6 DP10 Ø4 H9 DP4
32	15	0 -0.05	M6 through hall	M5	46	46	12	26	40	26	34 DP1.5	M6 DP13	33	M6 DP10 Ø5 H9 DP5
40	18	0 -0.05	M8 through hall	M5	56	58	14	32	48	32	42 DP1.5	M8 DP17	39	M8 DP13 Ø5 H9 DP5

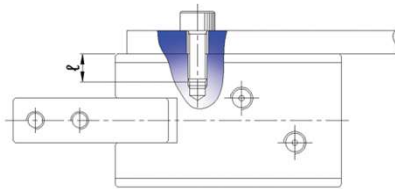
How to Attach Air Chuck / NFHD2 Series



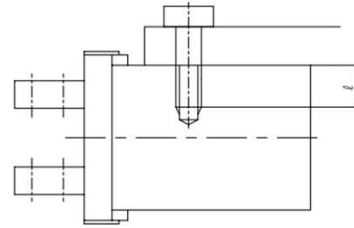
Model	Bolt Applied	Max. Connecting Torque N*m(kgf*cm)	Max. Tightening Depth ℓ
NFHD2-10	M3X0.5	0.88(9)	6
NFHD2-16	M4X0.7	2.1(21)	8
NFHD2-20	M5X0.8	4.3(44)	10
NFHD2-25	M6X1	7.3(74)	12
NFHD2-32	M6X1	7.3(74)	13
NFHD2-40	M8X1.25	17.7(180)	17



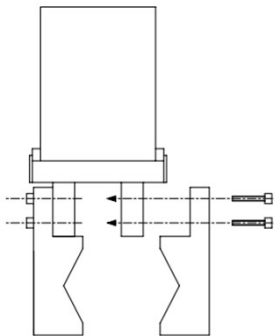
Model	Bolt Applied	Max. Connecting Torque N*m(kgf*cm)
NFHD2-10	M2.5X0.45	0.49(5)
NFHD2-16	M3X0.5	0.88(9)
NFHD2-20	M4X0.7	2.1(21)
NFHD2-25	M5X0.8	4.3(44)
NFHD2-32	M5X0.8	4.3(44)
NFHD2-40	M6X1.0	7.3(74)



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NFHD2-20	M5X0.8	4.3(44)	10
NFHD2-25	M6X1	7.3(74)	12
NFHD2-32	M6X1	7.3(74)	13
NFHD2-40	M8X1.25	17.7(180)	16

