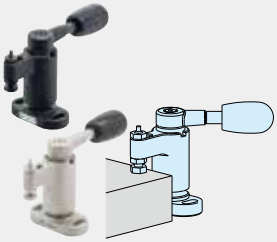
ONE-TOUCH CLAMPS

ONE-TOUCH CLAMPS

SNAP CLAMPS

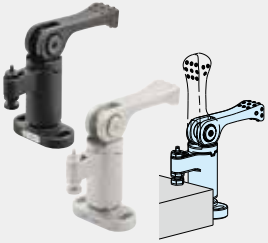
ONE-TOUCH CLAMPS

ONE-TOUCH CLAMPS



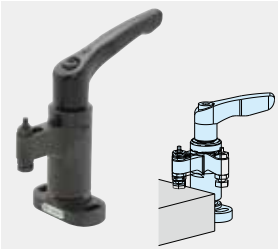
SWING CLAMPS

Part No. QLSWC



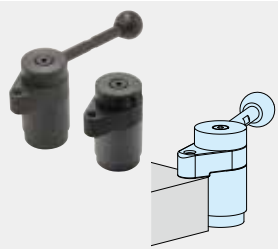
SWING CLAMPS
WITH CAM HANDLE

Part No. QLSWC



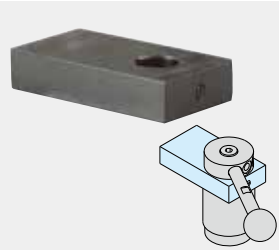
SWING CLAMPS
WITH ADJUSTABLE HANDLE

Part No. QLSWC



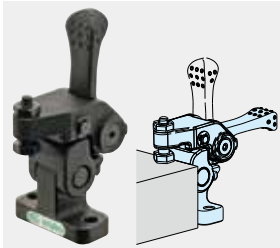
SWING CLAMPS
(Standard)

Part No. QLSW



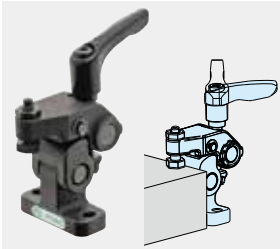
MACHINABLE CLAMP ARMS
FOR STANDARD SWING CLAMPS

Part No. QLSW-SH



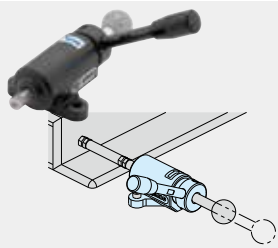
RETRACTABLE CLAMPS
WITH CAM HANDLE

Part No. QLRE



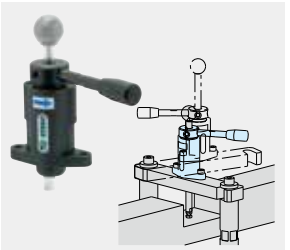
RETRACTABLE CLAMPS
WITH ADJUSTABLE HANDLE

Part No. QLRE



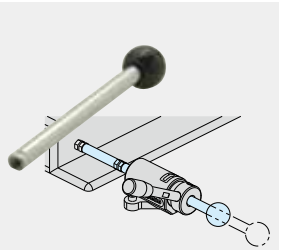
THRUST CLAMPS

Part No. QLRC



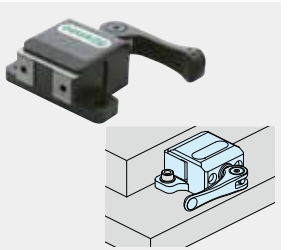
THRUST CLAMPS (Vertical)

Part No. QLRCF



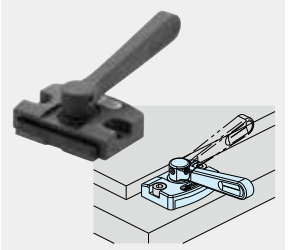
CLAMPING BARS

Part No. QLRCS



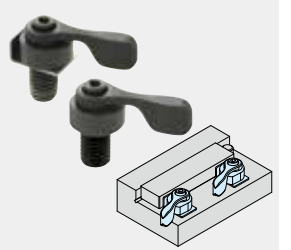
CAM EDGE CLAMPS

Part No. QLSCH



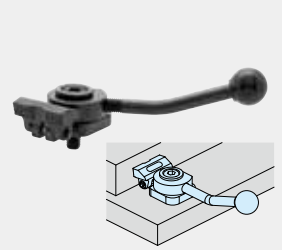
LOW-PROFILE CAM EDGE CLAMPS

Part No. QLSCL-R



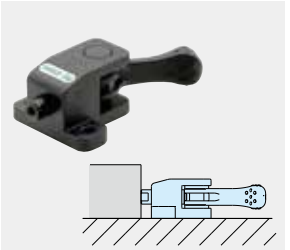
SPIRAL CAM CLAMPS

Part No. CP135-L



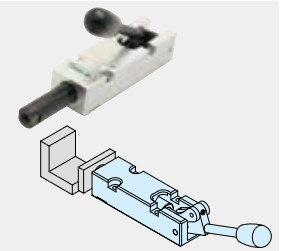
CAM EDGE CLAMPS

Part No. QLSC



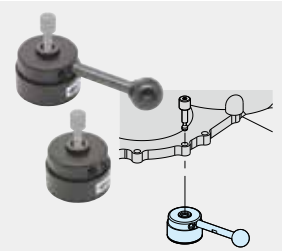
CAM PUSH CLAMPS

Part No. QLCP



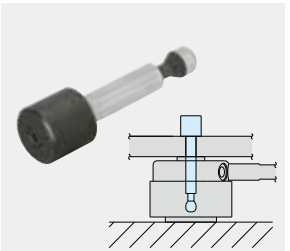
PRECISION THRUST CLAMPS

Part No. QLPCT



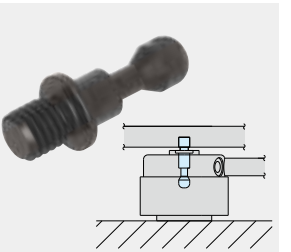
PULL CLAMPS (Standard)

Part No. QLPD



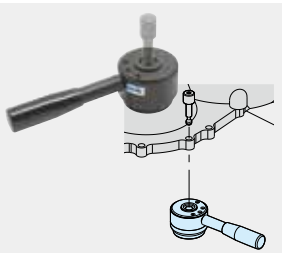
CLAMPING PINS (Standard)

Part No. QLPD-X



CLAMPING SCREWS (Standard)

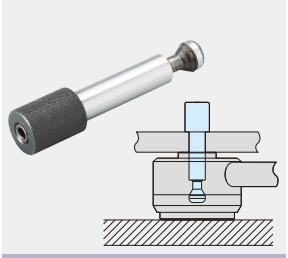
Part No. QLPD-M



PULL CLAMPS (Heavy)

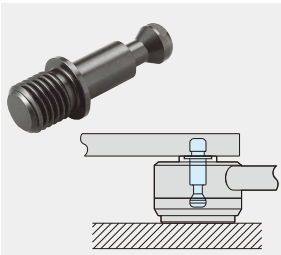
Part No. QLPDH

ONE-TOUCH CLAMPS



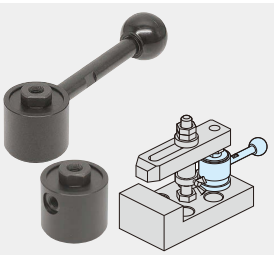
CLAMPING PINS (Heavy)

Part No. QLPDH-X



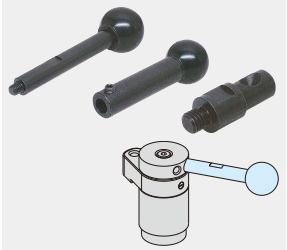
CLAMPING SCREWS (Heavy)

Part No. QLPDH-M



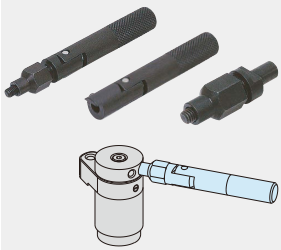
PUSH CLAMPS (Standard)

Part No. QLPU



STANDARD HANDLES

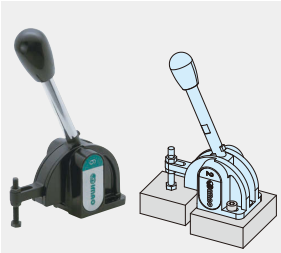
Part No. QLSL



ADJUSTABLE-TORQUE HANDLES

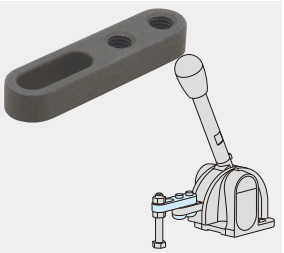
Part No. QLTL

SNAP CLAMPS



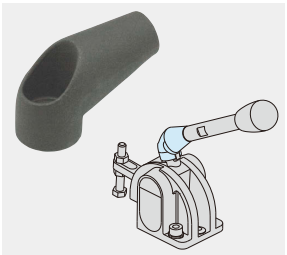
VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS

Part No. QLSND



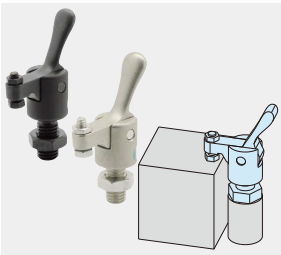
EXTENSION ARM

Part No. QLSND-EX20



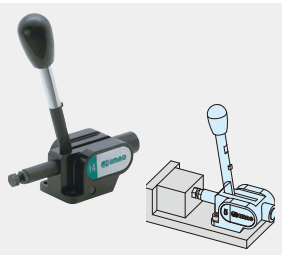
ANGLE ADAPTOR

Part No. QLSND-AN10



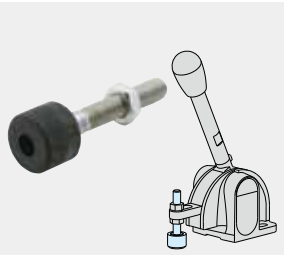
VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS(Mini)

Part No. QLSNDM



PUSH-PULL SNAP CLAMPS

Part No. QLSNS



CLAMPING SPINDLES

Part No. UB

ONE-TOUCH CLAMPS

Any Tools Needed? No Need!

Just Turn the Handle!

Good Design
GOOD DESIGN AWARD 2006

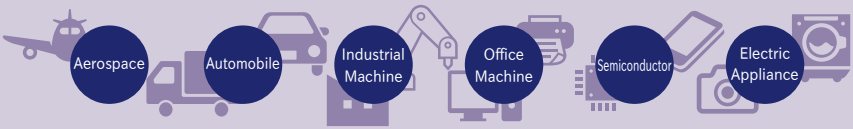
ONE-TOUCH CLAMPS

for Better Efficiency and Lower Costs

Quick Manual Clamps with No Tools

Imao One-Touch Clamps allow clamping and unclamping the workpiece just by turning the handle, without any tools. This one-touch feature helps to slash workpiece loading/unloading time, for drastic setup time reduction and increased productivity.

One-Touch Clamps reduce setup time in machining, assembly, inspection and testing fixtures for various industries.



This extended line of One-Touch Clamps covers a wide range of clamping applications for small parts, and aluminum, zinc, cast-iron or steel parts.

Push-Down


SWING CLAMPS


SWING CLAMPS WITH CAM HANDLE


SWING CLAMPS WITH ADJUSTABLE HANDLE


SWING CLAMPS


RETRACTABLE CLAMPS WITH CAM HANDLE


RETRACTABLE CLAMPS WITH ADJUSTABLE HANDLE


THRUST CLAMPS (Vertical)

Side-Push


THRUST CLAMPS


CAM EDGE CLAMPS


LOW-PROFILE CAM EDGE CLAMPS


SPIRAL CAM CLAMPS


CAM EDGE CLAMPS


CAM PUSH CLAMPS


PRECISION THRUST CLAMPS

Pull-Down


PULL CLAMPS


PULL CLAMPS (Heavy)

Push-Up


PUSH CLAMPS

QLSWC SWING CLAMPS

RoHS

IMAO

(Black Oxide Finish)

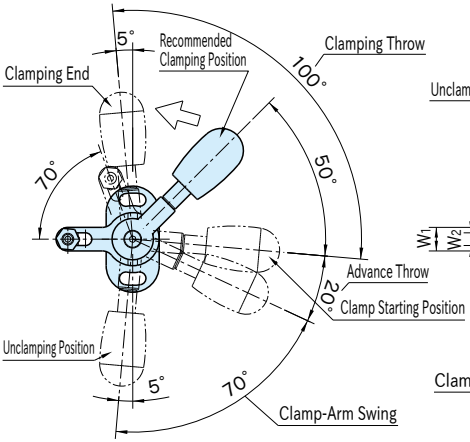
(Electroless Nickel Plated)

On Request

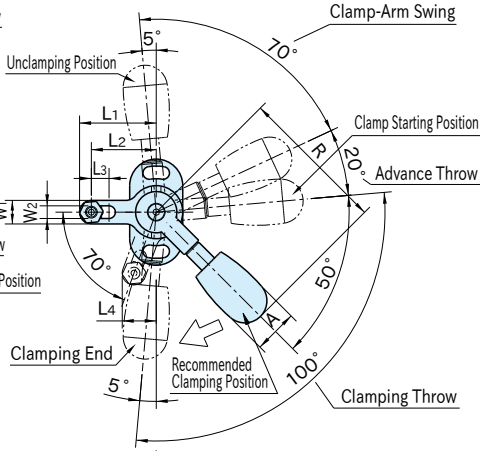
GOOD DESIGN

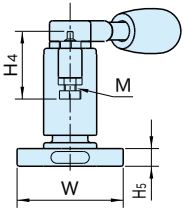
Type	Body/Handle/Clamping Spindle	Arm	Cam Shaft	Knob
QLSWC	S45C steel Quenched and tempered Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish	SCM415 steel Quenched and tempered Black oxide finish	Phenolic plastic Black
QLSWC-NP	S45C steel Quenched and tempered Electroless nickel plated	SCM440 steel Quenched and tempered Electroless nickel plated	SCM415 steel Quenched and tempered Electroless nickel plated	

Counterclockwise Clamping

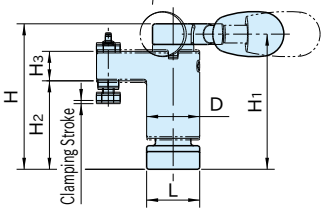


Clockwise Clamping

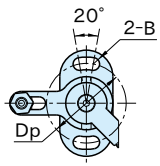




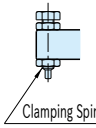
Rough Surface Contact

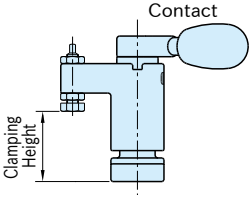


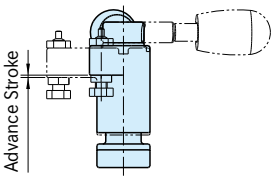
Finished Surface Contact



Mounting Holes







Part Number	Clamping Direction	Clamping Height *) Finished Surface Contact Min.	Finished Surface Contact Max.	Rough Surface Contact Min.	Rough Surface Contact Max.	Clamping Stroke	Advance Stroke	L_2	L_3	L_1	L_4	W	L	H_5	B
QLSWC100R	CW	22.8 (22.3~23.3)	24.8 (24.3~25.3)	22.4 (21.9~22.9)	24.4 (23.9~24.9)	1	0.8	22	6	26	11.5	36	18	6	4.3
QLSWC100L	CCW														
QLSWC150R	CW	31.3 (30.6~32)	33.3 (32.6~34)	32.2 (31.5~32.9)	34.2 (33.5~34.9)	1.4	1.1	30	8	35	15.3	45	23	8	5.3
QLSWC150L	CCW														
QLSWC200R	CW	32.5 (31.7~33.2)	39 (38.2~39.7)	33.5 (32.7~34.2)	40 (39.2~40.7)	1.5	1.4	37		45	20.7	65	30	12	8.4
QLSWC200L	CCW														
QLSWC300R	CW	36.5 (35.5~37.4)	46 (45~46.9)	39 (38~39.9)	48.5 (47.5~49.4)	1.9	1.7	45		55	25.4	85	40	15	10.5
QLSWC300L	CCW														

Part Number	Dp	H	D	W_1	W_2	H_3	H_2	M	H_4	R	A	H_1	Allowable Operating Load (N) **)	Clamping Force (kN)	Clamping Mechanism
QLSWC100R	27	49	18	8	4.3	10	30	M 4X0.7	22.8	50	15	45.8	100	1.1	Spiral Cam Cam Angle: 5°
QLSWC100L															
QLSWC150R	34	66	23	10	5.3	14	40	M 5X0.8	28.5	63	20	61.3	150	1.8	
QLSWC150L															
QLSWC200R	48	82	30	16	8.4	18	50	M 8X1.25	45.5	80	26	76.5	200	2.2	Spiral Cam Cam Angle: 4°
QLSWC200L															
QLSWC300R	64	100	40	20	10.4	22	60	M10X1.5	57	100	33	93	300	3.5	
QLSWC300L															

QLSWC (Black oxide finish)

Part Number	Weight (g)
QLSWC100R	112
QLSWC100L	
QLSWC150R	250
QLSWC150L	
QLSWC200R	570
QLSWC200L	
QLSWC300R	1200
QLSWC300L	

QLSWC-NP (Electroless nickel) On Request

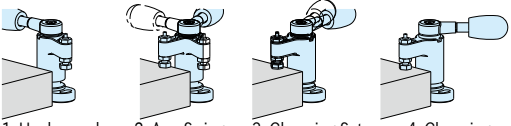
Part Number	Weight (g)
QLSWC100R-NP	112
QLSWC100L-NP	
QLSWC150R-NP	250
QLSWC150L-NP	
QLSWC200R-NP	570
QLSWC200L-NP	
QLSWC300R-NP	1200
QLSWC300L-NP	

*) Clamping height can be adjusted. The parenthesised values denote clamping height range.

**) Allowable load to operate the handle.

How To Use

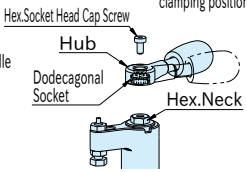
■Operation of CW Type (Invert the operation for CCW type.)



1. Unclamped Load or unload a part.
2. Arm Swing — Turn the handle to set the clamp arm in position.
3. Clamping Setup — Continue turning the handle to set the spindle close to the part.
4. Clamping — Turn the handle to the recommended clamping position.

■How to Change Handle Position

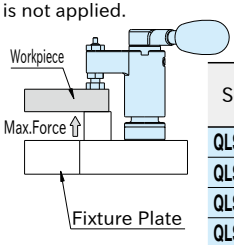
The dodecagonal socket in the hub of the handle allows changing the handle position by 30˚.



Technical Information

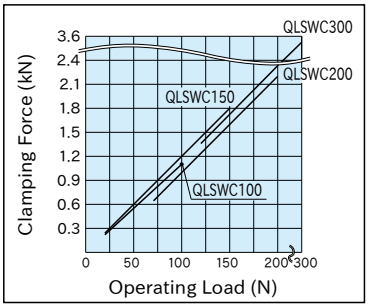
■Allowable Loads in Machining of Workpiece Bottom

Ensure that any force more than stated below is not applied.



