CLHW

Air Sensing Swing Clamp

FEATURES

The CLHW series utilizes air sensing mechanisms by detecting the differential pressure to achieve action confirmation, allowing safe and efficient loading/unloading of the workpiece. With the integration of the built-in sensor valves, the CLKW series has taken a new and improved compact design and is most suitable for achieving automation.

Max. operating pressure : 70 kgf/cm²
Min. operating pressure : 15 kgf/cm²

NOTE

The speed of clamping and unclamping action needs to be slowed down appropriately. Action confirmation can be conducted by detecting differential pressure with the air sensor. Please keep clearance of the air exhaust hole to prevent the intrusion of coolant and chips. Make sure to supply constant air pressure to the air port when in use.

ORDERING INDICATION

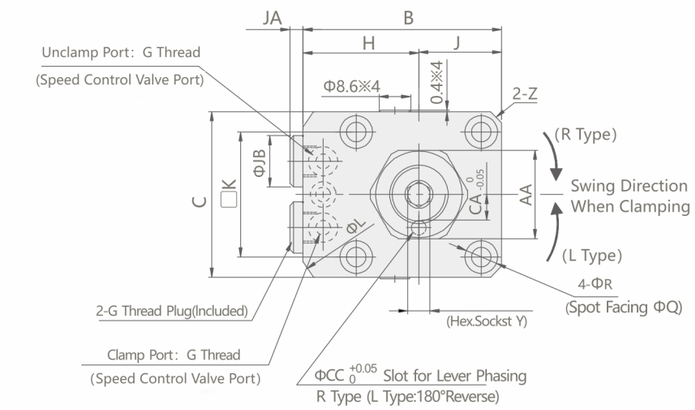
CLHW-048CRE

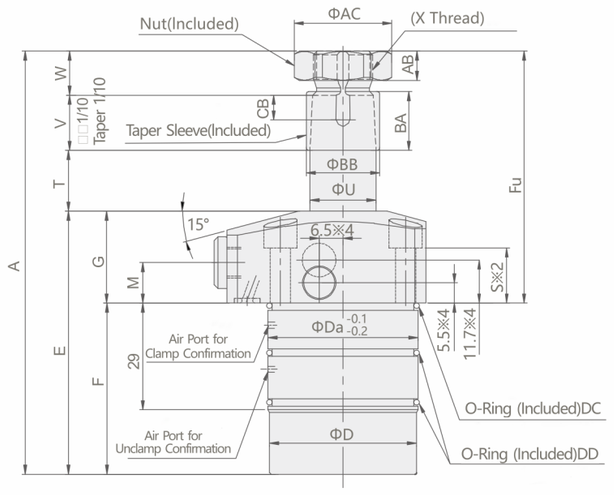
CLHW	Series	CLHW
048	Body size	040: ΦD=40mm 065: ΦD=65mm 048: ΦD=48mm 075: ΦD=75mm Outer diameter (ΦD) of the cylinder 055: ΦD=55mm
C	Gasket Option(With G Thread Plug)	With G Thread Plug (able to attach Speed Control Valve) (Order the valve separately Recommended:CZL)
R	Swing Direction when Clamping	
E	Sensing Valve	E: Clamp-Unclamp Confirmation(Both) H: Clamp Confirmation Only J:Unclamp Confirmation Only

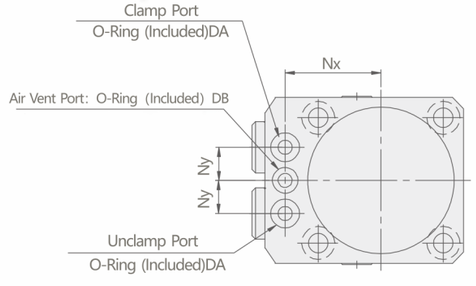
Note: Recommended Operating Air Pressure 01~0.2MPa. Air Sensor: ISA2-HE45N(SMC)