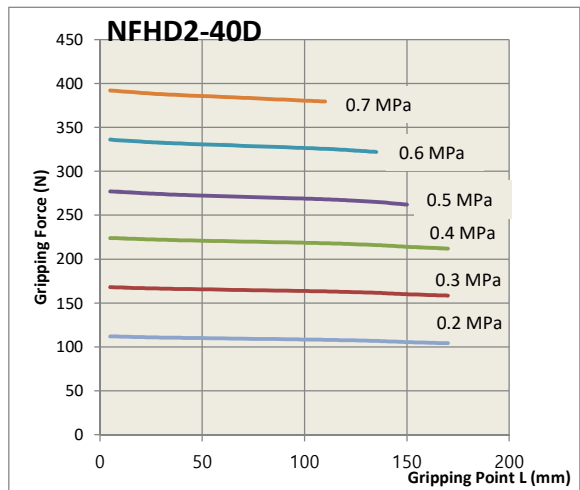
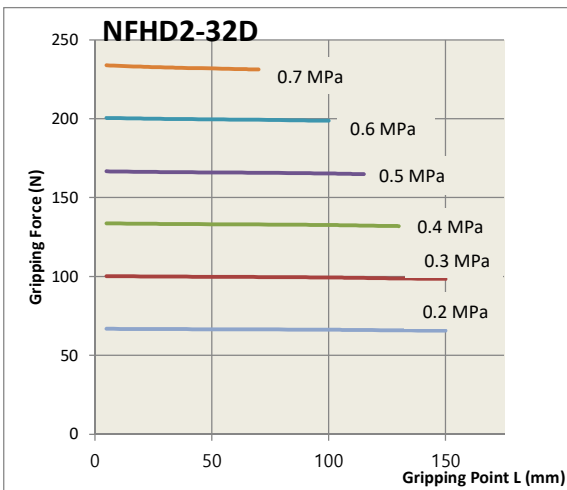
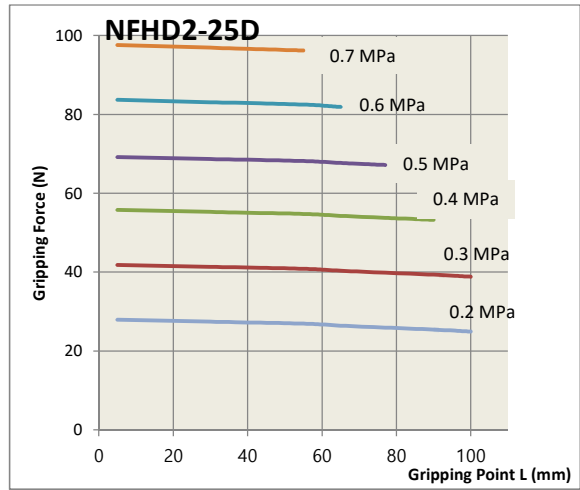
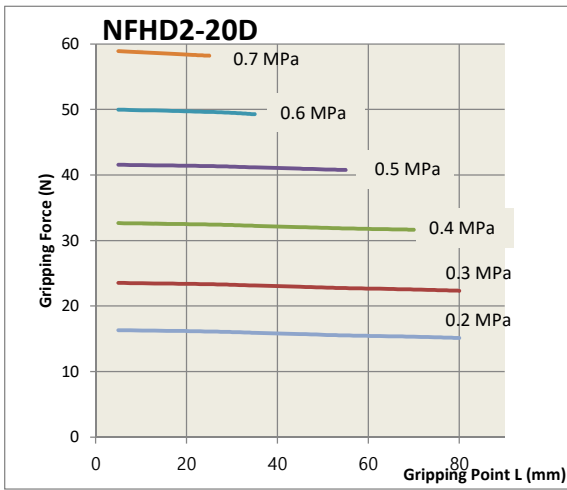
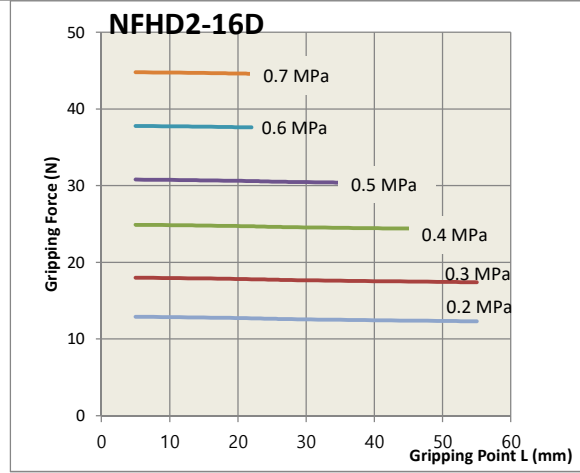
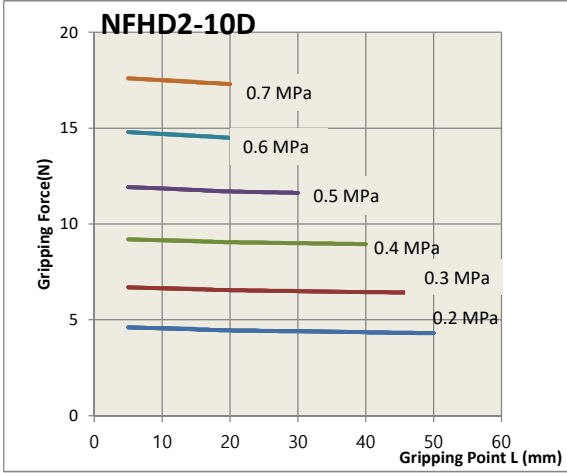


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NFHD2-16	M4X0.7	2.1(21)	4.5
NFHD2-20	M5X0.8	4.3(44)	8
NFHD2-25	M6X1	7.3(74)	10
NFHD2-32	M6X1	7.3(74)	10
NFHD2-40	M8X1.25	17.7(180)	13