Series	Allowable Force To Workpiece Bottom (Per Clamp)
QLSWC100	max.2.3kN
QLSWC150	max.3.6kN
QLSWC200	max.3.7kN
QLSWC300	max.5.6kN

Performance Curve



QLSWC SWING CLAMPS WITH CAM HANDLE

RoHS

IMAO

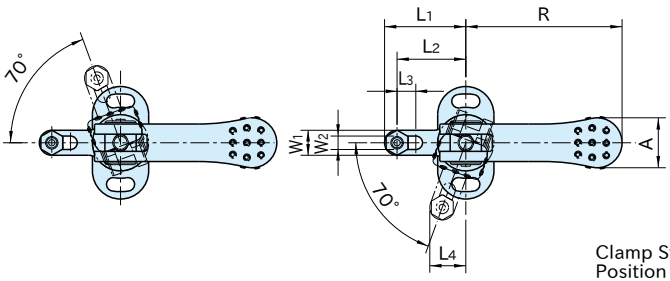
(Black Oxide Finish) (Electroless Nickel Plated)

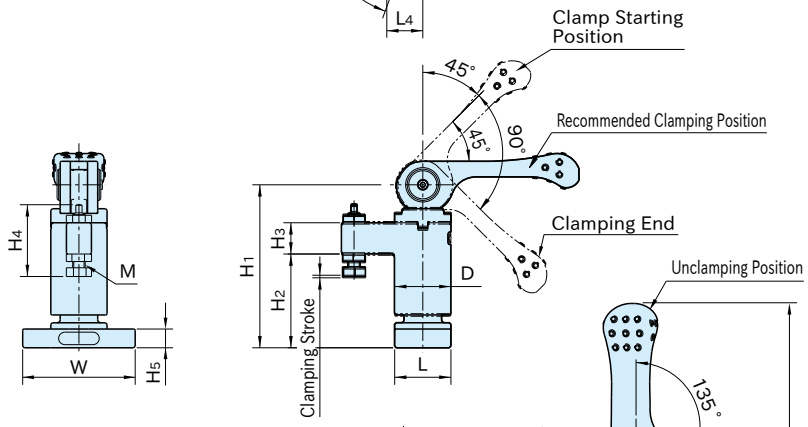
Style	Body/Washer/Clamping Spindle	Arm/Handle
QLSWC	S45C steel Quenched and tempered Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish
QLSWC-NP	S45C steel Quenched and tempered Electroless nickel plated	SCM440 steel Quenched and tempered Electroless nickel plated

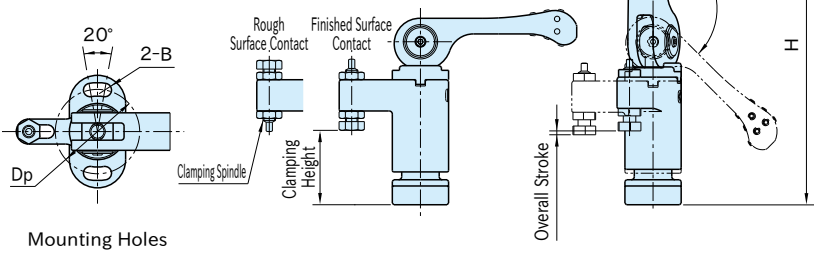
On Request

Counterclockwise Clamping

Clockwise Clamping







Mounting Holes

Part Number	Clamping Direction	Clamping Height *) Finished Surface Contact Min.	Finished Surface Contact Max.	Rough Surface Contact Min.	Rough Surface Contact Max.	Clamping Stroke	Overall Stroke	L_2	L_3	L_1	L_4	W	L	H_5	B
QLSWC100VR	CW	22.8 (22.4~23.2)	24.8 (24.4~25.2)	22.4 (22~22.8)	24.4 (24~24.8)	0.8	1.2	22	6	26	11.5	36	18	6	4.3
QLSWC100VL	CCW														
QLSWC150VR	CW	31.3 (30.8~31.8)	33.3 (32.8~33.8)	32.2 (31.7~32.7)	34.2 (33.7~34.7)	1	1.5	30		35	15.3	45	23	8	5.3
QLSWC150VL	CCW														
QLSWC200VR	CW	32.5 (31.9~33.1)	39 (38.4~39.6)	33.5 (32.9~34.1)	40 (39.4~40.6)	1.2	1.8	37	8	45	20.7	65	30	12	8.4
QLSWC200VL	CCW														
QLSWC300VR	CW	36.5 (35.7~37.2)	46 (45.2~46.7)	39 (38.2~39.7)	48.5 (47.7~49.2)	1.5	2.3	45		55	25.4	85	40	15	10.5
QLSWC300VL	CCW														

*) Clamping height can be adjusted. The parenthesized values denotes clamping height range.

Part Number	Dp	H	D	W_1	W_2	H_3	H_2	M	H_4	R	A	H_1	Cam Handles Part Number	Allowable Operating Load (N) **)	Clamping Force (kN)	Clamping Mechanism
QLSWC100VR	27	102	18	8	4.3	10	30	M 4X0.7	22.8	50	16	52	QLCA-05	100	0.8	Spiral Cam Cam Angle: 4°
QLSWC100VL																
QLSWC150VR	34	131	23	10	5.3	14	40	M 5X0.8	28.5	63	19	68	QLCA-06	150	1.5	
QLSWC150VL																
QLSWC200VR	48	167	30	16	8.4	18	50	M 8X1.25	45.5	80	24	87	QLCA-08	200	2.1	
QLSWC200VL																
QLSWC300VR	64	207	40	20	10.4	22	60	M10X1.5	57	100	30	107	QLCA-10	300	2.8	
QLSWC300VL																

**) Allowable load to operate the handle

QLSWC (Black Oxide Finish)

Part Number	Weight (g)
QLSWC100VR	134
QLSWC100VL	
QLSWC150VR	272
QLSWC150VL	
QLSWC200VR	625
QLSWC200VL	
QLSWC300VR	1340
QLSWC300VL	

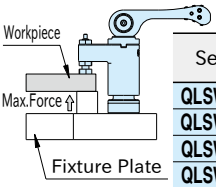
QLSWC-NP (Electroless Nickel Plated) On Request

Part Number	Weight (g)
QLSWC100VR-NP	134
QLSWC100VL-NP	
QLSWC150VR-NP	272
QLSWC150VL-NP	
QLSWC200VR-NP	625
QLSWC200VL-NP	
QLSWC300VR-NP	1340
QLSWC300VL-NP	

Technical Data

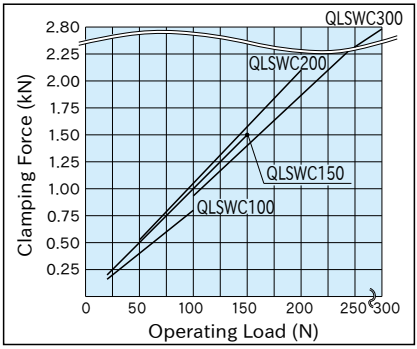
■Allowable Loads in Machining of Workpiece Bottom

Ensure that any force more than stated below is not applied.



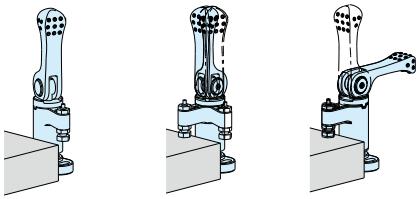
Series	Allowable Force To Workpiece Bottom (Per Clamp)
QLSWC100	max.2.3kN
QLSWC150	max.3.6kN
QLSWC200	max.3.7kN
QLSWC300	max.5.6kN

Performance Curve



How To Use

■Operation of CW Type (Invert the operation for CCW type.)



1. Unclamped Load or unlaod a workpiece.

2. Arm Swing
Turn the handle to set the clamp arm in position.

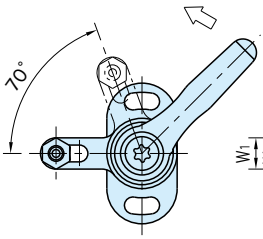
3. Clamping
Set the handle down to clamp the workpiece.

QLSWC SWING CLAMPS WITH ADJUSTABLE HANDLE

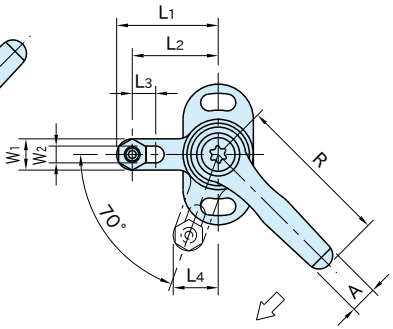
Base/Washer/Clamping Spindle	Body	Handle
S45C steel Quenched and tempered Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish	ZDC1 die cast zinc Coated with paint Black

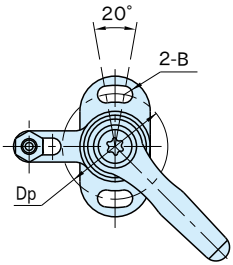
- Clamp worked by a screw-locking mechanism which allows providing longer clamping stroke and greater clamping force than a cam-locking mechanism.
- Operated by an adjustable handle that allows for flexible handle positioning.

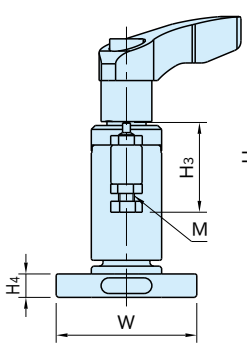
Counterclockwise Clamping

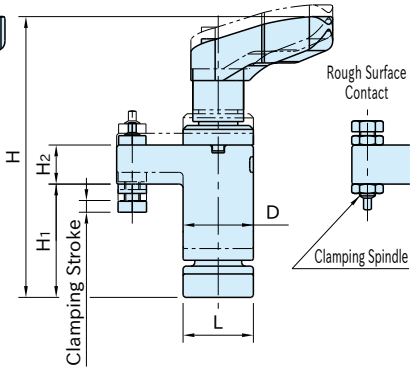


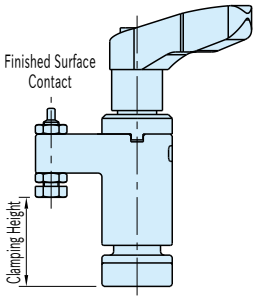
Clockwise Clamping











Part Number	Clamping Direction	Clamping Height *) Finished Surface Contact Min.	Finished Surface Contact Max.	Rough Surface Contact Min.	Rough Surface Contact Max.	Clamping Stroke	L_2	L_3	L_1	L_4	W	L	H_4	B	Dp
QLSWC-0618KR	CW	21.8 (21.8~24.8)	23.8 (23.8~26.8)	21.4 (21.4~24.4)	23.4 (23.4~26.4)	3	22	6	26	11.5	36	18	6	4.3	27
QLSWC-0618KL	CCW														
QLSWC-0823KR	CW	30.3 (30.3~34.3)	32.3 (32.3~36.3)	31.2 (31.2~35.2)	33.2 (33.2~37.2)	4	30	8	35	15.3	45	23	8	5.3	34
QLSWC-0823KL	CCW														
QLSWC-1030KR	CW	30.5 (30.5~34.5)	37 (37~41)	31.5 (31.5~35.5)	38 (38~42)		37		45	20.7	65	30	12	8.4	48
QLSWC-1030KL	CCW														
QLSWC-1240KR	CW	34.5 (34.5~39.5)	44 (44~49)	37 (37~42)	46.5 (46.5~51.5)	5	45		55	25.4	85	40	15	10.5	64
QLSWC-1240KL	CCW														

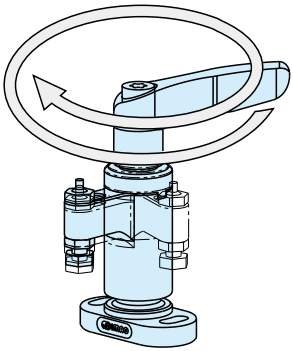
*) Clamping height can be adjusted. The parenthesised values denote clamping height range.

Part Number	H	D	W_1	W_2	H_2	H_1	M	R	A	H_3	Adjustable Handles **)	Allowable Operating Load (N) ***)	Clamping Force (kN)	Weight (g)
QLSWC-0618KR	71.9	18	8	4.3	10	29	M 4X0.7	40	7	22.8	FKF 6-BR	170	2	121
QLSWC-0618KL														
QLSWC-0823KR	97.3	23	10	5.3	14	39	M 5X0.8	65	9.5	28.5	FKF 8-BR		3.2	276
QLSWC-0823KL														
QLSWC-1030KR	122.3	30	16	8.4	18	48	M 8X1.25	80	11	45.5	FKF10-BR	350	4.5	600
QLSWC-1030KL														
QLSWC-1240KR	145.7	40	20	10.4	22	58	M10X1.5	95	13	57	FKF12-BR	410	6	1225
QLSWC-1240KL														

**) Studs are bonded with FKF handles.
***) Allowable load to operate the handle.

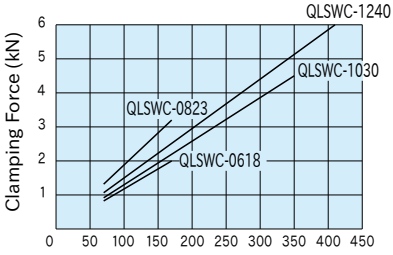
How To Use

- Turning the handle allows the clamp arm to swing for clamping.
- Lifting the handle allows the handle to be disengaged from the teeth of the locking element and then be turned to a desired position.



Note: The above indicates the handle operation of CW type. Invert the operation for CCW type.

Performance Curve



QLSWC — SWING CLAMPS FOR TORQUE CONTROL

Stronger type without handle is available.

QLSW SWING CLAMPS (Standard)

RoHS

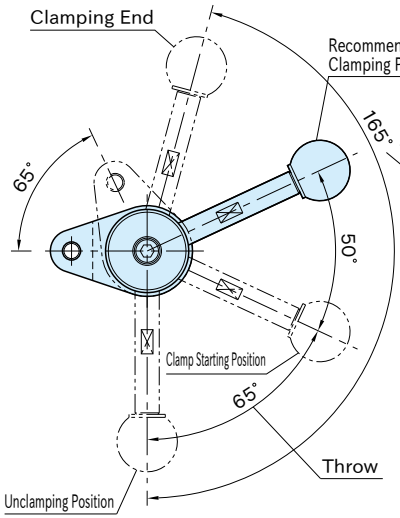
IMAO

With Handle

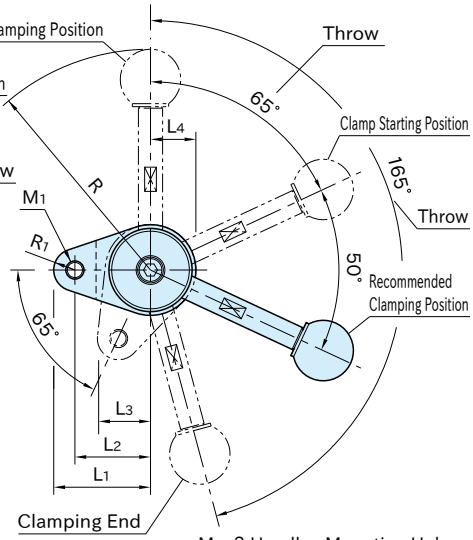
Without Handle

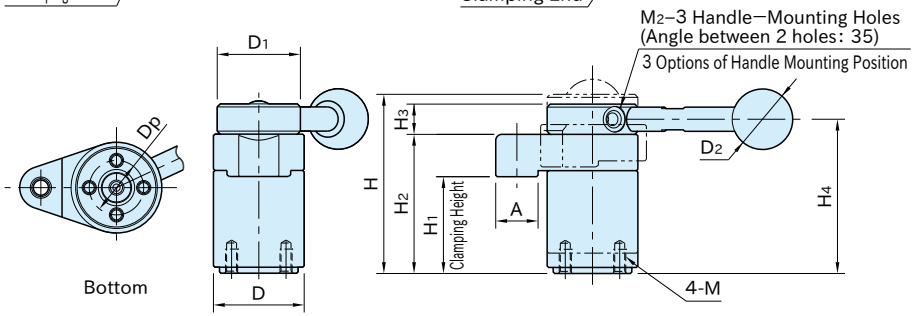
Body / Shaft	Clamp Arm / Adaptor Head	Handle	Ball Knob
SCM440 steel Quenched and tempered Black oxide finish	S45C steel Quenched and tempered Black oxide finish	S45C steel Black oxide finish	ABS resin Black

Counterclockwise Clamping



Clockwise Clamping





Size/Type	Clamping Direction	H_1	A	R_1	M_1	L_2	L_1	L_3	D	M	Dp
QLSW150R	CW	32 *)	14	7	M6×1	25	32	17.5	30	M4×0.7 Depth 8	18
QLSW150L	CCW										
QLSW200R	CW	45 **)	16	8	M8×1.25	32	40	21.5	40	M6×1 Depth 12	25
QLSW200L	CCW										

*) Actual clamping height: 31.4 to 32.6 (clamping stroke: 1.2)
**) Actual clamping height: 44.1 to 45.9 (clamping stroke: 1.8)

Size/Type	H	D_1	H_3	H_2	M_2	H_4	L_4	Clamping Force (kN)	Clamping Mechanism
QLSW150R	57.5	30	10	46	M5×0.8	51	15	0.8	Spiral Cam Cam Angle: 4 °
QLSW150L									
QLSW200R	78.1	38	13	63	M6×1	69.5	20	1.2	
QLSW200L									

■With Handle

Part Number	R	D_2	Allowable Operating Load (N) ***)	Weight (g)
QLSW150R	73	20	150	320
QLSW150L				
QLSW200R	107	25	200	710
QLSW200L				

***) Allowable load to operate the handle

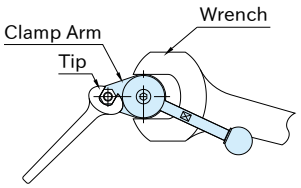
■Without Handle

Part Number	Weight (g)
QLSW150NR	295
QLSW150NL	
QLSW200NR	660
QLSW200NL	

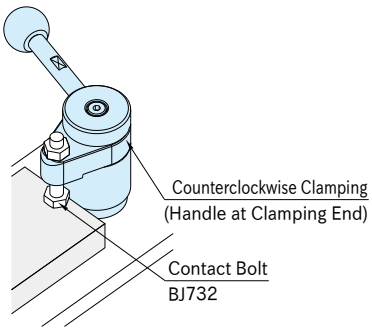
Note : The handle must be ordered separately.
・ QLSL STANDARD HANDLES
・ QLTL ADJUSTABLE-TORQUE HANDLES

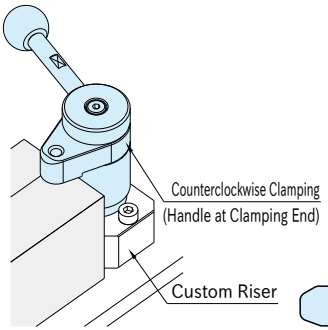
■Tip Installation

When installing a tip on the clamp arm, lock the clamp arm using a wrench to prevent the clamp from receiving any torque.



