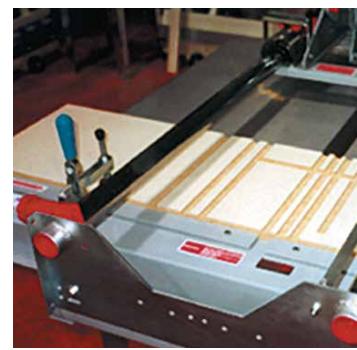
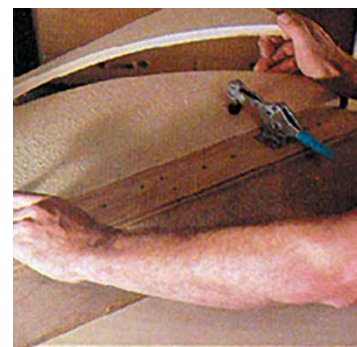


Right Clamp. Right Price. Right Now.



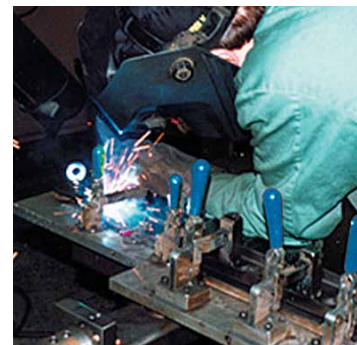
CLAMP-RITE

www.clamp-rite.com



Clamp-Rite Toggle Clamps provide unmatched value by delivering:

- Quality materials and workmanship
- Industry standard designs
- The most popular sizes and styles



At Clamp-Rite, our focus is vested in providing customers top-selling toggle clamping technology with a strong commitment to value. Clamp-Rite's global presence and distribution enables us to provide local off-the-shelf availability. Focusing on the most popular industry standard styles and sizes enables us to offer unmatched value. Our products are manufactured to industry standard designs with quality materials and craftsmanship for use in a wide variety of industries and applications.

Our global website (www.Clamp-Rite.com) is a one-stop engineering resource center available 24/7 for product information, data sheets and download information. We offer easy downloading of the latest AutoCAD and STEP (Solidworks) files for all of our models as well as a comprehensive selection guide to assist you in selecting the best and highest quality clamp to fit your application. Please feel free to contact any of our technical support and customer service professionals with any questions or concerns as we look forward to serving you...

Our Valued Customer!



Introduction and Technical Resources	6
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Standard Clamps

Vertical Handle Toggle Clamps



Series 1101	20
Series 1102	22
Series 1107	24
Series 1110	26
Series 1147	27
Series 1167	28
Series 1117	29

Horizontal Handle Toggle Clamps



Series 1405	30
Series 1413	31
Series 1415	32
Series 1425	33
Series 1435	34
Series 160x1	35

Latch Type Toggle Clamps



Series 12xx0	36
Series 12x50	37
Series 12x40	38
Series 12x1x	39
Series 12x10	40

Push/Pull Action Toggle Clamps



Series 13xx	42
Series 1301	43
Series 1305	44
Series 13xxx	45
Series 135x5	46
Series 1309	47
Series 1310	48
Series 13xx0	49

Standard Accessories	50
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Heavy-Duty Clamp-Rite models shown on fixture assembly example.

Dimensions and technical information subject to change without notice.

Stainless Steel Clamps

Vertical Handle Toggle Clamps



Series 1101-SS	52
Series 1102-SS	52
Series 1107-SS	53

Horizontal Handle Toggle Clamps



Series 14x1-SS.....	54
Series 160x1-SS	55

Latch Type Toggle Clamps



Series 12xx0-SS	56
Series 1224-SS	57
Series 1234-SS	57
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Push/Pull Action Toggle Clamps



Series 1302-SS	59
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Stainless Steel Accessories	60
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Heavy-Duty Clamps

Heavy-Duty Clamps



Series 1150	62
Series 1159	63
Series 1350	64
Series 1450	65

Pneumatic Clamps

Pneumatic Toggle and Swing Clamp



Series 17xxx.....	66
Series 17xxx Sensors.....	67
Series 18xxx	68
Series 18xxx Sensors.....	70
Series 18xxx Clamp Arms ..	70

What is a Toggle Clamp?

- Toggle clamps are **fast-acting tools** used to steady a work piece or hold it in place.
- Ideal for use in a wide variety of situations where **quick** and **repeatable** clamping is required.
- Locking is achieved through the simplicity of the **toggle principle**.

Why a Toggle Clamp?

Among all commercial clamp types, toggle clamps offer the greatest level of utility, efficiency, and versatility.

Advantages for the user:

- **Fast** clamp/unclamp cycle over threaded solutions
- **Secure**, locking clamping
- **Consistent** clamping forces



Vertical Hold-Down Toggle Clamp



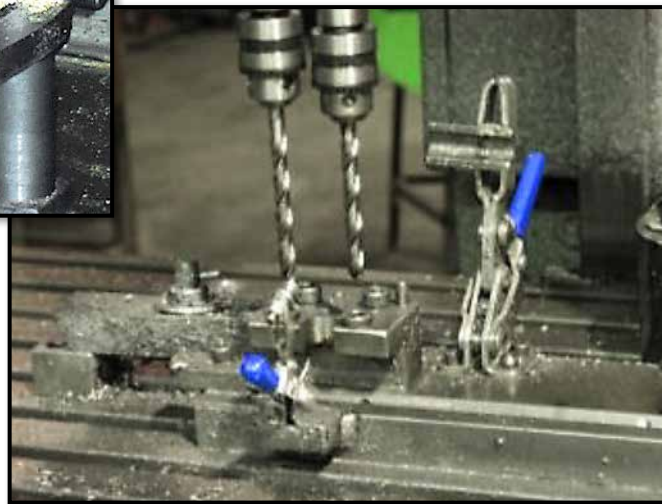
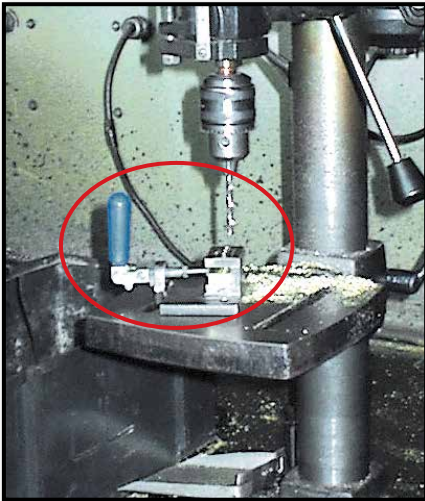
Horizontal Hold-Down Toggle Clamp



Latch Type Toggle Clamp



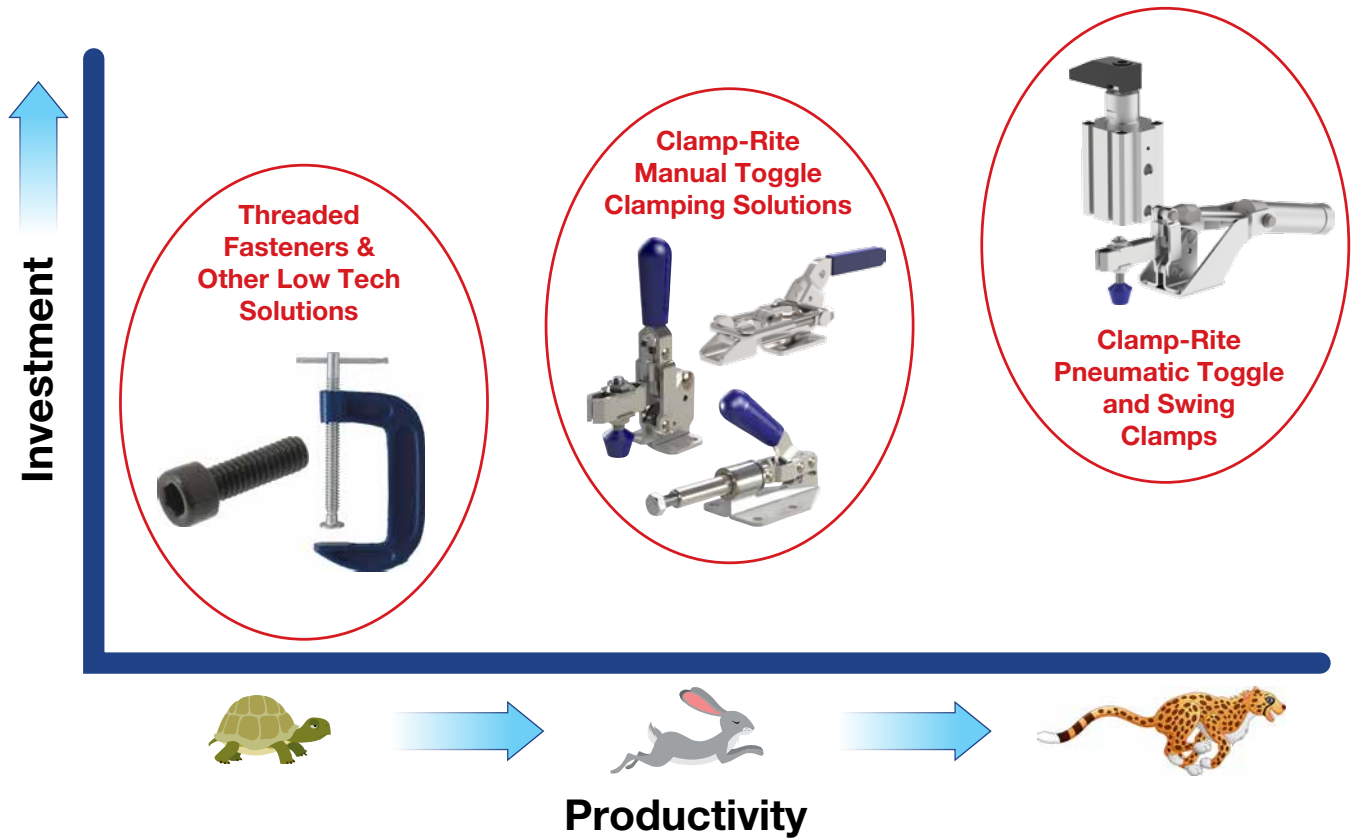
Push/Pull Toggle Clamp



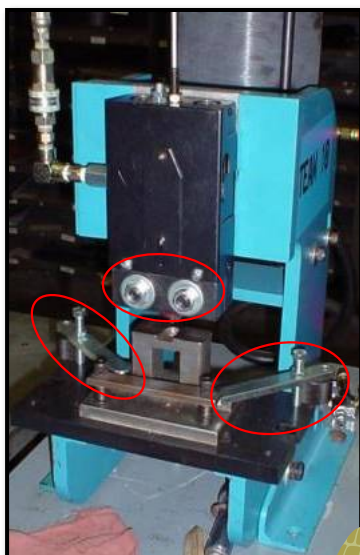
Dimensions and technical information subject to change without notice.

Progression of Clamping Solutions

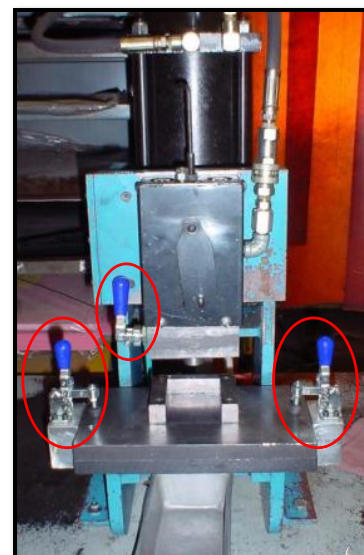
Clamp-Rite toggle clamps represent a minimal investment for dramatic increases in productivity and safety.



Why Toggle Clamps?



Before
Bolts and bar clamps in this set-up resulted in **long tooling change over times** on this press.



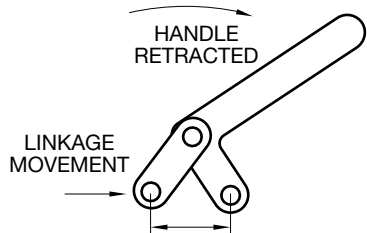
After
Some thoughtful redesign and application of Clamp-Rite toggle clamps transformed this press into a **quick-change** system.

Dimensions and technical information subject to change without notice.

Toggle Principle

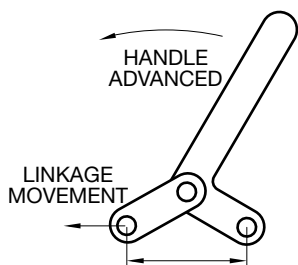
- Toggle clamps operate through a simple linkage system of fixed-length levers and pivots.

Open Position



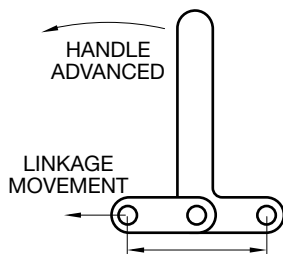
CENTER POSITIONS OF LINKAGE WHEN IN THE RETRACTED OR OPEN POSITION

Intermediate Position



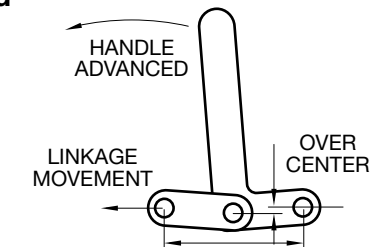
CENTER POSITIONS OF LINKAGE EXPAND AS THE CLAMP ADVANCES

On Center Position

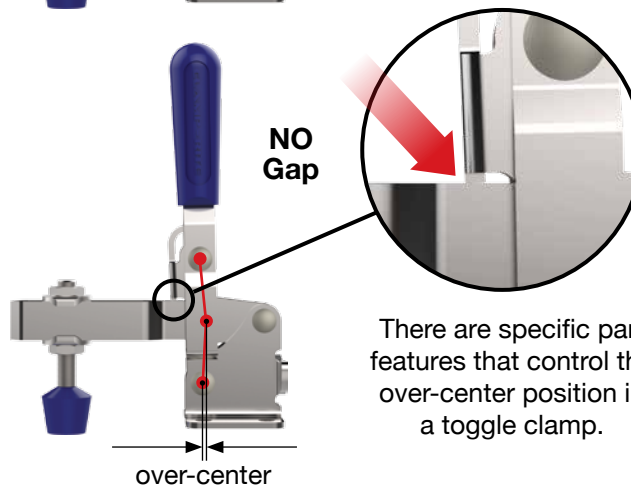
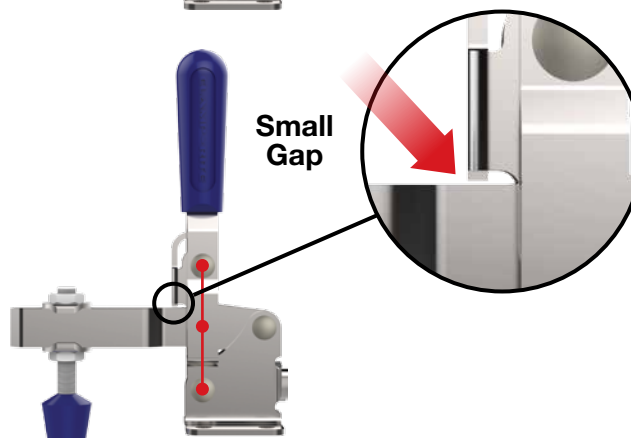
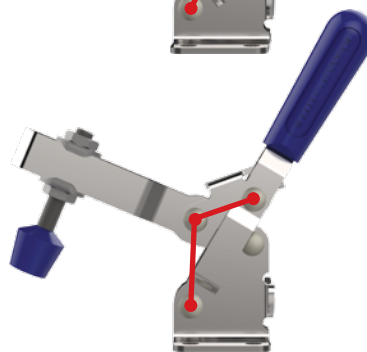
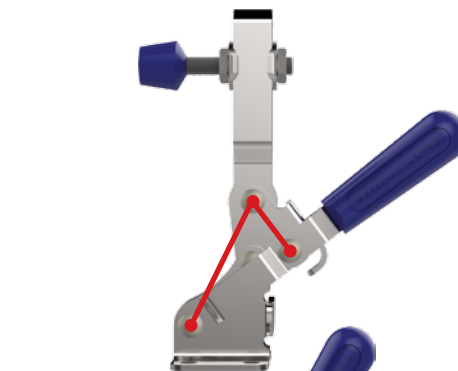


CENTER POSITIONS OF LINKAGE EXPAND TO THEIR MAXIMUM DISTANCE AS THE CLAMP APPLIES ITS MAXIMUM FORCE

Closed/Locked Position



CENTER POSITION OF LINKAGE RETRACT SLIGHTLY AS THE CLAMP LOCKS IN THE OVER CENTER POSITION



There are specific part features that control the over-center position in a toggle clamp.

THE RESULT: *Fast*, secure, and consistent clamping!

Dimensions and technical information subject to change without notice.

Understanding Holding Capacity

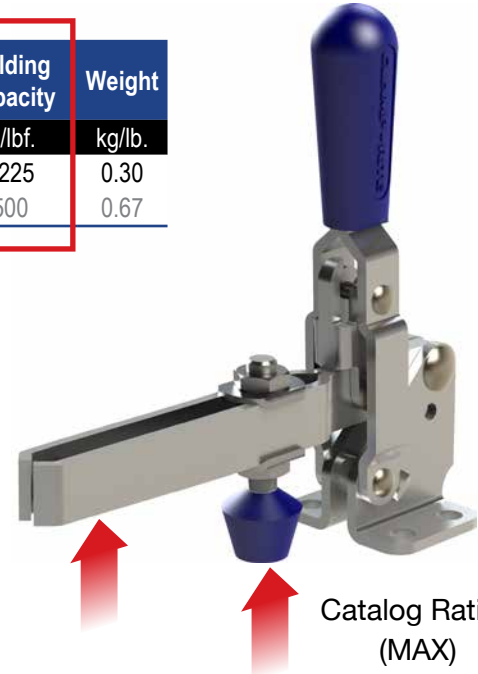
Holding Capacity

- **Maximum** force the clamp can withstand when in closed, locked position.
- **Assume NO factor of safety.**

Model	Holding Capacity	Weight
Metric	N/lbf.	kg/lb.
11018CR	2225 500	0.30 0.67

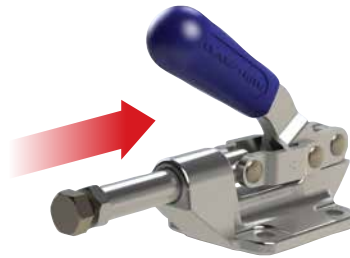
Hold Down Clamps

- Stated rating is assumed to be taken at a clamping point **closest to the base**. This is the MAX value.
- The holding capacity **decreases** as the spindle is positioned **away from the base**.



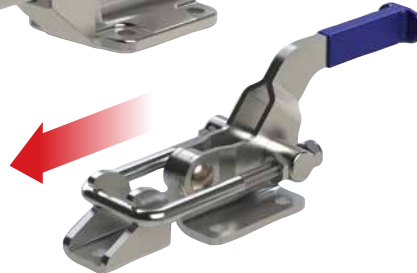
Push/Pull Clamps

- MAX compressive load



Latch Type Clamps

- MAX tensile load



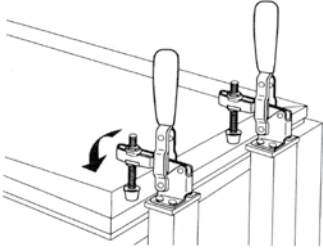
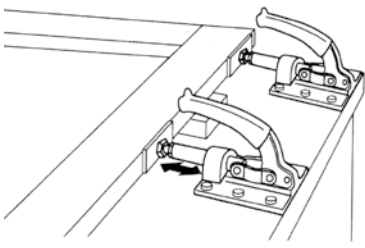
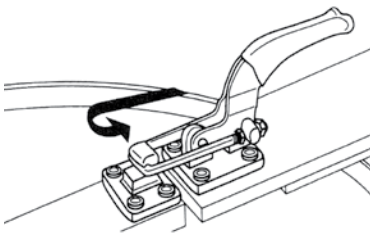
Clamping Force

HOLDING CAPACITY \neq CLAMPING FORCE

- The clamp's holding capacity rating must not be mistaken to be the same as what clamping force the clamp will exert on a workpiece.
- Clamping force is dependent upon several factors:
 - Force exerted by the operator
 - Spindle adjustment
 - Thickness of the workpiece
 - Mechanical advantage of the linkage
 - Clamping point along the bar

Action Comparison



	Hold Down	Straight Line Action	Latch Type
Clamping Action	 <p>Clamping force is applied perpendicular to clamping arm</p>	 <p>Clamping force is applied in-line with the plunger</p>	 <p>Clamping force is applied through the hook with a pulling action</p>
Major Type	Horizontal Vertical Modular	Flanged Base Mounted Thru-Hole Mounted	Fixed Latch U-bolt, Horiz. & Vert. J-hook
Key Selection Attributes	Type, Size, Mounting Feature Holding Capacity	Stroke Mounting Feature Holding Capacity	Type Holding Capacity Drawing Movement
Typical Mechanical Advantage	~ 15:1	~ 14:1 to 30:1	~ 30:1
Holding Capacity Range	Up to 5300N [1200lbf]	Up to 11100N [2500lbf]	Up to 33300N [7500lbf]

Dimensions and technical information subject to change without notice.

Hold Down Toggle Clamps

- Most popular type of toggle clamp
- Widest variety of sizes
- Holds the workpiece with a downward clamping action
- Vertical or Horizontal

Vertical Hold-Down Toggle Clamp



Horizontal Hold-Down Toggle Clamp



Product Overview

Vertical Handle Toggle Clamps



Series 1101
440N
[100lbf]



Series 1102
890N
[200lbf]



Series 1107
1670-2220N
[375-500lbf]



Series 1110
2670-3340N
[600-750lbf]



Series 1147
4400N
[1000lbf]



Series 1167
5340N
[1200lbf]

Horizontal Handle Toggle Clamps



Series 1405
270N
[60lbf]



Series 14xxx
670-890N
[150-200lbf]



Series 1425
2220N
[500lbf]



Series 1435
3340N
[750lbf]



Series 160X1
670-3340N
[150-750lbf]

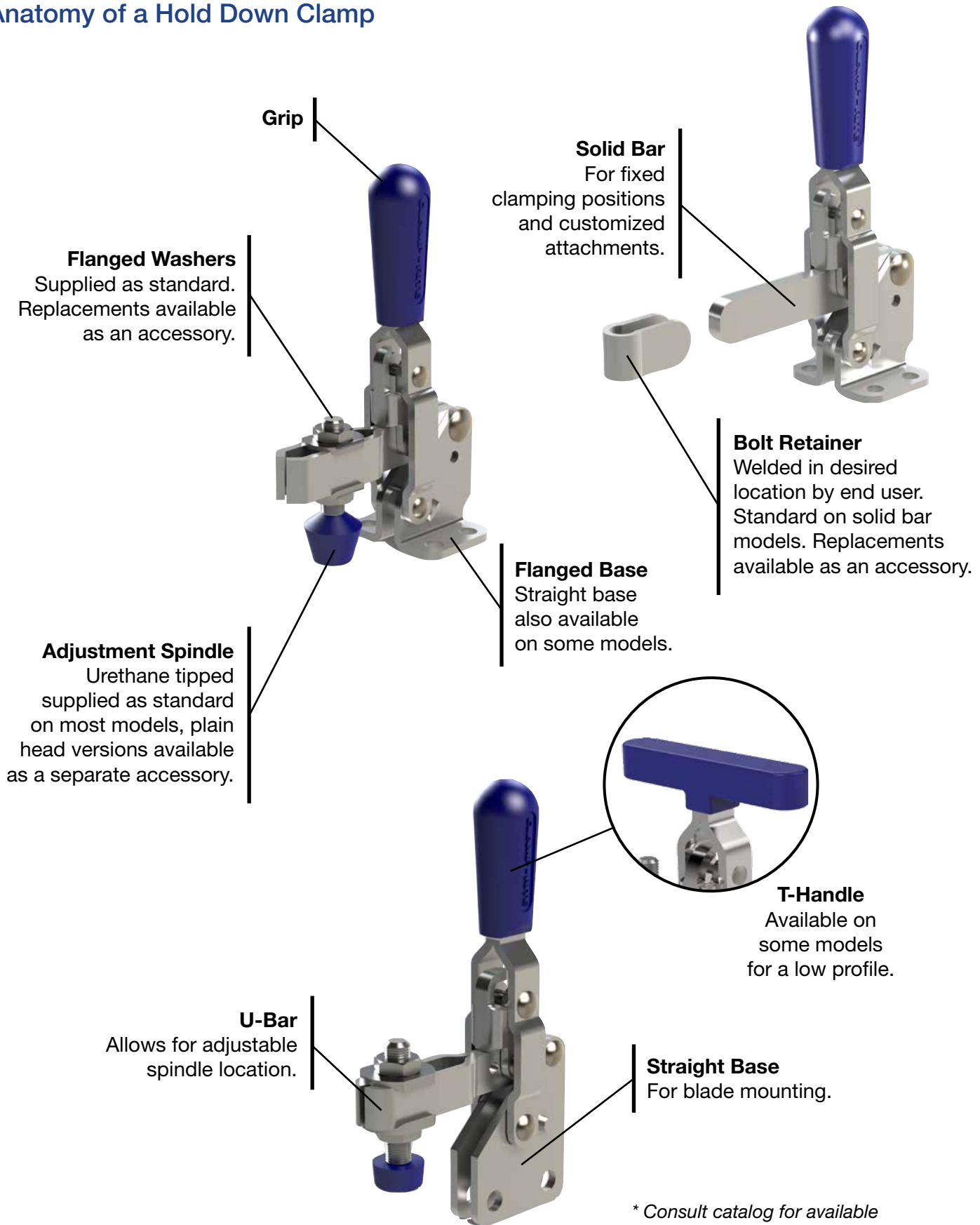


Series 1117
1670N
[375lbf]

SS Available in *Stainless Steel*

Dimensions and technical information subject to change without notice.