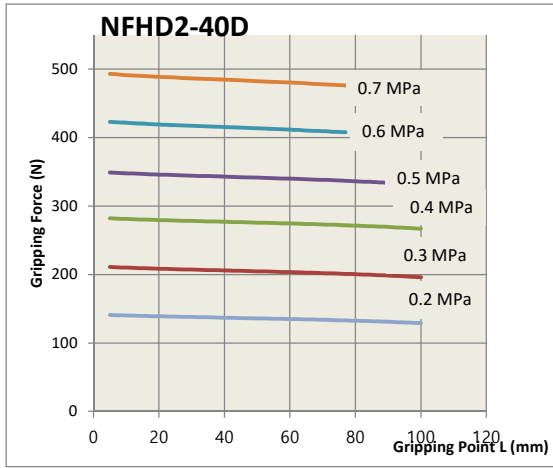
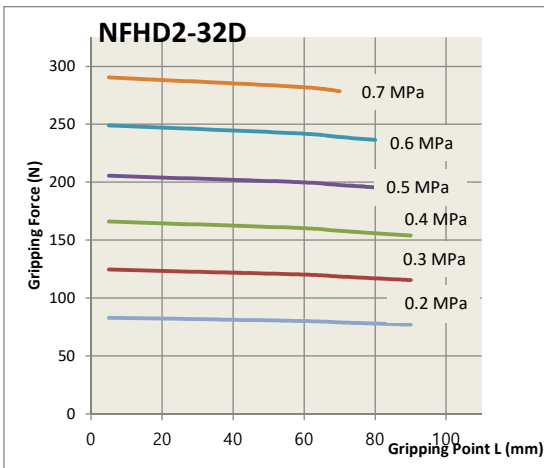
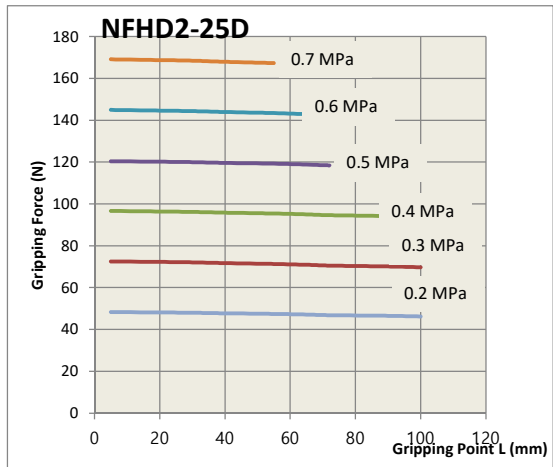
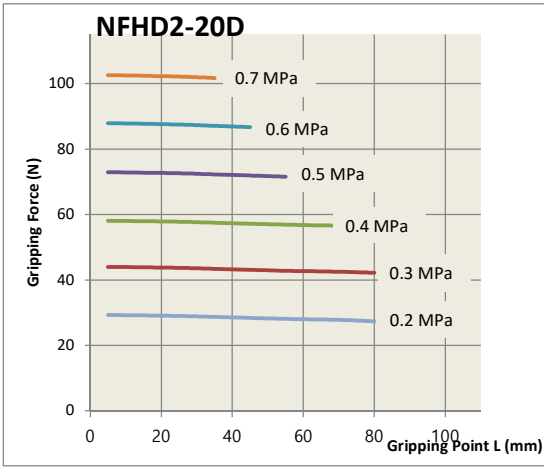
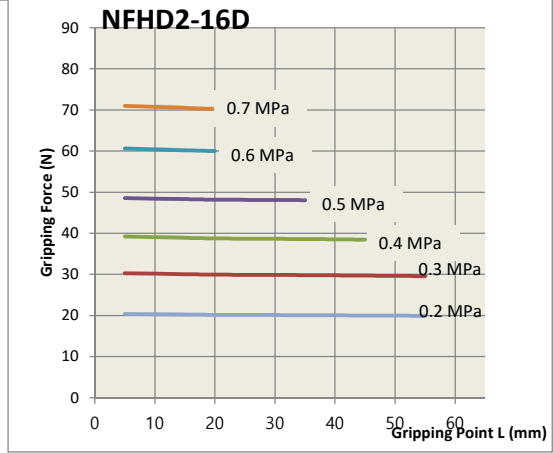
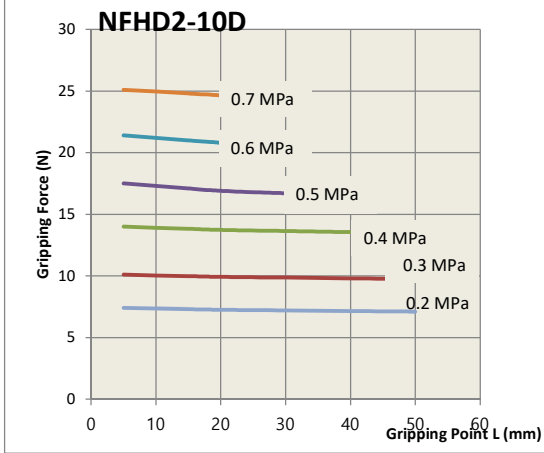