How To Use



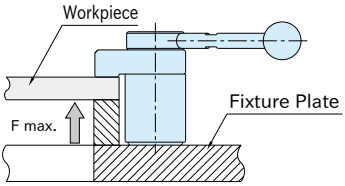


Continuing to next page

Technical Infomation

■Allowable Loads in Machining of Workpiece Bottom

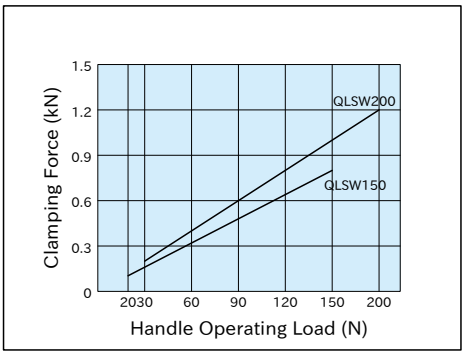
Type	Allowable Force To Workpiece Bottom (Per Clamp)
QLSW150	max. 2.1kN
QLSW200	max. 2.7kN



Performance Curve

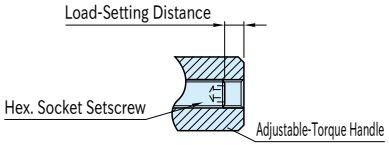
■QLSL STANDARD HANDLES

⚠ The performance curves shown below do not denote the guaranteed performance.

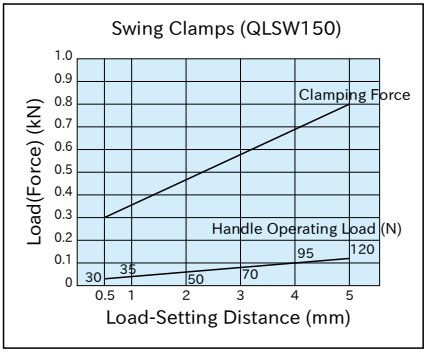


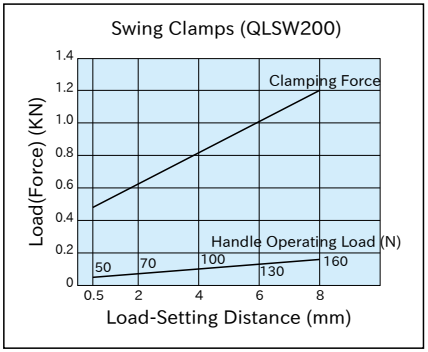
■QLTL ADJUSTABLE-TORQUE HANDLES

Use a force gauge when measuring handle-operating loads.



⚠ The performance curves shown below do not denote the guaranteed performance.





Clamp Arm

■Custom Clamp Arm

Recommeded Dimensions

Type	L_5 (Max.) *)	L_6	W	H_6	L_7	d (F8)	R_2	B	H_7	M_3	C
QLSW150	45	15	30	12	32	10	11	1.5	5	M4×0.7	C5
QLSW200	55	20	40	16	42	16	15	2	6	M5×0.8	C8

*) See page QLSW-SH clamping force vs. clamp - arm length

■Installation / Removal

To install a clamp arm,

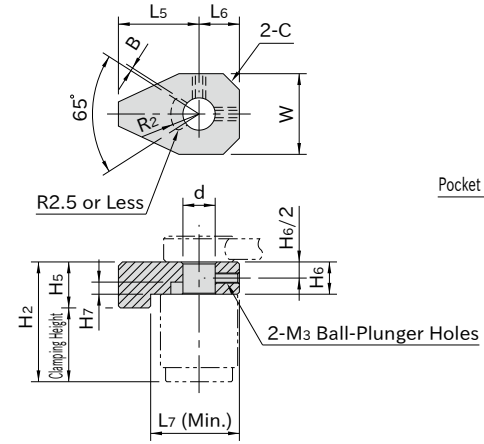
1. Fit it onto the shaft getting the stop pin received in the stop-pin slot provided on the clamp-arm bottom.
2. Place the adaptor head onto the shaft getting the shaft fitted into the shaft-receiving pocket in the adaptor head, and then lock the adaptor head using a hex. socket head cap screw.
3. Tighten the ball plungers inside the clamp arm.
   To remove the clamp arm, follow the above steps back.

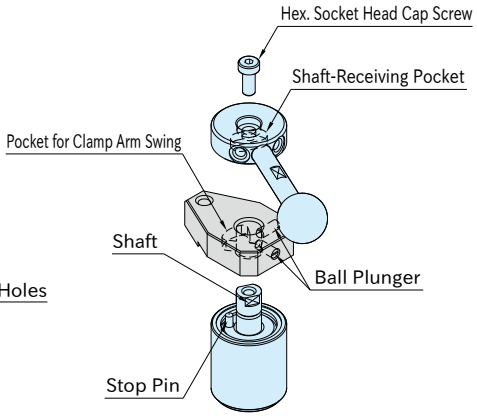
How to Determine H_5 Dimensions

Type	H_2	H_5
QLSW150	46	46−Clamping Height
QLSW200	63	63−Clamping Height

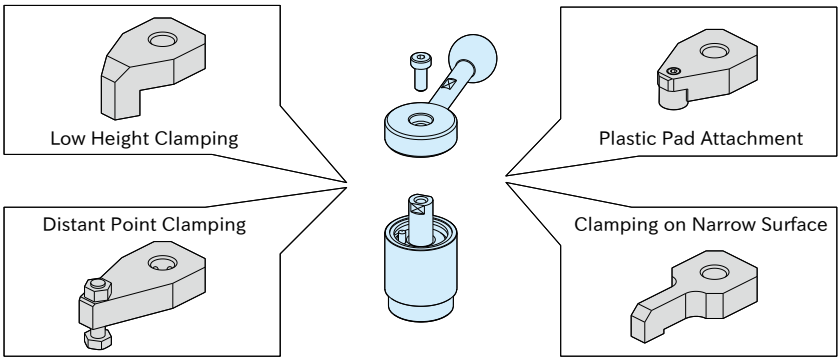
Ball Plunger

Type	Part Number
QLSW150	LBSTH4
QLSW200	LBSTH5





■Clamp Arm Customization Examples

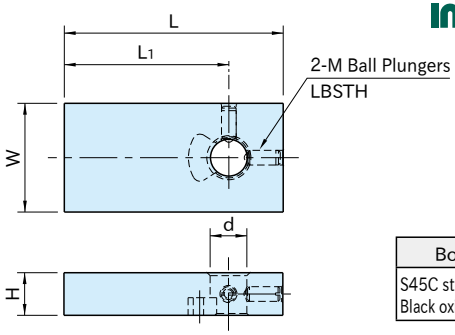


QLSW-SH

MACHINABLE CLAMP ARMS FOR STANDARD SWING CLAMPS

RoHS

IMAO

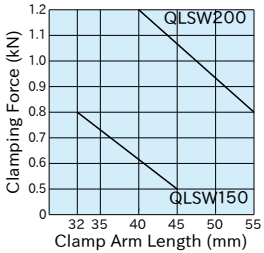


Body
S45C steel Black oxide finish

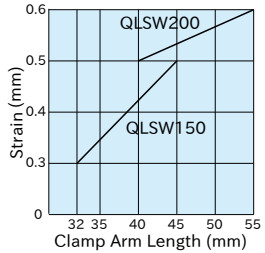
Part Number	L	W	H	d (F8)	L1	M	Allowable Weight of Clamping Tip (g) *)	Weight (g)	Swing Clamps
QLSW150-SH	60	30	12	10	45	M4	100	150	QLSW150Series
QLSW200-SH	75	40	16	16	55	M5		330	QLSW200Series

*) A clamping tip to mount on the end of the clamp arm must not weigh over 100g.

■Clamp Arm Length Vs. Clamping Force



■Clamp Arm Length Vs. Strain During Clamping



Notes:
- Clamp arm length denotes L1 dimensions below.
- Clamping force and strain during clamping denote values gained when the max. allowable load is applied to the handle.

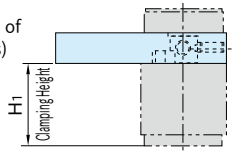
Note

Use within smaller clamping stroke when the clamp arm becomes longer than standard one.

How To Use

- Use for QLSW clamp arm customization
- Machine to your clamping requirements

(Clamping Height in Use of Machinable Clamp Arms)



Part Number	H1
QLSW150-SH	34 **)
QLSW200-SH	47 ***)

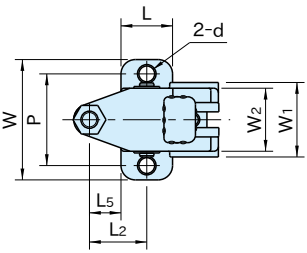
**) Actual clamping height: 33.4 to 34.6 (clamping stroke: 1.2)
***) Actual clamping height: 46.1 to 47.9 (clamping stroke: 1.8)

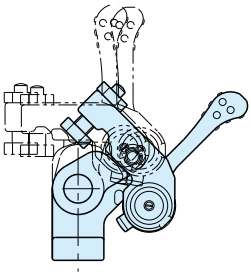
Value Creator

IMAO

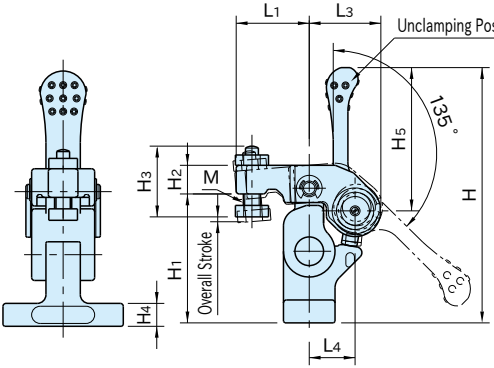
QLRE RETRACTABLE CLAMPS WITH CAM HANDLE

Body/Spindle	Arm/Joint	Cam Handle
S45C steel Quenched and tempered Black oxide finish	SCM435 steel Quenched and tempered Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish

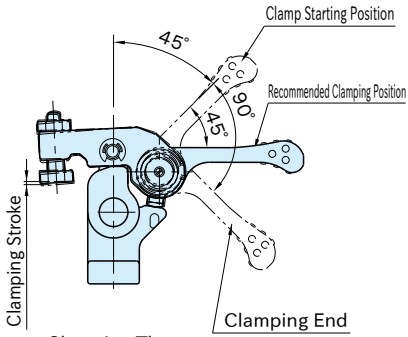




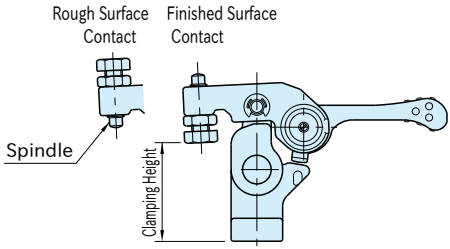
Unclamped



Clamping Position



Clamping Throw



Part Number	Clamping Height *)				Clamping Stroke	Overall Stroke	L_2	L_5	W	L	H_4	d	P	H	L_1	L_3
	Finished Surface Contact		Rough Surface Contact													
	min.	max.	min.	max.												
QLRE100	32 (31.5~32.5)	40 (39.5~40.5)	35 (34.5~35.5)	43 (42.5~43.5)	1	1.5	20	11	42	18	8	5.5	32	89	25.5	25
QLRE150	37 (36.4~37.6)	48 (47.4~48.6)	42 (41.4~42.6)	53 (52.4~53.6)	1.2	1.8	25	14	52	22	10	6.6	40	109	32	31

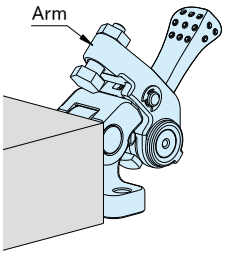
*) Clamping height can be adjusted. The parenthesised values denote actual clamping height.

Part Number	W_1	W_2	H_2	H_1	M	H_3	H_5	L_4	Cam Handles Part Number	Allowable Operating Load (N) **)	Clamping Force (kN)	Clamping Mechanism	Weight (g)
QLRE100	26	22	10	45	M6×1	24	50	16	QLCA-05	100	0.7	Spiral Cam	244
QLRE150	32	28	12	55	M8×1.25	30.5	63	20	QLCA-06	150	1.1	Cam Angle: 4°	468

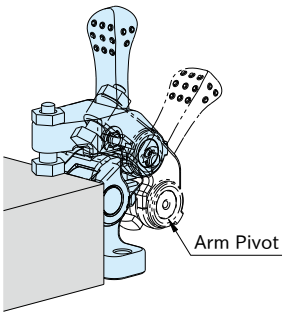
**) Allowable load to operate the handle

How To Use

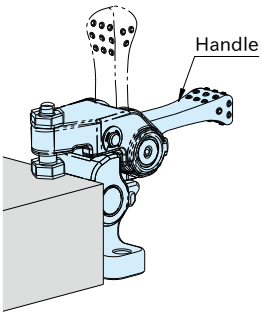
■How to Operate



1. Unclamped
Load a workpiece.



2. Clamping Setup
Set the arm in clamping position holding it at the arm pivot.

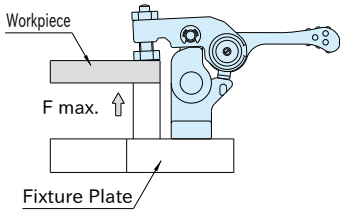


3. Clamping
Set the handle down to clamp the workpiece.
(For unclamping, follow the above steps back.)

Technical Information

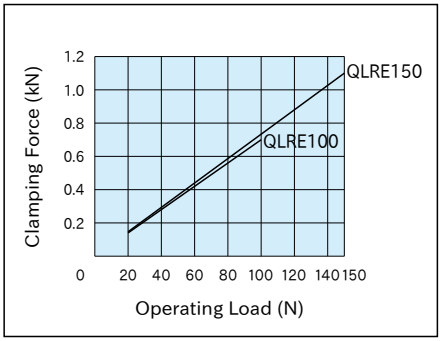
■Allowable Loads in Machining of Workpiece Bottom

Ensure that any force more than stated below is not applied.



Part Number	Allowable Force to Workpiece Bottom (per Clamp)
QLRE100	max. 5kN
QLRE150	max. 6kN

Performance Curve



QLRE

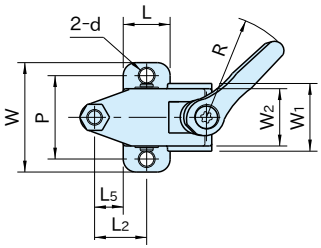
RETRACTABLE CLAMPS WITH ADJUSTABLE HANDLE

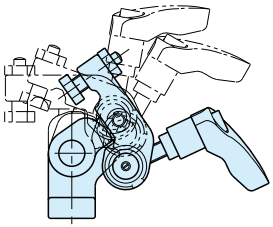
RoHS

IMAO

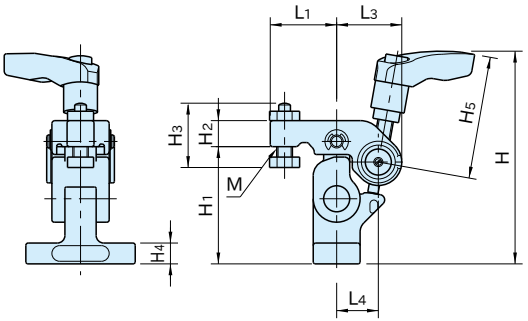
Body/Spindle	Arm/Joint
S45C steel Quenched and tempered Black oxide finish	SCM435 steel Quenched and tempered Black oxide finish

Screw clamping mechanism allows for longer clamping stroke and greater clamping force.

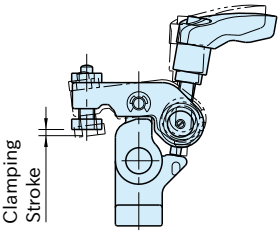




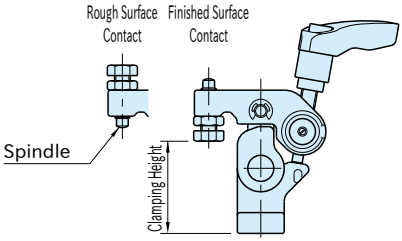
Unclamped



Clamping Position



Clamping Throw



Part Number	Clamping Height *)				Clamping Stroke	L_2	L_5	W	L	H_4	d	P	H	L_1	L_3	W_1
	Finished Surface Contact		Rough Surface Contact													
	min.	max.	min.	max.												
QLRE-06	32 (32~29.5)	40 (40~37.5)	35 (35~32.5)	43 (43~40.5)	2.5	20	11	42	18	8	5.5	32	81	25.5	25	26
QLRE-08	37 (37~33.5)	48 (48~44.5)	42 (42~38.5)	53 (53~49.5)	3.5	25	14	52	22	10	6.6	40	100	32	31	32

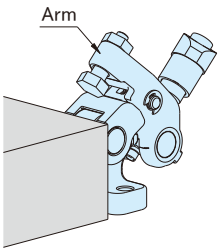
*) Clamping height can be adjusted. The parenthesised values denote actual clamping height.

Part Number	W_2	H_2	H_1	M	H_3	R	H_5	L_4	Adjustable Handles **)	Allowable Operating Load (N) ***)	Clamping Force (kN)	Clamping Mechanism	Weight (g)
QLRE-06	22	10	45	M6×1	24	40	47	16	FKF6-BR	170	2.4	Screw	242
QLRE-08	28	12	55	M8×1.25	30.5	65	63	20	FKF8-BR	210	4.2		490

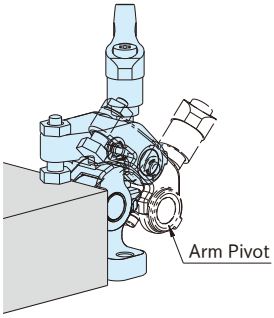
**) Studs are bonded with FKF handles.
***) Allowable load to operate the handle.

How To Use

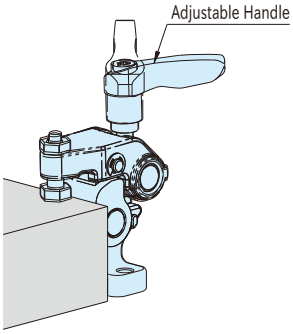
■How to Operate



1. Unclamped
Load a workpiece.



2. Clamping Setup
Set the arm in clamping position holding it at the arm pivot.

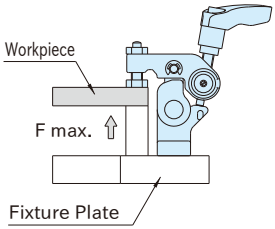


3. Clamping
Tighten the adjustable handle to clamp the workpiece.
(For unclamping, follow the above steps back.)

Technical Information

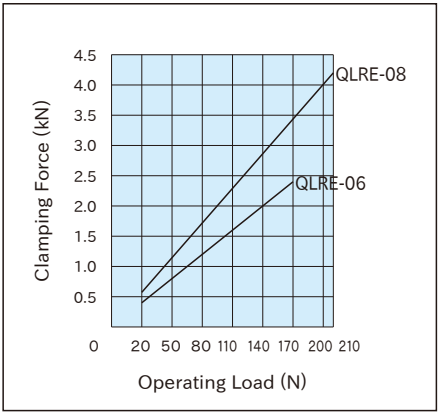
■Allowable Loads in Machining of Workpiece Bottom

Ensure that any force more than stated below is not applied.