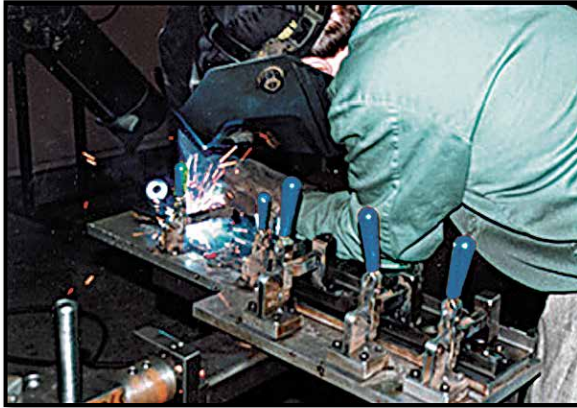
Anatomy of a Hold Down Clamp



Dimensions and technical information subject to change without notice.

Welding

- These Series 1107 Vertical Handle Toggle Clamps make for quick clamping cycles in this welding fixture.



Inspection

- These Series 1102 Vertical Handle Toggle Clamps are used in this checking fixture to provide reliable and consistent clamping force for accurate quality inspection.



Woodworking

- These Model 1425CR Horizontal Handle Toggle Clamps on this router (woodworking) jig give the user safe and repeatable cuts.



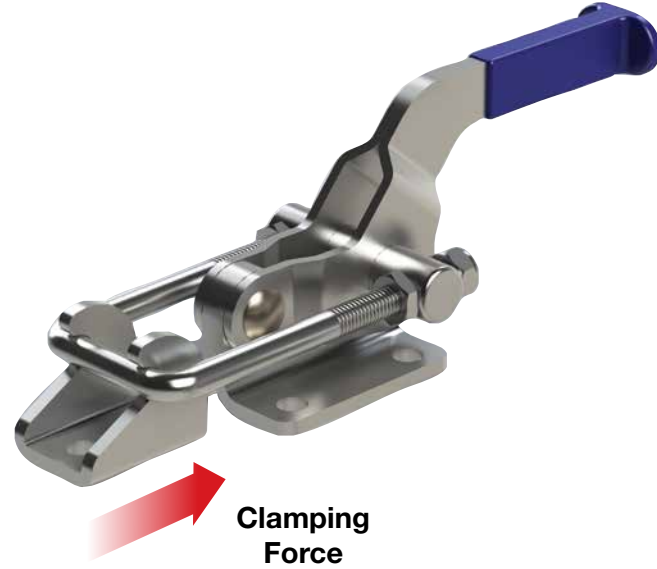
Woodworking

- These Model 14351CR Horizontal Handle Toggle Clamps are used on this woodworking jig make holding the workpiece fast and secure.



Latch Type Toggle Clamps

- Operate with a pulling action
- Ideally suited for stationary latching applications such as door, lid, and mold closures
- Three primary styles
 - Fixed (non-adjustable)
 - U-hook (vertical & horizontal)
 - J-hook



Anatomy of a Latch Type Toggle Clamp

Hook
Provides the clamping force. Allows for a small amount of adjustment.

Grip/Handle

Hook Adjustment
Hook is adjustable for easy set-up and adjustment of clamping force.

Cleat
Mounted to the object to be clamped. Most models are supplied with this component as shown in the catalog.

Mounting Base

Hook Adjustment
Customer-supplied adjustment feature is required for proper set-up and application.

Non-Adjustable Type

Dimensions and technical information subject to change without notice.

Product Overview

Adjustable U-Hook Style



Series 12xx0
1600-8900N
[360-2000lbf]



Series 12x50
17800-33300N
[4000-7500lbf]



Series 12x40
1600-8900N
[360-2000lbf]

Adjustable J-Hook Style



Series 12x1x
1670-4450N
[375-1000lbf]

Non-Adjustable Style



Series 12x10
1670-5340N
[375-1200lbf]

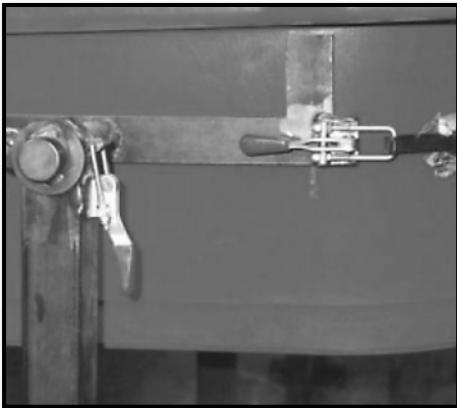


Vertical style for around the corner latching.

SS Available in *Stainless Steel*

Vacuum Application

- Model 12230CR Latch Type Toggle Clamp used on this vacuum canister allows quick dis-assembly for cleaning.



Agriculture

- This Series 1223 Latch Type Toggle Clamp on this grain conveyor (agriculture) provides quick and safe access to the machine for frequent maintenance jobs.

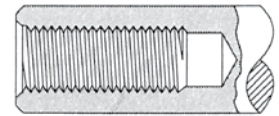
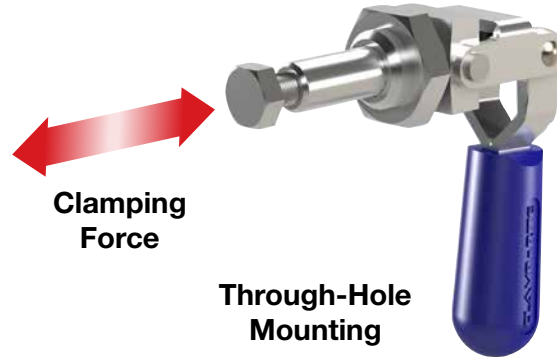


Dimensions and technical information subject to change without notice.

Push/Pull Toggle Clamps

- Provide straight line clamping/positioning action
- Most models can be locked over-center in either extended or retracted position†
- Useful in a wide range of applications beyond workholding

† **NOTE:** Handle must be allowed to rotate >180° for over-center locking in retracted position. Handle will fall below mounting surface.



All models feature threaded plungers in either Imperial or Metric threads.

Product Overview



Series 13xx
900-3100N
[200-700lbf]



Series 1301
440N
[100lbf]



Series 1305
1330N
[300lbf]



Series 13xxx
2670-3780N
[600-850lbf]



Series 135x5
3780-6675N
[850-1500lbf]



Series 1309
1330N
[300lbf]



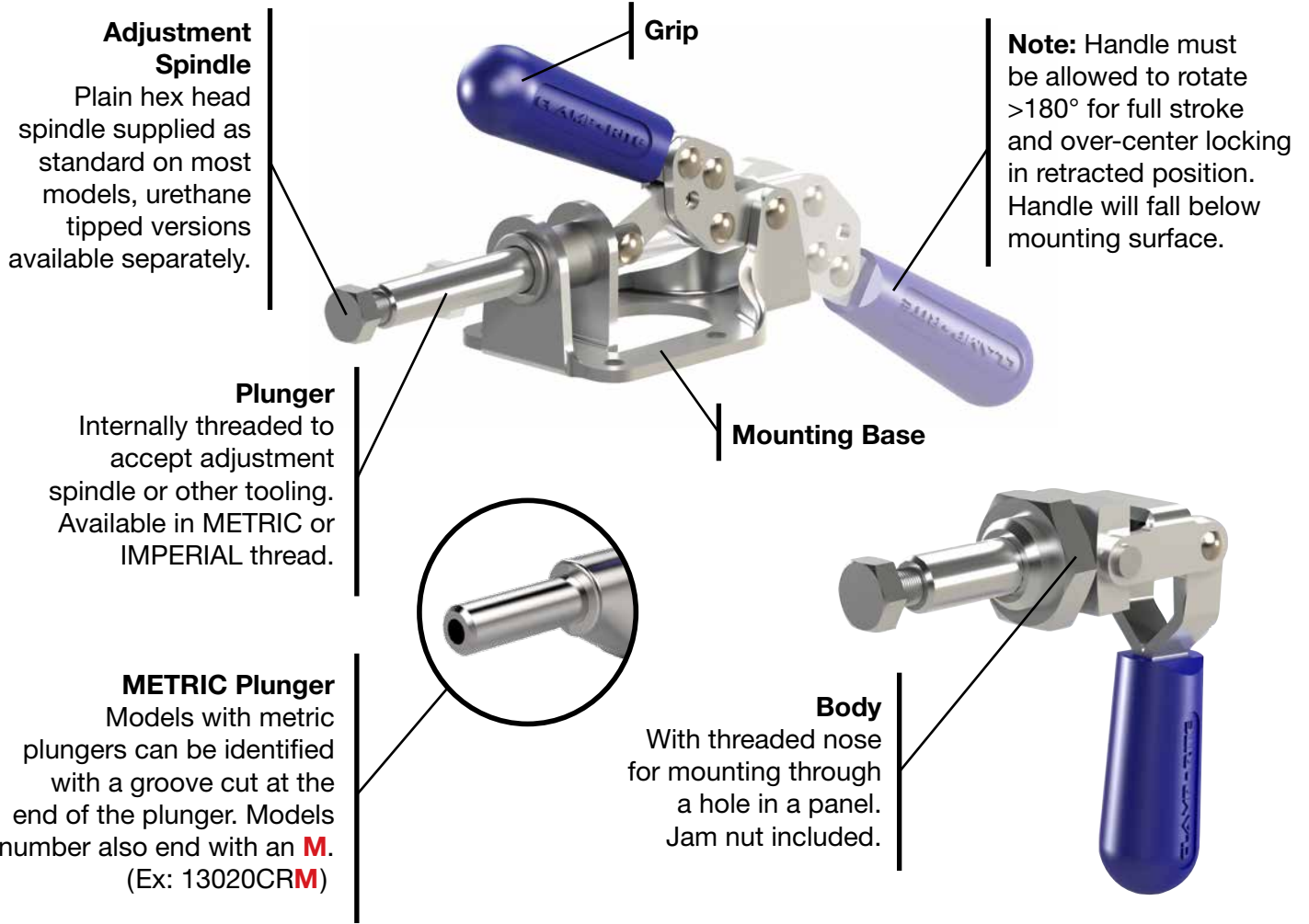
Series 1310
3560N
[800lbf]



Series 13xx0
3500-11100N
[800-2500lbf]

SS Available in **Stainless Steel**

Dimensions and technical information subject to change without notice.



OEM installation

- These Model 13100CR Push/Pull Toggle Clamp is being used on this equipment as a brake.



Machining

- This Series 1302 Push Pull Toggle Clamp is used here on this drill jig for repetitive clamping.



Dimensions and technical information subject to change without notice.

Choose the right action

- Hold down, latch, push/pull

Consider the handle position

- Vertical, horizontal
- Consider the position of the operator

Account for the working size envelope

- Is there proper clearance for loading and removal of workpiece?
- Is there adequate space to access and operate the clamp?
- Consider the position of the operator

Understand clamping force requirements

- Remember – a toggle clamp's clamping force is highest when the clamping contact is closest to the base
- Choose a clamp with a holding capacity that is double the anticipated load
- Understand the difference between holding capacity and clamping force

Clamping height and clamping contact

- Try to keep the clamping point closest to the base
- Consider the height under the clamping bar – is there enough room for adjustments?
- Use adjustable contact points (most models supplied with adjustment spindles)
- Clamping point should be applied against rigid workpiece/ fixture features to minimize workpiece distortion

Consider the operating environment

- Use stainless steel for corrosive or high temperature (>250° F) applications



STAINLESS STEEL Toggle Clamps

- Combines Clamp-Rite economy with the durability of stainless steel† for use in a wider range of markets and applications
- Out-of doors applications
- Food processing & handling equipment
- Plating/finish operations
- Chemical processing equipment
- Pharmaceutical processing
- High temperature applications (exclusive of plastic grip)

† Clamp-Rite stainless steel clamps are constructed from Series 300 (normally an 18-8 type 302-304). This is a heat resisting non-magnetic stainless steel in the annealed state and slightly magnetic when cold worked.

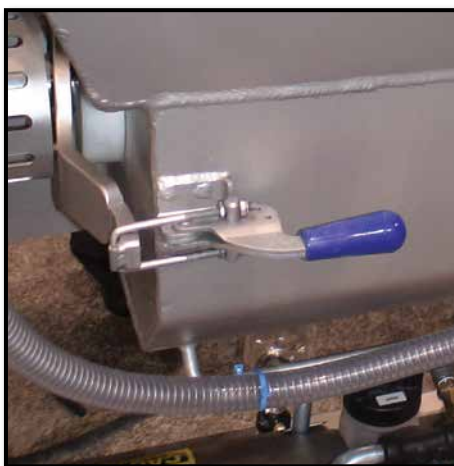
NOTE: Rivets are type 430 stainless steel.



These Model 14251CR-SS Toggle Clamps secure an access door in this filtration equipment. Fast acting, secure, and corrosion resistant.

STAINLESS STEEL Applications

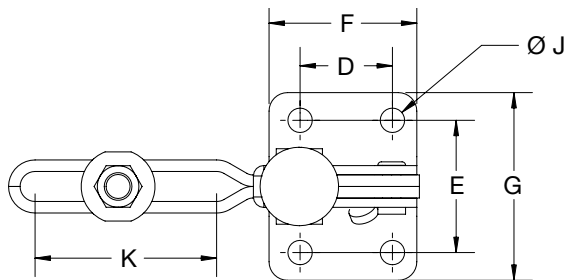
- Solutions for robust and secure clamping on stainless steel equipment
- Allows for quick installation and removal of machine components for cleaning and service



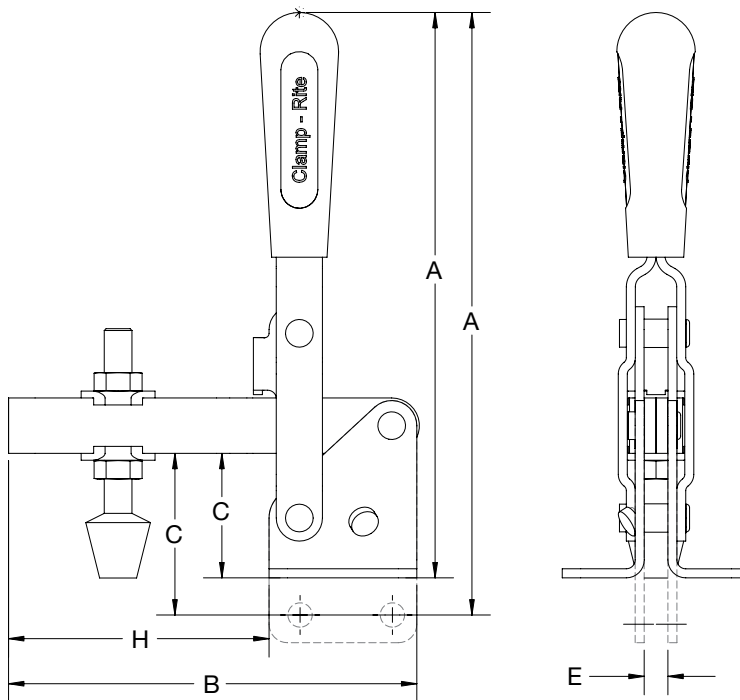
Dimensions and technical information subject to change without notice.

Series 1101

Specifications

Bar Opens: **110°**Handle Opens: **61°**Spindle Supplied: **19525CR**Straight Base
11012CR

11011CR



Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
11011CR	440	0.07	0.16	Flanged Base, U-Bar	77	52	15.8	15.7	24	25.4	33.5	26.6	4.5	18.5
	100	0.16			3.03	2.05	0.62	0.62	0.94	1.00	1.32	1.05	0.18	0.73
11012CR	440	0.07	0.16	Straight Base, U-Bar	83.5	52	22.4	15.7	3.8	25.4	-	26.6	4.5	18.5
	100	0.16			3.29	2.05	0.88	0.62	0.15	1.00	-	1.05	0.18	0.73

Dimensions and technical information subject to change without notice.

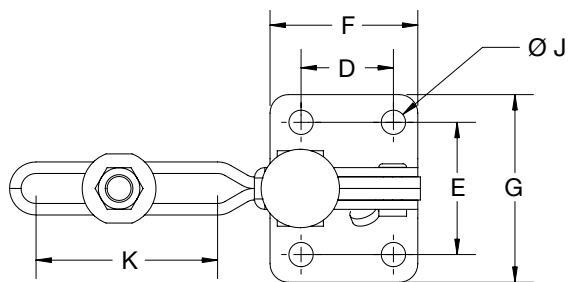
Series 1101

Specifications

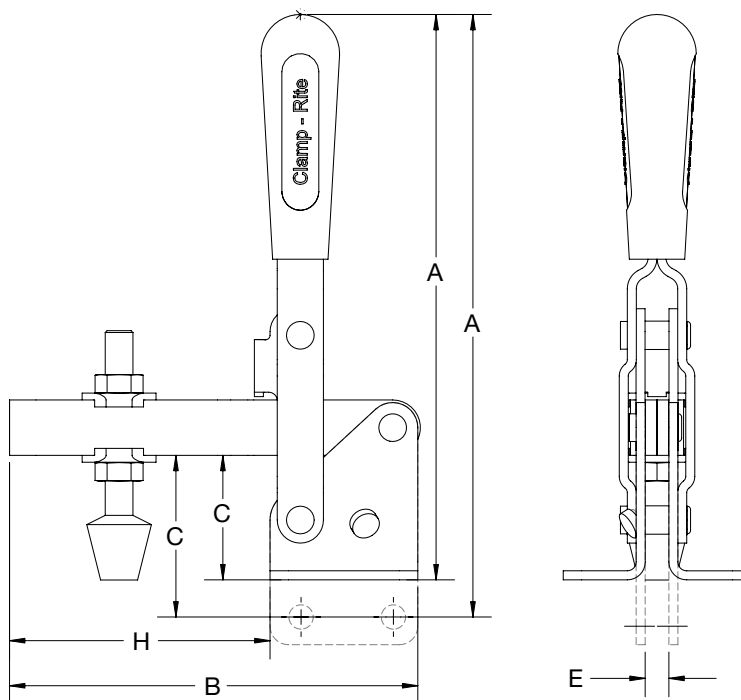
Bar Opens:	110°
Handle Opens:	61°
Spindle Supplied:	19835CR



Straight Base
11019CR



11018CR



Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
11018CR	1670	0.30	0.67	Flanged Base, Long U-Bar	142.2	137.9	31.8	19.8	31.8	35.1	45.0	95.3	6.9	70.9
	375	0.67			5.60	5.43	1.25	0.78	1.25	1.38	1.77	3.75	0.27	2.79
11019CR	1670	0.30	0.67	Straight Base, Long U-Bar	150.3	130.0	39.0	19.0	6.4	34.9	-	95.2	7.2	71.4
	375	0.67			5.92	5.12	1.53	0.75	0.25	1.37	-	3.75	0.28	2.81

Dimensions and technical information subject to change without notice.

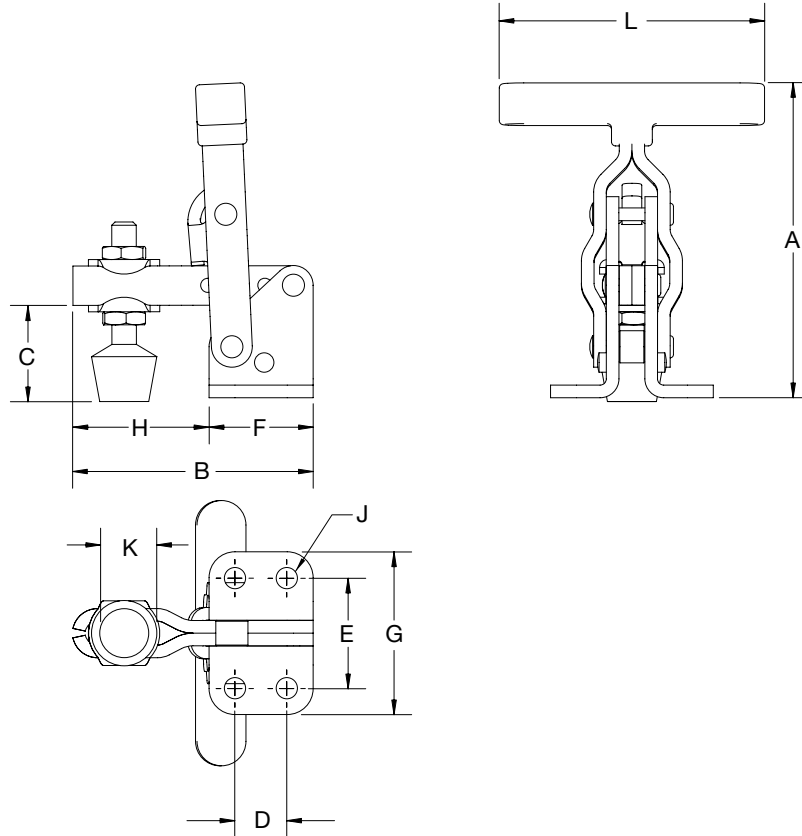
Series 1102

Specifications

Bar Opens: 100°

Handle Opens: 60°

Spindle Supplied: 1/4-20 x 1.75

Solid Bar
11026CR

11023CR

Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K	L
	N/lbf.	kg/lb.													
11023CR	890	0.16	200	Flanged Base, U-Bar, T-Handle	77.0	58.8	22.65	12.7	27.0	25.5	39.9	33.1	5.2	14.7	65.0
					3.04	2.32	0.89	0.50	1.06	1.00	1.57	1.30	0.20	0.58	2.56
11026CR	890	0.16	200	Flanged Base, Solid Bar, T-Handle	77.0	58.8	22.65	12.7	27.0	25.5	39.9	27.0	5.2	-	65.0
					3.04	2.32	0.89	0.50	1.06	1.00	1.57	1.06	0.20	-	2.56

Dimensions and technical information subject to change without notice.