CLAMP-UNCLAMP CONFIRMATION

The drawing shows the unclamped state of CLHW-CRE



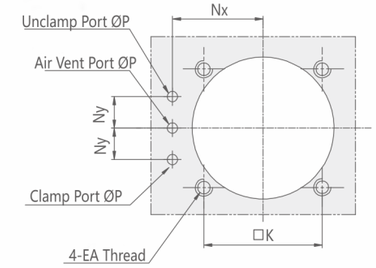




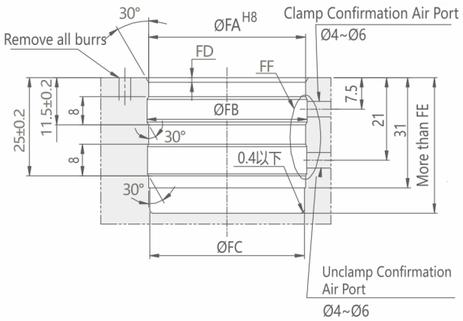
NOTE

※1.The slot for lever phasing faces the port side when clamped.
※2.Mounting bolts are not provided . Please prepare them according to the mounting height referring to dimension"S".
※3. Speed control valve is sold separately.
※4. The valve of CLHW-040 is protruded as shown in the drawing.

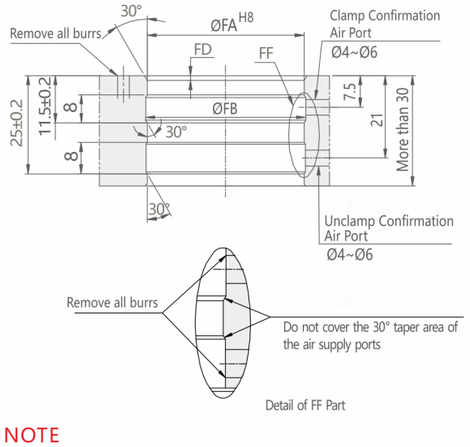
MACHINING DIMENSIONS OF MOUNTING AREA



For Blind Hole



For Through Hole



NOTE

※EA tapping depth the mounting bolt should be decided according to the mounting height referring to dimension"S".

Unit:mm

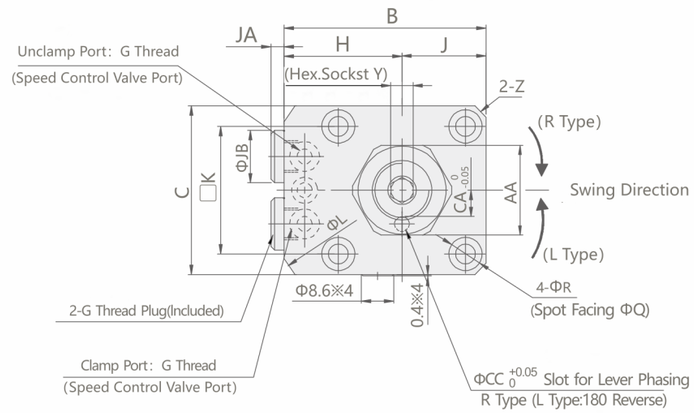
MODEL ITEM		CLHW-040C□E	CLHW-048C□E	CLHW-055C□E	CLHW-065C□E	CLHW-075C□E
A		115	128.5	145.5	156	181
B		54	61	69	81	92
C		45	51	60	70	80
D		40	48	55	65	75
Da		40.8	49	56	66	76
E		71.5	79	89	94	109
F		46.5	51	59	63	71
Fu		68.5	77.5	86.5	93	110
G		25	28	30	31	38
H		31.5	35.5	39	46	52
J		22.5	25.5	30	35	40
K		34	40	47	55	63
L		73	83	88	106	116
M		11	13	12	13	16
Nx		26	30	33.5	39.5	45
Ny		9	11	12	15	16
P		3	3	3	5	5
Q		9	9	11	11	14
R		5.5	5.5	6.8	6.8	9
S		15	17.5	17	17	21
T		16.5	17.5	20.5	22	26
U		18	22	25	30	35.5
V		15	18	21	24	30
W		12	14	15	16	16
X		M16x1. 5	M20x1. 5	M22×1.5	M27x1.5	M30x1.5
Y		6	8	8	10	10
z		C3	C3	C3	C4	C5
AA		24	30	32	41	46
AB		8	9	10	11	11
AC		26.5	33	35.5	45	50
BA		16	19	22	25	31
BB		20	25	28	34	40
CA		7	9	10	12.5	14
CB		6.5	7.5	9.5	11.5	12.5
CC		4	5	6	6	8
EA		M5x0.8	M5x0. 8	M6	M6	M8
FA		40.8 +0.04 0	49 +0.04 0	56 +0.04 0	66 +0.04 0	76 +0.04 0
FB		41.4	49.6	56.6	66.6	76.6
FC		40.5	48.5	55.5	65.5	75.5
FD		1.2	1.2	1.5	1.5	1.5
FE		47	51.5	59.5	63.5	71.5
JA		4	4	4	4.5	4.5
JB		14	14	14	19	19
Clamp Port:G Thread Unclamp Port:G Thread		G1/8	G1/8	G1/8	G1/4	G1/4
O-Ring	DA	1BP5	1BP5	1BP5	1BP7	1BP7
	DB	AS568-007(90°)	1BP5	1BP5	1BP7	1BP7
	DC	38x1.5	AS568-031(70°)	AS568-034(70°)	AS568-037(70°)	AS568-040(70°)
	DD	38x1.5	AS568-031(70°)	AS568-033(70°)	AS568-036(70°)	AS568-040(70°)