Part Number	Allowable Force to Workpiece Bottom (per Clamp)
QLRE-06	max. 5kN
QLRE-08	max. 6kN

Performance Curve



QLRC THRUST CLAMPS

RoHS

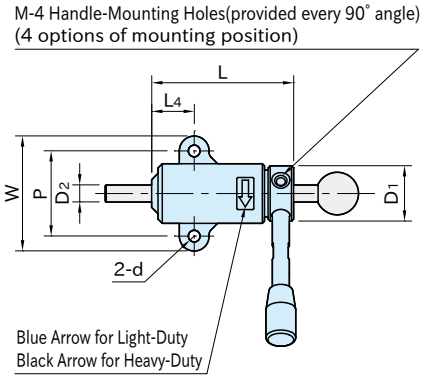
IMAO

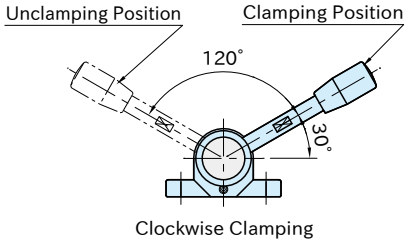
Light-Duty
(Marked with Blue Arrow)

Heavy-Duty
(Marked with Black Arrow)

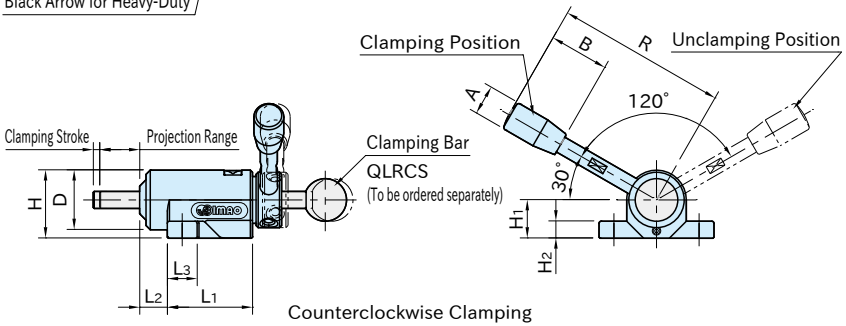
Note: Clamping bar is not included.

Body/Lever Arm	Cam	Handle
S45C steel Black oxide finish	SCM415 steel Carburized-hardened Black oxide finish	Phenolic plastic Black matte





Clockwise Clamping



Counterclockwise Clamping

Type	Clamping Stroke	D_2	H_1	L_4	W	L_3	H_2	d	P	H	D	D_1	L	L_1	L_2	R	B	A	M
QLRC-08	1.5	8	18	20	54	14	8	5.5	40	32	28	26	68.5	40	13	80	28	14	M5×0.8
QLRC-12	2.3	12	25	30	80	20	12	9	60	45	40	36	93.7	55	20	132	50	21	M6×1

QLRC-L (Light-Duty)

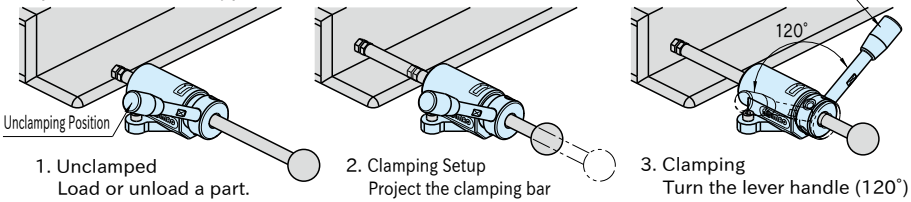
Part Number	Clamping Direction	Allowable Operating Load (N)	Clamping Force (kN)	Weight (g)	Clamping-Bar Projection Range
QLRC-08R-L	CW	40	0.2	330	QLRCS-08100 0～ 30 QLRCS-08125 0～ 55 QLRCS-08150 0～ 80
QLRC-08L-L	CCW				
QLRC-12R-L	CW	100	0.7	930	QLRCS-12125 0～ 29 QLRCS-12150 0～ 54 QLRCS-12200 0～ 104
QLRC-12L-L	CCW				

QLRC (Heavy-Duty)

Part Number	Clamping Direction	Allowable Operating Load (N)	Clamping Force (kN)	Weight (g)	Clamping-Bar Projection Range
QLRC-08R	CW	80	0.5	330	QLRCS-08100 0～ 30 QLRCS-08125 0～ 55 QLRCS-08150 0～ 80
QLRC-08L	CCW				
QLRC-12R	CW	150	1.4	910	QLRCS-12125 0～ 29 QLRCS-12150 0～ 54 QLRCS-12200 0～ 104
QLRC-12L	CCW				

How To Use

■Operation of CW Type (Invert the operation for CCW type.)



1. Unclamped
Load or unload a part.

2. Clamping Setup
Project the clamping bar until it contacts the part.

3. Clamping
Turn the lever handle (120°) to the clamping position.

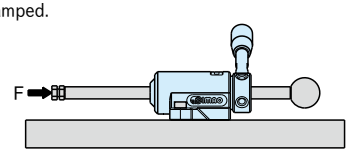
Feature

・Spring-loaded clamp that provides constant clamping force.
・Long clamping-bar projection range allows clamping a recessed part.
・Clamping Bars are not included (must be ordered separately).
(When using your own clamping bar, ensure that the diameter is finished to a h9 or better tolerance)

Note

When a reaction force (F) becomes greater than a clamping force, the clamping bar slides back to get a part unclamped.

Type	Clamp Releasing Force
QLRC-08-L	F>0.2kN
QLRC-12-L	F>0.7kN
QLRC-08	F>0.5kN
QLRC-12	F>1.4kN



QLRCF THRUST CLAMPS (Vertical)

RoHS

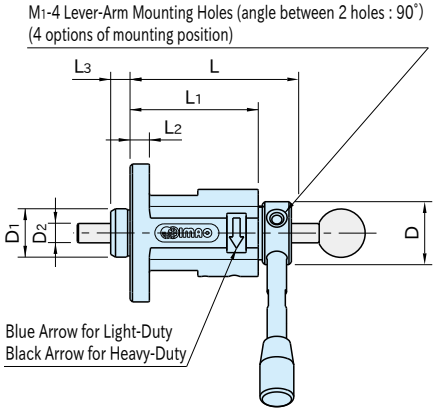
IMAO

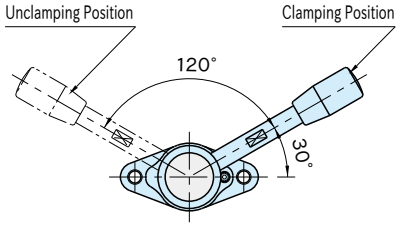
Light-Duty
(Marked with Blue Arrow)

Heavy-Duty
(Marked with Black Arrow)

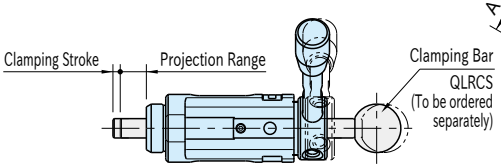
Note: Clamping bar is not included.

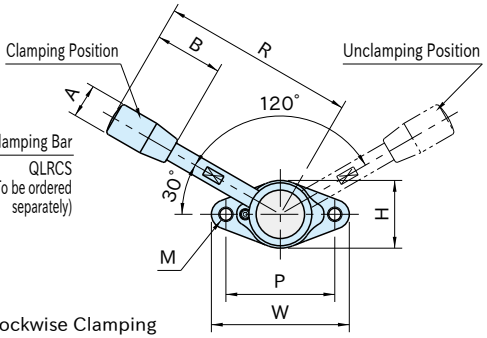
Body/Lever Arm	Cam	Handle
S45C steel Black oxide finish	SCM415 steel Carburized-hardened Black oxide finish	Phenolic plastic Black matte





Clockwise Clamping





Counterclockwise Clamping

Type	Clamping Stroke	D_2	W	H	L_2	M	P	L	L_1	L_3	D	D_1 $(^{-0.04}_{-0.08})$	R	B	A	M_1
QLRCF-08	1.5	8	57	28	8	M 6X1 (Prepared Hole 5.2)	45	68.5	53	8	26	20	80	28	14	M5×0.8
QLRCF-12	2.3	12	85	40	12	M10×1.5 (Prepared Hole 8.5)	65	90.7	72	12	36	30	132	50	21	M6×1

QLRCF-L (Light-Duty)

Part Number	Clamping Direction	Allowable Operating Load (N)	Clamping Force (kN)	Weight (g)	Clamping-Bar Projection Range
QLRCF-08R-L	CW	40	0.2	330	QLRCS-08100 0~22 QLRCS-08125 0~47 QLRCS-08150 0~72
QLRCF-08L-L	CCW				
QLRCF-12R-L	CW	100	0.7	930	QLRCS-12125 0~20 QLRCS-12150 0~45 QLRCS-12200 0~95
QLRCF-12L-L	CCW				

QLRCF (Heavy-Duty)

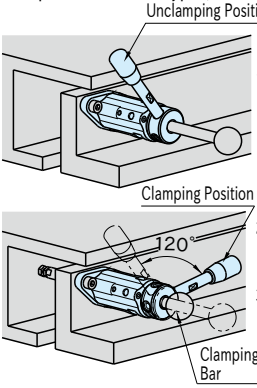
Part Number	Clamping Direction	Allowable Operating Load (N)	Clamping Force (kN)	Weight (g)	Clamping-Bar Projection Range
QLRCF-08R	CW	80	0.5	330	QLRCS-08100 0~22 QLRCS-08125 0~47 QLRCS-08150 0~72
QLRCF-08L	CCW				
QLRCF-12R	CW	150	1.4	950	QLRCS-12125 0~20 QLRCS-12150 0~45 QLRCS-12200 0~95
QLRCF-12L	CCW				

Feature

- Can be used in both vertical and horizontal clamping applications.
- The horizontal style is also available. (see page for QLRC)
- Spring-loaded clamp that provides constant clamping force.
- Long clamping-bar projection range allows clamping a recessed part. (When using your own clamping bar, ensure that the diameter is finished to a h9 or better tolerance)

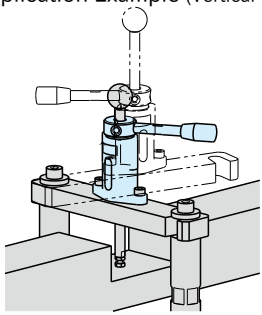
How To Use

■Operation of CW Type (Invert the operation for CCW type.)



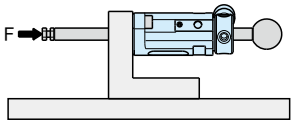
1. Unclamped
   Load or unload a part.
2. Clamping Setup
   Project the clamping bar until it contacts the part.
3. Clamping
   Turn the lever handle (120°) to the clamping position.

■Application Example (Vertical Clamping)



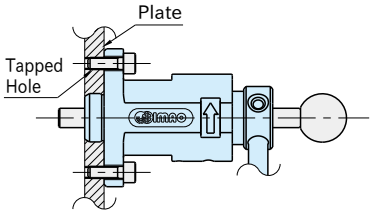
Note

When a reaction force (F) becomes greater than a clamping force, the clamping bar slides back to get a part unclamped.

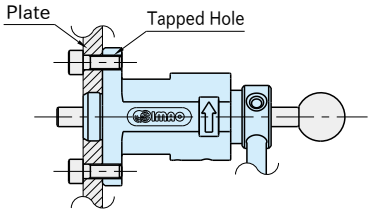


Type	Clamp Releasing Force
QLRCF-08-L	F>0.2kN
QLRCF-12-L	F>0.7kN
QLRCF-08	F>0.5kN
QLRCF-12	F>1.4kN

■How to Mount



- Face Mounting
  (Use cap screws with one-size smaller threads than mounting-hole threads.)

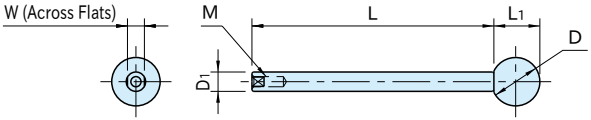


- Back Mounting
  (Use cap screws with threads of the same size as mounting-hole threads.)

QLRCS CLAMPING BARS

RoHS

IMAO

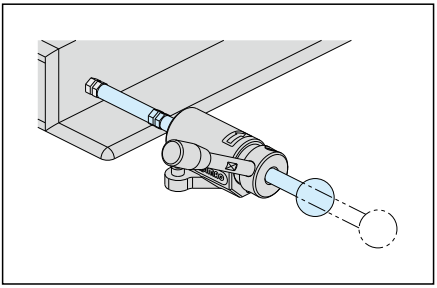


Part Number	D1 (f8)	L	L1	D	W	M	Weight (g)
QLRCS-08100	8	100	19	20	7	M4×0.7 Depth 8	50
QLRCS-08125		125					60
QLRCS-08150		150					70
QLRCS-12125	12	125	24	25	10	M6×1 Depth 12	130
QLRCS-12150		150					150
QLRCS-12200		200					190

Arm	Ball Knob
S45C steel Chrome plated	ABS resin Black

How To Use

- QLRC THRUST CLAMPS
- QLRCF THRUST CLAMPS (Vertical)
- Can be cut shorter to a desired length.



Value Creator

IMAO

QLSCH CAM EDGE CLAMPS

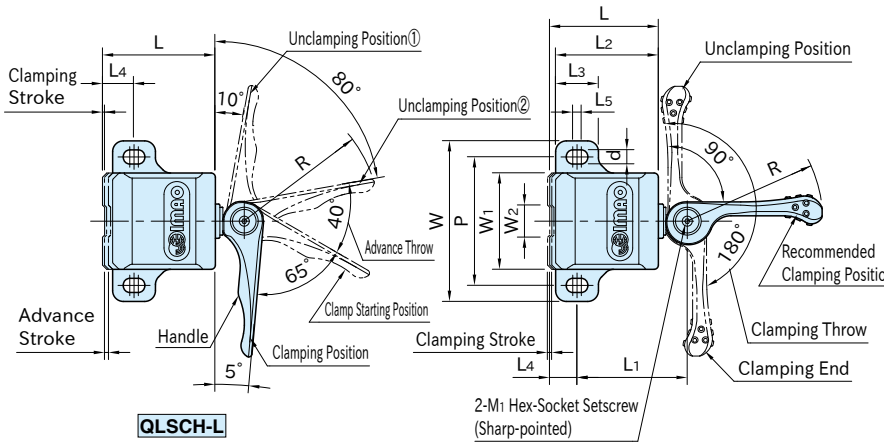
RoHS

IMAO

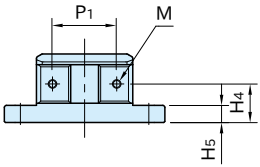
QLSCH-L
(Light-Duty)

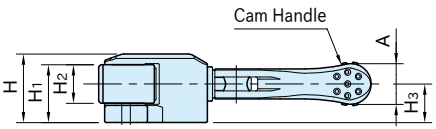
QLSCH
(Standard)

Type	Body	Jaw/Handle Shaft	Handle
QLSCH-L	S45C steel Black oxide finished	S45C steel Quenched & tempered Black oxide finished Precision ground	SCM440 steel Quenched & tempered Electroless nickel plated
QLSCH			SCM440 steel Quenched & tempered Black oxide finished



QLSCH-L
(Light-Duty)





QLSCH
(Standard)

Size	W_1	W_2	H_1	H_2	M	P_1	H_4	L_4	W	L_3	H_5	d	L_5	P
QLSCH32	45	15	27	18	M4×0.7 Depth 6	30	18	13	75	20	8	6.6	3	60
QLSCH40	60	20	33	22	M5×0.8 Depth 8	40	22	17	100	26	10	8.6	4	80

Size	H	L	L_2	R	L_1	H_3	M_1
QLSCH32	32	51	48	63	51.5	18	M4×0.7-5L
QLSCH40	40	67	63	80	67	22	M5×0.8-6L

Related Product

Stronger type without handle is available.
QLSCH-H SIDE CLAMPS

■Light-Duty

Part Number	A	Clamping Stroke *)	Advance Stroke	Operating Load (N) **)	Clamping Force (kN)	Weight (g)
QLSCH32L	14	0.3	0.8	40	0.6	600
QLSCH40L	18	0.4		50	1.2	1320

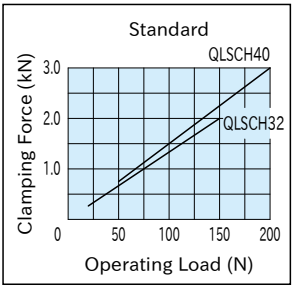
*) Dimensional variations between workpieces should be 0.1mm or less.
**) Load needed to turn the handle to clamping position

■Standard

Part Number	A	Clamping Stroke	Handle Number	Operating Load (N) ***)	Clamping Force (kN)	Weight (g)
QLSCH32	19	1.6	QLCA-06	150	2	620
QLSCH40	24	2.2	QLCA-08	200	3	1360

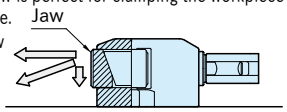
***) Allowable load to operate the handle

Performance Curve



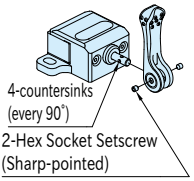
Feature

- The cam handle allows fast clamping in single operation.
- Spring-loaded light-duty style allows distributing constant clamping force.
- Standard style allows adjusting clamping force depending on operating loads.
- Precision-ground jaw is perfect for clamping the workpiece on its finished surface.
- In clamping, the jaw provides downward force to prevent part lift.

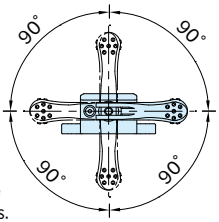


Changing Handle Position

The handle shaft has 4 countersinks which are provided every 90˚for 4 options of handle position.

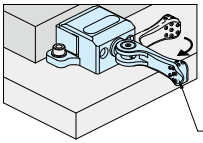


Note: The setscrews must be tightened into 2 countersinks.



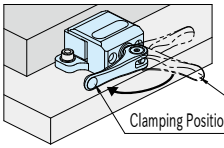
How To Use

■Standard



Turning the cam handle allows the jaw to advance to the workpiece for clamping. For clamping forces, see the performance curve.

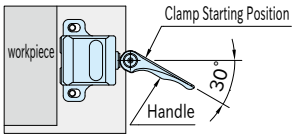
■Light-Duty



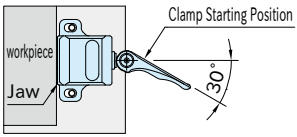
Turning the handle to the clamping position allows clamping the workpiece with constant clamping force.

Installation Instructions for Light-Duty Style

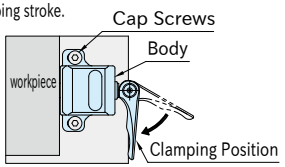
The steps below must be followed so that constant clamping force can be distributed within the clamping stroke.



Set the handle to the clamp starting position.



Contact the jaw to the workpiece.



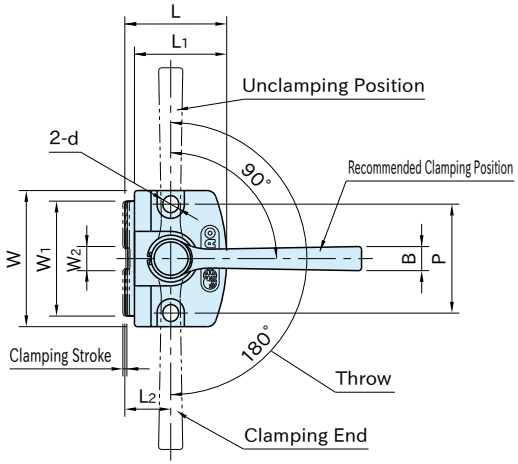
Fasten the clamp with hex socket-head cap screws, and then turn the handle to the clamping position for clamping.