Series 1102

Specifications

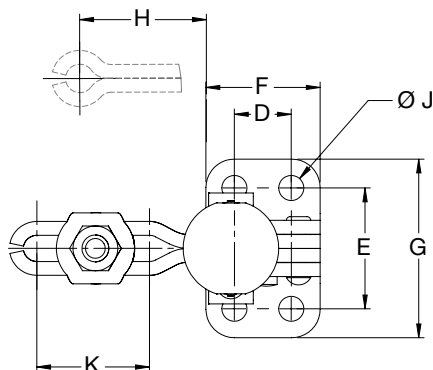
Bar Opens:	96°
Handle Opens:	62°
Spindle Supplied:	19630CR



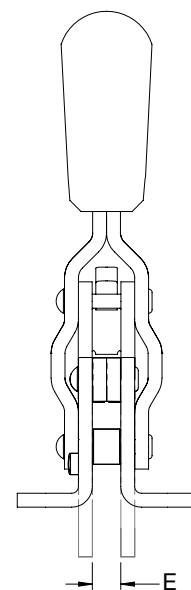
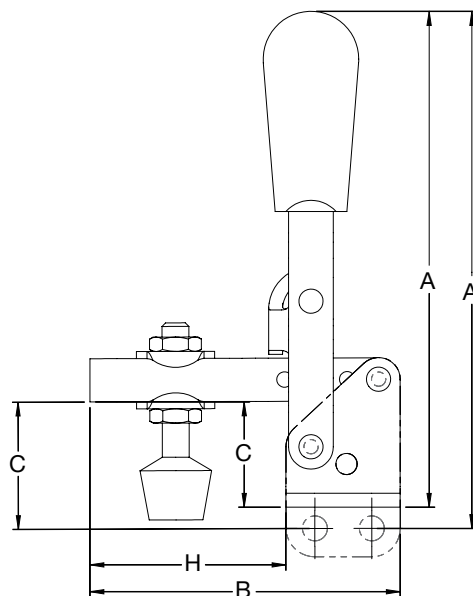
Straight Base
11022CR
11025CR



Solid Bar
11020CR
11025CR



11021CR
11028CR

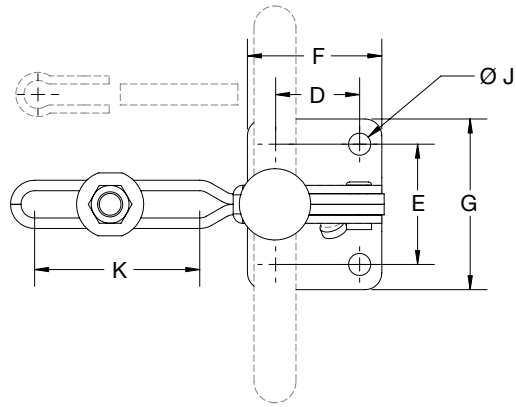


Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
11020CR	890	0.16		Flanged Base, Solid Bar	110.7	58.6	23.7	12.7	27	25.5	39.9	33.1	5.6	-
	200	0.35			4.36	2.31	0.93	0.5	1.06	1.00	1.57	1.30	0.22	-
11021CR	890	0.16		Flanged Base, U-Bar	110.7	69.2	23.5	12.7	27	25.5	39.9	43.7	5.6	25.1
	200	0.35			4.36	2.73	0.92	0.5	1.06	1.00	1.57	1.72	0.22	0.99
11022CR	890	0.16		Straight Base, U-Bar	115.5	69.2	28.2	12.7	6.4	25.5	-	43.7	5.6	25.1
	200	0.35			4.55	2.73	1.11	0.5	0.25	1.00	-	1.72	0.22	0.99
11025CR	890	0.16		Straight Base, Solid Bar	115.5	58.6	28.2	12.7	6.4	25.5	-	33.1	5.6	-
	200	0.35			4.55	2.31	1.11	0.5	0.25	1.00	-	1.30	0.22	-
11028CR	890	0.16		Flanged Base, Long U-Bar	110.7	83.5	23.5	12.7	27.0	25.5	39.9	57.5	5.6	38.4
	200	0.35			4.35	3.27	0.93	0.50	1.06	1.00	1.57	2.26	0.22	1.53

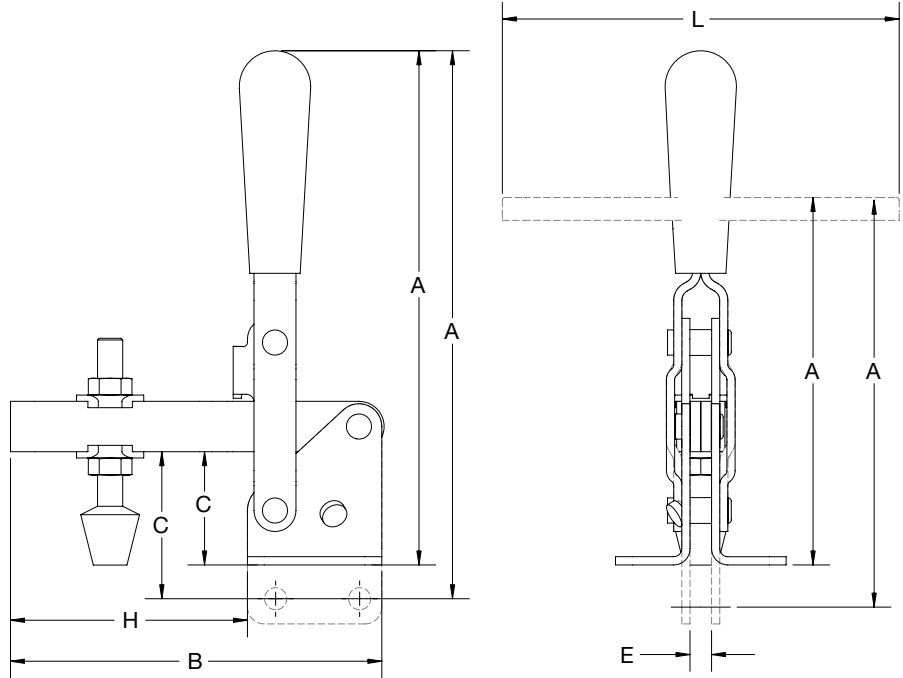
Dimensions and technical information subject to change without notice.

Series 1107

Specifications

Bar Opens: **102°**Handle Opens: **57°**Spindle Supplied: **19835CR**Straight Base
11072CRT-Handle
11073CR

11071CR



Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	L
11071CR	1670	0.30	Flanged Base, U-Bar	143.2	111.7	31.9	19.1	31.8	35.1	44.6	72.1	7.1	50.8	-
	375	0.67		5.64	4.4	1.26	0.75	1.25	1.38	1.75	2.84	0.28	2.00	-
11072CR	1670	0.35	Straight Base, U-Bar	150.8	111.7	39.3	19.1	6.4	35.1	-	72.1	7.1	50.8	-
	375	0.78		5.94	4.40	1.55	0.75	0.25	1.38	-	2.84	0.28	2.00	-
11073CR	1670	0.37	Flanged Base, U-bar, T-Handle	104.1	116.8	31.2	19.1	31.8	35.1	45.0	72.4	6.9	53.3	98.0
	375	0.82		4.10	4.60	1.23	0.75	1.25	1.38	1.77	2.85	0.27	2.10	3.86

Dimensions and technical information subject to change without notice.

Series 1107

Specifications

Bar Opens: **102°**

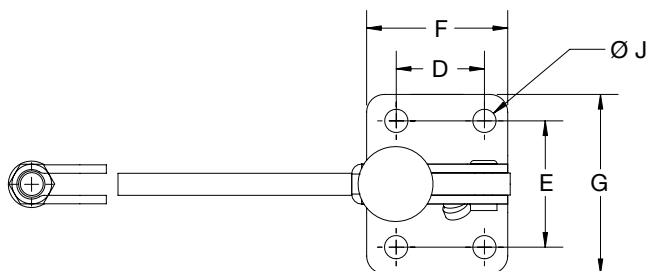
Handle Opens: **57°**

Spindle Supplied:* **19835CR**

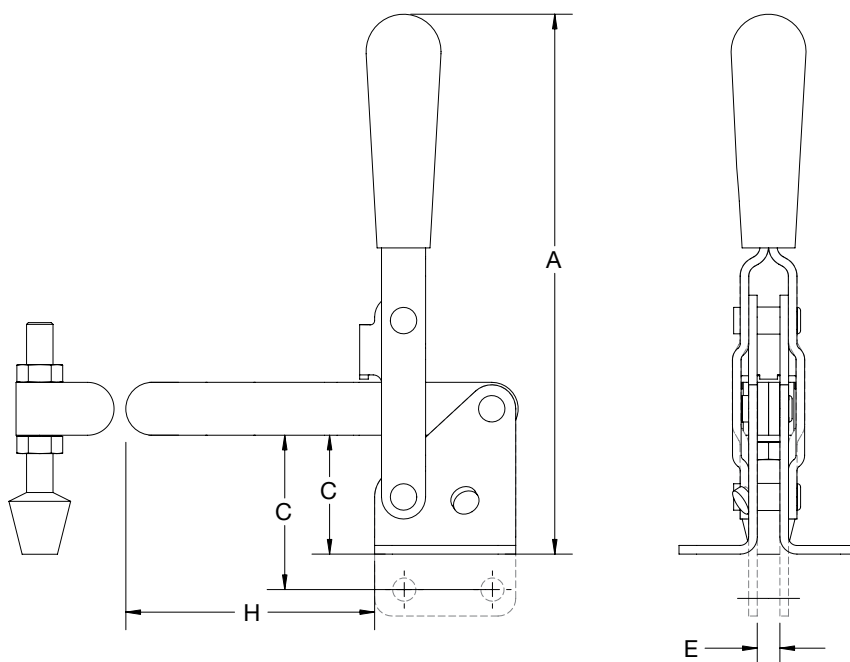
*Solid Bar versions supplied with bolt retainer.



Straight Base
11077CR
11079CR



11074CR



Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J
	N/lbf.	kg/lb.											
11074CR	2225	0.34	0.75	Flanged Base, Solid Bar	149.86	95.25	32.00	19.05	31.75	35.05	45.72	56.90	6.86
	500	0.75			5.90	3.75	1.26	0.75	1.25	1.38	1.80	2.24	0.27
11077CR	2225	0.34	0.75	Straight Base, Solid Bar	155.45	95.25	39.88	19.05	6.35	35.05	-	56.90	6.86
	500	0.75			6.12	3.75	1.57	0.75	0.25	1.38	-	2.24	0.27
11078CR	2225	0.35	0.78	Flanged Base, Long Solid Bar	141.73	121.41	32.00	19.05	31.75	35.05	44.70	86.36	6.86
	500	0.78			5.58	4.78	1.26	0.75	1.25	1.38	1.76	3.40	0.27
11079CR	2225	0.35	0.78	Straight Base, Long Solid Bar	155.45	123.19	39.88	19.05	6.35	35.05	-	88.14	6.86
	500	0.78			6.12	4.85	1.57	0.75	0.25	1.38	-	3.47	0.27

Dimensions and technical information subject to change without notice.

Series 1110

Specifications

Bar Opens: **105°**Handle Opens: **58°**Spindle Supplied:* **19312CR**

*Solid Bar versions supplied with bolt retainer.



Straight Base
11102CR
11107CR



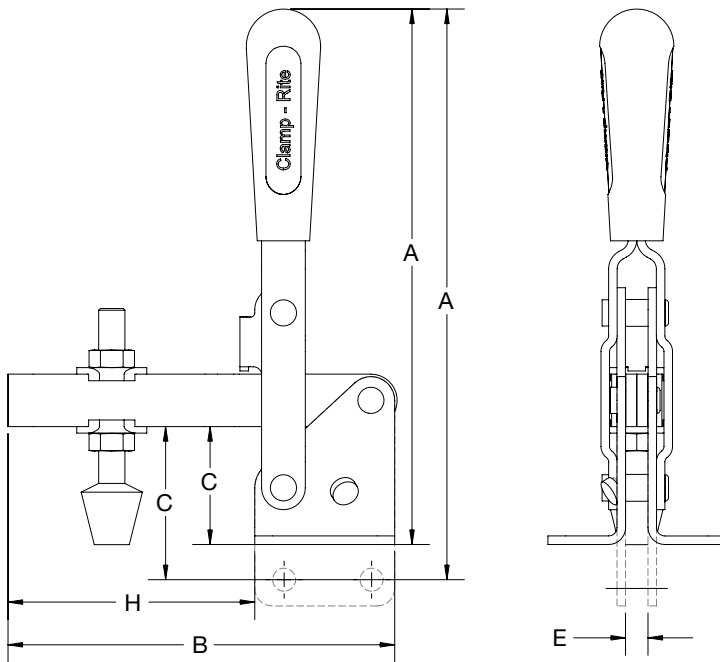
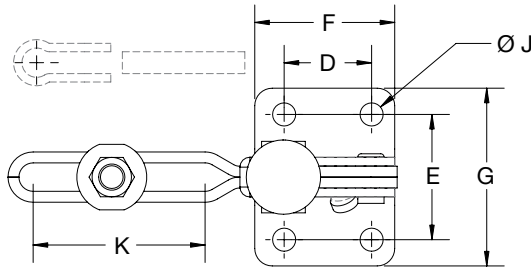
Solid Bar
11104CR
11107CR



T-Handle
11103CR



11101CR



Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K
				mm/in.									
11101CR	2670	0.59	Flanged Base, U-Bar	196	139.4	42.4	31.8	45.2	49.3	64.5	90.2	8.3	59.4
	600	1.29		7.71	5.65	1.67	1.25	1.8	1.94	2.55	3.56	0.31	2.31
11102CR	2670	0.64	Straight Base, U-Bar	214.88	143.51	55.37	31.75	7.87	49.28	-	90.42	7.87	56.64
	600	1.4		8.46	5.65	2.18	1.25	0.31	1.94	-	3.56	0.31	2.23
11103CR	2670	0.73	Flanged Base, U-Bar, T-Handle	142.24	139.70	41.15	31.75	44.96	49.28	63.50	90.42	7.87	60.96
	600	1.6		5.60	5.50	1.62	1.25	1.77	1.94	2.50	3.56	0.31	2.40
11104CR	3340	0.68	Flanged Base, Solid Bar	200.4	142	32	31.8	46.0	49.3	65	89.7	7.9	-
	750	1.5		7.89	5.59	1.26	1.25	1.81	1.94	2.56	3.53	0.31	-
11107CR	3340	0.68	Straight Base, Solid Bar	214.9	142	54.9	31.8	8.9	49.3	-	91.2	7.9	-
	750	1.5		8.46	5.59	2.16	1.25	0.35	1.94	-	3.59	0.31	-

Dimensions and technical information subject to change without notice.

Series 1147

Specifications

Bar Opens: **96°-135°**

Handle Opens: **67°-70°**

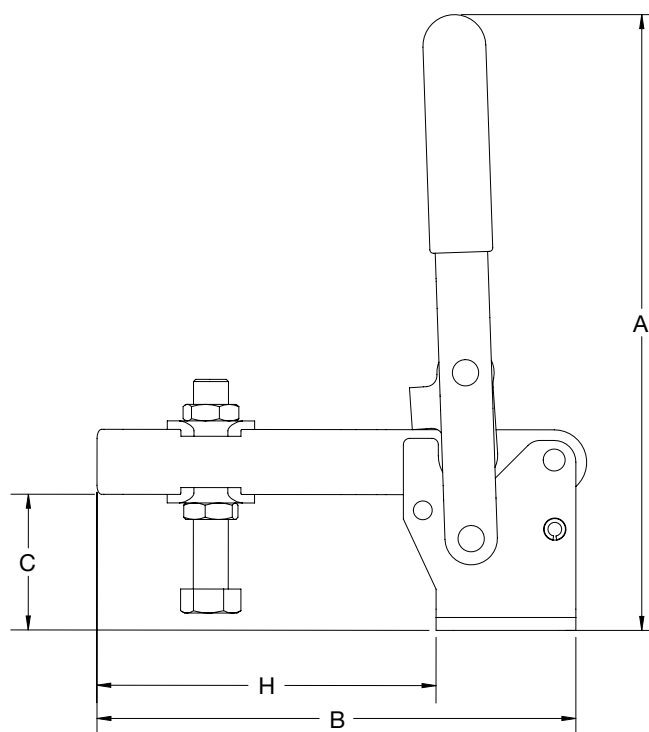
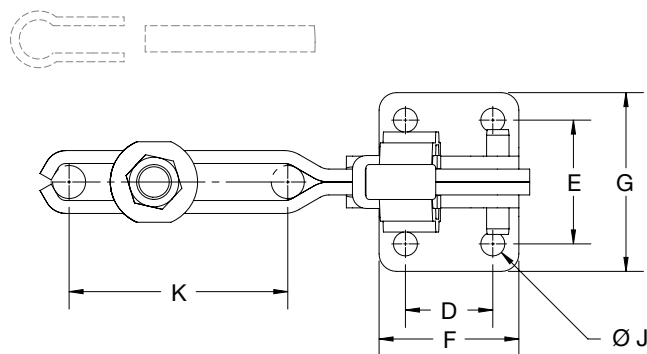
Spindle Supplied: **19310CR**



Solid Bar
11474CR
11477CR



Straight Base
11472CR
11477CR



Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
11471CR	4400	1.24	2.76	Flanged Base, U-Bar	223.8	175.0	49.5	31.8	45.0	50.8	65.0	123.7	8.9	75.7
	1000	2.76			8.81	6.89	1.95	1.25	1.77	2.00	2.56	4.87	0.35	2.98
11472CR	4400	1.24	2.76	Straight Base, U-Bar	233.9	176.3	57.2	31.8	10.0	50.8	-	125	8.7	79.0
	1000	2.76			9.21	6.94	2.25	1.25	0.39	2.00	-	4.94	0.34	3.13
11474CR	4400	1.24	2.76	Flanged Base, Solid Bar	223.8	180.9	50.8	31.8	45.0	50.8	65.0	130.1	8.9	-
	1000	2.76			8.81	7.12	2.00	1.25	1.77	2.00	2.56	5.12	0.35	-
11477CR	4400	1.24	2.76	Straight Base, Solid Bar	233.9	176.3	57.2	31.8	10.0	50.8	-	125	8.7	-
	1000	2.76			9.21	6.94	2.25	1.25	0.39	2.00	-	4.94	0.34	-

Dimensions and technical information subject to change without notice.

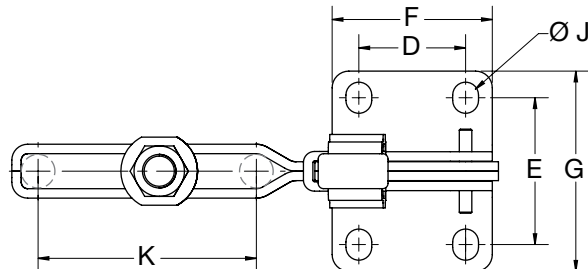
Series 1167

Specifications

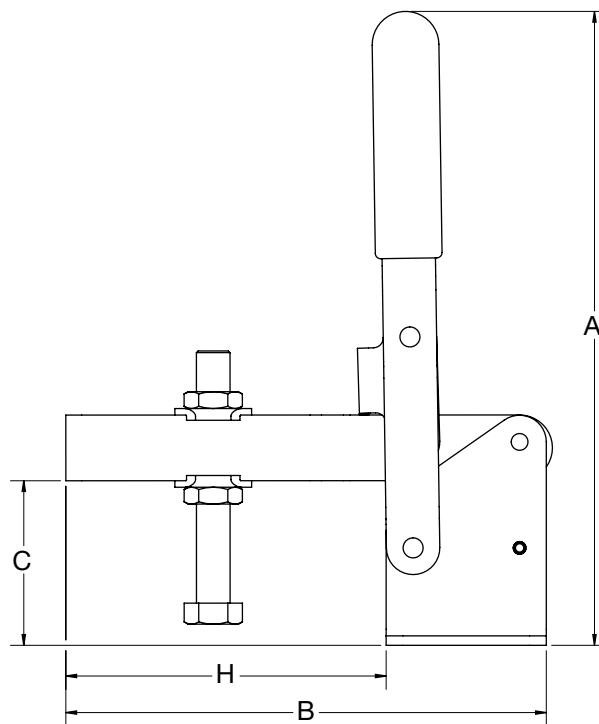
Bar Opens: 140°

Handle Opens: 60°

Spindle Type: 1/2-13 x 4.50

Solid Bar
11674CR

11671CR



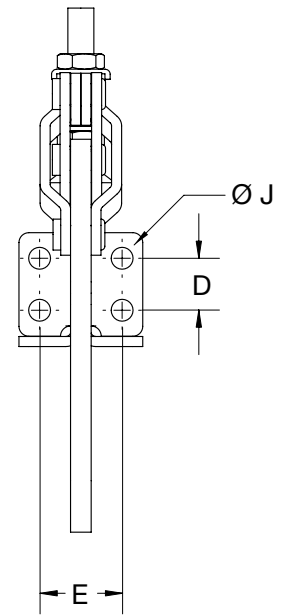
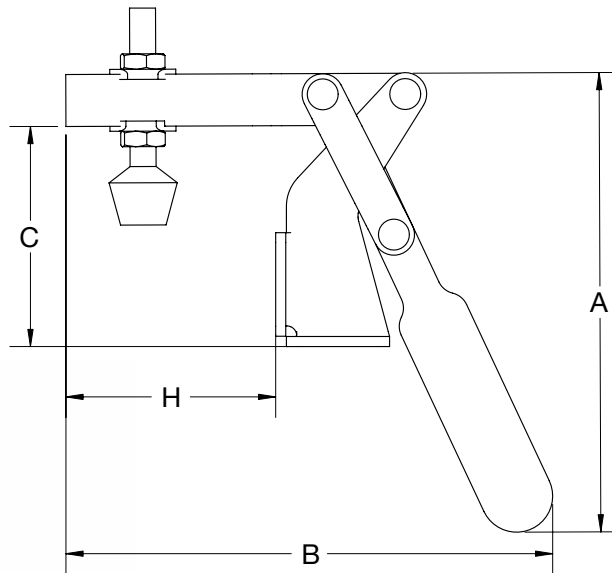
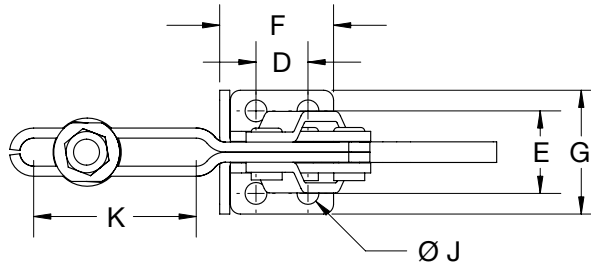
Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K
11671CR	5340	2.54	Flanged Base, U-Bar	301.5	228.6	78.2	50.8	69.9	76.2	95.2	152.2	12.2	110
	1200	5.6		11.87	9.00	3.08	2.00	2.75	3.00	3.75	5.99	0.48	4.33
11674CR	5340	2.51	Flanged Base, Solid Bar	306.6	229.2	82.6	50.8	70.0	76.2	95.2	153.0	12.3	-
	1200	5.6		12.07	9.04	3.25	2.00	2.75	3.00	3.75	6.04	0.48	-

Dimensions and technical information subject to change without notice.

Series 1117

Specifications

Bar Opens:	180°
Handle Opens:	60°
Spindle Supplied:	5/16-18 x 2.50



11170CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.		mm/in.									
11170CR	1670	0.40	Flanged Base, U-Bar	161.8	156.1	71.1	16.0	25.4	35.1	38.1	65.5	6.7	53.6
	375	0.88		6.37	6.14	2.8	0.63	1.00	1.38	1.50	2.58	0.26	2.11

Dimensions and technical information subject to change without notice.

