

One-Touch Clamping

Snap Clamps



500,000
Cycles of
Durability

**Durable Clamps Designed for Use in
Fixture Building for Assembly, Inspection, Welding and
Light-Cutting Jobs, and in Temporary Clamping**

One-Touch Clamping

Snap Clamps

Click-Out Clamping

Snap Clamps use an Imao original snap-on system to provide uniform clamping, smooth operation and positive clamping.



Snap-On System (patent pending)

As the handle is turned upward, the built-in balls work 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.



Uniform Clamping

Every operator can provide the same clamping force.

Smooth Clamping

A small handle operating load generates a maximal clamping force.

Positive Clamping

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



500,000 Cycles* of Durability

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).



Many Choices of Clamping Force

Snap Clamps are available in three designs, each of which is available in two sizes and in different clamping capacities.

A label number stands for clamping force.

Example:

6 ... 60N



QLSND

VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS

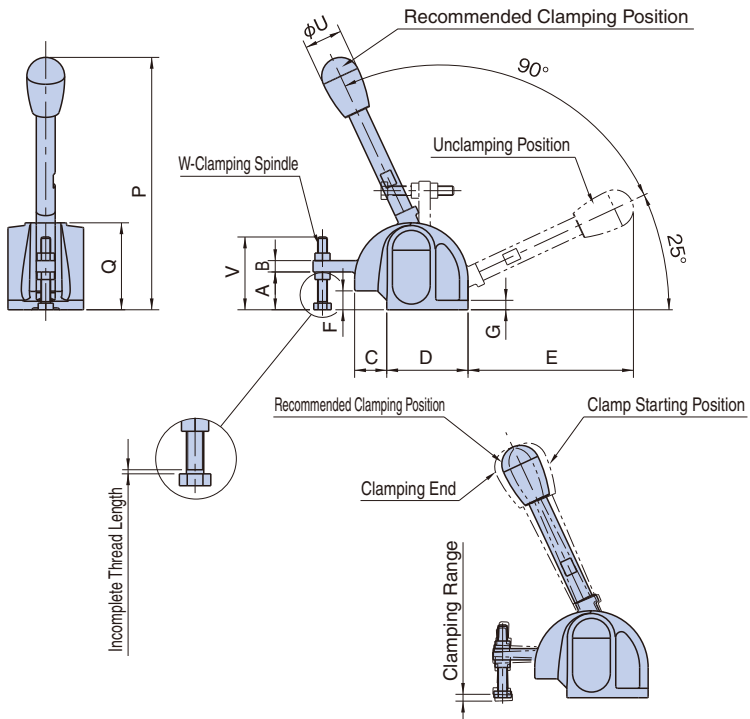
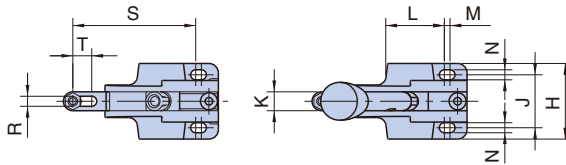


The clamp clicks when clamping is done.



Body	Clamping Arm
ZDC2 steel Cation coating finish Black	SCM440 steel Quenched and tempered Black oxide finish

Handle	Knob	Clamping Spindle
S45C steel Chrome plated	Phenolic plastic Black	SCM435 steel Quenched and tempered Black oxide finish



Part Number	Clamping Range	A	B	C	D	E	F	G	H	J	K	L	M	N	P max.		
QLSND28-02	3	20	6	17	43	88	10	5	40	28	10	31	3	5.3	140		
QLSND28-05			8	22.5	48.5	98	12	6	42	30		32.5	6	6.4	158		
QLSND30-03																	
QLSND30-06																	

Part Number	Q	R	S	T	U	V	W	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSND28-02	46	5.3	65	10	20	38.5	M5x0.8-35L Incomplete Thread Length :1.5	6	20	390
QLSND28-05								12	50	
QLSND30-03	53	75	12	26	6			30	520	
QLSND30-06					12			60		

How To Set Handle To Recommended Clamping Position

- Turn the handle to the clamping end and then set the clamping spindle to contact a workpiece (Fig. 1)
- Lower the clamping spindle by about half of the clamping range and then tighten the nut for locking (Fig. 2)