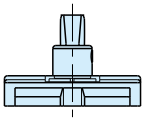
QLSCL-R LOW-PROFILE CAM EDGE CLAMPS

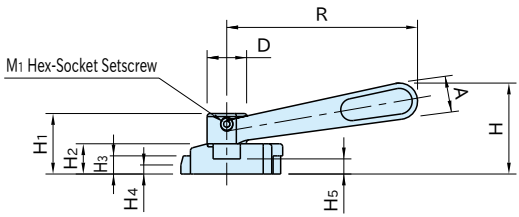
RoHS

IMAO

Body	Jaw/Cam	Handle
S45C steel Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish	S45C steel Quenched and tempered Black oxide finish







Part Number	Clamping Stroke	W_1	W_2	H_3	H_4	L_2	W	L	H_2	d	P	H_5	L_1	Clamping Mechanism
QLSCL10R	1	38	8	6	3	15	45	33.5	10	5.2	36	5	30.5	Spiral Cam
QLSCL15R	2	60	12	9	5	22	70	50	15	8.2	55	7	46	Cam Angle: 4°

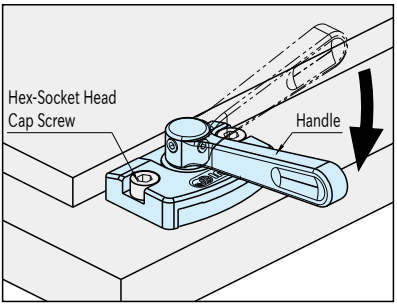
Part Number	H	D	H_1	R	A	B	M_1	Allowable Operating Load (N) *)	Clamping Force (kN)	Weight (g)
QLSCL10R	30	13	20	63	12	8	M4×0.7-4L	170	4	130
QLSCL15R	46	19	30	100	18	12	M5×0.8-5L	280	6	440

*) Allowable load to operate the handle

Feature

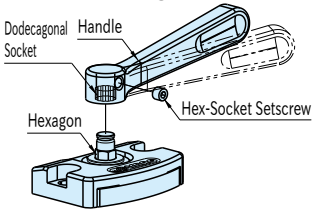
Designed to prevent part lift.

How To Use



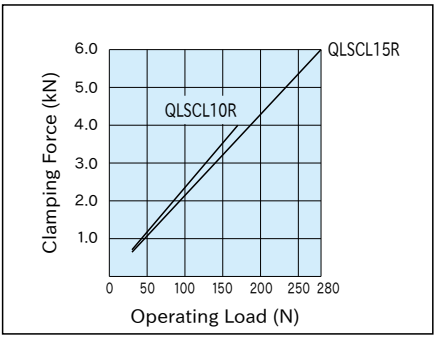
Turning the handle allows the cam to project the jaw for clamping. When the handle is turned back for unclamping, the loaded spring lets the jaw return to the original position.

■How to Change Handle Position



The handle has the dodecagonal socket to allow changing the handle position by 30˚

Performance Curve



Note

Ensure that mounting surfaces are finished to $\overset{6.3}{\nabla}$ (6.3a) or better, without any scratches or dents.

QLSCL-NR LOW-PROFILE CAM EDGE CLAMPS

Without handle type is available.

CP135-L SPIRAL CAM CLAMPS

RoHS

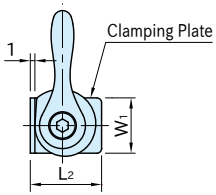
IMAO

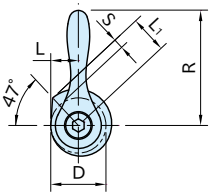
★Key Point
Space saving.
Long clamping stroke.

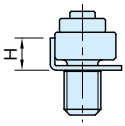
CP135-AL

CP135-L

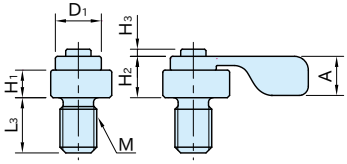
Spiral Cam Clamp	Handle	Clamping Plate
SCM440 steel Black oxide finished HRC33-39	SCM440 steel Black oxide finish HRC30-35	SUS304CSP stainless steel







CP135-AL
(With Clamping Plate)



CP135-L
(Without Clamping Plate)

Type	S	L	L1	D	M	H1	L3	D1	H2	R	H3	A	Allowable Operating Load (N)	Clamping Force (kN)
CP135-08001	2.2	6	8.2	12	M 8×1.25	6	12	10	9	25	1.5	8.5	50	0.3
CP135-10001	2.5	7	9.5	14	M10×1.5	7	15	12	11	30	1.8	10	70	0.5
CP135-12001	2.9	8	10.9	16	M12×1.75	8	18	14	13	40	2.2	12	100	0.7

CP135-AL (With Clamping Plate)

Part Number	H	W1	L2	Clamping Plates	Weight (g)
CP135-08001AL	7	12	15.5	CP135-08001P	19
CP135-10001AL	8	14	18	CP135-10001P	32
CP135-12001AL	9	16	20	CP135-12001P	54

CP135-L (Without Clamping Plate)

Part Number	Weight (g)
CP135-08001L	17
CP135-10001L	30
CP135-12001L	51

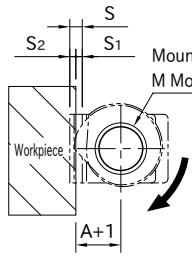
Feature

- The spiral cam provides quick and powerful clamping.
- The simple design keeps cost low and the small size allows more workpieces per load.
- Clamping Plate avoids marring workpiece surfaces.

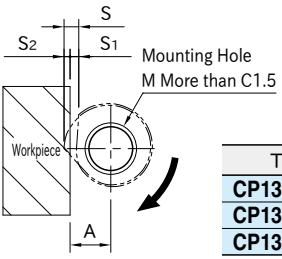
How To Use

■Mounting Hole Dimension

With Clamping Plate



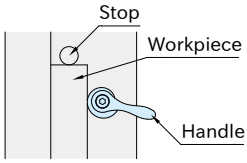
Without Clamping Plate

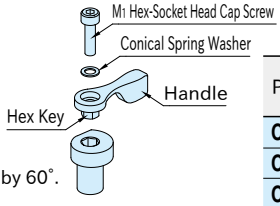


Type	A	S	S_1	S_2	M
CP135-08001	7.1	2.2	1.1	1.1	M 8×1.25
CP135-10001	8.3	2.5	1.3	1.2	M10×1.5
CP135-12001	9.5	2.9	1.5	1.4	M12×1.75

Note: Dimension A and A+1 are the recommended distances between the mounting hole and the end of the workpiece.

■How to Install Handle



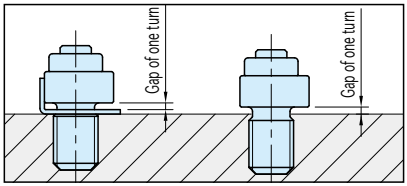


The handle position is adjustable by 60˚.

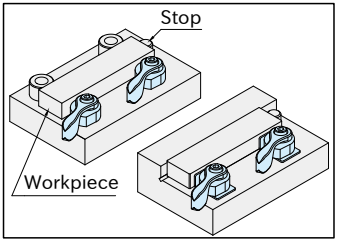
Part Number	M_1	Recommended Tightening Torque (N·m)
CP135-08001L	M3×0.5	1.2
CP135-10001L	M4×0.7	3
CP135-12001L	M5×0.8	6

Note

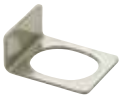
Tighten Spiral Cam Clamp fully and loosen it about one turn. Then mount a workpiece.



- Tighten clockwise to clamp the workpiece.
- Mount a stop on the right side of the workpiece.



CP135-P Clamping Plates



CP135 SPIRAL CAM CLAMPS

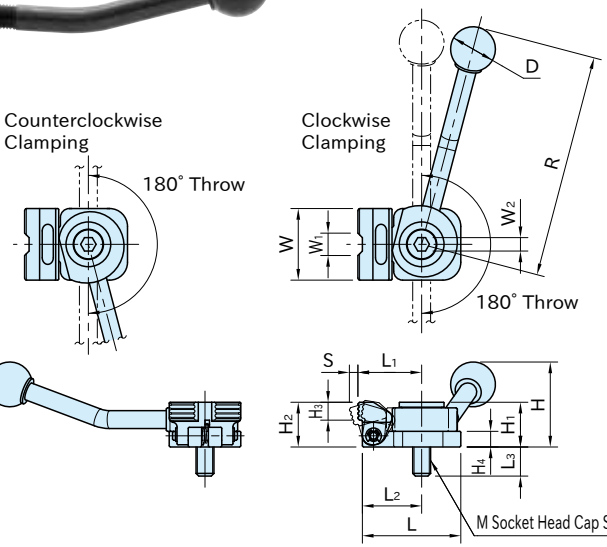
Without handle type is available.

QLSC CAM EDGE CLAMPS

RoHS

IMAO

Body/Jaw	Cam/Handle	Ball Knob
SCM440 steel Quenched and tempered Black oxide	SCM435 steel Quenched and tempered Black oxide	ABS resin Black



Part Number	Clamping Direction	H_2	S	W	W_1	H_3	L_1	L	L_2	H_4	M	L_3	H_1	H
QLSC-08R	CW	20	3.8	32	10	8	28.5	44	26.5	7	M 8×1.25	13	20	38
QLSC-08L	CCW													
QLSC-12R	CW	30	5.5	46	14	12	39.5	62	37.5	11	M12×1.75	17	30	55
QLSC-12L	CCW													

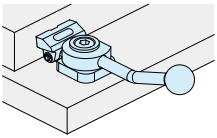
Part Number	R	D	W_2	Allowable Operating Load (N)	Clamping Force (kN)	Weight (g)
QLSC-08R	100	20	6	250	2.5	195
QLSC-08L						
QLSC-12R	146	25	10	400	5	600
QLSC-12L						

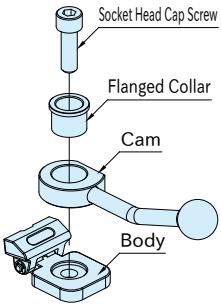
Feature

Enables one-touch clamping / unclamping of workpiece.

How To Use

Secure the body and the flanged collar with a socket head cap screw, and then turn the the handle to clamp a workpiece.





Related Product

BJ162 CAM EDGE CLAMPS
Without handle type is available.

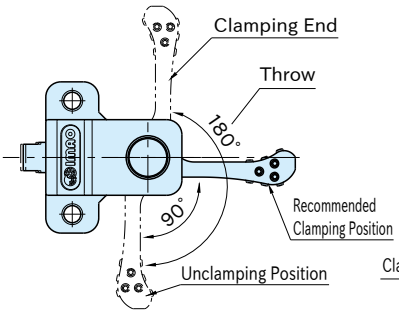
QLCP CAM PUSH CLAMPS

RoHS

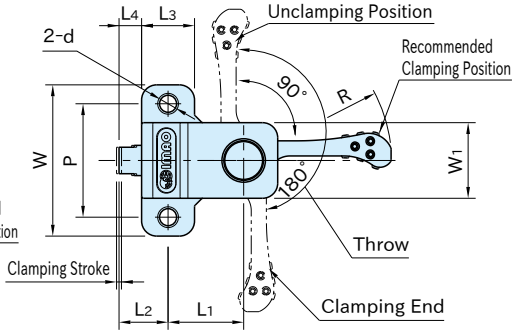
IMAO

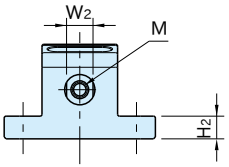
Body	Piston / Pin	Cam Handle
S45C steel Black oxide finish	S45C steel Quenched and tempered Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish

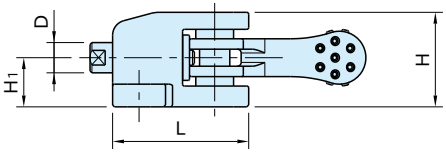
Counterclockwise Clamping



Clockwise Clamping





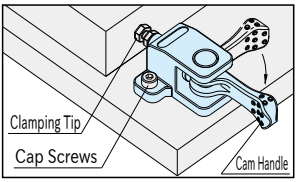


Part Number	Clamping Direction	Clamping Stroke	H1	D	W2	M	L2	L4	W	L3	H2	d	P	H	L	W1	R	L1	Cam Handle
QLCP080R	CW	1.2	13	8	7	M4X0.7 Depth 8	13	6	40	14	6	4.5	30	25	36	20	40	20	QLCA-04
QLCP080L	CCW																		
QLCP150R	CW	1.6	18	12	10	M6X1 Depth 12	19	9	55	20	10	6.6	40	33	50	26	63	28	QLCA-06
QLCP150L	CCW																		

Part Number	Allowable Operating Load (N) *)	Clamping Force (kN)	Clamping Mechanism	Weight (g)
QLCP080R	80	0.9	Spiral Cam Cam Angle:4°	130
QLCP080L				
QLCP150R	150	2.4		350
QLCP150L				

*) Allowable load to operate the cam handle

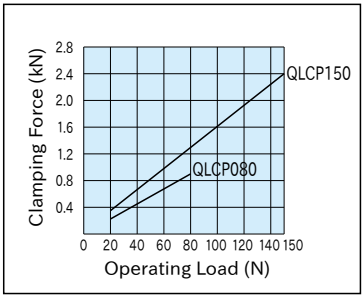
How To Use



Turning the handle in the clamping direction lets the cam work to project the piston for clamping.

Turning the handle back lets the spring work to retract the piston for unclamping.

Performance Curve



Feature

The tapped hole in the piston allows a tip to be fitted to the push clamp.

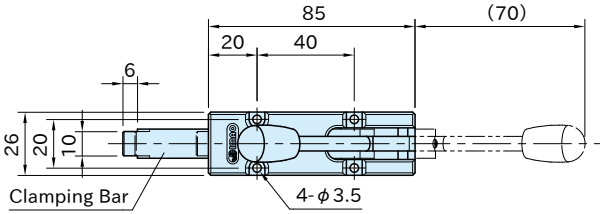
QLPCT PRECISION THRUST CLAMPS

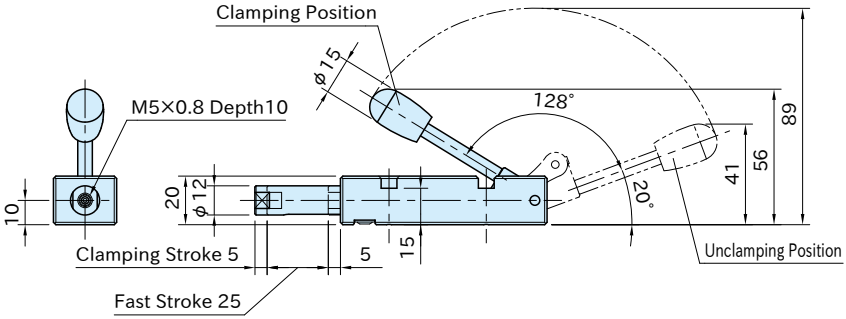
RoHS

IMAO

Body	Clamping Bar
AC7A aluminum Anodized	S45C steel Solid film lubricated
Linkage End	Knob
S45C steel Black oxide finished	Phenolic plastic Black

(Clamping) (Unclamping)





Part Number	Clamping Force(N) Initial - Final *)	Weight (g)
QLPCT20-07	55～ 85	170
QLPCT20-13	90～175	

*) The minimum clamping force at clamping end position, and the maximum clamping force at clamp starting position.

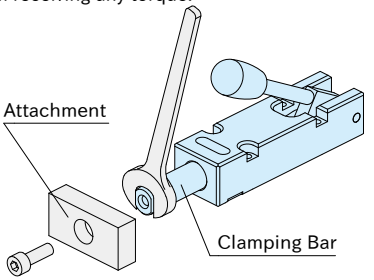
Feature

・Precision Thrust Clamps can clamp at the same position by precise projection of clamping bars.
・Spring-loaded clamp provides constant clamping force.
・The handle clicks to indicate completed clamping.

Note

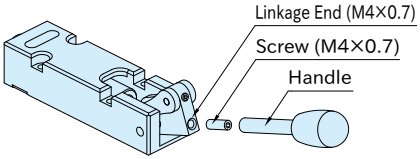
■How to Install Attachments

When installing an attachment on the clamping bar, lock the clamping bar using a wrench to prevent it from receiving any torque.



■How to Replace Handle

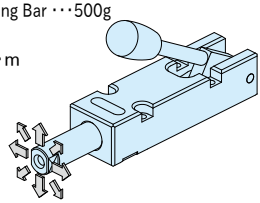
The handle is replaceable.
When installing/removing a handle, do not apply torque to the Linkage End.

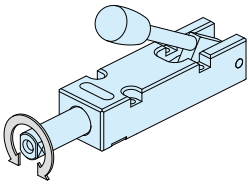


Technical Information

■Allowable Load and Accuracy of Clamping Bar

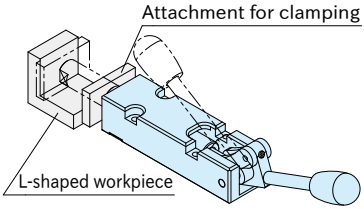
・Allowable Weight of Attachments on Clamping Bar ･･･500g
・Deflection･･･±0.05
・Allowable Rotation Torque ･･･0.5N･m
・Rotation Accuracy
･･･±0.1°(Under no load)
･･･±1°(Under load at allowable rotation torque)


<Allowable Weight / Deflection>

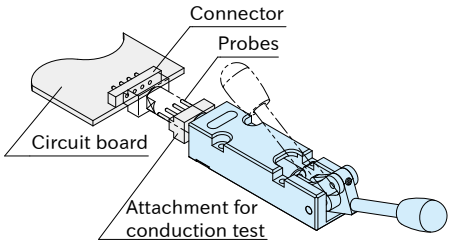

<Allowable Rotation Torque / Rotation Accuracy>

How To Use

For clamping a recessed part / clamping with constant clamping force



For press-fit fixtures and conduction test fixtures that require precise projection of clamping bars.



QLPD PULL CLAMPS (Standard)

RoHS IMAO

(CCW Clamping With Handle)

(CW Clamping Without Handle)

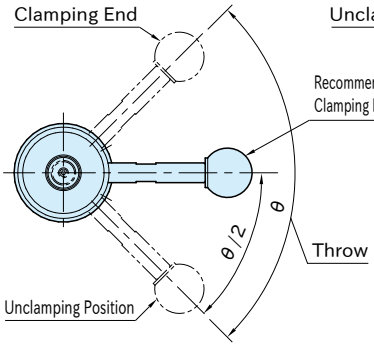
(CW Clamping With Handle)

Note: Clamping Pins or Screws must be ordered separately.

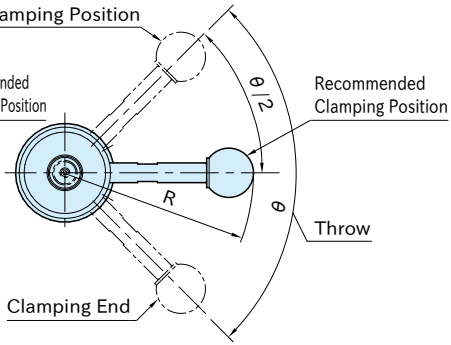
Body	Handle Shank	Ball Knob
SCM440 steel Quenched and tempered Black oxide finish	S45C steel Black oxide finish	ABS resin Black

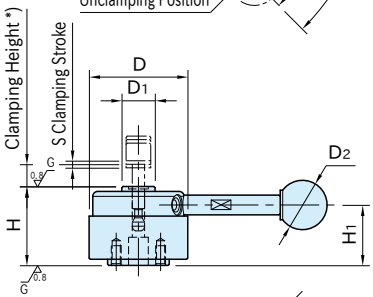
★Key Point
Easy clamping without screws.