Series 1405

Specifications

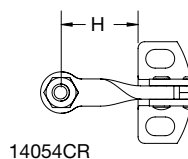
Bar Opens: 90°

Handle Opens: 50°

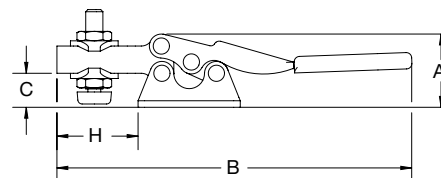
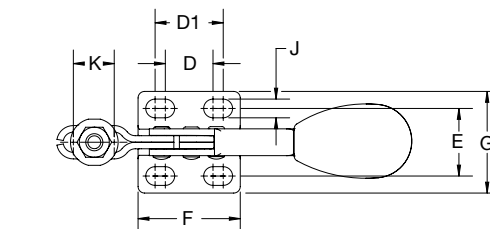
Spindle Supplied: 19420CR

Solid Bar
14054CR

14051CR



14054CR



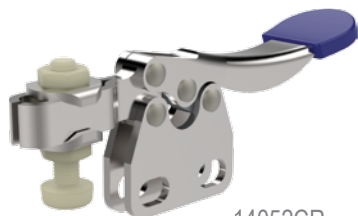
Model	Holding Capacity		Weight	Description	A	B	C	D	D1	E	F	G	H	J	K
	N/lbf.	kg/lb.													
14051CR	270	0.03	0.06	Flanged Base, U-Bar	17.3	82.7	7.4	11.1	16	15.7	23.8	23.7	18.9	4.4	9.5
	60	0.06			0.68	3.26	0.29	0.44	0.63	0.62	0.94	0.93	0.74	0.18	0.37
14054CR	270	0.03	0.06	Flanged Base, Solid Bar	17.3	86.5	9	11.1	16	15.7	23.8	23.7	18	4.4	-
	60	0.06			0.68	3.40	0.35	0.44	0.63	0.62	0.94	0.93	0.71	0.18	-

Specifications

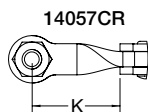
Bar Opens: 90°

Handle Opens: 50°

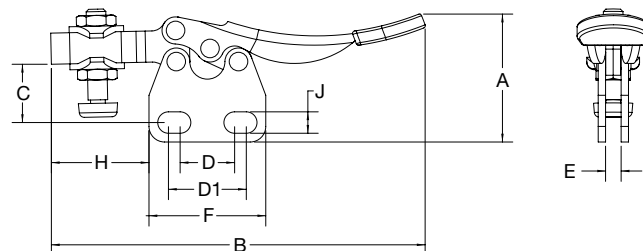
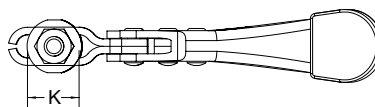
Spindle Supplied: 19421CR (Nylon)

Solid Bar
14057CR

14052CR



14057CR



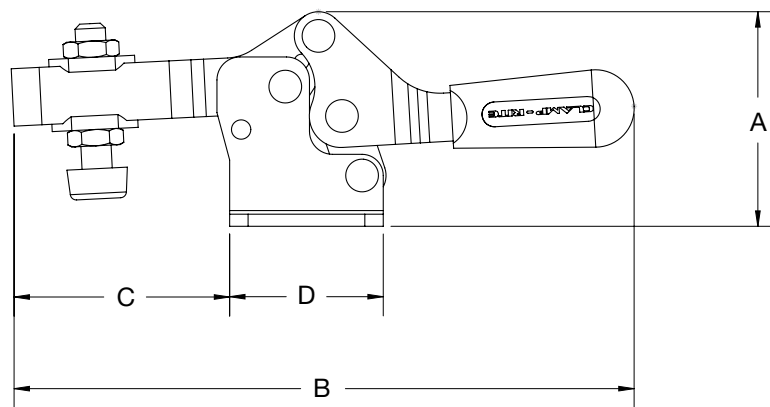
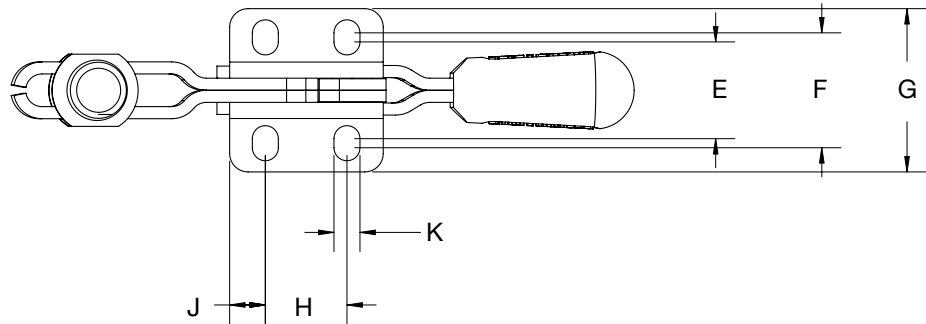
Model	Holding Capacity		Weight	Description	A	B	C	D	D1	E	F	H	J	K
	N/lbf.	kg/lb.												
14052CR	270	0.03	0.06	Straight Base, U-Bar	26.0	77.1	11.9	11.1	15.9	3.2	23.9	20.0	4.4	9.5
	60	0.06			1.00	3.04	0.47	0.44	0.63	0.12	0.94	0.79	11.9	0.37
14057CR	270	0.03	0.06	Straight Base, Solid Bar	22.0	79.0	14.0	11.1	15.9	3.2	23.9	-	4.4	17.6
	60	0.06			0.85	3.11	0.55	0.44	0.63	0.12	0.94	-	11.9	0.69

Dimensions and technical information subject to change without notice.

Series 1413

Specifications

Bar Opens:	91°
Handle Opens:	64°
Spindle Supplied:	19520CR



14131CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	J	H	K
	N/lbf.	kg/lb.		mm/in.									
14131CR	670	0.08	Flanged Base, U-bar	35.5	102.5	35.6	25.4	16.0	19.0	27.0	5.9	13.5	4.3
	150	0.17		1.40	4.04	1.40	1.00	0.63	0.75	1.06	0.23	0.53	0.17

Dimensions and technical information subject to change without notice.

Series 1415

Specifications

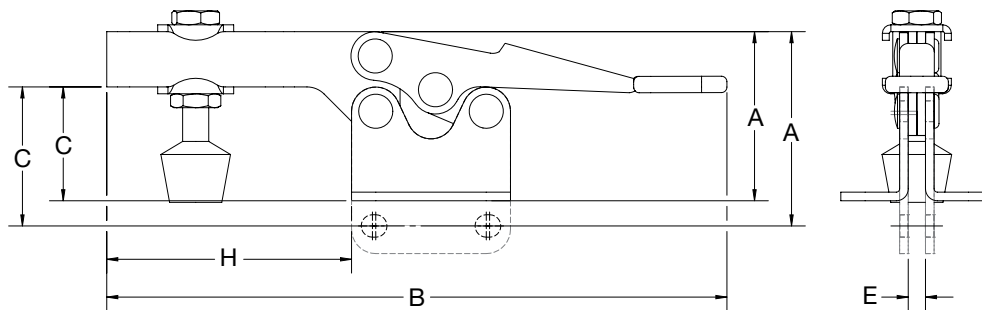
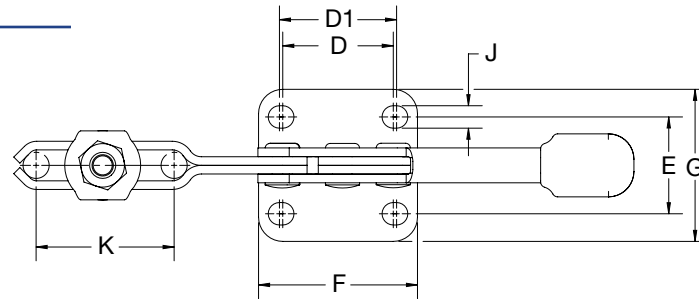
Bar Opens: 84°

Handle Opens: 70°

Spindle Supplied: 19630CR



Solid Bar
14154CR
14157CR



14151CR



14152CR

Model	Holding Capacity		Weight	Description	A	B	C	D	D1	E	F	G	H	J	K
	N/lbf.	kg/lb.													
14151CR	890	0.15	200	Flanged Base, U-Bar	38.9	142.6	25.6	26.2	26.9	22.3	36.5	35	56.3	5.2	31.1
		0.34			1.53	5.61	1.01	1.03	1.06	0.88	1.44	1.38	2.22	0.2	1.23
14152CR	890	0.15	200	Straight Base, U-Bar	44.6	142.6	37.7	26.2	26.9	4	36.5	-	56.3	5.2	31.1
		0.34			1.76	5.61	1.48	1.03	1.06	0.16	1.44	-	2.22	0.2	1.23
14154CR	890	0.15	200	Flanged Base, Solid Bar	38.9	141.3	25.6	25.4	26.9	22.3	36.5	35.0	55.0	5.2	-
		0.34			1.53	5.56	1.01	1.00	1.06	0.88	1.44	1.38	2.16	0.02	-
14157CR	890	0.15	200	Straight Base, Solid Bar	42.9	141.3	29.5	25.4	26.9	4.0	36.5	-	55.0	5.2	-
		0.34			1.69	5.56	1.16	1.0	1.06	0.16	1.44	-	2.16	0.20	-

Dimensions and technical information subject to change without notice.

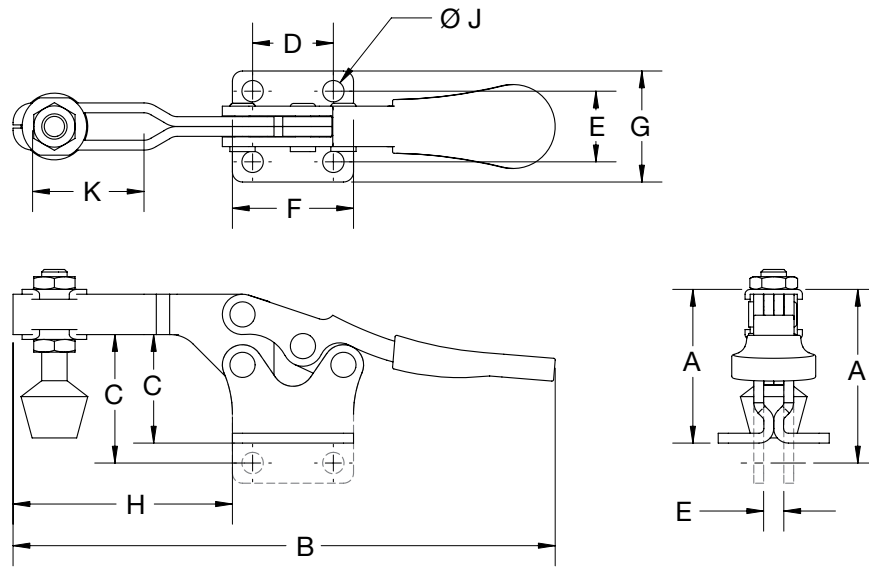
Series 1425

Specifications

Bar Opens: **92°**

Handle Opens: **70°**

Spindle Supplied: **19835CR**



14251CR



14252CR

Model	Holding Capacity	Weight	Description	mm/in.									
				A	B	C	D	E	F	G	H	J	K
14251CR	2220	0.25	Flanged Base, U-Bar	46.8	170	32.9	25.4	22.1	38.1	34.8	69.2	6.7	35
	500	0.55		1.84	6.69	1.3	1.00	0.87	1.50	1.37	2.72	0.27	1.38
14252CR	2220	0.25	Straight Base, U-Bar	53.2	170	39.3	25.4	6.2	38.1	-	69.2	6.7	35
	500	0.55		2.09	6.69	1.55	1.00	0.24	1.50	-	2.72	0.27	1.38

Dimensions and technical information subject to change without notice.

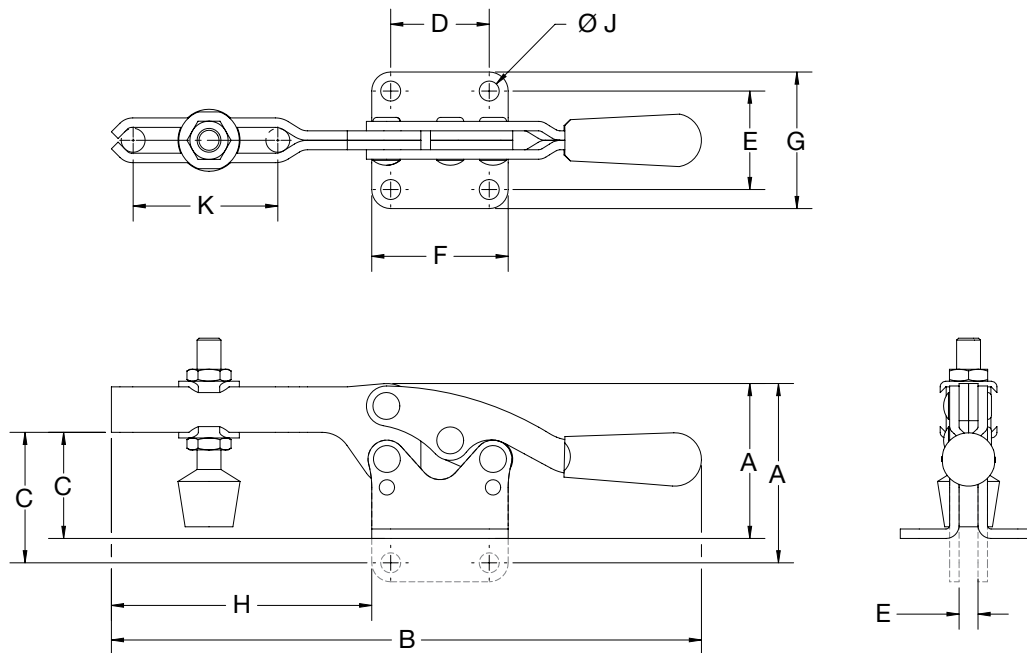
Series 1435

Specifications

Bar Opens: 92°

Handle Opens: 50°

Spindle Supplied: 19055CR



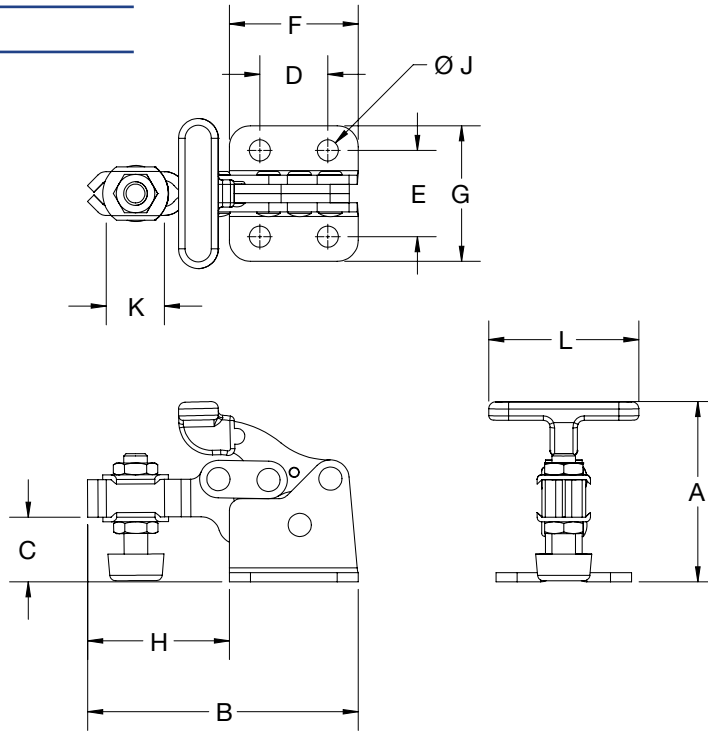
Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
14351CR	3340	0.67	Flanged Base, U-Bar	64.9	247.9	43.3	41.3	41.2	57.2	57.2	109.2	8.4	60.4	
	750	1.47		2.55	9.76	1.7	1.63	1.62	2.25	2.25	4.3	0.33	2.38	
14352CR	3340	0.67	Straight Base, U-Bar	75.1	247.9	54.7	41.3	7.9	57.2	-	109.2	8.4	60.4	
	750	1.47		2.96	9.76	2.15	1.63	0.31	2.25	-	4.3	0.33	2.38	

Dimensions and technical information subject to change without notice.

Series 160x1

Specifications

Bar Opens:	90°
Handle Opens:	170°
Spindle Supplied:	
16051CR	19525CR
16071CR	19836CR
16091CR	3/8-16 x 3.50



16071CR

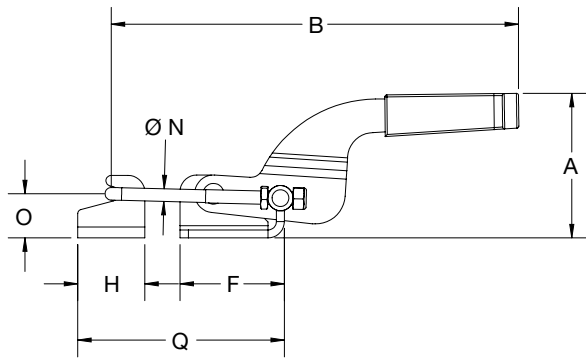
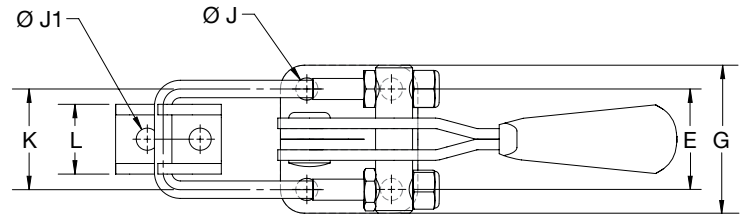
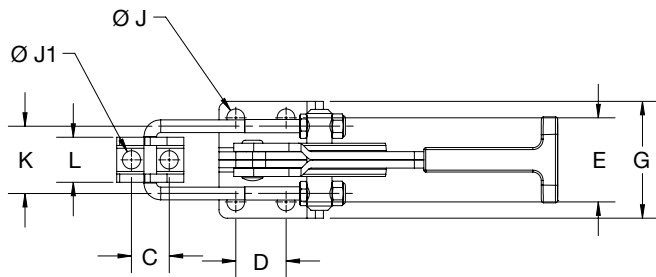
Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	L
				mm/in.										
16051CR	670	0.06	Flanged Base, U-Bar	37.3	58.4	16.5	13.5	16.8	26.2	26.2	32	4.3	11.2	33.5
	150	0.13		1.47	2.3	0.65	0.53	0.66	1.03	1.03	1.26	0.17	0.44	1.32
16071CR	1560	0.24	Flanged Base, U-Bar	61	91.7	22	23	29.2	43.7	45.9	48	7.1	19	51
	350	0.54		2.40	3.61	0.87	0.91	1.15	1.72	1.81	1.89	0.28	0.75	2.00
16091CR	3340	0.27	Flanged Base, U-Bar	94.7	135.4	33.3	35.1	38.1	64	64	71.4	7.9	33.5	63
	750	0.59		3.73	5.33	1.31	1.38	1.5	2.52	2.52	2.81	0.31	1.32	2.48

Dimensions and technical information subject to change without notice.

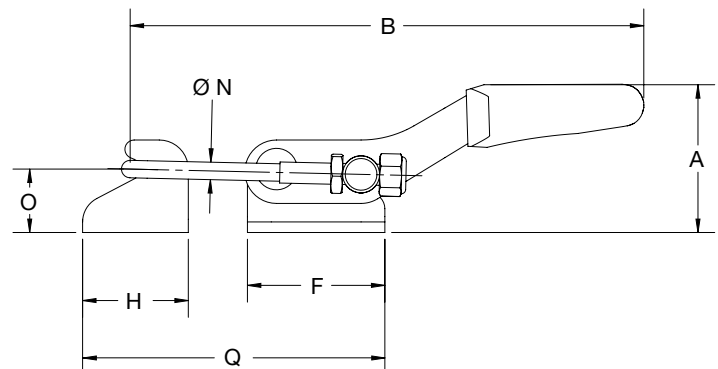
Series 12xx0

Specifications

Drawing Movement:	mm [in.]
12230	46.0 [1.81]
12310	44.5 [1.75]
12410	63.5 [2.50]



12310CR - 12410CR



12230CR

Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	J1	K	L	N	O	Q (MIN)	Q (MAX)
12230CR	1600	0.07	28	97.2	10	16	19	26	28	20	4.2	4.2	19	13.2	3.3	12	46	57.2
	360	0.16	1.10	3.83	0.39	0.63	0.75	1.02	1.10	0.79	0.17	0.17	0.75	0.52	0.13	0.47	1.81	2.25
12310CR	3200	0.25	54.5	154.1	14.3	19.1	31.8	39.5	44.1	25.4	6.7	6.9	25.4	17	4.8	16.7	64.9	78.2
	700	0.56	2.15	6.07	0.56	0.75	1.25	1.56	1.74	1.00	0.27	0.27	1.00	0.67	0.19	0.66	2.56	3.08
12410CR	8900	0.65	73.4	188.1	19.1	41.3	38.1	60.5	53.8	38.1	8.5	8.5	44.5	30.1	7.9	23.8	98.6	114.3
	2000	1.43	2.89	7.41	0.75	1.63	1.5	2.38	2.12	1.5	0.33	0.33	1.75	1.19	0.31	0.94	3.88	4.5

Dimensions and technical information subject to change without notice.

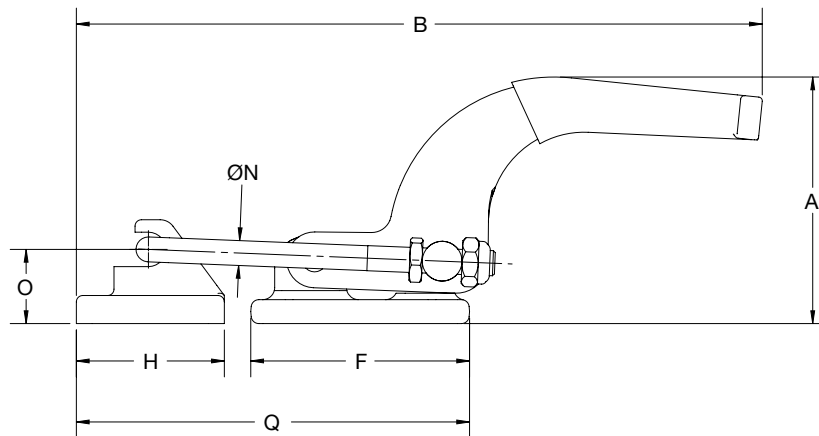
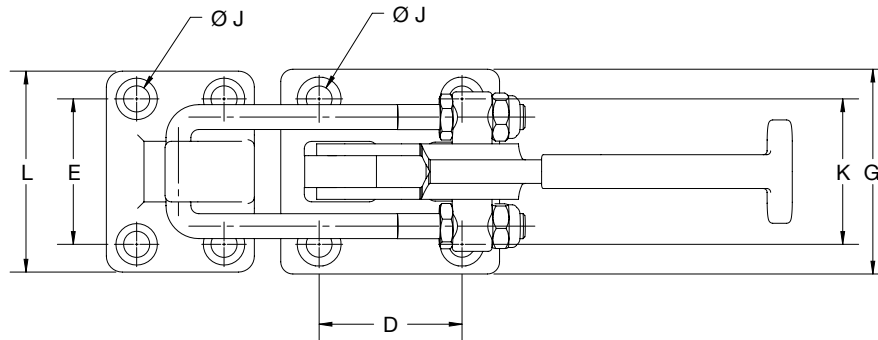
Series 12x50

Specifications

Drawing Movement: mm [in.]