Model	Bolt Applied	Max. Connecting Torque N*m(kgf*cm)
NFHD2-10	M2.5X0.45	0.31(3.2)
NFHD2-16	M3X0.5	0.59(6)
NFHD2-20	M4X0.7	1.4(14)
NFHD2-25	M5X0.8	3.8(39)
NFHD2-32	M5X0.8	4.9(50)
NFHD2-40	M6X1.0	11.8(120)

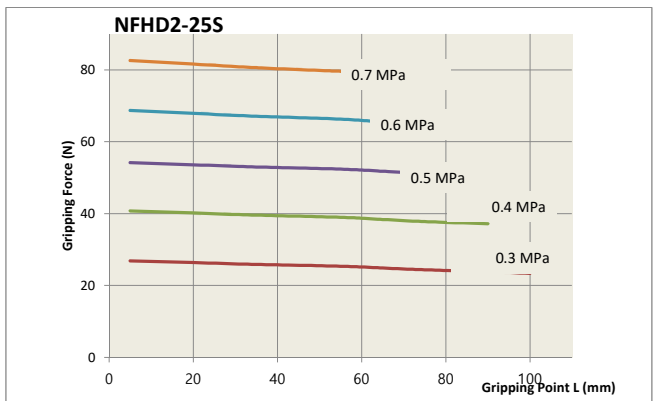
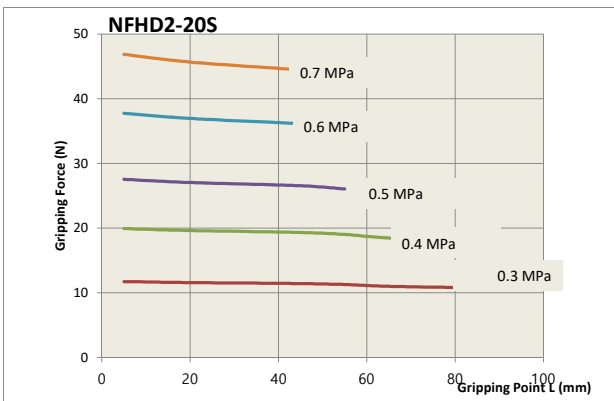
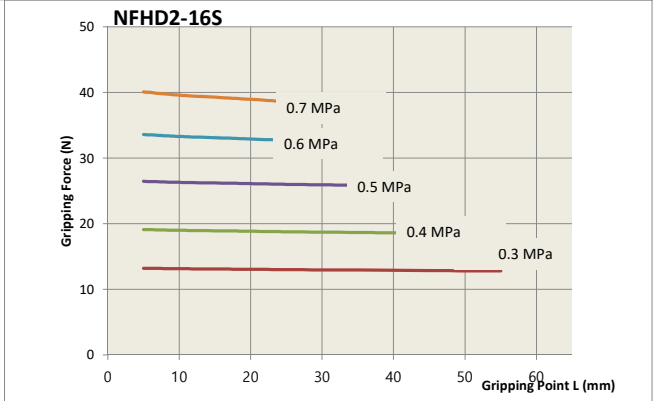
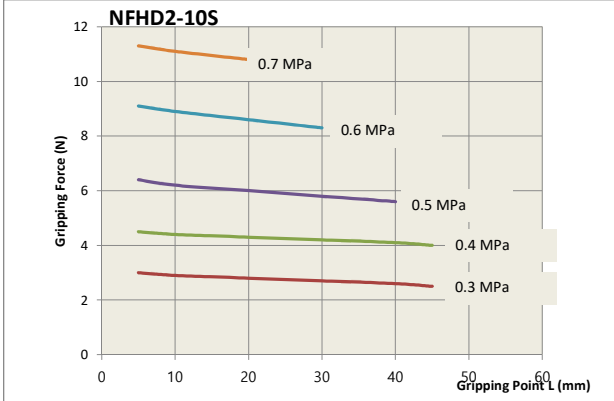
Double-acting Type Outer Gripping Force



Double-acting Type Inner Gripping Force



Single-acting Type Outer Gripping Force



Single-acting Type Inner Gripping Force