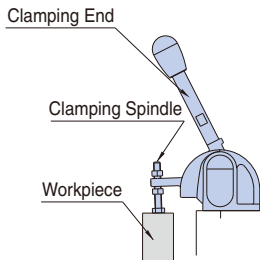


Fig. 1

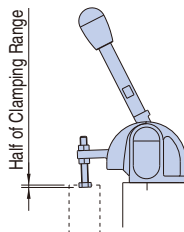
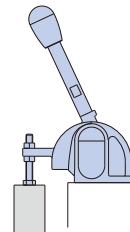


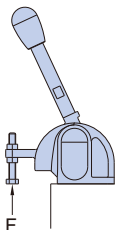
Fig. 2



Setting Completed

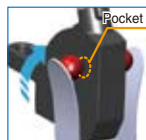
Notes :

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



Features:

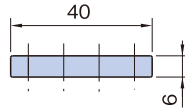
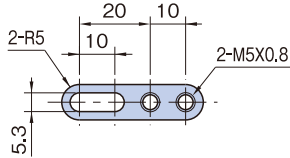
- The long handle facilitates clamping operation.
- The handle is locked at the unclamping position.
- Uses a snap-on system (double locking)



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

QLSND-EX20

EXTENSION ARM



Body
S45C steel
Black oxide finish

Part Number	Weight (g)
QLSND-EX20	12

Included are:

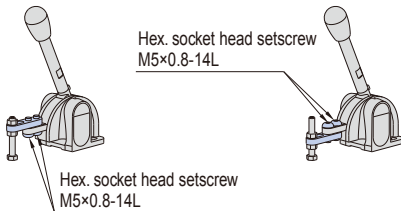
- Hex. socket head setscrew M5×0.8-14L ×2 pcs.

How To Use

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

Face Mounting

Back Mounting

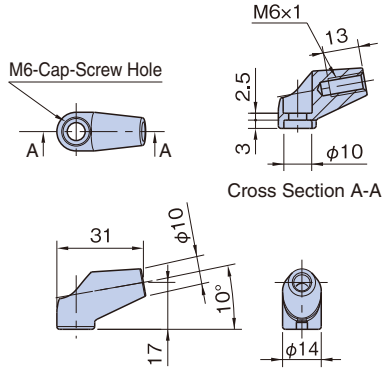
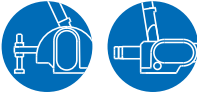


Clamping Forces Generated in Use of Extension Arms

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

QLSND-AN10

ANGLE ADAPTOR



Body
S45C steel
Black oxide finish

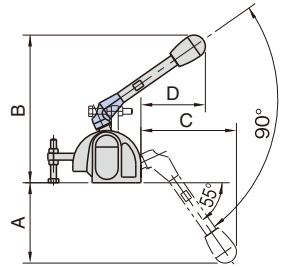
Part Number	Weight (g)
QLSND-AN10	12

Included is:

- Hex.socket head cap screw M6x1-12L x 1pc.

Dimensions of Snap Clamps with Angular Adaptor Mounted

Series	A	B	C	D
QLSND28	71	130	84	57
QLSND30	79	145	92	61

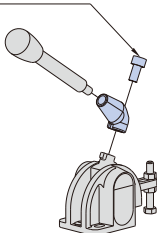


How To Use

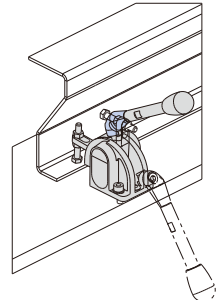
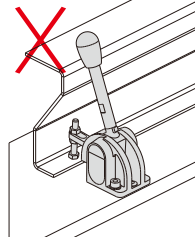
- Remove the handle and then install an Angular Adaptor between the body and the handle.
(Use a wrench of nominal size 9 for removal of the handle.)

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

Hex.Socket Head Cap Screw
M6x1-12L



Conflict



QLNSW

HORIZONTAL-HANDLE HOLD-DOWN SNAP CLAMPS

NEW **ROHS**

[Base]

Material : S45C steel
Finish : Black oxide

[Body]

Material : SCM440 steel
Heat treat : Quenched and tempered
Finish : Black oxide

[Lever Arm]

Material : S45C steel
Finish : Chrome plated

[Knob]

Material : Phenolic plastic
Color : Black

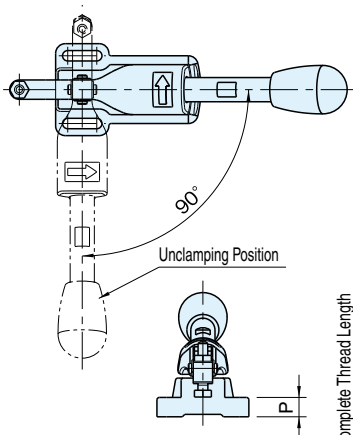
[Clamping Spindle]