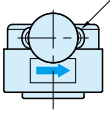
Counterclockwise Clamping

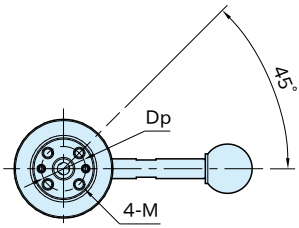


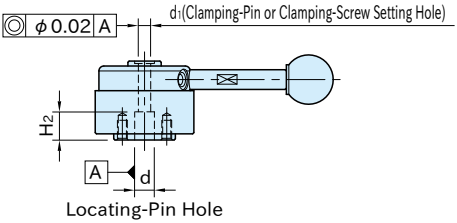
Clockwise Clamping











Type	S	d (G6)	d_1 (F7)	H_2	D_1	H (±0.01)	D	θ	Dp	M
QLPD150	1.5	8	5	10	13.5	32	40	90°	18	M4×0.7 Depth 8
QLPD200	2	12	8	13	18	40	50	110°	25	M6×1 Depth 9

Type	M_1	H_1	Clamping Force (kN)	Clamping Mechanism	Recommended Workpiece Thickness Tolerance **)
QLPD150	M5×0.8	24.5	0.9	Spiral Cam Cam Angle: 4°	±0.3
QLPD200	M6×1	30.7	2.5		±0.5

■With Handle

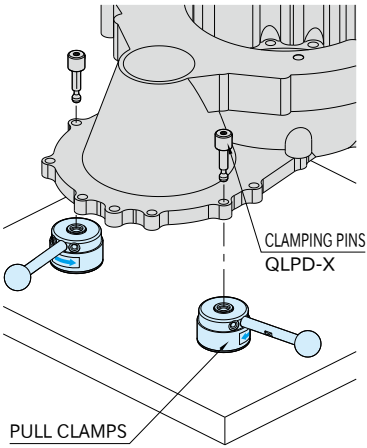
Part Number	Clamping Direction	R	D_2	Allowable Operating Load(N) ***)	Weight (g)
QLPD150R	CW	76.5	20	150	245
QLPD150L	CCW				
QLPD200R	CW	111.5	25	200	470
QLPD200L	CCW				

■Without Handle ****)

Part Number	Clamping Direction	Weight (g)
QLPD150NR	CW	220
QLPD150NL	CCW	
QLPD200NR	CW	420
QLPD200NL	CCW	

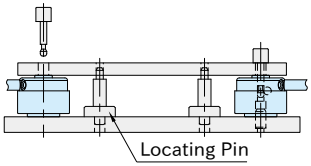
*) Grip length of QLPD-X Clamping Pin (workpiece thickness)
**) Maintaining these recommended tolerances allows minimizing the variation of handle position in the clamping mode in clamping with the use of the Clamping Pin.
***) Allowable load to operate the handle.
****) The handle must be ordered separately.
- QLSL STANDARD HANDLES
- QLTL ADJUSTABLE-TORQUE HANDLES

How To Use

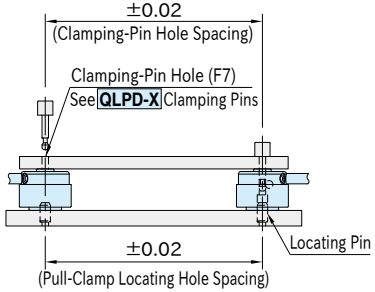


■How to Locate Workpiece

1. Basic Method



2. Method for clamping and locating a workpiece at a time
Give an accuracy shown below to the hole spacing to generate a locating accuracy of ±0.08.



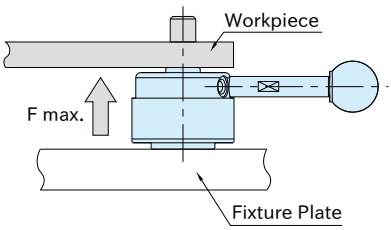
Continuing on Next Page

Technical Information

■Allowable Loads in Machining of Workpiece Bottom

Ensure that a force more than indicated below is not applied to the workpiece bottom.

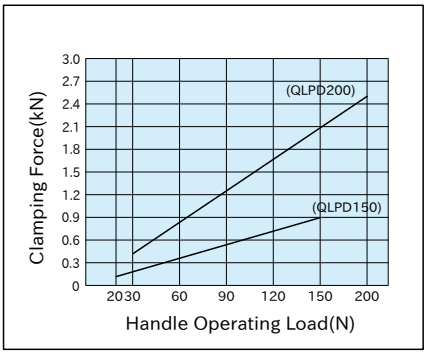
Type	Allowable Force To Workpiece Bottom (Per Clamp)
QLPD150	max.2 kN
QLPD200	max.5.5kN



Performance Curve

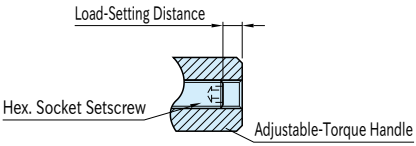
■QLSL STANDARD HANDLES

⚠ The performance curves shown below do not denote the guaranteed performance.

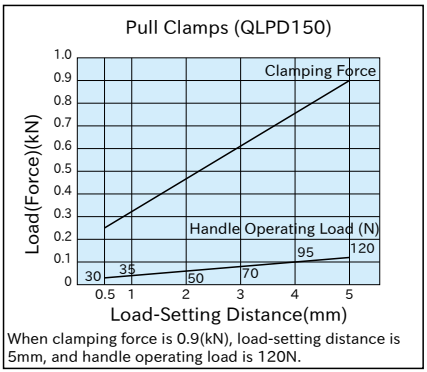


■QLTL ADJUSTABLE-TORQUE HANDLES

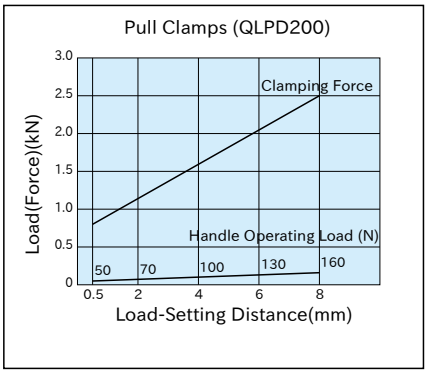
Use a force gauge when measuring handle-operating loads.



⚠ The performance curves shown below do not denote the guaranteed performance.



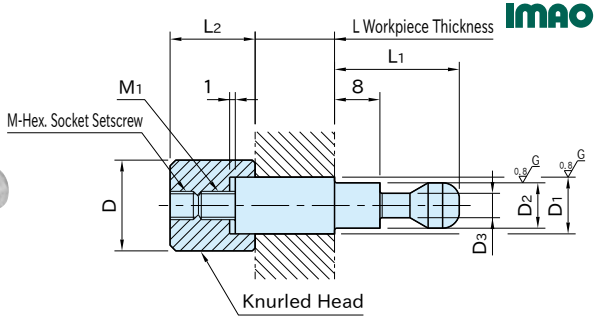
When clamping force is 0.9(kN), load-setting distance is 5mm, and handle operating load is 120N.



QLPD-X CLAMPING PINS (Standard)

On Request RoHS

IMAO



L dimension is adjustable by ±1mm to fit actual workpiece thickness.

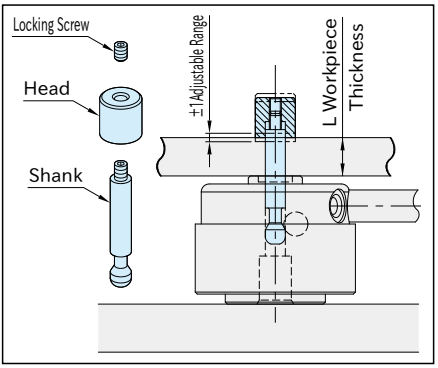
Shank	Head
SCM435 steel Induction hardened(taper seat) Precision ground	S45C steel Quenched and tempered Black oxide finish

Part Number	D_2 (f7)	D_1 (f7)	L*) (By 0.1mm)	D	L_2	L_1	D_3	M
QLPD150-5× 5- (L Dim. in mm)	5	5	3≦L≦50	10	10	17	3	M3×0.5-4L
QLPD150-5× 6- (L Dim. in mm)		6						
QLPD200-8× 8- (L Dim. in mm)	8	8	4≦L≦80	16	15	22	4.3	M5×0.8-5L
QLPD200-8×10- (L Dim. in mm)		10						

Part Number	M_1	Weight (g)	Pull Clamps
QLPD150-5× 5- (L Dim. in mm)	M3×0.5	min. 8～max.16	QLPD150Series
QLPD150-5× 6- (L Dim. in mm)		min. 8～max.19	
QLPD200-8× 8- (L Dim. in mm)	M5×0.8	min.30～max.60	QLPD200Series
QLPD200-8×10- (L Dim. in mm)		min.31～max.77	

*) For ordering, specify workpiece thickness.

How To Use



Note

The length of L dimension should be decided depending on the workpiece thickness.

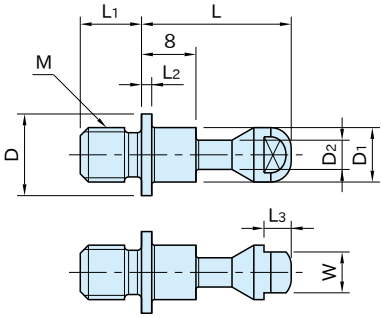
■ Ordering Example

QLPD150-5×5-10.5

Shank Size　L Dim.

※ QLPD150-5×5 for 10.5mm thickness workpiece.

QLPD-M CLAMPING SCREWS (Standard)



Body
SCM435 steel Quenched and tempered Black oxide finish

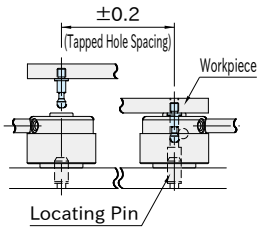
Part Number	D1	M	L1	L	D	L2	D2	W	L3	Weight (g)	Pull Clamps
QLPD150-M 5	5	M 5×0.8	6	17	8	1.2	3	4	2.5	3	QLPD150
QLPD150-M 6		M 6×1	7							4	
QLPD200-M 8	8	M 8×1.25	9	22	12	1.5	4.3	6	4	10	QLPD200
QLPD200-M10		M10×1.5	11							13	

Note

Custom Clamping Screws (different screw thread sizes) are available on request.

How To Use

■Recommended Spacing Tolerance in Use of Clamping Screws

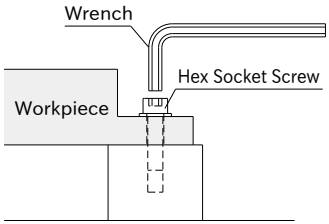


Advantage of PULL CLAMPS

Conventional Method

Conventional

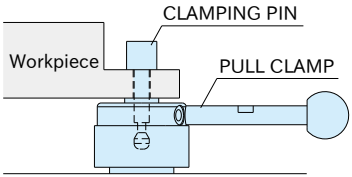
Uses hex socket screw



Requires wrench & screw in addition to block for clamping.

QLPD PULL CLAMP

Uses dedicated clamping pin



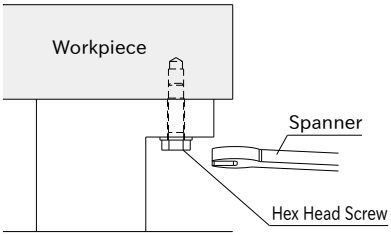
Simply turn the handle after inserting the pin.

=Setup time becomes 1/3!!

Conventional Method

Conventional

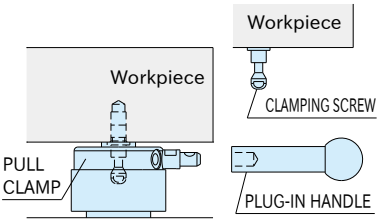
Uses hex head screw



Require to operate from bottom.

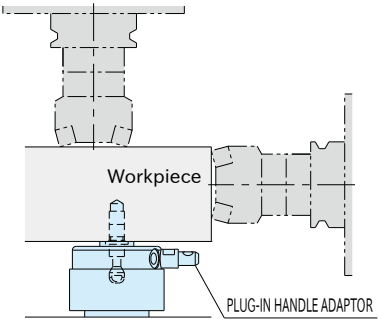
QLPD PULL CLAMPS

Use dedicated clamping screw



Simply turn the handle after inserting the clamping screw mounted on the workpiece.

=Setup time becomes 1/3!!



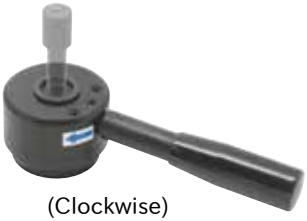
PLUG-IN HANDLE type enables machining from 5 sides.

QLPDH PULL CLAMPS (Heavy)

RoHS

IMAO

(Counterclockwise)



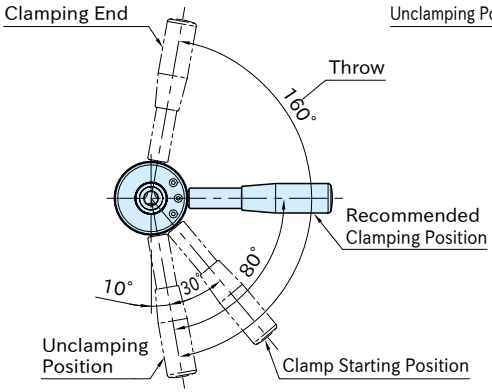
(Clockwise)

Body	Handle Shank	Handle
SCM440 steel Quenched and tempered Black oxide finish	S45C steel Quenched and tempered Black oxide finish	Phenolic plastic Black

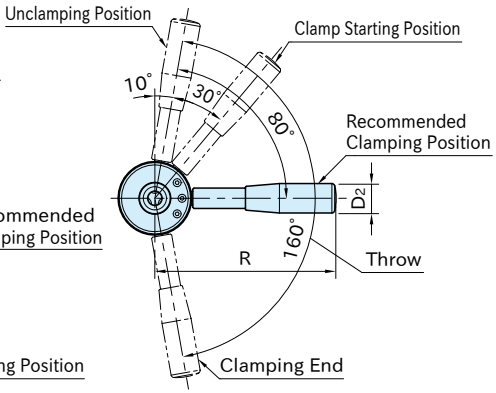
★Key Point
Easy clamping without screws.

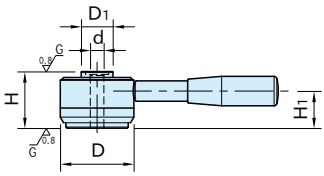
Note: Clamping Pins or Screws must be ordered separately.

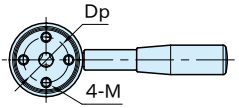
Counterclockwise Clamping

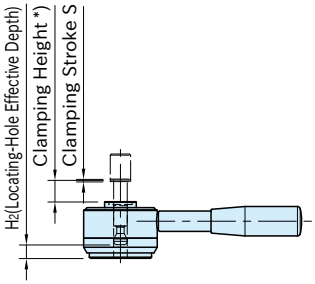


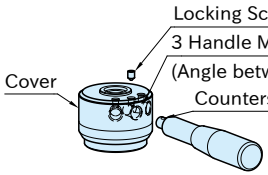
Clockwise Clamping











- The handle can be removed by loosening the locking screw.
- To keep the handle mounted permanently, make sure that the locking screw is fully tightened.
- 3 options of handle mounting position.

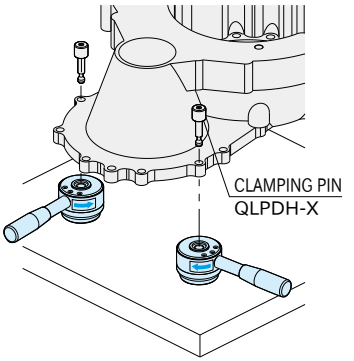
ONE-TOUCH CLAMPS

Part Number	Clamping Direction	S	d (F7)	H_2	D_1	H (±0.01)	D	M	Dp	R
QLPDH400R	CW	2	12	10	28	50	65	M 8×1.25 Depth 14	40	160
QLPDH400L	CCW									
QLPDH500R	CW	2.5	16	12	34	63	80	M10×1.5 Depth 18	50	180

Part Number	D_2	H_1	Allowable Operating Load (N) **)	Clamping Force (kN)	Clamping Mechanism	Recommended Workpiece Thickness Tolerance ***)	Weight (kg)
QLPDH400R	26	32.8	600	6	Spiral Cam Cam Angle: 4°	±0.5	1.2
QLPDH400L							
QLPDH500R	28	41.1		8		±0.8	2.2

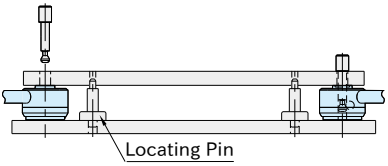
*) Grip length of QLPDH-X Clamping Pin (workpiece thickness)
**) Allowable load to operate the handle
***) Maintaining these recommended tolerances allows minimizing the variation of handle position in the clamping mode in clamping with the use of the Clamping P in.
****) QLPDH500 is available only with Clockwise Clamping.

How To Use



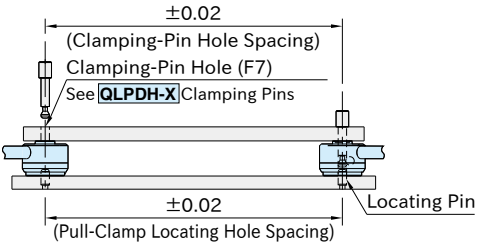
■How to Locate Workpiece

1. Basic Method



2. Method for clamping and locating a workpiece at a time

Give an accuracy shown below to the hole spacing to generate a locating accuracy of ±0.08.



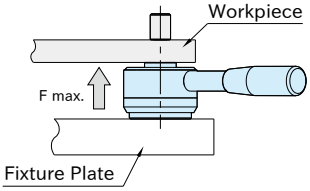
Related Product

- QLPDH-X CLAMPING PINS (Heavy)
- QLPDH-M CLAMPING SCREWS(Heavy)

Technical Information

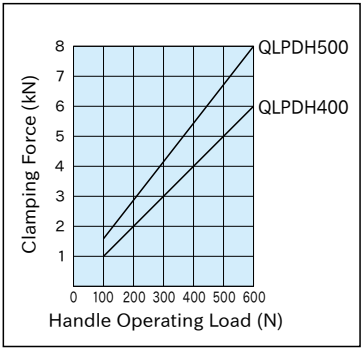
■Allowable Loads in Machining of Workpiece Bottom

Ensure that a force more than indicated below is not applied to the workpiece bottom.



Type	Allowable Force To Workpiece Bottom (Per Clamp)
QLPDH400	max. 8kN
QLPDH500	max.14kN

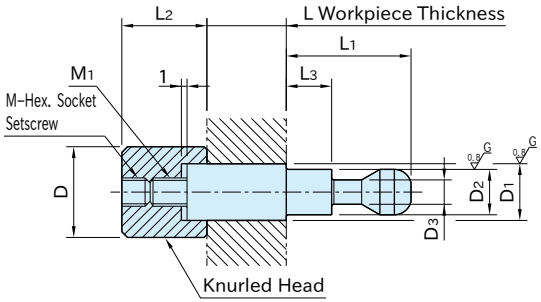
Performance Curve



QLPDH-X CLAMPING PINS (Heavy)

On Request RoHS

IMAO



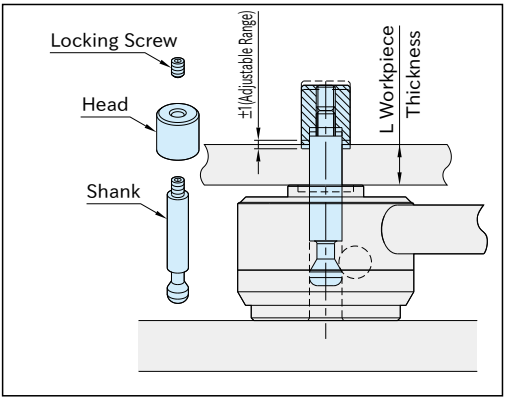
L dimension is adjustable by ± 1mm to fit actual workpiece thickness.