12750 89 [3.50]

12850 55.6 [2.19]



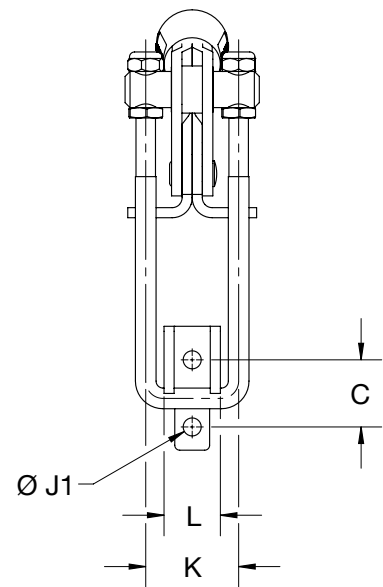
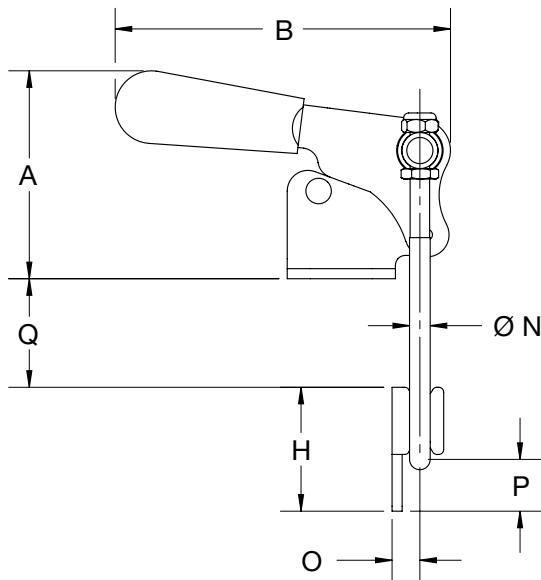
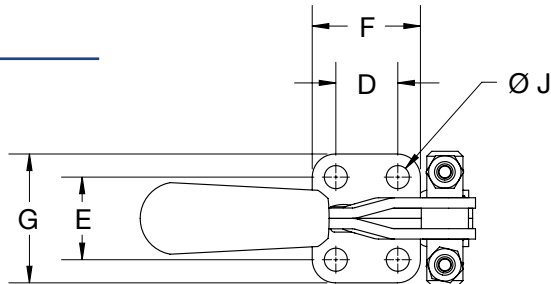
Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	K	L	N	O	Q (MIN)	Q (MAX)
			mm/in.														
12750CR	17800	1.25	100.6	289.3	34.8	56.9	57.9	87.1	81.5	58.9	10.4	43.4	79.8	9.9	29.7	158	183.1
	4000	2.78	3.96	11.39	1.37	2.24	2.28	3.43	3.21	2.32	0.41	1.71	3.14	0.39	1.17	6.22	7.21
12850CR	33300	1.47	92.2	300	34.8	56.9	57.4	87.6	81	58.9	9.6	54.8	80.3	11.7	27.4	155.7	184.2
	7500	3.26	3.63	11.8	1.37	2.24	2.26	3.45	3.19	2.32	0.38	2.16	3.16	0.46	1.08	6.13	7.25

Dimensions and technical information subject to change without notice.

Series 12x40

Specifications

Drawing Movement:	mm [in.]
12240	39 [1.53]
12340	51 [2.00]
12440	63.5 [2.50]



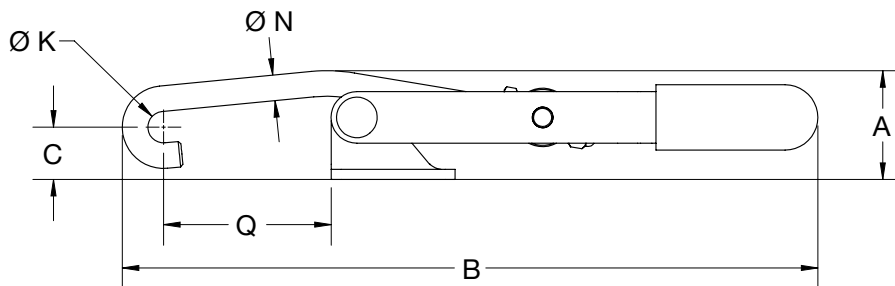
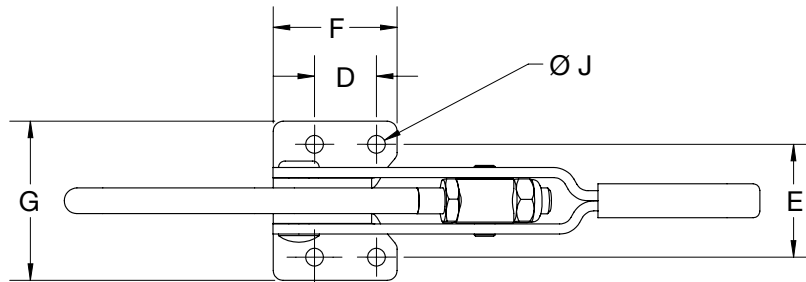
Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P	Q (MIN)	Q (MAX)
12240CR	1600	0.11	51.4	88.3	14.3	12.7	22.4	25.4	35.1	25.4	5.2	4.4	20.6	13.3	3.5	4.7	11.1	12.95	23.4
	360	0.25	2.03	3.48	0.56	0.5	0.88	1.00	1.38	1.00	0.20	0.17	0.81	0.52	0.14	0.19	0.44	0.51	0.92
12340CR	3100	0.27	63.9	103	20.6	19.1	25.4	33.3	39.6	38.1	7.1	5.6	28.6	17.3	6.4	8.8	16.7	16	34.1
	700	0.55	2.52	4.06	0.81	0.75	1.00	1.31	1.56	1.50	0.28	0.22	1.13	0.68	0.25	0.35	0.66	0.63	1.34
12440CR	8900	0.70	91.4	133.4	26.9	31.8	37.3	47.2	53.6	54.1	8.6	8.9	44.2	30.2	7.9	12.7	20.1	54.4	53.6
	2,000	1.54	3.60	5.25	1.06	1.25	1.47	1.86	2.11	2.13	0.34	0.35	1.74	1.19	0.31	0.50	0.79	2.14	2.11

Dimensions and technical information subject to change without notice.

Series 12x1x

Specifications

Drawing Movement:	mm [in.]
12510	101.6 [4.00]
12515	101.6 [4.00]
12710	136.6 [5.38]
12810	155.7 [6.13]



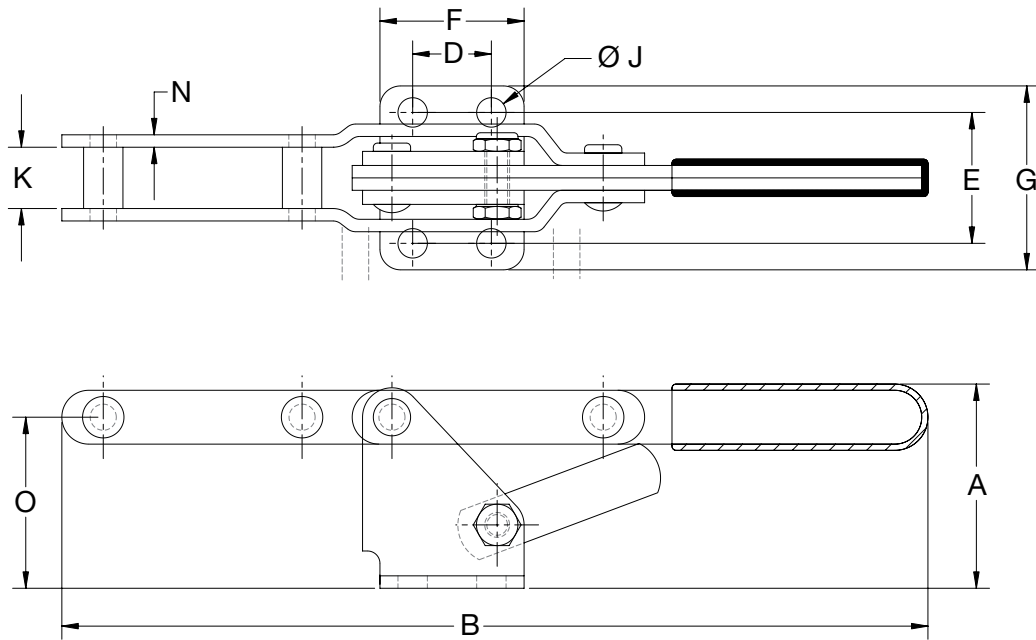
Model	Holding Capacity		Weight	A	B	C	D	E	F	G	J	K	N	Q (MIN)	Q (MAX)
	N/lbf.	kg/lb.													
mm/in.															
12510CR	1670	0.28	32.9	214	15.5	19.1	34.7	38.1	48.9	5.5	9.7	7.9	43.6	54.6	
	375	0.61	1.29	8.42	0.61	0.75	1.37	1.50	1.93	0.22	0.38	0.31	1.72	2.15	
12515CR	1670	0.28	35.7	216.9	17.3	38.1	-	50.8	14.2	6.7	9.7	7.9	30.9	42.4	
	375	0.61	1.41	8.54	0.68	1.50	-	2.00	0.56	0.27	0.38	0.31	1.22	1.67	
12710CR	3340	0.62	55.1	298.5	34.5	31.8	49	47.2	66.3	8.9	12.7	9.5	68.6	87.4	
	750	1.38	2.17	11.75	1.36	1.25	1.93	1.86	2.61	0.35	0.50	0.37	2.70	3.44	
12810CR	4450	1.12	64.3	350.5	39.6	28.7	63.2	54.1	89	10	14.7	13	69.9	91.4	
	1000	2.49	2.53	13.80	1.56	1.13	2.49	2.13	3.50	0.39	0.58	0.51	2.75	3.60	

Dimensions and technical information subject to change without notice.

Series 12x10

Specifications

Drawing Movement: mm [in.]

12010CR 101.6 [4.00]**12110CR** 85.9 [3.38]

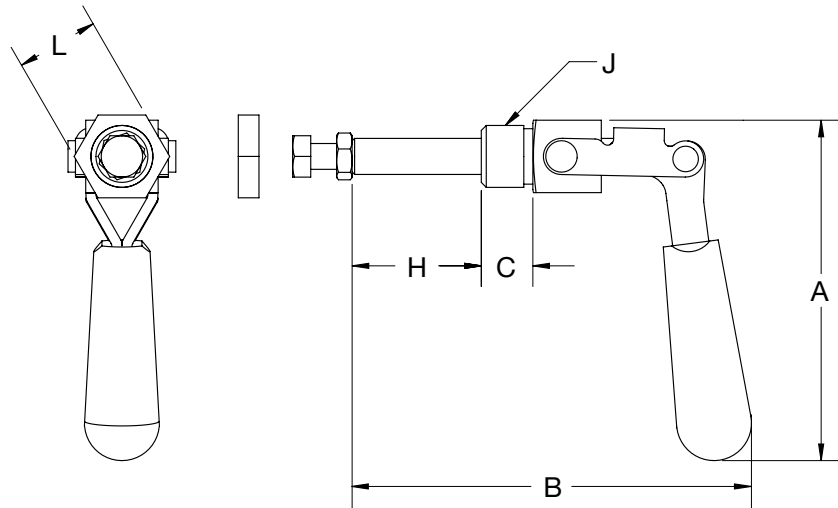
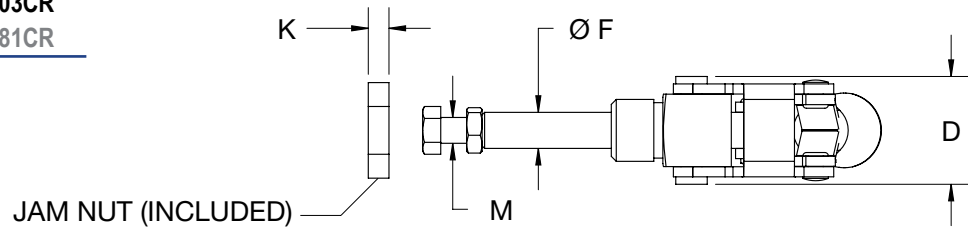
12010CR

Model	Holding Capacity		Weight	A	B	D	E	F	G	J	K	N	O
	N/lbf.	kg/lb.											
12010CR	1670	0.31	47.8	213.4	19.0	31.0	35.1	43.7	7.1	14.2	3.0	40.4	
	375	0.68	1.88	8.4	0.75	1.22	1.38	1.72	0.28	0.56	0.12	1.59	
12110CR	5340	0.53	61.9	241.2	31.8	45.2	48.4	64.3	8.4	14.3	4.0	48.6	
	1200	1.17	2.44	9.49	1.25	1.78	1.91	2.53	0.33	0.56	0.16	1.92	

Dimensions and technical information subject to change without notice.

Series 13xx

Model	Plunger Travel	Spindle Supplied
	mm/in.	
13020CRM	19	19616CR
13020CR	0.75	19145CR
13040CRM	38.1	19825CR
13040CR	1.50	19518CR
13240CRM	66.7	19103CR
13240CR	2.63	19381CR



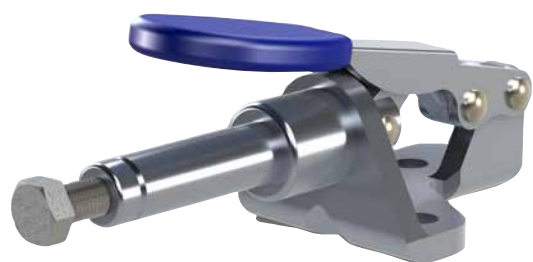
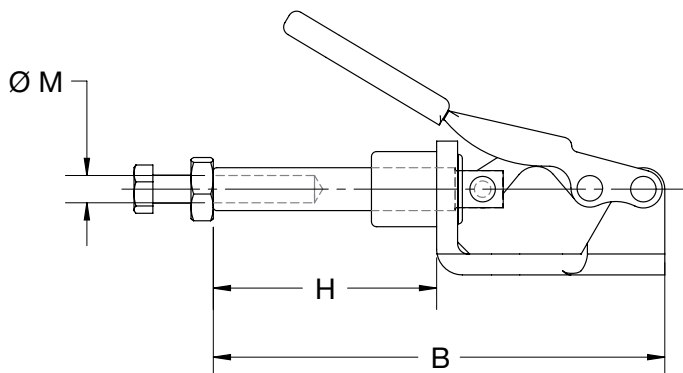
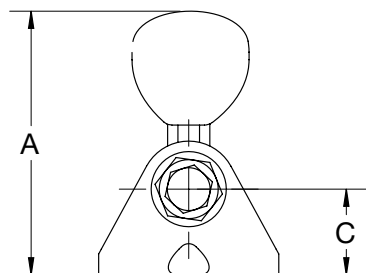
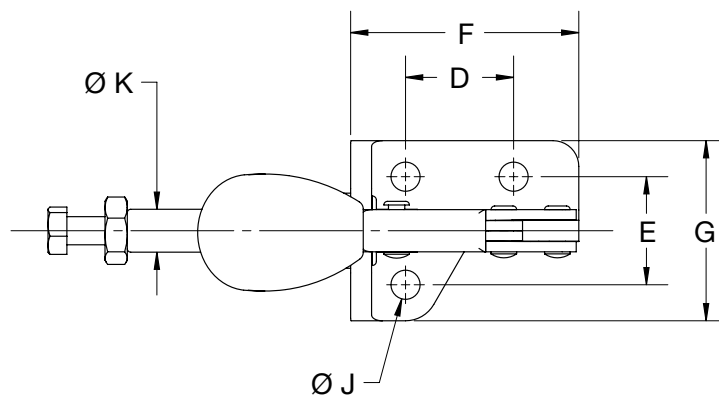
13040CRM
13040CR

Model	Holding Capacity	Weight	Description	A	B	C	D	F	H	J	K	L	M
	N/lbf.	kg/lb.		mm/in.									
13020CRM	900	0.05	Through Hole Mount, Metric Thread	79.8	66.1	12.7	26.2	10	20.6	M16X1.5	6.4	22.4	M6
13020CR	200	0.12	Through Hole Mount, Imperial Thread	3.14	2.6	0.5	1.03	0.39	0.81	5/8-18	0.25	0.88	1/4 - 20
13040CRM	1330	0.20	Through Hole Mount, Metric Thread	106.3	123.3	19.4	33.1	11.1	36.1	M20X1.5	6.4	25.4	M8
13040CR	300	0.44	Through Hole Mount, Imperial Thread	4.18	4.85	0.76	1.3	0.44	1.42	3/4-16	0.25	1.00	5/16 - 18
13240CRM	3100	0.70	Through Hole Mount, Metric Thread	137.9	170.9	22.4	47.2	16	71.1	M27x2	8.1	41	M10
13240CR	700	1.54	Through Hole Mount, Imperial Thread	5.43	6.73	0.88	1.86	0.63	2.8	1-14	0.32	1.59	3/8-16

Dimensions and technical information subject to change without notice.

Series 1301

Model	Plunger Travel mm/in.	Spindle Supplied
13010CRM	16	19421CR
13010CR	0.63	19105CR



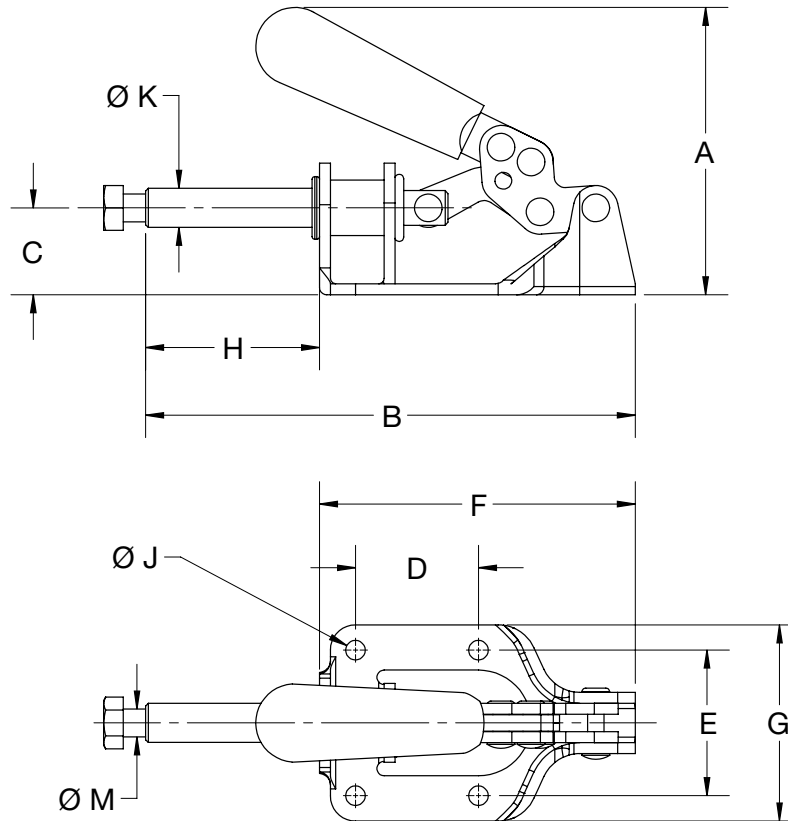
13010CRM
13010CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	J	K	M
	N/lbf.	kg/lb.		mm/in.									
13010CRM	440	0.04	Flanged Base, Metric Thread	39.1	66.9	12.7	16	16	33.8	26.7	4.3	6.2	M4
13010CR	100	0.09	Flanged Base, Imperial Thread	1.54	2.63	0.5	0.63	0.63	1.33	1.05	0.17	0.25	#8-32

Dimensions and technical information subject to change without notice.

Series 1305

Model	Plunger Travel mm/in.	Spindle Supplied
13050CRM	31.8	19825CR
13050CR	1.25	19518CR



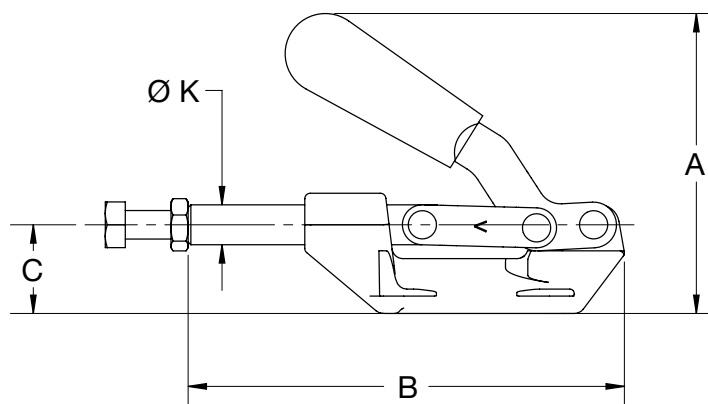
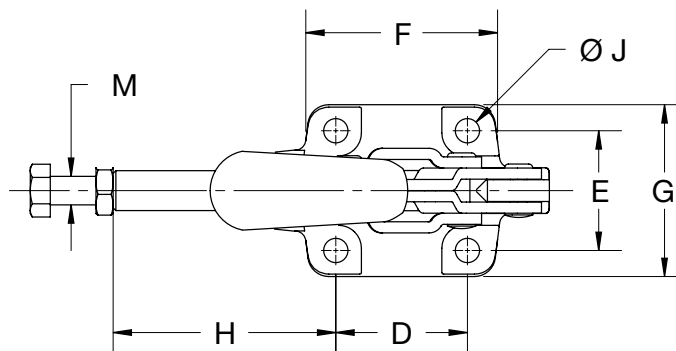
13050CRM
13050CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	J	K	M
	N/lbf.	kg/lb.		mm/in.									
13050CRM	1330	0.31	Flanged Base, Metric Thread	79.8	138.4	24.9	35.1	41.7	90.2	56.4	48.3	5.6	M8
13050CR	300	0.69	Flanged Base, Imperial Thread	3.14	5.45	0.98	1.38	1.64	3.55	2.22	1.90	0.22	5/16-18

Dimensions and technical information subject to change without notice.