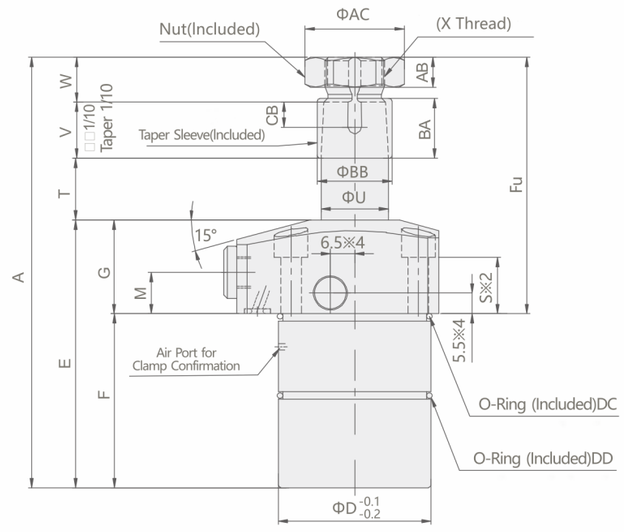
SPECIFICATIONS

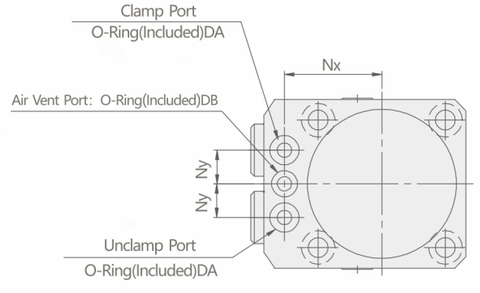
MODEL	CLAMPING FORCE AT (70 kgf/cm²)	CLAMPING STROKE (mm)	CLAMPING STROKE (mm)	TOTAL STROKE(mm)	CYLINDER CAPACITY CLAMP(cm³)	CYLINDER CAPACITY UNCLAMP(cm³)	EFF.PISTON AREA CLAMP(cm²)	EFF.PISTON AREA UNCLAMP(cm²)	RANGE OF TEMPERATURE(°C)
CLHW-040	350	6.5	8	14.5	10.9	7.3	7.54	5.0	0-+70°C
CLHW-048	486.5	7.5	8	15.5	16.7	10.8	10.75	6.95	0-+70°C
CLHW-055	721	8.5	10	18.5	28.1	19	15.2	10.3	0-+70°C
CLHW-065	938	10	10	20	40.9	26.7	20.42	13.4	0-+70°C
CLHW-075	1421	12	12	24	72.5	48.7	30.18	20.3	0-+70°C