Material : SUSXM7 stainless steel (for QLSNW28)
SCM435 steel (for QLSNW35)
Heat treat : Quenched and tempered (for QLSNW35)
Finish : Black oxide (for QLSNW35)

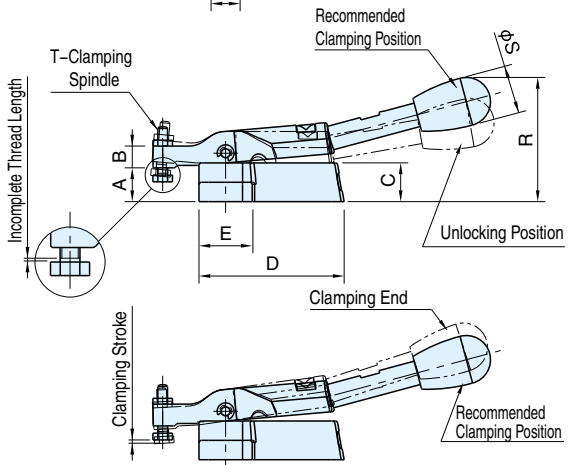
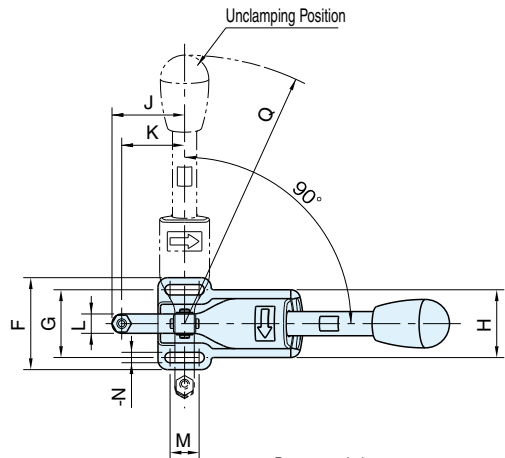


The clamp clicks when clamping is done.

Counterclockwise Clamping



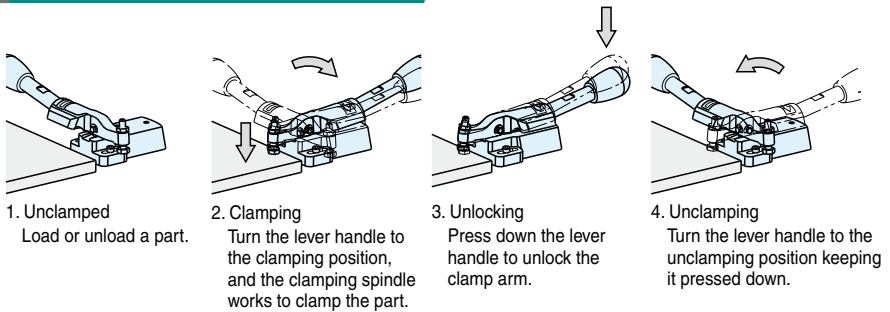
Clockwise Clamping



Series	Clamping Stroke	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
QLSNSW28	1	14	9	16	60	22	38	28	28	30	26	8	12	4.3	8	111	51	20
QLSNSW35	1.5	20	12	22	80	28	48	35	36	40	34	12	15	6.3	12	157	70	26

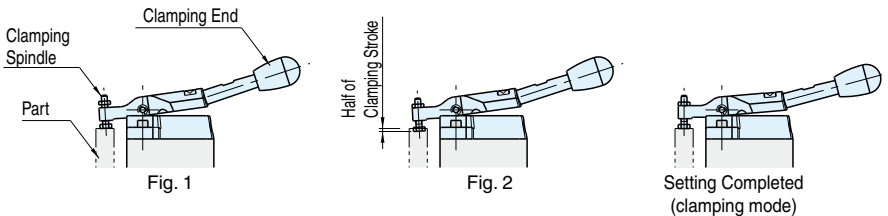
Part Number	Clamping Direction	Part Number	Clamping Direction	T	Allowable Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNSW28-03R	CW	QLSNSW28-03L	CCW	M4X0.7- 20L	10	30	260
QLSNSW28-06R		QLSNSW28-06L		Incomplete Thread Length:1	20	60	260
QLSNSW35-09R		QLSNSW35-09L		M6X1- 25L	30	90	570
QLSNSW35-12R		QLSNSW35-12L		Incomplete Thread Length:2	40	120	570

How To Use



How To Set Lever Handle to Recommended Clamping Position

Turn the lever handle to the clamping end and then set the clamping spindle to contact a part (Fig. 1). Lower the clamping spindle by half of the clamping stroke and then tighten the nut for locking (Fig. 2).