Series 13xxx

Model	Plunger Travel mm/in.	Spindle Supplied
13030CRM	31.8	19825CR
13030CR	1.25	19518CR
13415CR	59.9 2.36	1/2-13 x 2.00 Hex Head Bolt
13485CRM	41.9	19103CR
13485CR	1.65	19381CR



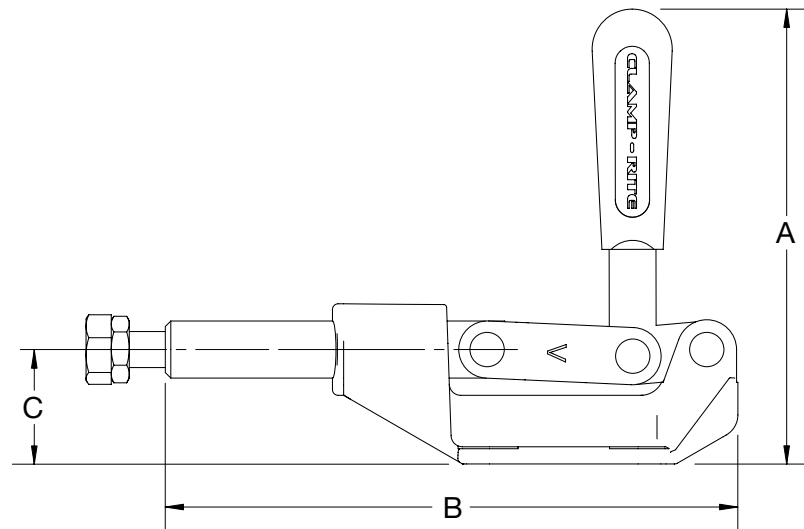
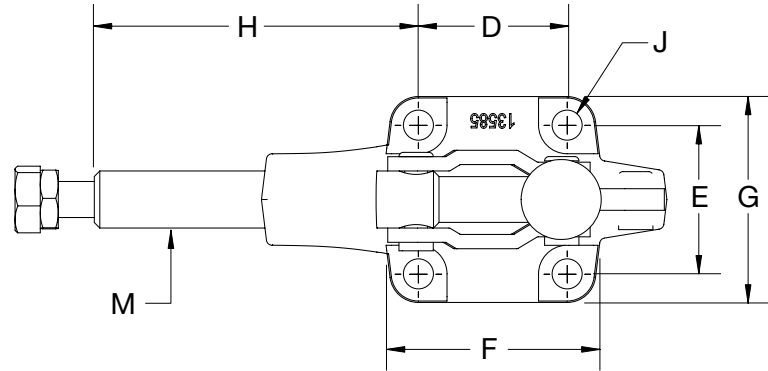
13030CRM
13030CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	M
	N/lbf.	kg/lb.		mm/in.										
13030CRM	2670	0.32	Flanged Base, Metric Thread	83.3	121.2	24.6	36.6	33.3	53.3	47.8	61.9	6.8	11.1	M8
13030CR	600	0.7	Flanged Base, Imperial Thread	3.28	4.77	0.97	1.44	1.31	2.10	1.88	2.44	0.27	0.44	5/16-18
13415CR	6800 1500	1.50 3.30	Flanged Base, Imperial Thread	137.1 5.40	238.5 9.39	44.4 1.75	50.8 2.00	50.8 2.00	73.2 2.88	71.4 2.81	129.8 5.11	8.3 0.33	19.2 0.76	1/2-13
13485CRM	3780	0.58	Flanged Base, Metric Thread	97	159.3	31.8	41.1	41.4	59.2	57.2	90.5	8.4	15.6	M10
13485CR	850	1.28	Flanged Base, Imperial Thread	3.82	6.27	1.25	1.62	1.63	2.33	2.25	3.56	0.33	0.62	3/8-16

Dimensions and technical information subject to change without notice.

Series 135x5

Model	Plunger Travel mm/in.	Spindle Supplied
13515CR	59.4 2.36	1/2-13 x 2.00 Hex Head Bolt
13585CR	41.9 1.65	3/8-16 x 1.25 Hex Head Bolt



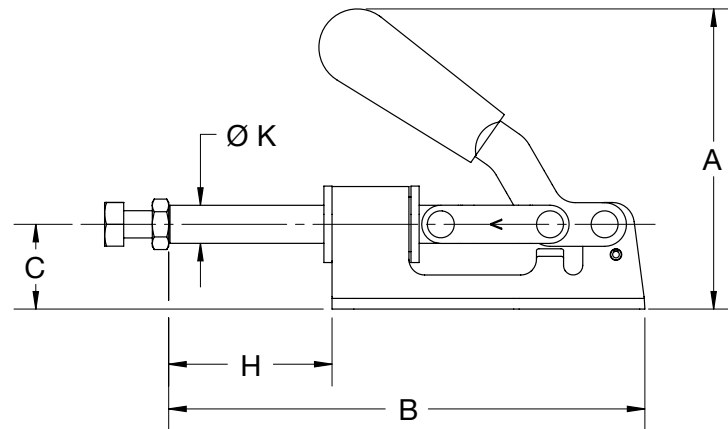
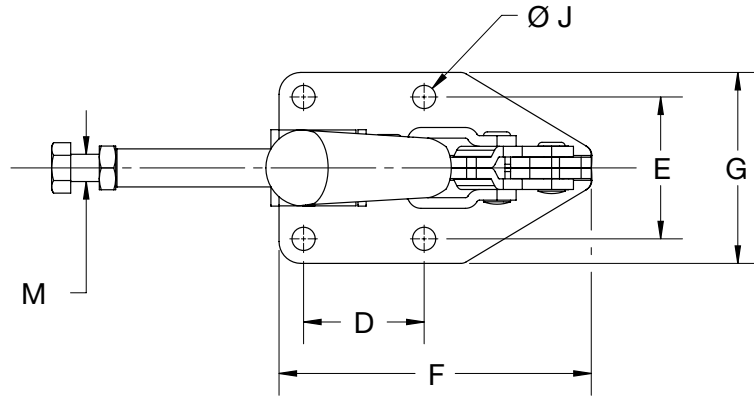
13585CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	N
	N/lbf.	kg/lb.		mm/in.										
13585CR	3780	0.58	Flanged Base, Imperial Thread	120.7	162.8	31.8	40.6	41.1	59.2	57.2	79.8	8.4	15.7	3/8-16
	850	1.28		4.75	6.41	1.25	1.60	1.62	2.33	2.25	3.14	0.33	0.62	
13515CR	6675	1.48	Flanged Base, Imperial Thread	176.0	238.3	46.5	50.8	51.3	72.4	71.6	146.1	8.9	17.8	1/2-13
	1500	3.26		6.93	9.38	1.83	2.00	2.02	2.85	2.82	5.75	0.35	0.70	

Dimensions and technical information subject to change without notice.

Series 1309

Model	Plunger Travel	Spindle Supplied
	mm/in.	
13090CRM	31.8	19825CR
13090CR	1.25	19518CR



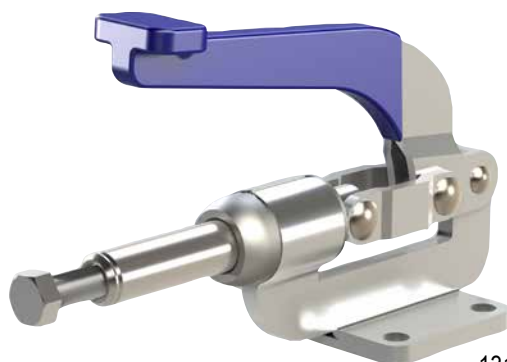
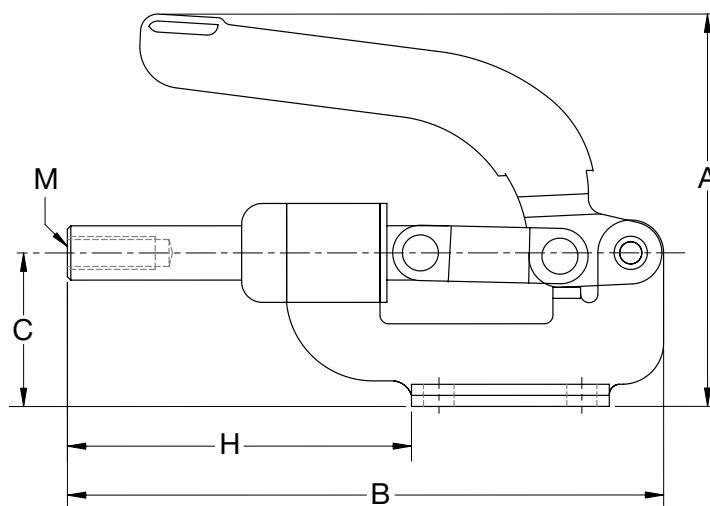
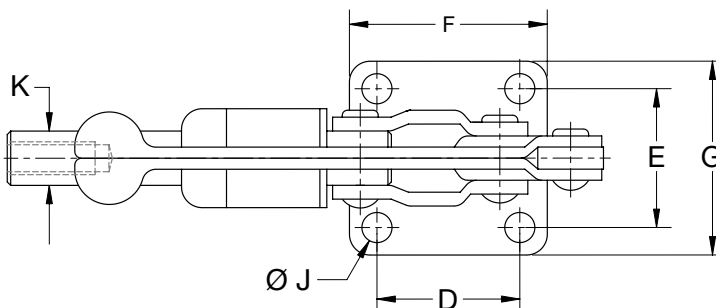
13090CRM
13090CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	M
	N/lbf.	kg/lb.												
				mm/in.										
13090CRM	1330	0.40	Flanged Base, Metric Thread	84	138.6	24.6	35.1	41.2	91	55.5	47.6	6.6	12.7	M8
13090CR	300	0.88	Flanged Base, Imperial Thread	3.31	5.46	0.97	1.38	1.62	3.58	2.19	1.87	0.27	0.50	5/16-18

Dimensions and technical information subject to change without notice.

Series 1310

Model	Plunger Travel mm/in.	Spindle Supplied
13100CRM	41.4	19103CR
13100CR	1.63	19381CR



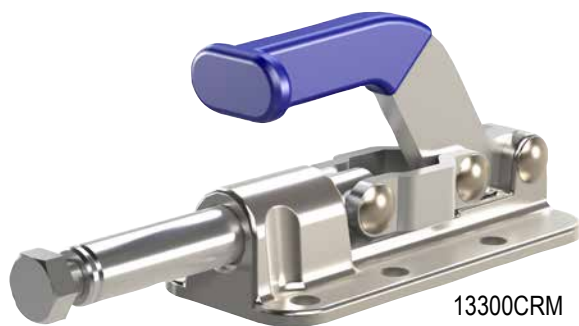
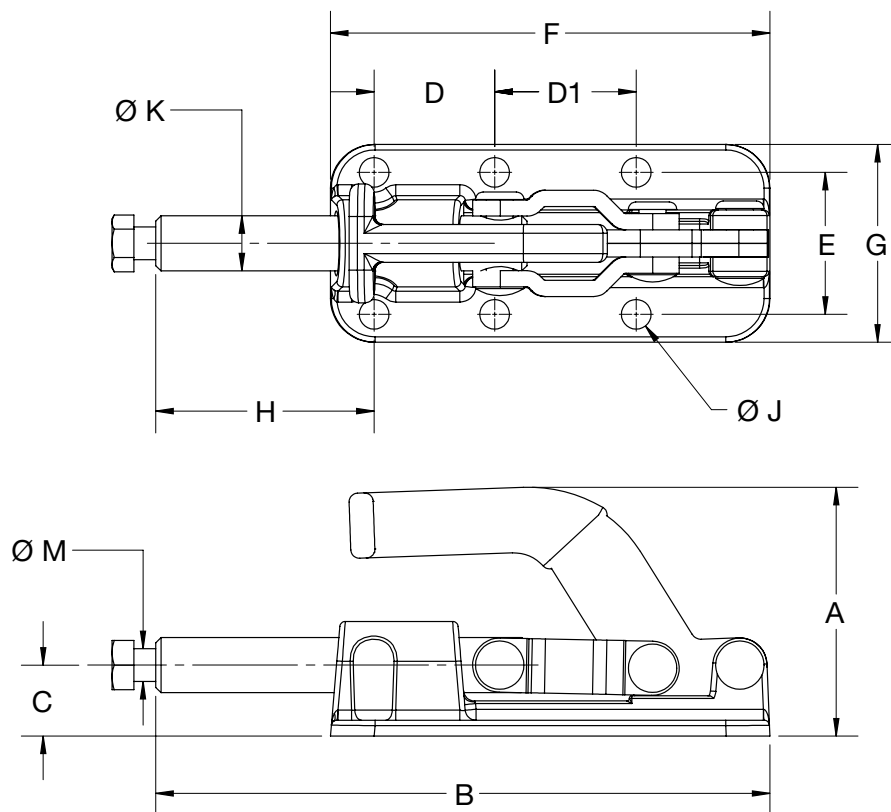
13100CRM
13100CR

Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K	M
	N/lbf.	kg/lb.		mm/in.										
13100CRM	3560	0.8	Flanged Base, Metric Thread	128	173.2	44.5	41.4	40.1	57.2	55.9	107.4	8.6	15.7	M10
13100CR	800	1.76	Flanged Base, Imperial Thread	5.04	6.82	1.75	1.63	1.58	2.25	2.2	4.23	0.34	0.62	3/8-16

Dimensions and technical information subject to change without notice.

Series 13xx0

Model	Plunger Travel mm/in.	Spindle Supplied
13070CRM	41.2	19825CR
13070CR	1.62	19518CR
13300CRM	50.8	19103CR
13300CR	2.00	19381CR



13300CRM
13300CR

Model	Holding Capacity	Weight	Description	A	B	C	D	D1	E	F	G	H	J	K	M
	N/lbf.	kg/lb.		mm/in.											
13070CRM	3560	0.76	Flanged Base, Metric Thread	83.3	155	17.3	35	41.1	41.1	109.2	55.4	62.7	7.1	12.5	M8
13070CR	800	1.7	Flanged Base, Imperial Thread	3.28	6.1	0.68	1.38	1.62	1.62	4.3	2.18	2.47	0.28	0.49	5/16-18
13300CRM	11.1kN	0.92	Flanged Base, Metric Thread	72.3	178.6	20.6	35.1	41.1	41.3	127.8	57.5	63.5	8.6	16	M10
13300CR	2500	2.06	Flanged Base, Imperial Thread	2.85	7.03	0.81	1.38	1.62	1.63	5.03	2.27	2.50	0.34	0.63	3/8-16

Dimensions and technical information subject to change without notice.

Standard Accessories

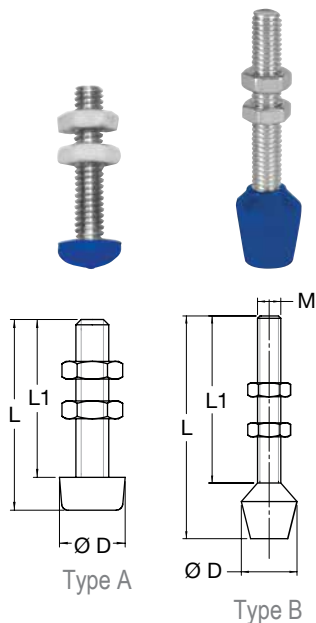
Flat Cushion Tip Bonded Cap Spindle (includes two jam nuts)

Model	D	M	L	L1	Type
mm/in.					

19218CR	16 0.63	1/4-20	54.1 2.13	40.1 1.58	B
19316CR	21 0.83	5/16-18	76.2 3.00	58.2 2.29	B
19312CR	22.2 0.88	3/8-16	89.0 3.50	63.5 2.50	B

Model	D	M	L	L1	Type
mm/in.					

19420CR	.8 0.31	M4X0.7	22 0.87	20 0.78	A
19525CR	10 0.39	M5X0.8	29 1.14	25 0.98	A
19836CR	19 0.75	M8X1.25	45.3 1.78	32.6 1.28	A
19630CR	16 0.63	M6X1.0	44 1.73	30 1.18	B
19835CR	21 0.83	M8X1.25	53 2.09	35 1.38	B
19055CR	26 1.02	M10X1.5	79 3.11	55 2.17	B



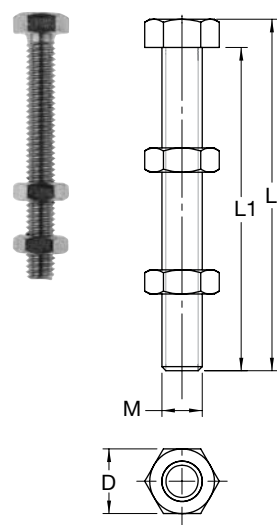
Standard Adjustable Spindle (includes two jam nuts)

Model	D	M	L	L1
mm/in.				

19105CR *	6.4 0.25	#8-32	21.8 0.86	19 0.75
19145CR	11.2 0.44	1/4-20	20.4 0.80	16 0.63
19518CR	12.7 0.50	5/16-18	31 1.22	25.4 1.00
19381CR	14.2 0.56	3/8-16	38.1 1.50	31.8 1.25
19310CR	19 0.75	1/2-13	84 3.31	76.2 3.00
19450CR	19 0.75	1/2-13	122.2 4.81	114.3 4.50

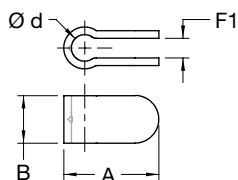
Model	D	M	L	L1
mm/in.				

19421CR *	7 4.77	M4 x 0.7	21.8 0.86	19 0.75
19616CR	10 0.39	M6 x 1.0	22 0.87	20 0.78
19825CR	13 0.51	M8 x 1.25	29 1.14	25 0.98
19103CR	17 0.67	M10 x 1.5	43 1.69	35 1.38



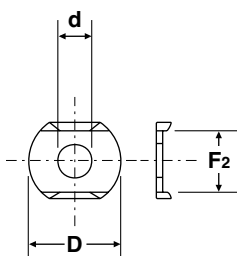
* Material: Nylon

Standard Accessories



Bolt Retainer

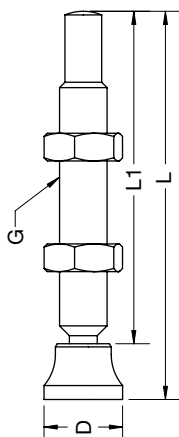
Model	A	B	F1	d
mm/in.				
19516CR	30.5	16.3	6.4	8.1
	1.20	0.64	0.25	0.32
19380CR	16.3	18.8	8.4	10.4
	37.3	0.74	0.33	0.41
19120CR	43.2	30.2	9.7	17.0
	1.70	1.19	0.38	0.67



Flanged Washers (qty: 2)

Model	For Spindle Diameter	D	d	F2
mm/in.				
19510CR	M5 or #10	14.2	5.1	9.6
		0.56	0.2	0.38
19614CR	M6 or 1/4	17.5	6.7	12.7
		0.69	0.26	0.5
19851CR	M8 or 5/16	22.4	8.4	15.2
		0.88	0.33	0.6
19106CR	M10 or 3/8	25.4	10.5	19.1
		1.00	0.41	0.75
19109CR	M12 or 1/2	32.0	13.5	23.2
		1.26	0.53	0.91

Swivel Foot Spindle



Model	D	G	L	L1
mm/in.				
19300CR	16.0	3/8-16	6.4	8.1
	0.63		0.25	0.32
19214CR	10.9	1/4-20	8.4	10.4
	0.43		0.33	0.41
19234CR	11.9	5/16-18	9.7	17.0
	0.47		0.38	0.67
19219CRM	12.0	M6	62.0	54.0
	0.47		2.44	2.13
19317CRM	16.0	M8	73.0	62.5
	0.63		2.87	2.46
19313CRM	16.0	M10	84.0	71.0
	0.63		3.31	2.8

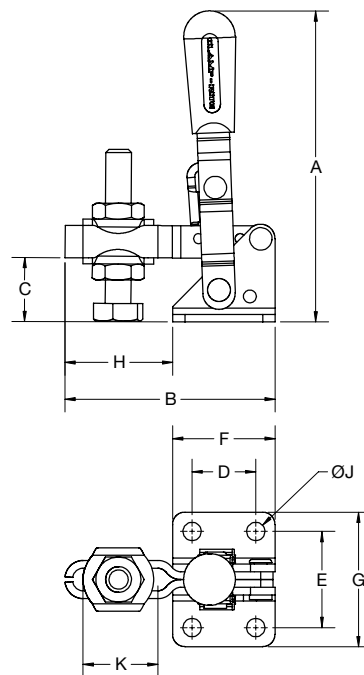
Dimensions and technical information subject to change without notice.

Series 1101-SS

Specifications

Bar Opens: **100°**Handle Opens: **55°**Spindle Supplied: **19530CR-SS**

11011CR-SS



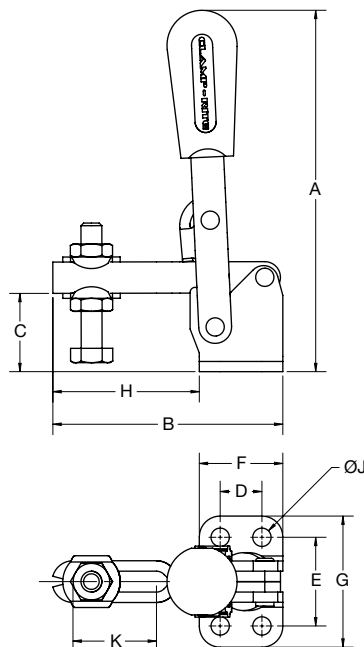
Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.												
11011CR-SS	560	0.7	Flanged Base, U-Bar	76.9	52	15.8	15.7	23.8	25.4	33.3	26.6	4.5	18.5
	125	0.15		3.03	2.05	0.62	0.62	0.94	1.00	1.31	1.05	0.18	0.73

Series 1102-SS

Specifications

Bar Opens: **105°**Handle Opens: **65°**Spindle Supplied: **19640CR-SS**

11021CR-SS



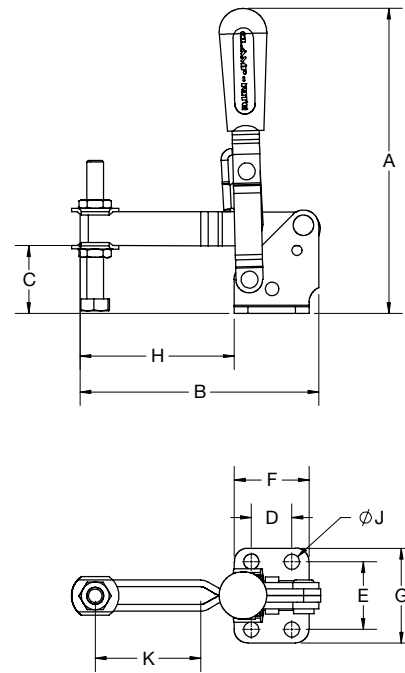
Model	Holding Capacity	Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.												
11021CR-SS	1110	0.16	Flanged Base, U-Bar	109.9	69.9	23.8	12.7	27	25.4	39.9	44.5	5.6	25.4
	250	0.35		4.33	2.75	0.94	0.5	1.06	1.00	1.57	1.75	0.22	1.00

Dimensions and technical information subject to change without notice.

Series 1107-SS

Specifications

Bar Opens:	99°
Handle Opens:	57°
Spindle Supplied:	19865CR-SS



Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
11071CR-SS	1670	0.30	0.30	Flanged Base, U-Bar	143.1	112	31.8	19.1	31.8	35.1	44.5	72.4	7.1	49.5
	375	0.67			5.64	4.41	1.26	0.75	1.25	1.38	1.75	2.85	0.28	1.95

Dimensions and technical information subject to change without notice.