CLAMP CONFIRMATION ONLY

The drawing shows the clamped state of CLHW-CRH



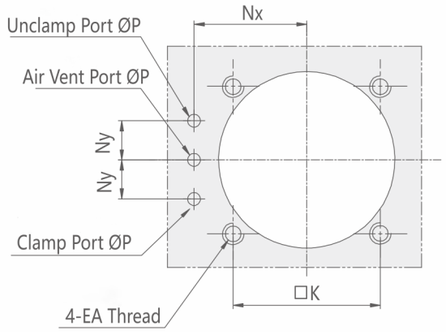




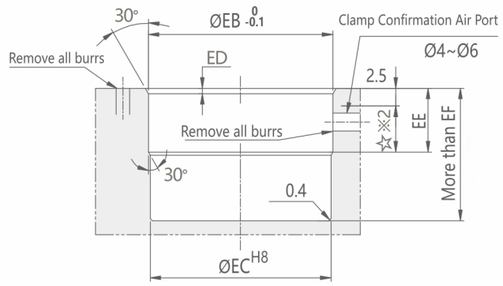
NOTE

※1. The slot for lever phasing faces the port side when clamped.
※2.Mounting bolts are not provided. Please prepare them according to the mounting height referring to dimension"S".
※3. Speed control valve is sold separately.
※4. The valve of CLHW-040 is protruded as shown in the drawing.