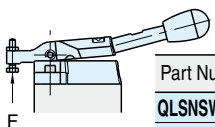


Notes:

- The clamping forces and handle operating loads stated above can vary by up to $\pm 20\%$.
- When a reaction force(F) becomes greater than a clamping force, clamping is released.

Features:

- Perfect for use in space where handle movement is limited vertically.
- The lever handle facilitates clamping operation.
- Uses a snap-on system.



Part Number	Clamping Is Released At:
QLSNSW28-03	$F > 30N$
QLSNSW28-06	$F > 60N$
QLSNSW35-09	$F > 90N$
QLSNSW35-12	$F > 120N$

QLSNDM

VERTICAL-HANDLE HOLD-DOWN SNAP CLAMPS (Mini)



Clamping Mode

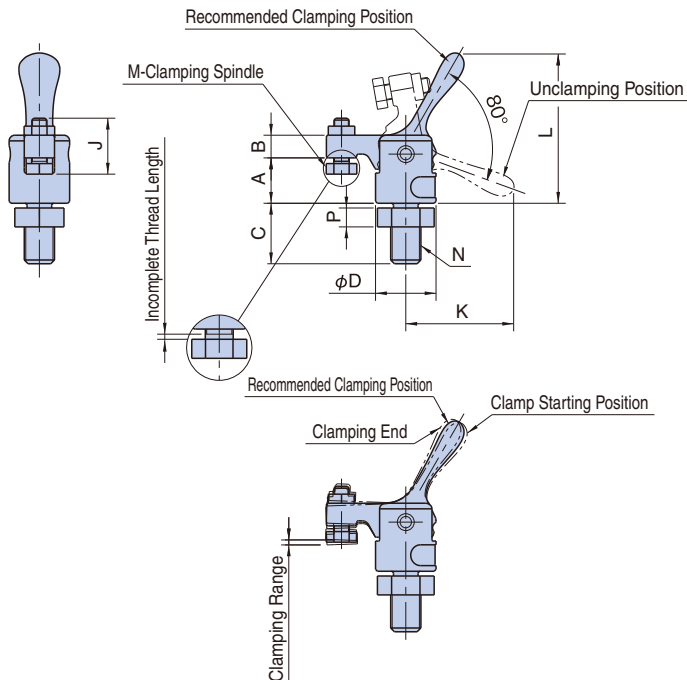
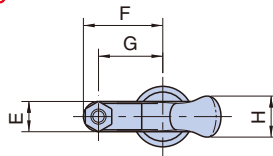


Unclamping Mode

Part Number	Body	Clamping Arm / Handle
QLSNDM08	S45C steel	SCM440 steel
QLSNDM12	Black oxide finish	Quenched and tempered Black

Part Number	Clamping Spindle
QLSNDM08	SUS304 stainless steel
QLSNDM12	SCM435 steel Quenched and tempered Black

The clamp clicks when clamping is done.



Part Number	Clamping Range	A	B	C	D	E	F	G	H	J	K	L
QLSNDM08-01	1	12	6	16	16	8	21	17	11	15	28.5	39.5
QLSNDM12-01	1.5	17	8	24	22	10	27	22	13	18.5	38	53.5
QLSNDM12-03												

Part Number	M	N	P	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNDM08-01	M4x0.7-12L Incomplete Thread Length :1	M 8x1.25	5	5	10	50
QLSNDM12-01	M5x0.8-15L	M12x1.75	7		13	
QLSNDM12-03	Incomplete Thread Length :1.5					

How To Set Handle To Recommended Clamping Position

- Turn the handle to the clamping end and then set the clamping spindle to contact a workpiece (Fig. 1)
- Lower the clamping spindle by about half of the clamping range and then tighten the nut for locking (Fig. 2)