Series 14xx1-SS

Specifications

Bar Opens: 92°

Handle Opens: 70°

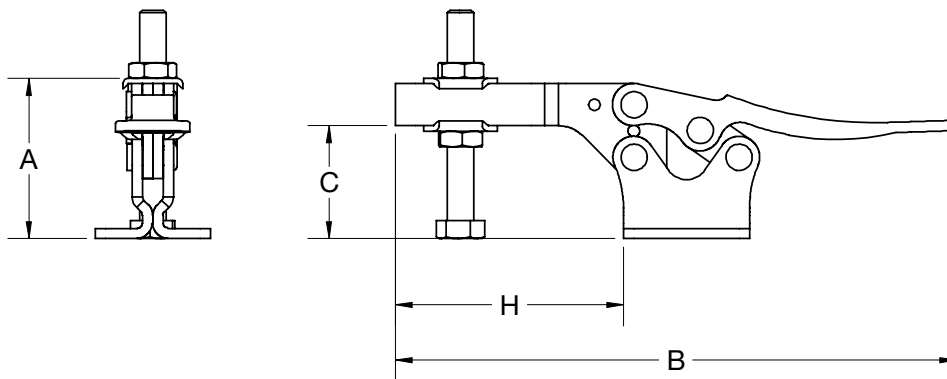
Spindle Supplied:

14051CR-SS 19408CR-SS

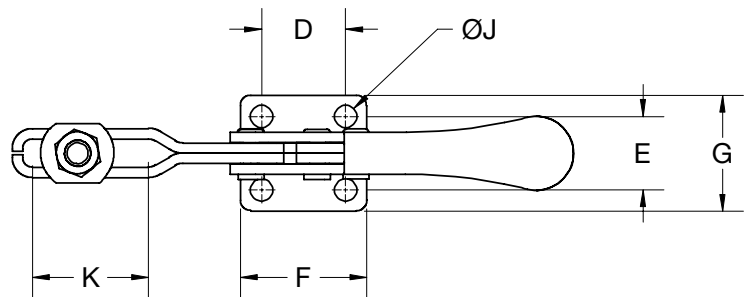
14131CR-SS 19530CR-SS

14151CR-SS 19640CR-SS

14251CR-SS 19865CR-SS



14251CR-SS



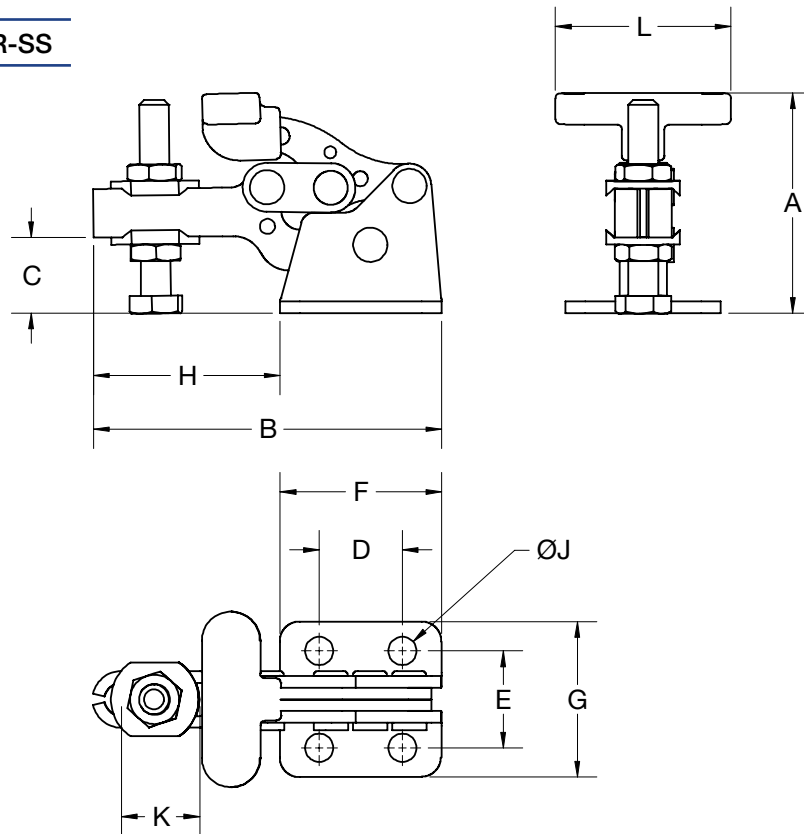
Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K
	N/lbf.	kg/lb.												
14051CR-SS	340	0.03	0.06	Flanged Base, U-Bar	17.3	82.7	7.4	11.1	15.7	23.8	23.7	18.9	4.4	9.5
	75	0.06			0.68	3.26	0.29	0.44	0.62	0.98	0.93	0.74	0.18	0.37
14131CR-SS	670	0.08	0.17	Flanged Base, U-Bar	35.3	102.9	23.3	13.5	19.0	25.4	27.0	36.0	4.3	21.5
	150	0.17			1.39	4.05	0.92	0.53	0.75	1.00	1.06	1.42	0.17	0.85
14151CR-SS	1110	0.15	0.34	Flanged Base, U-Bar	38.9	138.6	35.8	27.0	22.0	36.4	35.0	56.6	6.0	32.0
	250	0.34			1.53	5.46	1.41	1.06	0.87	1.43	1.38	2.23	0.24	1.26
14251CR-SS	2670	0.27	0.59	Flanged Base, U-Bar	48.4	169.6	34.1	25.4	22.2	38.1	34.9	69	6.7	35
	600	0.59			1.91	6.68	1.34	1	0.88	1.5	1.38	2.72	0.27	1.38

Dimensions and technical information subject to change without notice.

Series 160x1-SS

Specifications

Bar Opens:	90°
Handle Opens:	170°
Spindle Supplied:	19530CR-SS



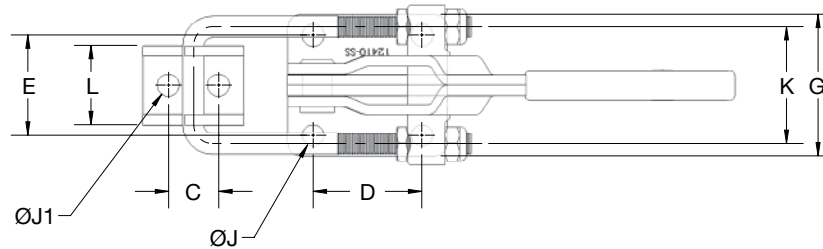
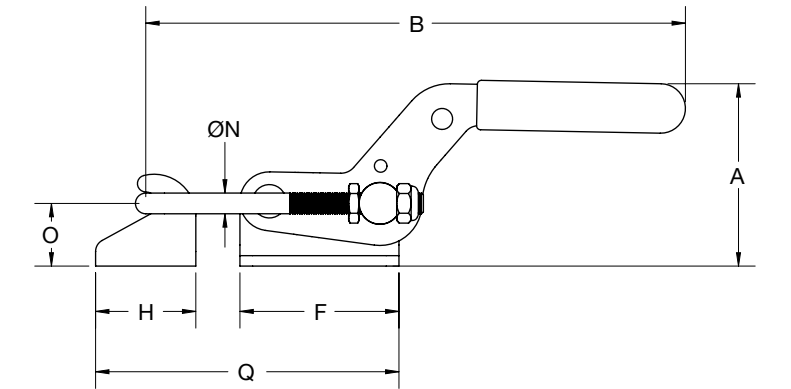
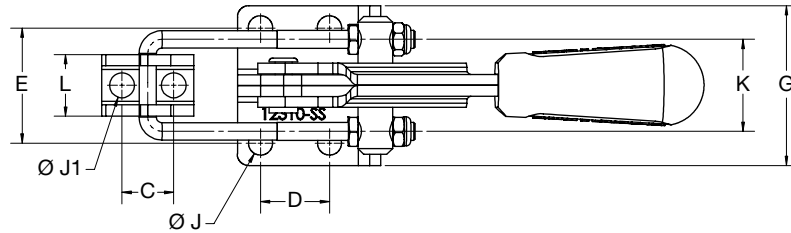
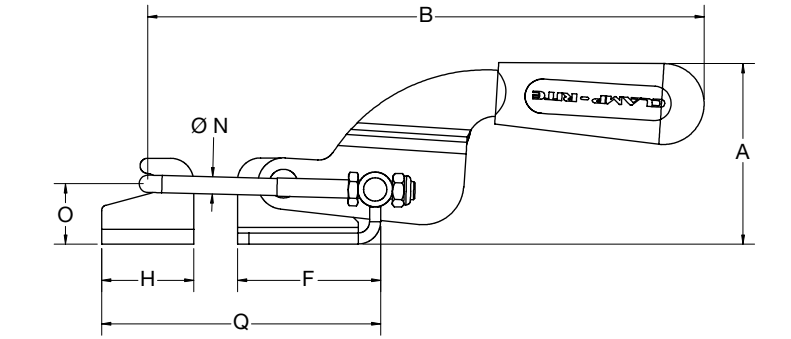
Model	Holding Capacity		Weight	Description	A	B	C	D	E	F	G	H	J	K	L
	N/lbf.	kg/lb.													
16051CR-SS	890	0.06	0.06	Flanged Base, U-Bar	35.7	56.4	12.3	13.5	15.7	26.2	25.1	30.3	4.6	12.7	28.4
	200	0.13			1.41	2.22	0.48	0.53	0.62	1.03	0.99	1.19	0.18	0.5	1.12
16071CR-SS	1558	0.23	0.51	Flanged Base, U-Bar	59.9	91.7	22.6	23.1	29.0	43.7	45.7	48.1	7.1	19.1	48.0
	350	0.51			2.36	3.61	0.89	0.91	1.14	1.72	1.80	1.89	0.28	0.75	1.89

Dimensions and technical information subject to change without notice.

Series 12xx0-SS

Specifications

Drawing Movement:	mm [in.]
12230	46.0 [1.81]
12310	44.5 [1.75]
12410	63.5 [2.50]



Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	J1	K	L	N	O	Q (MIN)	Q (MAX)
12230CR-SS	1600	0,07	28	97.5	10	16	19.1	26	28	20	4.2	4.2	19.1	13.2	3.3	12	46	57.2
	360	0.15	1.10	3.84	0.39	0.63	0.75	1.02	1.10	0.79	0.17	0.17	0.75	0.52	0.13	0.47	1.81	2.25
12310CR-SS	3200	0,25	49.8	153.7	14.3	19.1	31.8	39.5	44.1	25.4	6.7	6.9	25.4	17	4.8	16.7	64.9	77
	700	0.56	1.96	6.05	0.56	0.75	1.25	1.56	1.74	1.00	0.27	0.27	1.00	0.67	0.19	0.66	2.56	3.08
12410CR-SS	8900	0,65	69.5	203.8	19.1	41.3	38.1	60.5	53.8	38.1	8.5	8.5	44.5	30.1	7.9	23.8	98.6	114
	2000	1.43	2.73	8.03	0.75	1.63	1.50	2.38	2.12	1.50	0.33	0.33	1.75	1.19	0.31	0.94	3.88	4.5

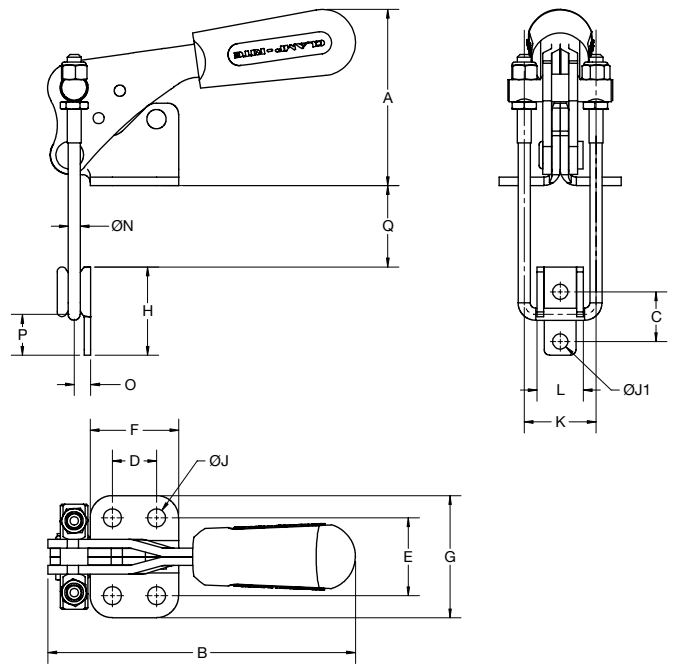
Dimensions and technical information subject to change without notice.

Series 1224-SS

Specifications

Drawing Movement: **mm [in.]**
39 [1.53]

12240CR-SS



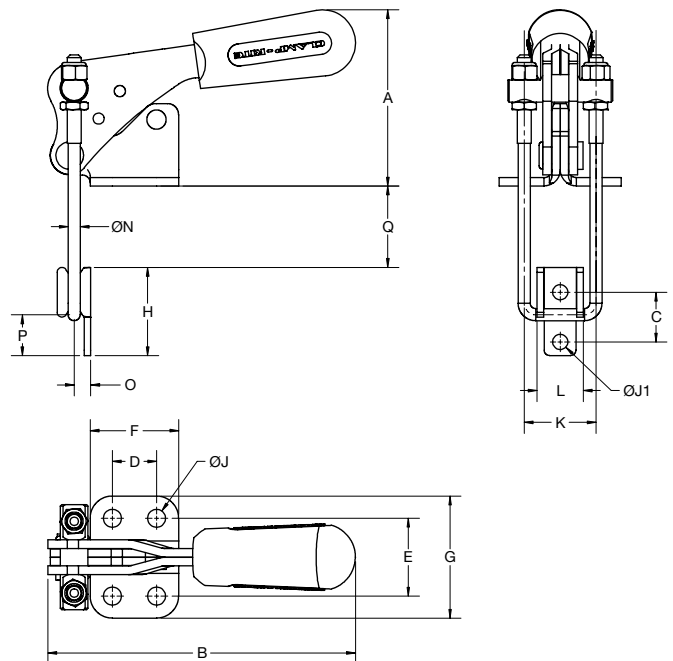
Model	Holding Capacity	Weight	mm/in.																	Q (MIN)	Q (MAX)
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P				
12240CR-SS	2200	0.11	50.6	88.4	14.3	12.7	22.4	25.4	35.1	25.4	5.2	4.4	20.6	13.3	3.5	4.7	11.8	12.95	23.4		
	500	0.25	1.99	3.48	0.56	0.5	0.88	1.0	1.38	1.0	0.2	0.17	0.81	0.52	0.14	0.19	0.46	0.51	0.92		

Series 1234-SS

Specifications

Drawing Movement: **mm [in.]**
51 [2.00]

12340CR-SS



Model	Holding Capacity	Weight	mm/in.																	Q (MIN)	Q (MAX)
			A	B	C	D	E	F	G	H	J	J1	K	L	N	O	P				
12340CR-SS	4450	0.27	60.2	105	20.6	19.1	25.4	33.3	39.6	38.1	7.1	5.6	28.6	17.2	6.4	8.3	16.7	16	34.1		
	1000	0.55	2.37	4.13	0.81	0.75	1	1.31	1.56	1.5	0.28	0.22	1.13	0.68	0.25	0.33	0.66	0.63	1.34		

Dimensions and technical information subject to change without notice.

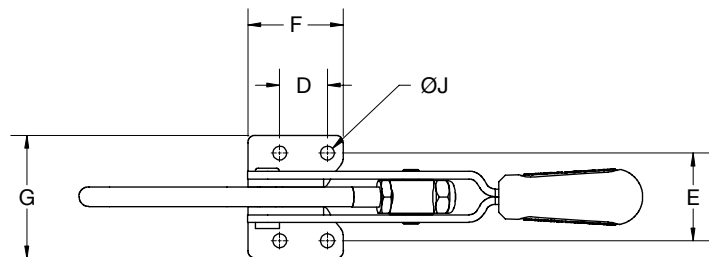
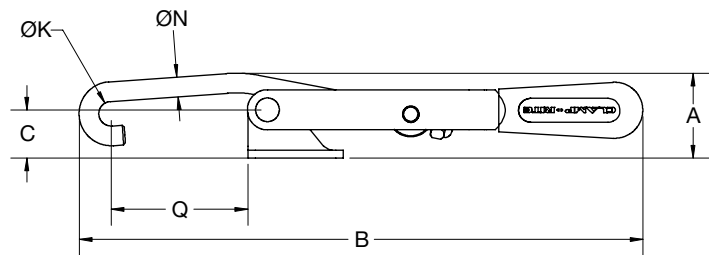
Series 1251-SS

Specifications

Drawing Movement: **mm [in.]**
101.6 [4.00]



12510CR-SS



Model	Holding Capacity	Weight	A	B	C	D	E	F	G	J	K	N	Q	
													(MIN)	(MAX)
		N/lbf.	mm/in.											kg/lb.
12510CR-SS	2000	0,28	33.8	224.6	19.1	19.1	34.9	38.1	49.1	5.5	9.7	7.9	43.6	54.5
	450	0.61	1.33	8.84	0.75	0.75	1.37	1.50	1.93	0.22	0.38	0.31	1.72	2.15



Model
12510CR-SS
 allows for quick
 access to this
 vacuum handling
 hopper.

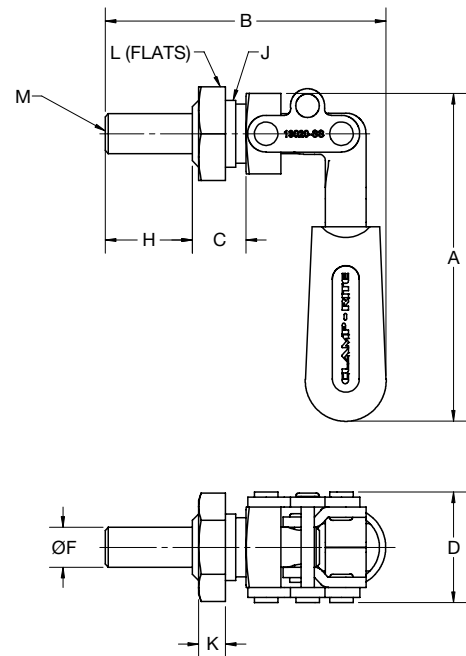
Dimensions and technical information subject to change without notice.

Series 1302-SS

Model	Plunger Travel
	mm/in.
13020CR-SS	19 0.75



13020CR-SS



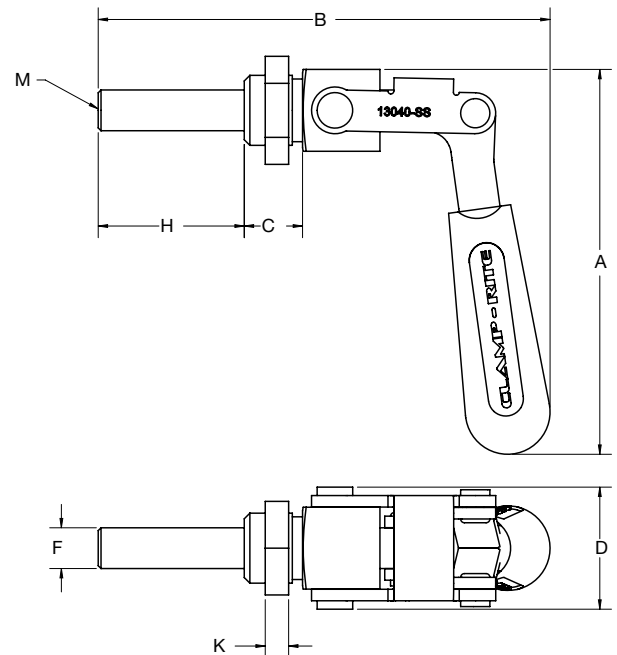
Model	Holding Capacity	Weight	Description	A	B	C	D	F	H	J	K	L	M
	N/lbf.	kg/lb.		mm/in.									
13020CR-SS	890 200	0.12 0.25	Through Hole Mount, Imperial Thread	77.7 3.06	66.5 2.62	12.7 0.50	26.2 1.03	9.5 0.37	20.7 0.81	5/8-18	6.4 0.25	22.2 0.88	1/4-20

Series 1304-SS

Model	Plunger Travel
	mm/in.
13040CR-SS	38 1.50



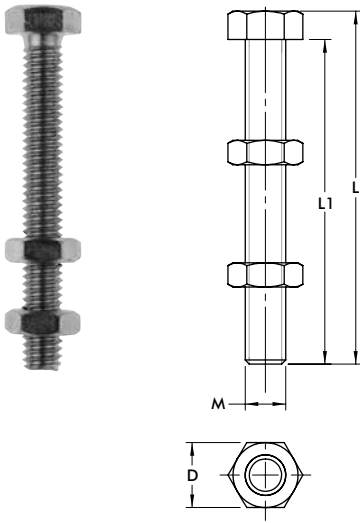
13040CR-SS



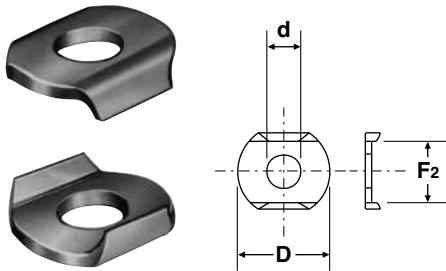
Model	Holding Capacity	Weight	Description	A	B	C	D	F	H	J	K	L	M
	N/lbf.	kg/lb.		mm/in.									
13040CR-SS	1340 300	0.44 0.60	Through Hole Mount, Imperial Thread	104.5 4.11	122.7 4.83	15.8 0.62	33.1 1.30	11.1 0.44	39.6 1.56	3/4-16	6.4 0.25	25.4 1.00	5/16-18

Dimensions and technical information subject to change without notice.

Stainless Steel Accessories

**Standard Adjustable Spindle** (includes two jam nuts)

Model	D	M	L	L1
mm/in.				
19530CR-SS	8 0.31	M5	33.5 1.32	30 1.18
19640CR-SS	10 0.39	M6	44 1.73	40 1.57
19865CR-SS	13 0.51	M8	70.3 2.77	65 2.56
19104CR-SS	8 0.31	#10-32	34.8 1.37	31.8 1.25
19146CR-SS	11.1 0.44	1/4-20	42.4 1.67	38.1 1.50
19517CR-SS	12.7 0.50	5/16-18	69 2.72	63.5 2.5

Flanged Washers (qty: 2)

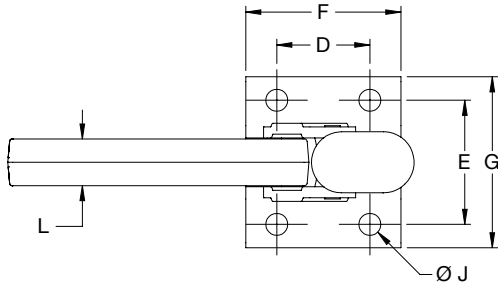
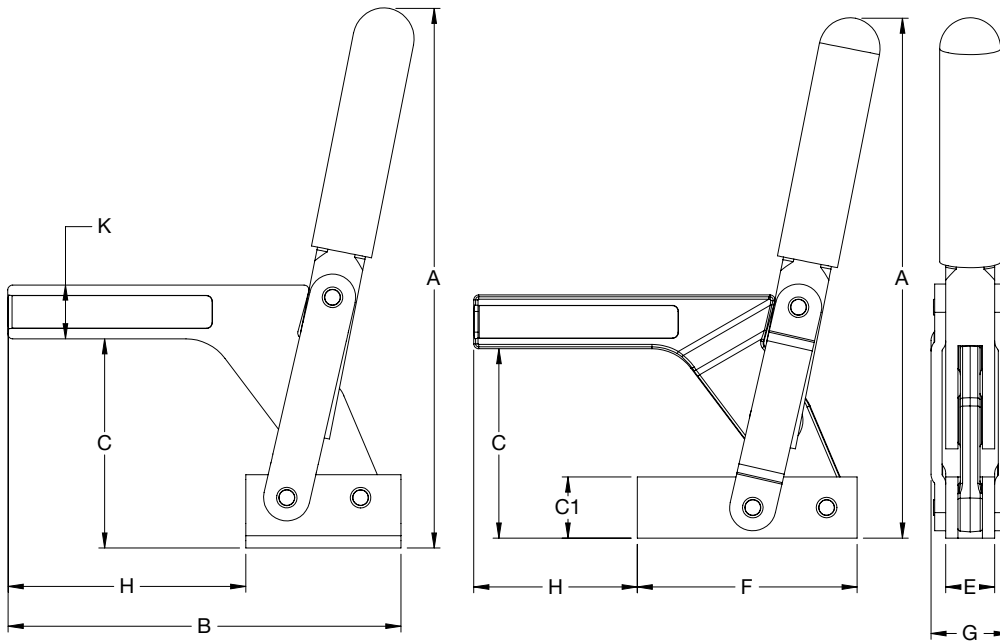
Model	For Spindle Diameter	D	d	F2
mm/in.				
19408CR-SS	M4 or #8	11.2 0.44	4.3 0.17	8.3 0.33
19510CR-SS	M5 or #10	14.2 0.56	5.1 0.2	9.6 0.38
19614CR-SS	M6 or 1/4	17.5 0.69	6.7 0.26	12.7 0.5
19851CR-SS	M8 or 5/16	22.4 0.88	8.4 0.33	15.2 0.6

Dimensions and technical information subject to change without notice.