Shank	Head
SCM435 steel Induction hardened(taper seat) Precision ground	S45C steel Quenched and tempered Black oxide finish

Part Number	D_2 (f7)	D_1 (f7)	L*) (By 0.1mm)	D	L_2	L_1	L_3	D_3	M	M_1	Weight (g)	Pull Clamps
QLPDH400-12-(L Dim. In mm)	12	12	0<L≦100	18	23	38	21.5	6.5	M 8X1.25- 8L	M 8X1.25	min. 70~max.160	QLPDH400R
QLPDH400-16-(L Dim. In mm)		16		24							min.175~max.265	
QLPDH500-16-(L Dim. In mm)	16	16	0<L≦120	24	29	48	28	9.5	M10X1.5 -10L	M10X1.5	min.160~max.350	QLPDH500R
QLPDH500-20-(L Dim. In mm)		20		30							min.325~max.515	

*) For ordering, specify workpiece thickness.

How To Use



■ Ordering Example

QLPDH400-12-20.5

Shank Size | L Dim.

※ QLPD400-12 for 20.5mm thickness workpiece.

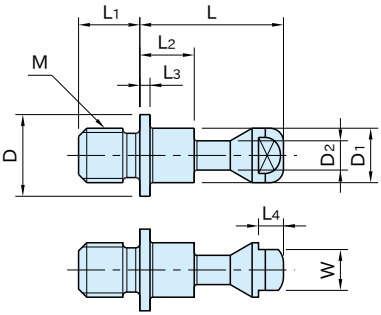
Note

The length of L dimension should be decided depending on the workpiece thickness.

QLPDH-M CLAMPING SCREWS(Heavy)

RoHS

IMAO



Body
SCM435 steel Quenched and tempered Black oxide finish

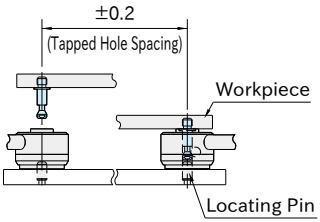
Part Number	D_1	M	L_1	L	D	L_2	L_3	D_2	W	L_4	Weight (g)	Pull Clamps
QLPDH400-M12	12	M12×1.75	13	38	20	21.5	2	6.5	10	4	40	QLPDH400R
QLPDH400-M16		M16×2	17								55	
QLPDH500-M16	16			48	25	28	2.5	9.5	13	5	90	QLPDH500R
QLPDH500-M20		M20×2.5	21								110	

Note

Custom Clamping Screws (different screw thread sizes) are available on request.

How To Use

■Recommended Spacing Tolerance in Use of Clamping Screws



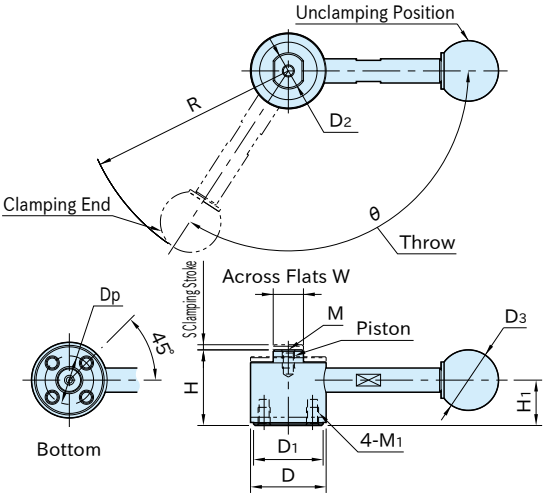
QLPU PUSH CLAMPS(Standard)

RoHS

IMAO

With Handle

Without Handle



Cam	Piston	Handle	Ball Knob
SCM440 steel Quenched and tempered Black oxide finish	S45C steel Quenched and tempered Black oxide finish	S45C steel Black oxide finish	ABS resin Black

Type	H	S	D_2	M	W	θ	D	D_1	M_1	Dp	H_1
QLPU150	25 *)	1.7	12	M4×0.7 Depth 6	10	123°	25	23	M4×0.7 Depth 6	16	15
QLPU200	32 **)	2.5	15	M6×1 Depth 9	13	135°	32	30	M6×1 Depth 9	20	19.5

Type	Clamping Force (kN)	Clamping Mechanism
QLPU150	3	Spiral Cam Cam Angle:4°
QLPU200	4	

*) Actual clamping height : 25 to 26.7 (clamping stroke :1.7)
**) Actual clamping height : 32 to 34.5 (clamping stroke :2.5)

■With Handle

Part Number	R	D_3	Allowable Operating Load (N) ***)	Weight (g)
QLPU150R	69.5	20	150	100
QLPU200R	103	25	200	200

***) Allowable load to operate the handle.

■Without Handle

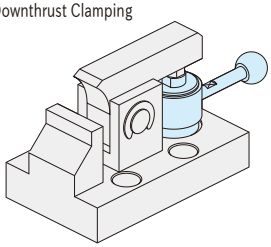
Part Number	Handle Mounting Hole	Weight (g)
QLPU150NR	M5×0.8	75
QLPU200NR	M6×1	150

The handle must be ordered separately.
・QLSL STANDARD HANDLES
・QLTL ADJUSTABLE-TORQUE HANDLES

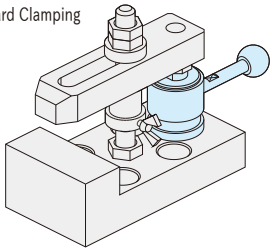
How To Use

■Application Examples

Downthrust Clamping

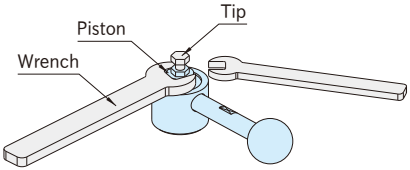


Downward Clamping



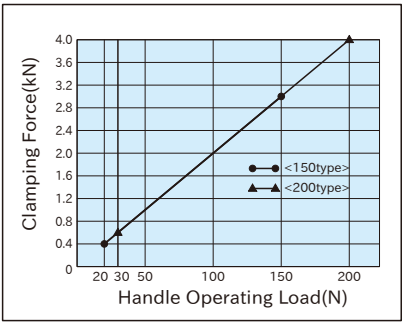
Note

・When installing a tip on the piston, lock the piston using a wrench to prevent the clamp from receiving any torque.
・The piston goes down when turning handle over clamping end.



Performance Curve

■QLSL STANDARD HANDLES

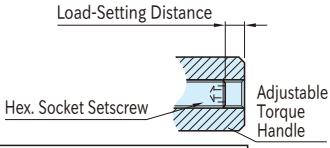


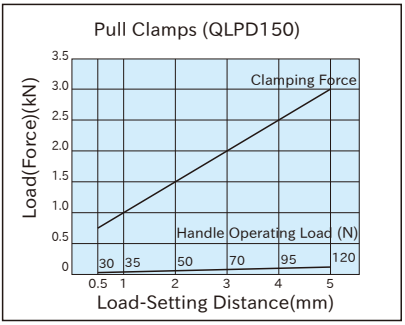
⚠ The performance curves shown below do not denote the guaranteed performance.

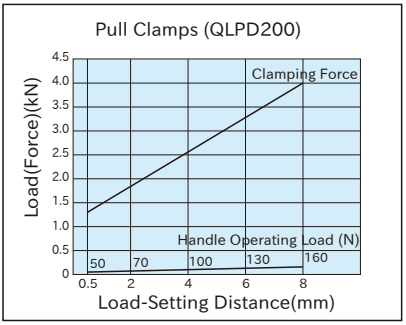
■QLTL ADJUSTABLE-TORQUE HANDLES

⚠ The performance curves shown below do not denote the guaranteed performance.

・Use a force gauge when measuring handle-operating loads.





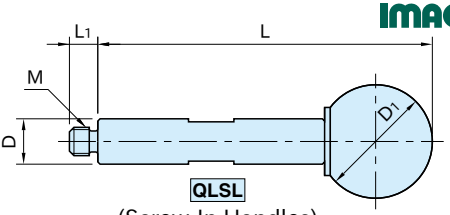


QLSL STANDARD HANDLES

RoHS

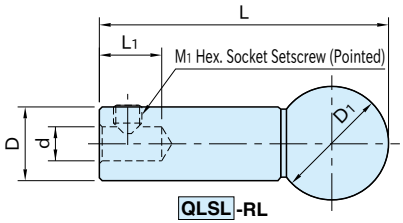
IMAO

QLSL
(Screw-In Handles)



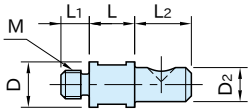
QLSL
(Screw-In Handles)

QLSL-RL
(Plug-In Handles)



QLSL-RL
(Plug-In Handles)

QLSL-RA
(Plug-In-Handle Adaptors)



QLSL-RA
(Plug-In-Handle Adaptors)

Type	Handle	Ball Knob	Shaft
QLSL	SCM435 steel Tempered Black oxide finish	ABS resin Black	—
QLSL-RL	S45C steel Black oxide finish		—
QLSL-RA	—	—	SCM435 steel Quenched and tempered Black oxide finish

QLSL (Screw-In Handles)

Part Number	L	D1	D	M	L1	Weight (g)
QLSL150	59	20	8	M5×0.8	5	25
QLSL200	89	25	10	M6×1	6	50

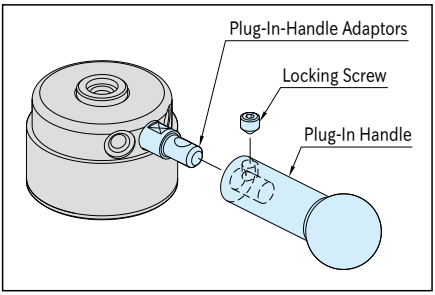
QLSL-RL (Plug-In Handles)

Part Number	L	D1	D	d	L1	M1	Weight (g)
QLSL150-RL	51	20	13	6	11	M5×0.8-5L	45
QLSL200-RL	79	25	15	8	13	M6×1 -6L	90

QLSL-RA (Plug-In-Handle Adaptors)

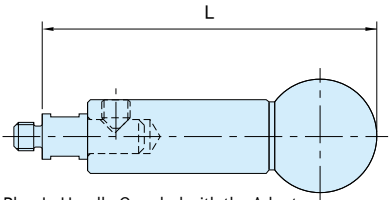
Part Number	L	D	L2	D2	M	L1	Weight (g)
QLSL150-RA	8	8	10	6	M5×0.8	5	7
QLSL200-RA	10	10	12	8	M6×1	6	14

How To Use



Secure the Plug-In Handle to the Adaptor using the locking screw if necessary.

■Proper One-Touch Clamps
- SWING CLAMPS <QLSW>
- PULL CLAMPS <QLPD>
- PUSH CLAMPS <QLPU>



Plug-In Handle Coupled with the Adaptor

Type	L
QLSL150	59
QLSL200	89

QLTL ADJUSTABLE-TORQUE HANDLES

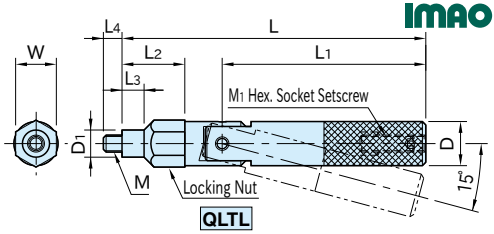
RoHS

IMAO

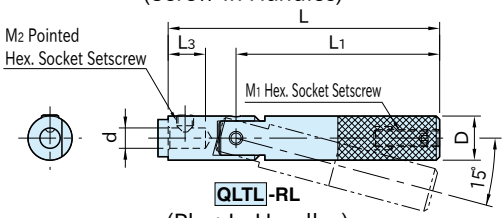
QLTL
(Screw-In Handles)

QLTL-RL
(Plug-In Handles)

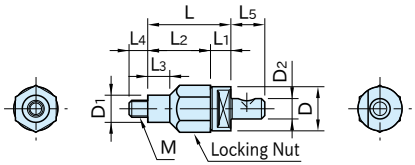
QLTL-RA
(Plug-In-Handle Adaptors)



QLTL
(Screw-In Handles)



QLTL-RL
(Plug-In Handles)



QLTL-RA
(Plug-In-Handle Adaptors)

Type	Stem	Locking Nut	Handle
QLTL	SCM435 steel Quenched & tempered Black oxide finished	S45C steel Black oxide finished	S45C steel Quenched & tempered Black oxide finished
QLTL-RL		—	
QLTL-RA		S45C steel Black oxide finished	—

QLTL (Screw-In Handles)

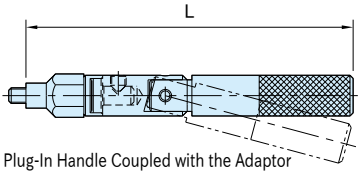
Part Number	L	L1	D	L2	L3	D1	W	M	L4	M1	Weight (g)
QLTL120	89.5	60	13	18.5	6.5	8	12	M5×0.8	5.5	M5×0.8-16L	90
QLTL160	119	84	15	23	8	10	14	M6×1	6.5	M6×1 -20L	140

QLTL-RL (Plug-In Handles)

Part Number	L	L1	D	d	L3	M2	M1	Weight (g)
QLTL120-RL	80	60	13	6	11	M5×0.8-5L	M5×0.8-16L	70
QLTL160-RL	107	84	15	8	13	M6×1 -6L	M6×1 -20L	130

QLTL-RA (Plug-In-Handle Adaptors)

Part Number	L	L1	D	L2	L3	D1	L5	D2	M	L4	Weight (g)
QLTL120-RA	24.5	6	13	18.5	6.5	8	10	6	M5×0.8	5.5	20
QLTL160-RA	30	7	15	23	8	10	12	8	M6×1	6.5	40



Plug-In Handle Coupled with the Adaptor

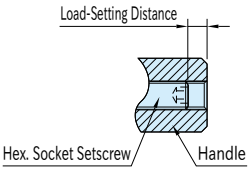
Type	L
QLTL120	104.5
QLTL160	137

■Proper One-Touch Clamps

- SWING CLAMPS <QLSW>
- PULL CLAMPS <QLPD>
- PUSH CLAMPS <QLPU>

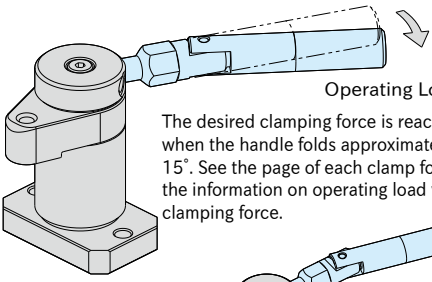
How To Use

Turning the setscrew inside the handle allows adjusting the torque to set a desired clamping force.

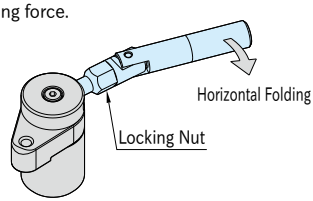


[Operating-Load Setting Range]
QLTL120/QLTL120-RL : 30N to 120N
QLTL160/QLTL160-RL : 50N to 160N

Note : Ensure that the operating load is not set below the lower limit to prevent the handle from returning to the unclamping position due to shock load generated during the transfer of machine pallets.

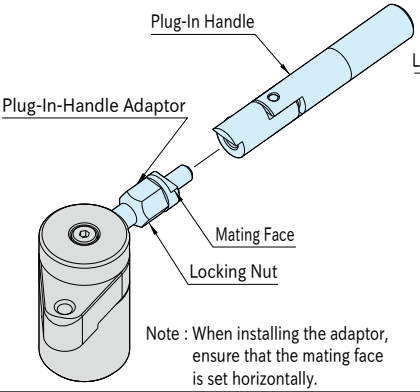


The desired clamping force is reached when the handle folds approximately 15˚. See the page of each clamp for the information on operating load vs. clamping force.

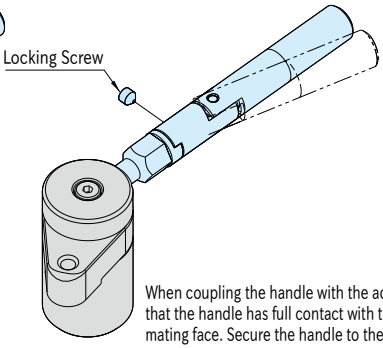


Note : Ensure that the handle is set to fold horizontally.

Plug-In Handle Installation



Note : When installing the adaptor, ensure that the mating face is set horizontally.



When coupling the handle with the adaptor,ensure that the handle has full contact with the adaptor's mating face. Secure the handle to the adaptor using the lockingscrew if necessary.

Value Creator
IMAO

SNAP CLAMPS

Click-Out Clamping!

SNAP CLAMPS

A click indicates completed clamping.


Hold-Down Style


Push-Pull Style


Hold-Down (Mini) Style

IMAO's Snap-On System

As the handle is operated, the built-in balls move following the slit to let tension accumulate on the flat spring. When the balls are positioned in the clamping pockets, the accumulated tension is released and transformed into clamping force.

Hold-Down
Standard
Double-Lock

Push-Pull
Double-Lock


Hold-Down
Mini
Single-Lock

Stable Clamping!

Provide the firm clamping force at every operation.

Smooth Clamping!

A small handle operating load generates a maximal clamping capacity.

Secure Clamping!

A snap-on system allows clamping a part with no errors.

Highly Durable!

New Sturdy Clamps! 500,000 Cycles Cleared! *)

Due to one-piece body construction and heat treatment to the pressurizing members, Snap Clamps can work with little wear-out, deformation or deterioration, and do not get shaky or weak in clamping even after long-term use.
Snap Clamps are far more durable than traditional toggle clamps or the like, and can be used without maintenance.

*) Result of Imao original proof test (note that cycle life varies with operating conditions and environments).


One-Piece Body

Visible Clamping Force

A label number stands for clamping force.