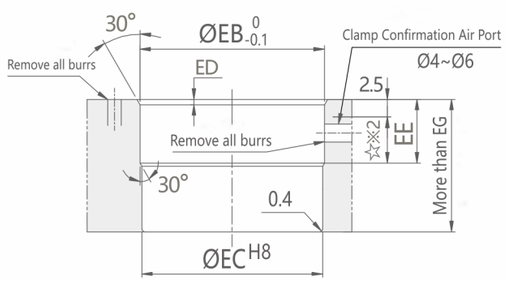
MACHINING DIMENSIONS OF MOUNTING AREA



For Blind Hole



For Through Hole



Unit:mm

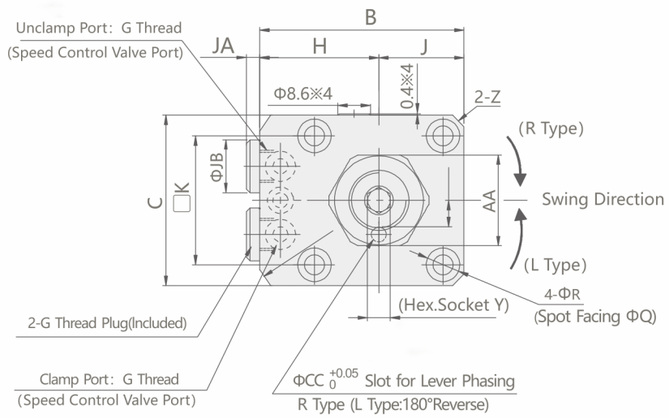
MODEL ITEM		CLHW-040C□H	CLHW-048C□H	CLHW-055C□H	CLHW-065C□H	CLHW-075C□H
A		115	128.5	145.5	156	181
B		54	61	69	81	92
C		45	51	60	70	80
D		40	48	55	65	75
E		71.5	79	89	94	109
F		46.5	51	59	63	71
Fu		68.5	77.5	86.5	93	110
G		25	28	30	31	38
H		31.5	35.5	39	46	52
J		22.5	25.5	30	35	40
K		34	40	47	55	63
L		73	83	88	106	116
M		11	13	12	13	16
Nx		26	30	33.5	39.5	45
Ny		9	11	12	15	16
P		3	3	3	5	5
Q		9	9	11	11	14
R		5.5	5.5	6.8	6.8	9
S		15	17.5	17	17	21
T		16.5	17.5	20.5	22	26
U		18	22	25	30	35.5
V		15	18	21	24	30
W		12	14	15	16	16
X		M16×1. 5	M20×1. 5	M22×1. 5	M27x1.5	M30x1.5
Y		6	8	8	10	10
Z		C3	C3	C3	C4	C5
AA		24	30	32	41	46
AB		8	9	10	11	11
AC		26.5	33	35.5	45	50
BA		16	19	22	25	31
BB		20	25	28	34	40
CA		7	9	10	12.5	14
CB		6.5	7.5	9.5	11.5	12.5
CC		4	5	6	6	8
EA		M5x0.8	M5x0.8	M6	M6	M8
EB		40.8	49	56	66	76
EC		40 +0.04 0	48 +0.04 0	55 +0.04 0	65 +0.04 0	75 +0.04 0
ED		1.2	1.2	1.5	1.5	1.5
EE		20	20	24	24	34
EF		47	51.5	59.5	63.5	71.5
EG		26	26	30	30	40
JA		4	4	3.5	4.5	4.5
JB		14	14	14	19	19
Clamp Port: G Thread Unclamp Port: G Thread		G1/8	G1/8	G1/8	G1/4	G1/4
O-Ring	DA	1BP5	1BP5	1BP5	1BP7	1BP7
	DB	AS568-007(90°)	1BP5	1BP5	1BP7	1BP7
	DC	38x1.5	AS568-031(70°)	AS568-034(70°)	AS568-037(70°)	AS568-040(70°)
	DD	AS568-028(70°)	AS568-031(70°)	AS568-033(70°)	AS568-036(70°)	AS568-039(70°)

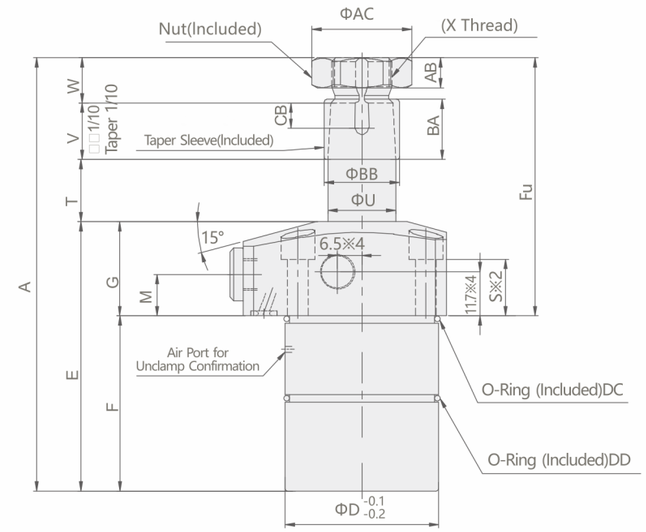
NOTE

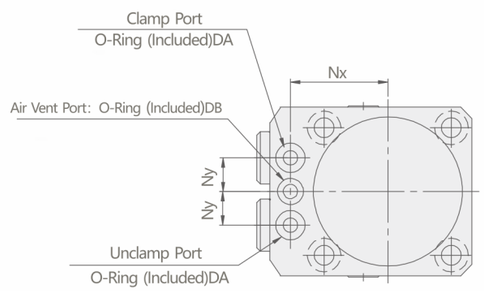
※1. EA tapping depth of the mounting bolt should be decided according to the mounting height referring to dimension"S".
※2. Provide the air port for clamp confirmation within the part ☆.