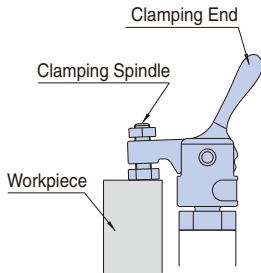


Fig. 1

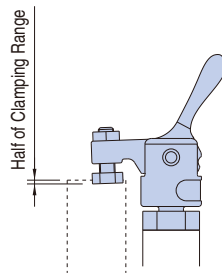
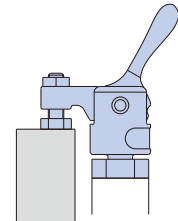


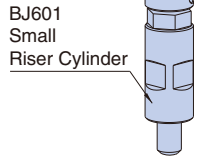
Fig. 2



Setting Completed

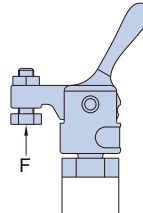
How To Use

Use a BJ601 Small Riser Cylinder to raise these clamps.



Notes :

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



Features:

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



Part Number	Clamping Is Lifted When :
QLSNDM08-01	$F > 10N$
QLSNDM12-01	$F > 30N$
QLSNDM12-03	



The clamp clicks when clamping is done.



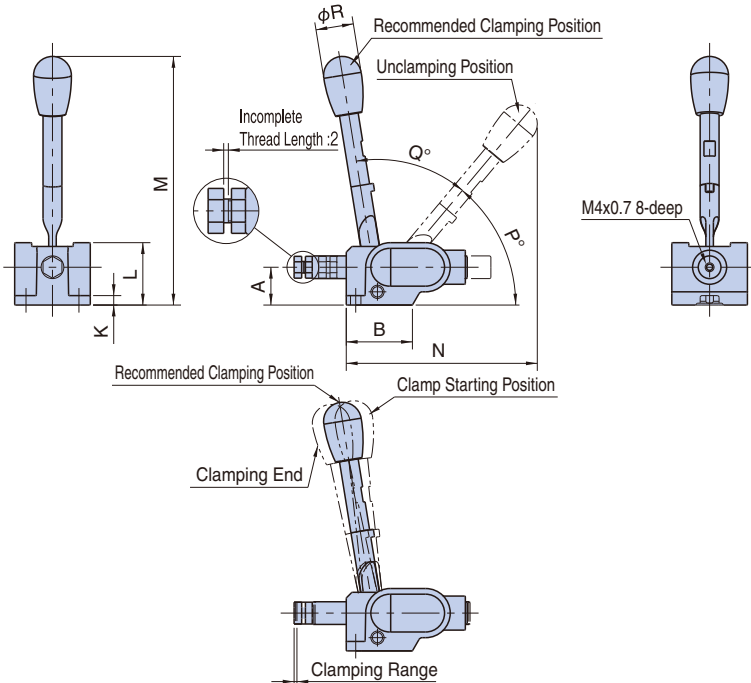
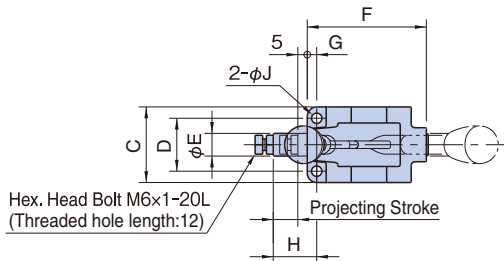
Clamping Mode



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



Part Number	Projecting Stroke	Clamping Range	A	B	C	D	E	F	G	H	J	K
QLSNS28-05	12	1.5	20	35	40	28	12	63	5	22	5.5	5
QLSNS28-12			25	42	42	30		80	6	33	6.5	6
QLSNS30-07	22		25	42	42	30	80	6	33	6.5	6	
QLSNS30-14			25	42	42	30	80	6	33	6.5	6	

Part Number	L	M Max.	N	P	Q	R	Handle Operating Load (N)	Clamping Force (N)	Weight (g)
QLSNS28-05	33	133	101	50°	50°	20	9	50	370
QLSNS28-12							20	120	
QLSNS30-07	38	157	131	45°	60°	26	6	70	500
QLSNS30-14							18	140	

How To Set Handle To Recommended Clamping Position

- Turn the handle to the clamping end and then set the clamping spindle to contact a workpiece (Fig. 1)
- Project the clamping spindle by about half of the clamping range and then tighten the nut for locking (Fig. 2)