Example:
6 ··· Clamping Force 60N

QLSND VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS

RoHS

IMAO

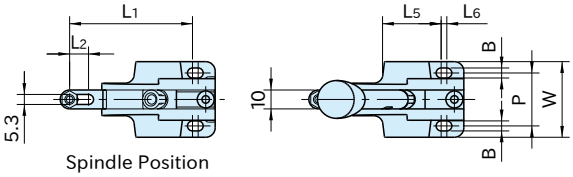
Clamping Mode

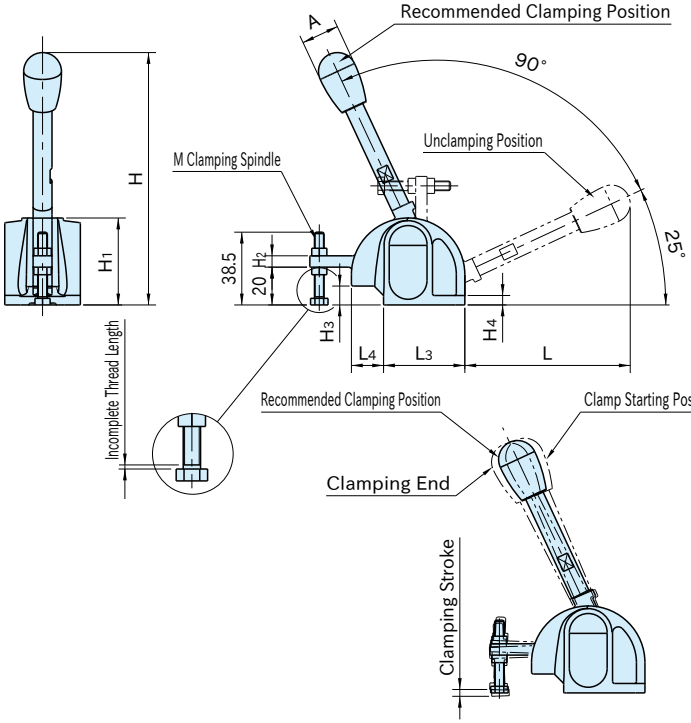
Unclamping Mode

Body	Clamping Arm	Handle	Knob	Clamping Spindle
ZDC2 steel Cation coating finish Black	SCM440 steel Quenched and tempered Black oxide finish	S45C steel Chrome plated	Phenolic plastic Black	SCM435 steel Quenched and tempered Black oxide finish

★Key Point

The handle clicks at clamping end.

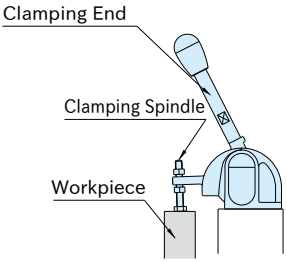




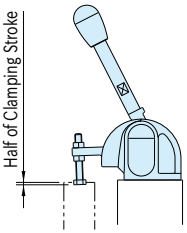
Part Number	Clamping Stroke	L_1	L_2	L_3	W	H_4	B	L_6	P	L_5	H max.	H_1	H_2	H_3
QLSND28-02	3	65	10	43	40	5	5.3	3	28	31	140	46	6	10
QLSND28-05														
QLSND30-03		75	12	48.5	42	6	6.4	6	30	32.5	158	53	8	12
QLSND30-06														

Part Number	L_4	M	L	A	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSND28-02	17	M5×0.8-35L Incomplete Thread Length :1.5	88	20	6	20	390
QLSND28-05					12	50	
QLSND30-03	22.5		98	26	6	30	520
QLSND30-06					12	60	

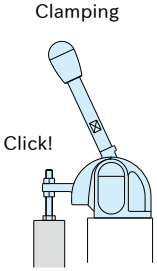
How To Set Handle To Recommended Clamping Position



1. Set the clamping spindle to contact a workpiece at clamping end position.



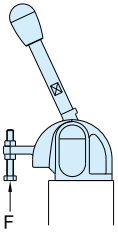
2. Project the clamping spindle by about half of the clamping stroke and tighten the nut.



3. Setting Completed

Note

- The clamping forces and handle operating loads stated above can vary by up to ± 20%.
- When the reaction force(F) becomes greater than the clamping force, clamping is lifted.



Part Number	Clamping Is Lifted When :
QLSND28-02	F > 20N
QLSND28-05	F > 50N
QLSND30-03	F > 30N
QLSND30-06	F > 60N

Feature

- The long handle facilitates clamping operation.
- The handle is locked at the unclamping position.
- Uses a snap-on system (double locking)

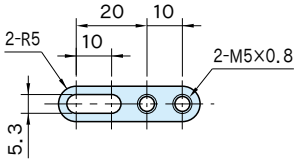
Related Product

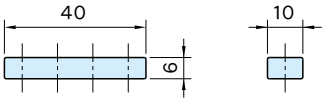
- QLSND-EX20 Extension Arms to extend the clamp arm.
- QLSND-AN10 Angle Adaptors to set the handle in an angled position.
- UB Clamping Spindles to protect workpieces from being marred.

QLSND-EX20 EXTENSION ARM

RoHS Dedicated for Snap Clamps

IMAO





Body
S45C steel Black oxide finish

Part Number	Weight (g)
QLSND-EX20	12

Supplied With

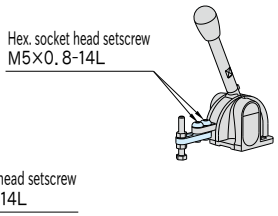
Hex. socket head setscrew M5×0.8-14L ×2 pcs.

How To Use

Use to extend the clamping arm for clamping at a more distant point.

Face Mounting

Back Mounting



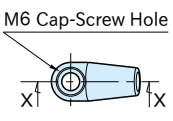
Clamping Forces Generated in Use of Extension Arms

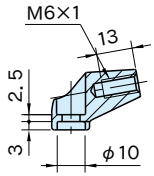
Part Number	Clamping Force (N)
QLSND28-02	15
QLSND28-05	35
QLSND30-03	20
QLSND30-06	40

QLSND-AN10 ANGLE ADAPTOR

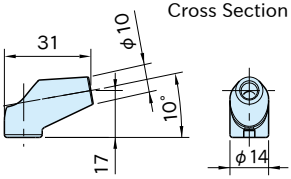
RoHS Dedicated for Snap Clamps

IMAO





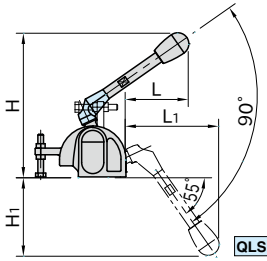
Cross Section X-X



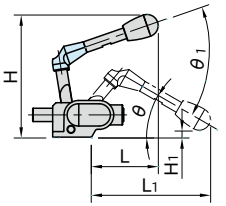
Part Number	Weight (g)
QLSND-AN10	12

Body
S45C steel Black oxide finish

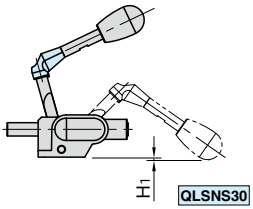
Dimensions of Snap Clamps with Angular Adaptor Installed



QLSND



QLSNS28



QLSNS30

Type	H	L	H1	L1
QLSND28	130	57	71	84
QLSND30	145	61	79	92

Type	H	L	H1	L1	θ	θ1
QLSNS28	110	60	6	107	30°	50°
QLSNS30	136	53	2	123	35°	60°

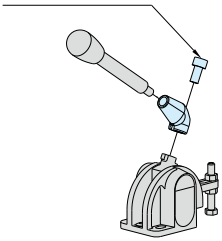
Supplied With

Hex.socket head cap screw M6×1-12L × 1pc.

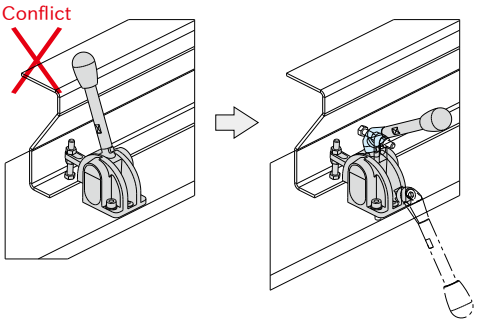
How To Use

Remove the handle and then install an Angular Adaptor between the body and the handle.
(Use a wrench of nominal size 9 for removal of the handle.)

Hex.Socket Head Cap Screw
M6×1–12L



Perfect in applications where the handle can not be turned to the clamping position.



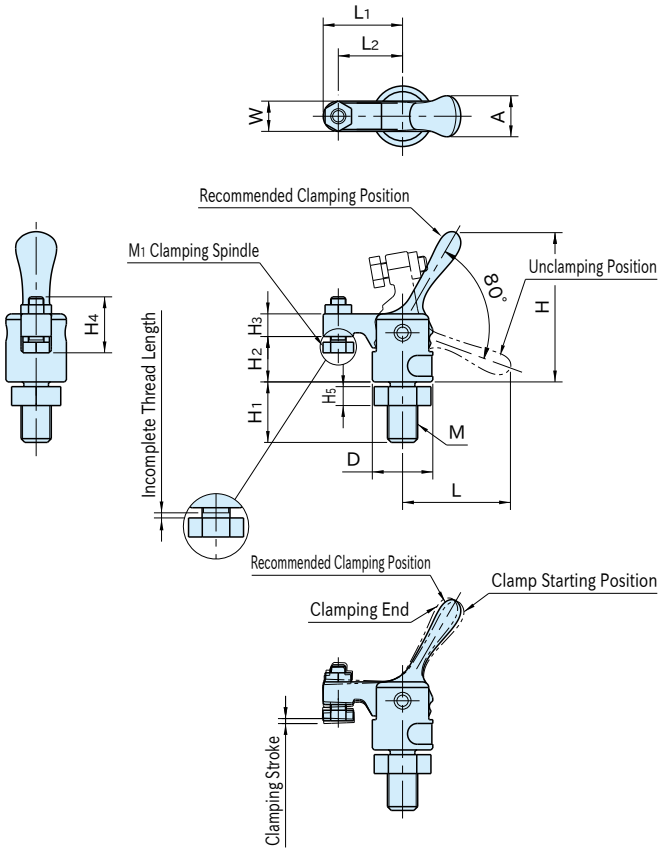
QLSNDM VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS (Mini)

RoHS Stainless Steel

IMAO

(Black Oxide Finish) (Stainless Steel) (Electroless Nickel Plated)

Type	Body	Clamping Arm / Handle	Clamping Spindle
QLSNDM08	S45C steel Black oxide finish	SCM440 steel Quenched and tempered Black oxide finish	SUS304 stainless steel
QLSNDM12			SCM435 steel Quenched and tempered Black oxide finish
QLSNDM08-SUS QLSNDM12-SUS	SCS13 steel (equivalent to SUS304)	SCS13 steel (equivalent to SUS304)	SUS304 stainless steel
QLSNDM08-NP QLSNDM12-NP	S45C steel Electroless Nickel Plated	SCM440 steel Electroless Nickel Plated	



Type	Clamping Stroke	L_2	M	H_1	H	D	L_1	W	H_3	H_2	M_1	H_4	L	A	H_5
QLSNDM08-01	1	17	M 8X1.25	16	39.5	16	21	8	6	12	M4X0.7-12L Incomplete Thread Length :1	15	28.5	11	5
QLSNDM12-01	1.5	22	M12X1.75	24	53.5	22	27	10	8	17	M5X0.8-15L Incomplete Thread Length :1.5	18.5	38	13	7
QLSNDM12-03															

QLSNDM (Black Oxide Finish)

Part Number	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNDM08-01	5	10	50
QLSNDM12-01			120
QLSNDM12-03	13	30	

QLSNDM-SUS (Stainless Steel)

Part Number	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNDM08-01-SUS	5	10	50
QLSNDM12-01-SUS			120
QLSNDM12-03-SUS	13	30	

QLSNDM-NP (Electroless Nickel Plated)

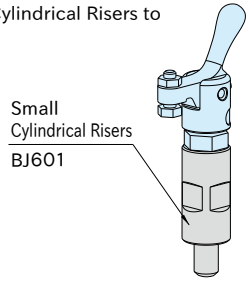
Part Number	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNDM08-01-NP	5	10	50
QLSNDM12-01-NP			120
QLSNDM12-03-NP	13	30	

Feature

- The clamp clicks when clamping is done.
- Perfect for clamping of a small part, and for use in limited space.
- Designed for fingertip handle operation.
- The handle is lockesd at the unclamping position.
- Uses a snap-on system (single locking).

How To Use

Use a BJ601 Small Cylindrical Risers to raise these clamps.

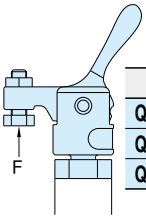


Related Product

UB Clamping Spindles with a plastic tip are available for clamping without marring a part.

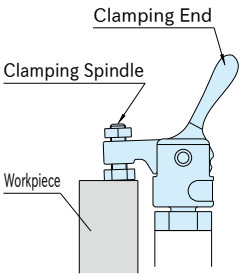
Note

- The clamping forces and handle operating loads stated above can vary by up to ± 20%.
- When the reaction force(F) becomes greater than the clamping force, clamping is lifted.

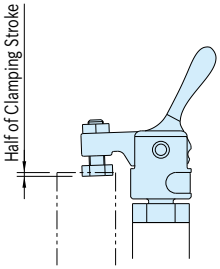


Type	Clamping Is Lifted When :
QLSNDM08-01	F is larger than 10N
QLSNDM12-01	
QLSNDM12-03	F is larger than 30N

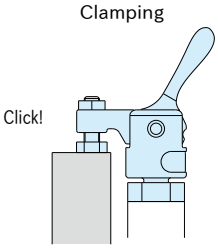
How To Set Handle To Recommended Clamping Position



1. Set the clamping spindle to contact a workpiece at clamping end position.



2. Project the clamping spindle by about half of the clamping stroke and tighten the nut.



3.Setting Completed

QLSNS PUSH-PULL SNAP CLAMPS

RoHS

IMAO

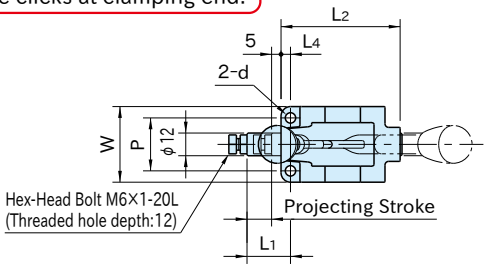
Clamping Mode

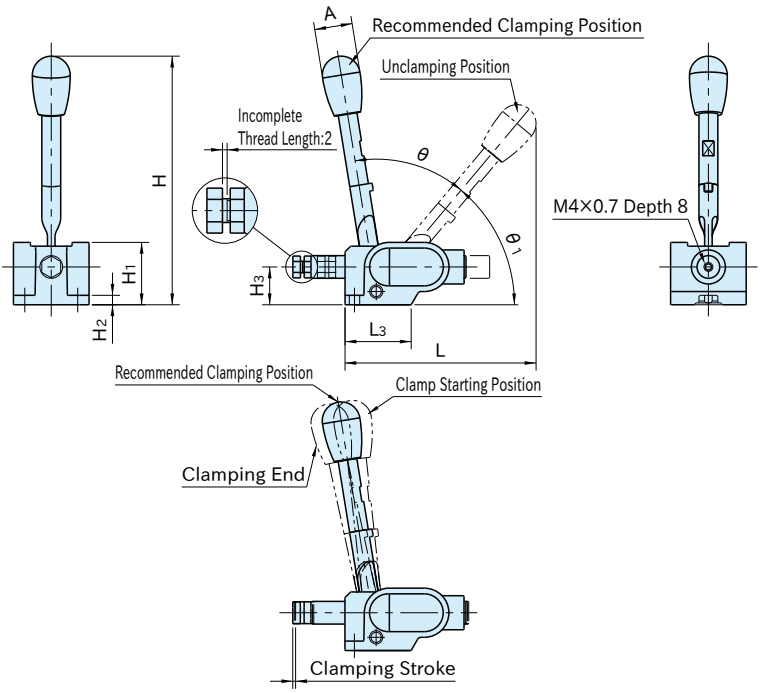
Unclamping Mode

Body	Handle Link	Shaft
ZDC2 steel Cation coating finish Black	SCM440 steel Quenched and tempered Black oxide finish	S25C steel Carburized nitriding hardened Black oxide finish
Lever	**Knob**	**Clamping Spindle**
S45C steel Chrome plated	Phenolic plastic Black	SCM435 steel Quenched and tempered Black oxide finish

★Key Point

The handle clicks at clamping end.

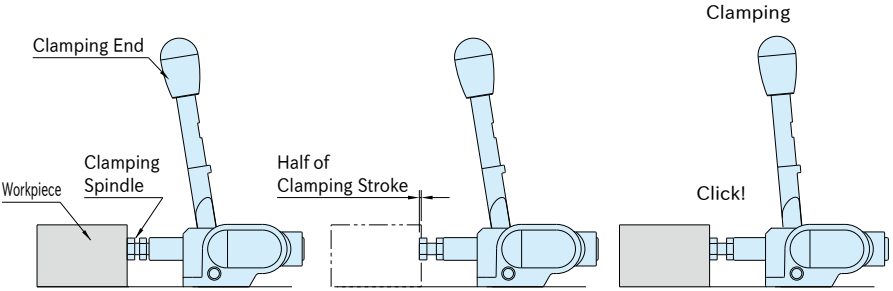




Part Number	Projecting Stroke	Clamping Stroke	H_3	L_1	L_2	L_3	W	H_2	d	L_4	P
QLSNS28-05	12	1.5	20	22	63	35	40	5	5.5	5	28
QLSNS28-12											
QLSNS30-07	22		25	33	80	42	42	6	6.5	6	30
QLSNS30-14											

Part Number	H max.	H_1	A	L	θ	θ_1	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNS28-05	133	33	20	101	50°	50°	9	50	370
QLSNS28-12							20	120	
QLSNS30-07	157	38	26	131	60°	45°	6	70	500
QLSNS30-14							18	140	

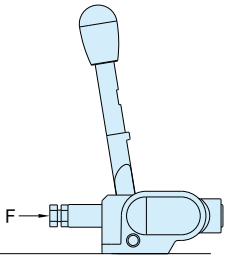
How To Set Handle To Recommended Clamping Position



1. Set the clamping spindle to contact a workpiece at clamping end position.
2. Project the clamping spindle by about half of the clamping stroke and tighten the nut.
3. Setting Completed

Note

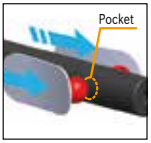
- The clamping forces and handle operationg loads stated above can vary by up to ± 20%.
- When the reaction force(F) becomes greater than the clamping force, clamping is lifted.



Part Number	Clamping Is Lifted When:
QLSNS28-05	F > 50N
QLSNS28-12	F > 120N
QLSNS30-07	F > 70N
QLSNS30-14	F > 140N

Feature

- The long handle facilitates clamping operation.
- The handle is locked at the unclamping position.
- Uses a snap-on system (double locking)



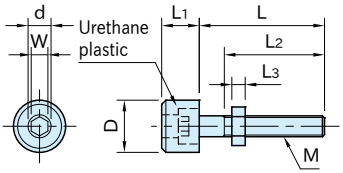
Related Product

- QLSND-AN10 Angle Adaptors to set the handle in an angled position.
- UB Clamping Spindles to protect workpieces from being marred.

UB CLAMPING SPINDLES

RoHS Dedicated for Snap Clamps

IMAO



Part Number	M	L	D	L1	L2	L3
UB4×15	M4×0.7	15	10	7	14	2.4
UB5×15	M5×0.8	15	12.5	9	13.5	3.2
UB5×30	M5×0.8	30	12.5	9	24	3.2
UB6×20	M6×1	20	15	10	18	3.6

Part Number	d	W	Weight (g)	Proper Snap Clamps
UB4×15	4.2	3	4	Mini Hold-Down
UB5×15	5.5	4	6	Mini Hold-Down
UB5×30	5.5	4	8	Standard Hold-Down
UB6×20	6	5	10	Push-Pull

Tip	Screw	Hex. Nut
Black urethane plastic Shore A90	SCM435 steel Trivalent chromate plated	SS400 steel Trivalent chromate plated

Installation example

The urethane tip avoids marring soft or finished surfaces.