UNCLAMP CONFIRMATION ONLY

The drawing shows the unclamped state of CLHW-CRJ



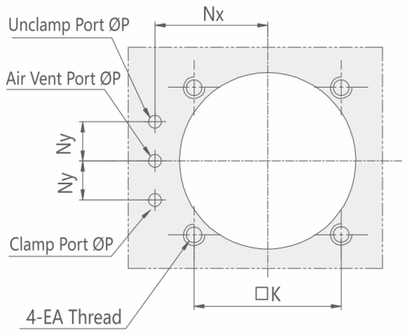




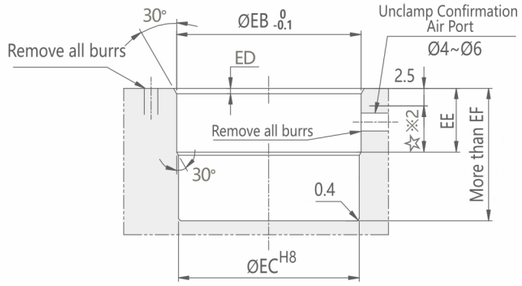
NOTE

※1. The slot for lever phasing faces the port side when clamped.
※2.Mounting bolts are not provided. Please prepare them according to the mounting height referring to dimension"S".
※3. Speed control valve is sold separately.
※4. The valve of CLHW-040 is protruded as shown in the drawing.

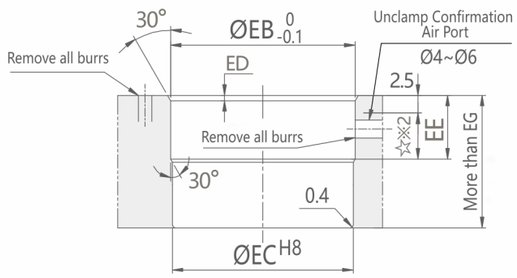
MACHINING DIMENSIONS OF MOUNTING AREA



For Blind Hole



For Through Hole



Unit:mm

MODEL ITEM		CLHW-040C□J	CLHW-048C□J	CLHW-055C□J	CLHW-065C□J	CLHW-075C□J
A		115	128.5	145.5	156	181
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M		11	13	12	13	16
Nx		26	30	33.5	39.5	45
Ny		9	11	12	15	16
P		3	3	3	5	5
Q		9	9	11	11	14
R		5.5	5.5	6.8	6.8	9
S		15	17.5	17	17	21
T		16.5	17.5	20.5	22	26
U		18	22	25	30	35.5
V		15	18	21	24	30
W		12	14	15	16	16
X		M16x1. 5	M20x1. 5	M22x1. 5	M27x1.5	M30x1.5
Y		6	8	8	10	10
Z		C3	C3	C3	C4	C5
AA		24	30	32	41	46
AB		8	9	10	11	11
AC		26.5	33	35.5	45	50
BA		16	19	22	25	31
BB		20	25	28	34	40
CA		7	9	10	12.5	14
CB		6.5	7.5	9.5	11.5	12.5
CC		4	5	6	6	8
EA		M5x0.8	M5x0.8	M6	M6	M8
EB		40.8	49	56	66	76
EC		40 +0.04 0	48 +0.04 0	55 +0.04 0	65 +0.04 0	75 +0.04 0
ED		1.2	1.2	1.5	1.5	1.5
EE		20	20	24	24	34
EF		47	51.5	59.5	63.5	71.5
EG		26	26	30	30	40
JA		4	4	4	4.5	4.5
JB		14	14	14	19	19
Clamp Port :G Thread Unclamp Port :G Thread		G1/8	G1/8	G1/8	G1/4	G1/4
O-Ring	DA	1BP5	1BP5	1BP5	1BP7	1BP7
	DB	AS568-007(90°)	1BP5	1BP5	1BP7	1BP7
	DC	38x1.5	AS568-031(70°)	AS568-034(70°)	AS568-037(70°)	AS568-040(70°)
	DD	AS568-028(70°)	AS568-031(70°)	AS568-033(70°)	AS568-036(70°)	AS568-039(70°)

NOTE

※1. EA tapping depth of the mounting bolt should be decided according to the mounting height referring to dimensions"S".
※2. Provide the air port for unclamp confirmation within the part ☆.