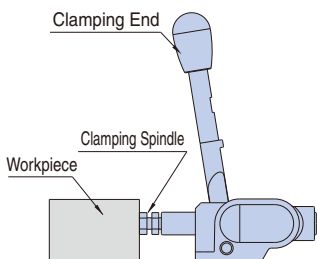


Fig. 1

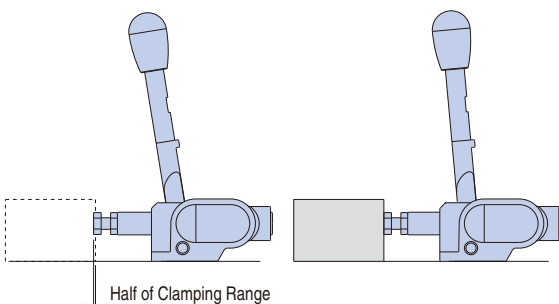
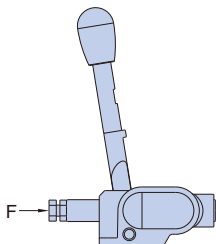


Fig. 2

Setting Completed

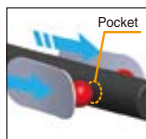
Notes :

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



Features:

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



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

QLSNS-SL

SLIDING COVER PLATES

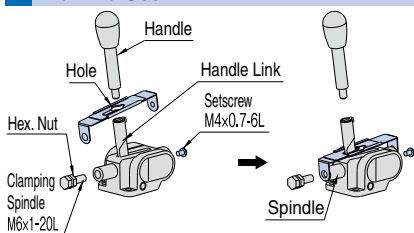


Plates
Steel(SPCC)
Black oxide finish

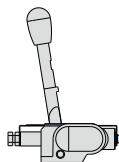
Included is :

- Hex. socket head setscrew M4x0.7-6L x 1 pc.

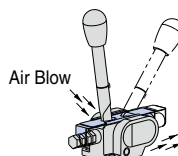
How To Use



Remove the handle from the handle link and then mount a Sliding Cover Plate with its two holes aligned onto the handle link.

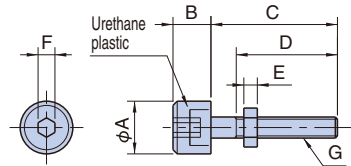


Lock the Sliding Cover Plate at both ends with the setscrews and the hex nuts.



As the handle is turned, the lower counterpart of the Sliding Cover Plate moves to block dust from penetrating into the mechanism. To remove powder dust built up in the mechanism, blow air from above.

Part Number	Weight (g)
QLSNS28-SL	12
QLSNS30-SL	14

UB**CLAMPING SPINDLES****RoHS**

Part Number	A	B	C	D	E	F
UB4x15	10	7	15	14	2.4	3
UB5x15	12.5	9	15	13.5	3.2	4
UB5x30			30	24		
UB6x20	15	10	20	18	3.6	5

Tip	Screw	Hex. Nut
Black urethane plastic	SCM435 steel	SS400 steel
Shore Hardness : A90	Chromated(Cr3)	Chromated(Cr3)

Application Examples

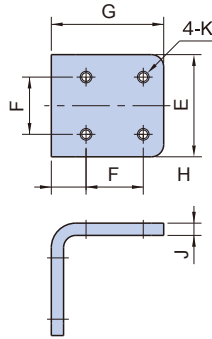
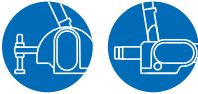
The urethane tip avoids marring soft or finished surfaces.

Part Number	G	Snap Clamps	Weight (g)
UB4x15	M4x0.7	Mini Hold-Down	4
UB5x15	M5x0.8		6
UB5x30		Standard Hold-Down	8
UB6x20		M6x1	Push-Pull

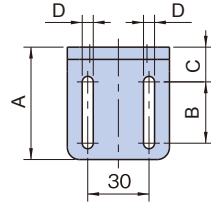


QLSN-B

MOUNTING BRACKETS

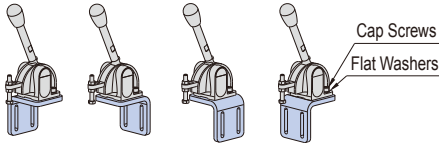


Body
SPHC steel
Black oxide finish

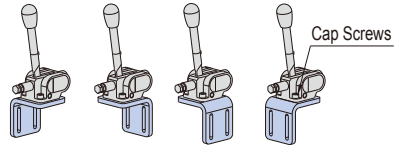


Part Number	A	B	C	D	E	F	G	H	J	K	Snap Clamps	Weight (g)
QLSN28-B	55	30	17	5.4	50	28	55	17	6	M5×0.8	QLSND28, QLSNS28	200
QLSN30-B	70	35	25	6.4	55	30	70	27.5		M6×1	QLSND30, QLSNS30	310

How To Use



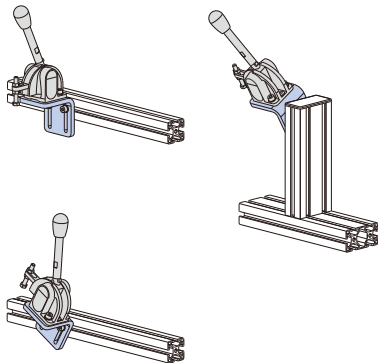
Examples of Mounting Standard Hold-Down Snap Clamps



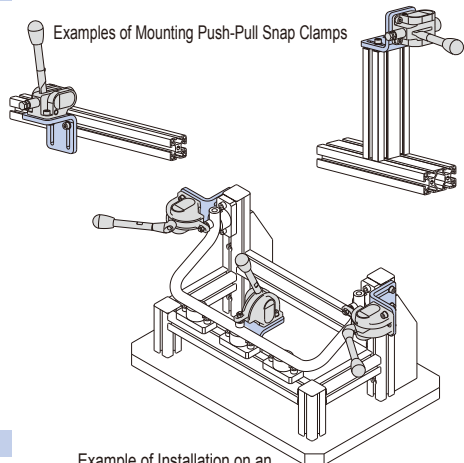
Examples of Mounting Push-Pull Snap Clamps

Installation on Aluminum Profiles

Examples of Mounting Standard Hold-Down Snap Clamps



Examples of Mounting Push-Pull Snap Clamps



Example of Installation on an inspection fixture for 3-D measuring machine

Features:

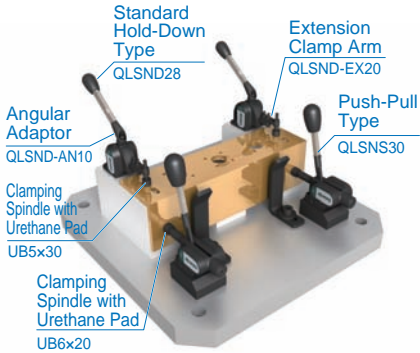
- Brackets for Standard Hold-Down and Push-Pull Snap Clamps
- Mountable in 4 directions

One-Touch Clamping

Snap Clamps

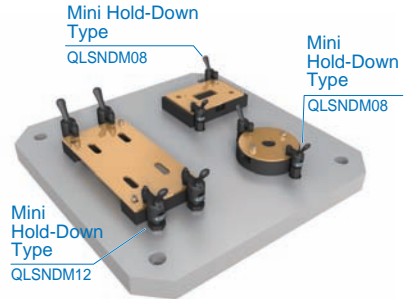
Application Examples

Assembly Fixture



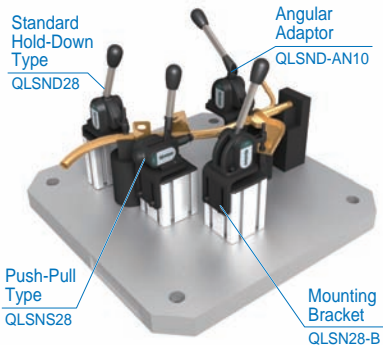
Example of both hold-down and push-pull types being used to build a fixture for assembly jobs

Assembly Fixture



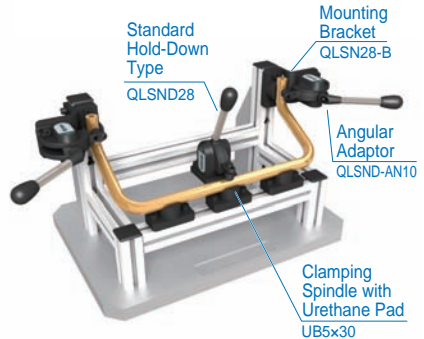
Example of vertical hold-down mini type being used to build a fixture to put parts of home appliances together

Welding Fixture



Example of both hold-down and push-pull types being used to build a fixture for spot welding jobs

Inspection Fixture



Example of hold-down type being used to build a fixture for inspection jobs