Series 1150

Specifications

Model	11501CR	11503CR
	11502CR	11504CR
Bar Opens:	89°	74°
Handle Opens:	159°	138°

11501CR
11503CR11502CR
11504CR

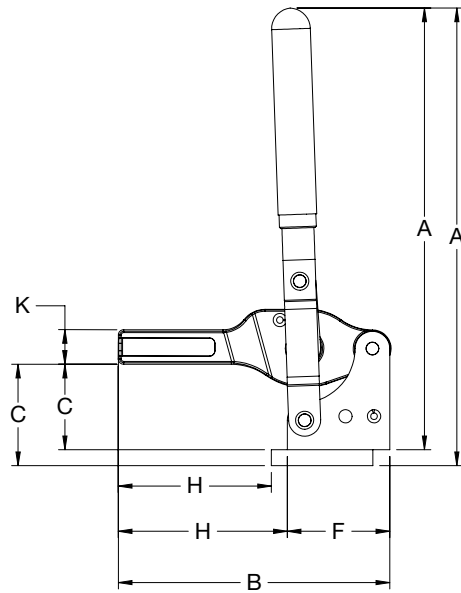
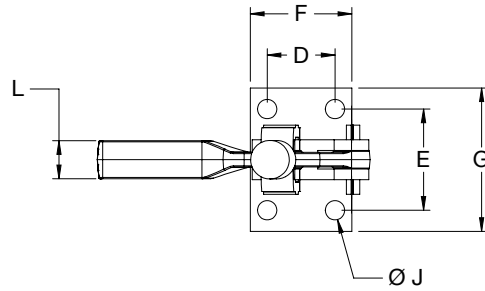
Model	Holding Capacity	Weight	A	B	C	C1	D	E	F	G	H	J	K	L
	N/lbf.	kg/lb.												
11501CR	3100	0.51	168.9	104.9	64.6	--	25.4	37	41.2	57	63.7	6.6	13	14.3
	700	1.12	6.65	4.13	2.54	--	1.00	1.46	1.62	2.24	2.51	0.26	0.51	0.56
11502CR	3100	0.48	168.9	102.7	54.3	15	--	15	63.5	25	39.2	--	13	14.3
	700	1.06	6.65	4.04	2.14	0.59	--	0.59	2.5	0.98	1.54	--	0.51	.56
11503CR	5100	1.35	220.9	160.9	85.6	--	38.1	50.8	63.5	70	97.4	9	22	19.1
	1150	2.98	8.7	6.33	3.37	--	1.50	2.00	2.50	2.76	3.83	0.35	0.87	0.75
11504CR	5100	1.34	212.8	156.9	77.5	25	--	20	90	32	66.9	--	22	19.1
	1150	2.95	8.38	6.18	3.02	0.98	--	0.79	3.54	1.26	2.63	--	0.87	0.75

Dimensions and technical information subject to change without notice.

Series 1159

Specifications

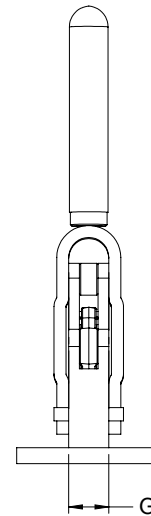
Model	11591CR 11592CR	11593CR 11594CR	11595CR
Bar Opens:	135°	132°	147°
Handle Opens:	70°	71°	74°



11591CR
11593CR
11595CR



11592CR
11594CR



Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	K	L
	N/lbf.	kg/lb.											
								mm/in.					
11591CR	3340	0.49	172.3	101.7	38.2	25.4	38.1	38.0	54.0	57.4	7.3	13.0	14.3
	750	1.08	6.78	4.00	1.50	1.00	1.50	1.50	2.13	2.26	0.29	0.51	0.56
11592CR	3340	0.37	166.3	101.7	32.2	--	--	38.4	15.0	63.3	--	13.0	14.3
	750	0.82	6.55	4.00	1.27	--	--	1.51	0.59	2.49	--	0.51	0.56
11593CR	7120	1.29	232.7	152.5	50.5	38.1	50.8	57.0	70.0	89.2	10.5	19.0	19.0
	1600	2.84	9.16	6.00	1.99	1.50	2.00	2.24	2.76	3.51	0.41	0.75	0.75
11594CR	7120	1.02	226.7	152.5	44.5	--	--	57.1	19.0	95.4	--	19.0	19.0
	1600	2.24	8.93	6.00	1.75	--	--	2.25	0.75	3.76	--	0.75	0.75
11595CR	12230	2.92	285.7	203.0	69.3	50.8	69.9	75.0	98.5	118.5	14.0	25.4	25.4
	2750	6.44	11.25	7.99	2.73	2.00	2.75	2.95	3.88	4.66	0.55	1.00	1.00

Dimensions and technical information subject to change without notice.

Series 1350

Specifications

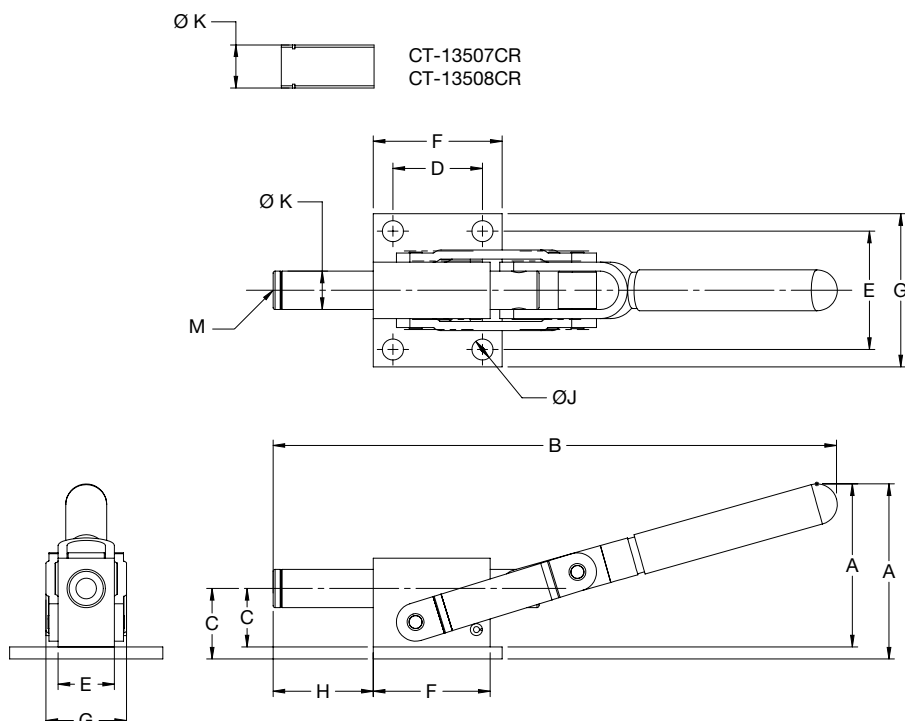
Model	13501CRM 13502CRM	13503CRM 13504CRM	13505CRM 13506CRM	13507CRM 13508CRM
Plunder Travel: mm [in.]	44.5 [1.75]	25.4 [1.00]	79.5 [3.13]	48.3 [1.9]
Handle Opens:	125°	113°	139°	125°

13501CRM
13503CRM
13505CRM13502CRM
13504CRM
13506CRM

13507CRM



13508CRM



Model	Holding Capacity	Weight	A	B	C	D	E	F	G	H	J	K	M THREAD
	N/lbf.	kg/lb.	mm/in.										
13501CRM	25800	1.30	86.9	279.7	35	44.5	58.7	64.0	76	49.7	10.5	19.0	M12 x 1.75
13501CR	5800	2.87	3.42	11.01	1.38	1.75	2.31	2.52	2.99	1.96	0.41	0.75	1/2-13
13502CRM	25800	1.09	80.9	279.7	29	--	28	58.0	40	49.7	--	19.0	M12 x 1.75
13502CR	5800	2.40	3.19	11.01	1.14	--	1.10	2.28	1.57	1.96	--	0.75	1/2-13
13503CRM	11120	0.51	63.2	193.5	28	28.6	47.6	44.0	64	29.3	8.6	13.0	M8 x 1.25
13503CR	2500	1.12	2.49	7.62	1.10	1.13	1.87	1.73	2.52	1.15	0.34	0.51	5/16-18
13504CRM	11120	0.39	57.2	193.5	22	--	19	38.5	29	29.3	--	13.0	M8 x 1.25
13504CR	2500	0.85	2.25	7.62	0.87	--	0.75	1.52	1.14	1.15	--	0.51	5/16-18
13505CRM	20460	1.41	92.1	328.5	35	44.50	58.7	64.00	76	82.2	10.5	19.0	M12 x 1.75
13505CR	4600	3.12	3.63	12.93	1.38	1.75	2.31	2.52	2.99	3.24	0.41	0.75	1/2-13
13506CRM	20460	1.20	86.1	328.5	29	--	28	60.50	39	82.2	--	19.0	M12 x 1.75
13506CR	4600	2.65	3.39	12.93	1.14	--	1.10	2.38	1.54	3.24	--	0.75	1/2-13
13507CRM	25800	0.51	86.9	282.6	35	44.50	58.7	64.0	76	49.7	10.5	19.0	M12 x 1.75
13507CR	5800	1.12	3.42	11.13	1.38	1.75	2.31	2.52	2.99	1.96	0.41	0.75	1/2-13
13508CRM	25800	0.39	80.9	282.6	29	--	28	60.50	40	49.7	--	19.0	M12 x 1.75
13508CR	5800	0.85	3.19	11.13	1.14	--	1.1	2.38	1.57	1.96	--	0.75	1/2-13

Dimensions and technical information subject to change without notice.

Series 1450

Specifications

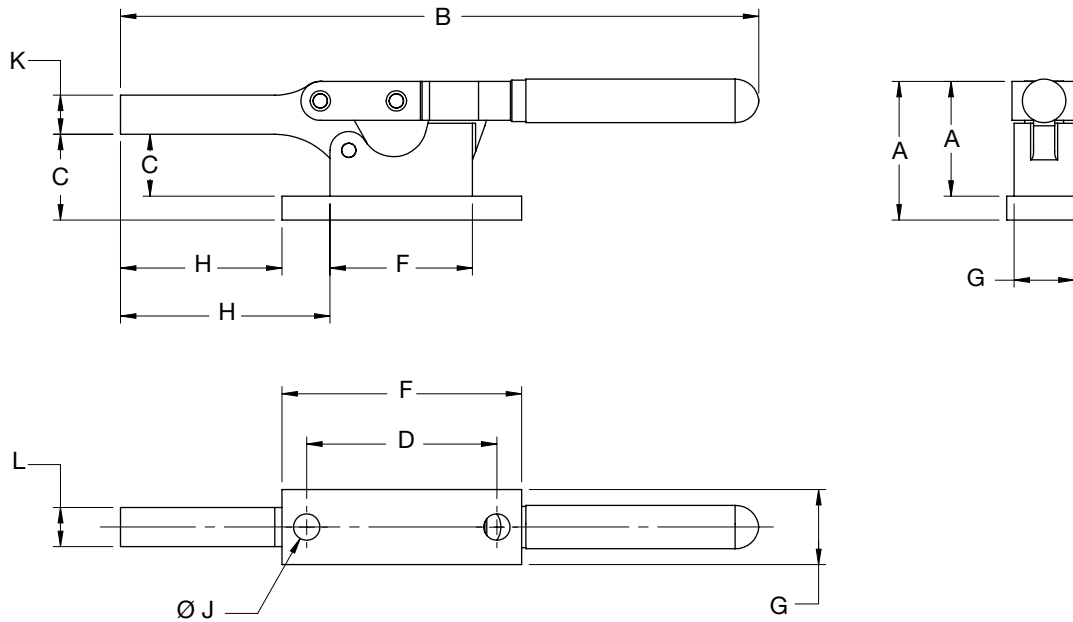
Bar Opens:	90°
Handle Opens:	69°



14501CR
14503CR



14502CR
14504CR



Model	Holding Capacity		Weight	A	B	C	D	F	G	H	J	K	L
	N/lbf.	kg/lb.											
mm/in.													
14501CR	2670	0.49	47.1	213.1	28.7	63.5	80	25	53.9	8.8	13	13	
	600	1.08	1.85	8.39	1.13	2.50	3.15	0.98	2.12	0.35	0.51	0.51	
14502CR	2670	0.37	39.1	213.1	20.7	--	47.6	20	69.9	--	13	13	
	600	0.82	1.54	8.39	0.81	--	1.87	0.79	2.75	--	0.51	0.51	
14503CR	5780	1.29	59.6	279.6	33.4	92.1	117.5	38.1	66.7	10.3	19.1	20	
	1300	2.84	2.34	11.01	1.32	3.63	4.63	1.5	2.63	0.41	0.75	0.79	
14504CR	5780	1.02	51.6	279.6	25.4	--	66.7	28.6	92.1	--	19.1	20	
	1300	2.24	2.03	11.01	1.00	--	2.63	1.13	3.63	--	0.75	0.79	

Dimensions and technical information subject to change without notice.

Series 17xxx

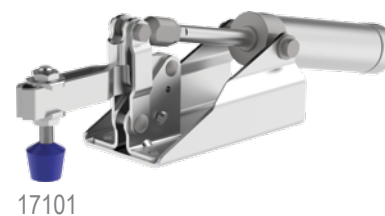
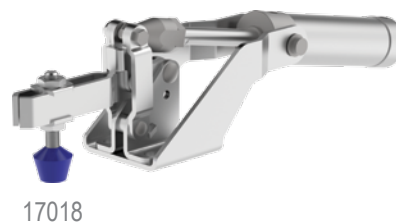
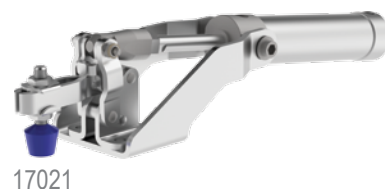
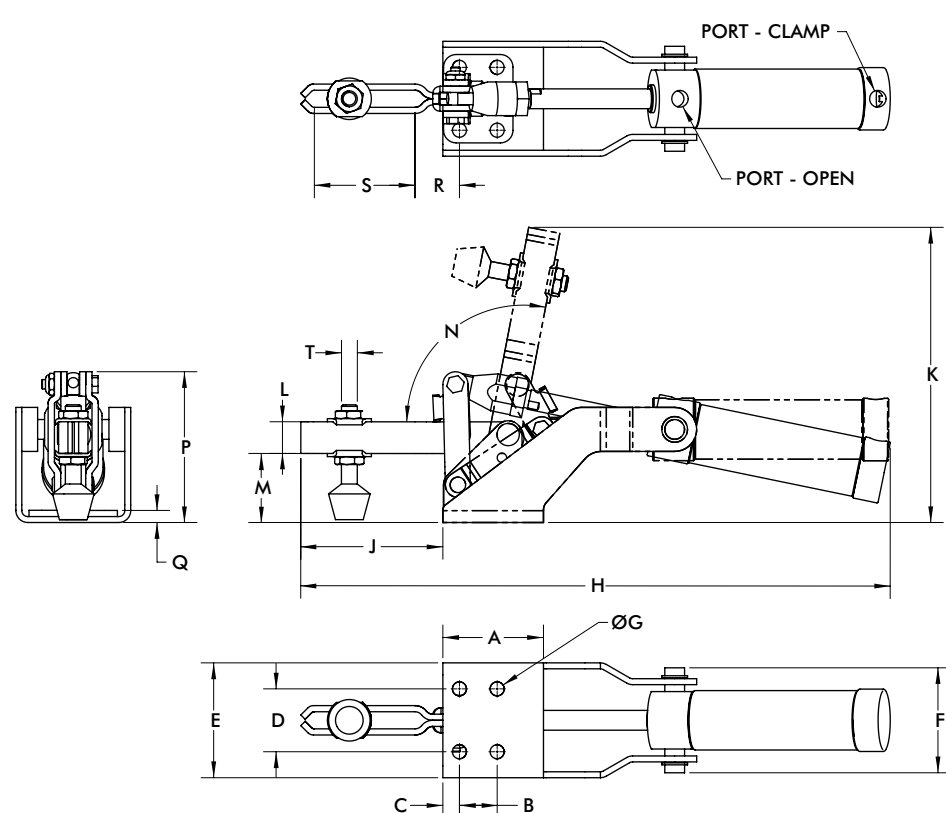
Model	Maximum Holding Capacity N/lf.		Max. Exerting Force @ 5bar/72 PSI N/lf.		Weight kg/lf.	Bore Ø mm/in.	Air Consumption dm ³ /ft ³	Port Size	Spindle Accessory (supplied)
	Inner	Outer	Inner	Outer					
17021CR	890	490	785	408	0.47	20	0.21	1/8 NPT	19630CR
17021CRE	200	110	176	92	1.03	0.79	0.008	G 1/8	196105CR
17018CR	1670	1220	1571	810	0.76	25	0.33	1/8 NPT	19835CR
17018CRE	375	275	353	182	1.67	0.98	0.009	G 1/8	198107CR
17101CR	2670	1290	2453	1166	1.49	32	0.66	1/8 NPT	19055CR
17101CRE	600	290	551	262	3.28	1.26	0.010	G 1/8	190106CR

Max. Cylinder Pressure: 9 bar [130 psig]*

Operating Temp Range: -20° to 70° C [-4° to 158° F]

Optional Sensors: 1710154, 1710156, 1710158

* In no case should the inlet pressure be high enough to create an exerting force that exceeds the clamps holding capacity.



Model	A	B	C	D	E	F	ØG	H	J	K	L	M	N	P	Q	R	S	T
mm/in.																		
17021CR	38.1	12.7	6.4	27	54	51.6	5.6	251.9	43.7	96.2	9.7	26.6	96°	55	6.1	19	25.1	M6
17021CRE	1.50	0.50	0.25	1.06	2.13	2.03	0.22	9.92	1.72	3.79	0.38	1.05		2.16	0.24	0.75	0.99	1/4"
17018CR	50.8	19.1	8.4	31.8	58	57.4	7.1	297.6	71.7	148.9	16	34.9	101°	76.1	6.1	22.4	50.8	M8
17018CRE	2.00	0.75	0.33	1.25	2.28	2.26	0.28	11.72	2.82	5.86	0.63	1.37		3.00	0.24	0.88	2.00	5/16"
17101CR	145	31.8	10	45.2	76	73	8.6	360	89.3	185.5	20	45.4	101°	96.2	6.1	31.5	59.4	M10
17101CRE	5.71	1.25	0.39	1.78	2.99	2.86	0.34	14.17	3.52	7.30	0.79	1.79		3.79	0.24	1.24	2.34	3/8"

Dimensions and technical information subject to change without notice.

Pneumatic Toggle Clamp Sensors

Sensor Specifications	1710154	1710156	1710158
Connector	2 wire	3 wire	3 wire
Function	Reed	NPN	PNP
Load Voltage	5-240V AC/DC	5-30V DC	
Switching Rating	10W Max.	6W Max.	
Voltage Drop	2.5V Max. @ 100mA DC	0.5V Max. @ 200mA DC	
CE & Protection IP	EN60529 IP67(NEMA6)		
Indicator	Red LED		
Temperature Range	-10 to 70°C [14 to 158° F]		
Mounting Band (inc.)	1710156-1		
Wiring			

2-Wire Sensor



3-Wire Sensor



Quick Disconnect Sensor



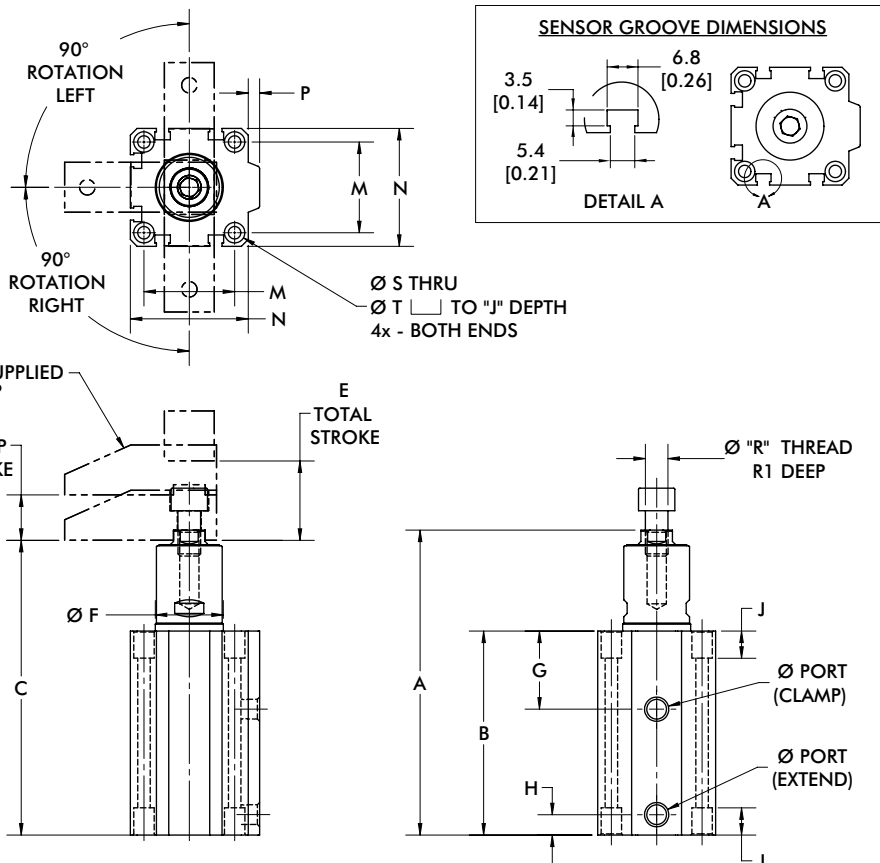
Mounting Band



Dimensions and technical information subject to change without notice.

Series 18xxx

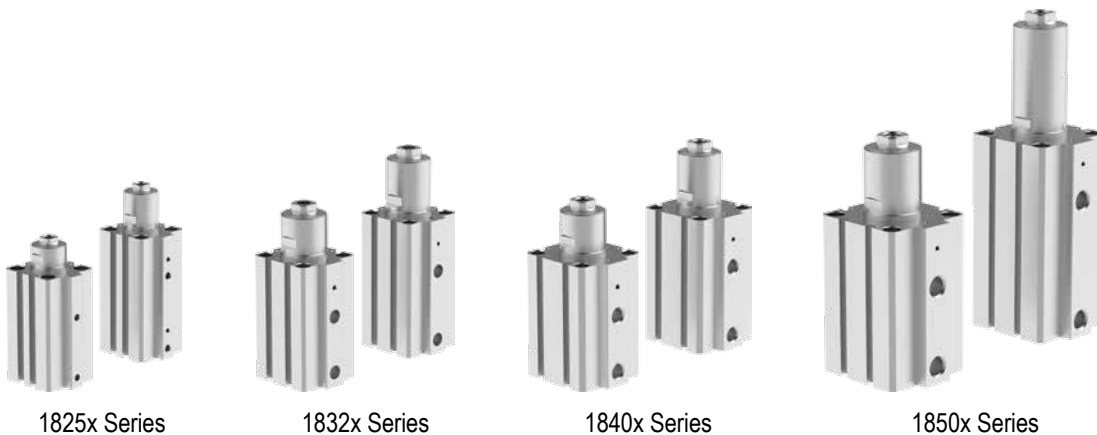
Specifications	1825x		1832x		1840x		1850x		
	Short	Long	Short	Long	Short	Long	Short	Long	
Bore	mm in	25 0.98	32 1.26	40 1.57	50 1.97				
Clamp Stroke	mm in	10 0.39	20 0.79	10 0.39	20 0.79	10 0.39	20 0.79	20 0.79	50 1.97
Rotary Stroke	mm in	9.5 0.37	9.5 0.37	15 0.59	15 0.59	15 0.59	15 0.59	19 0.75	19 0.75
Total Stroke	mm in	19.5 0.77	29.5 1.16	25 0.98	35 1.38	25 0.98	35 1.38	39 1.53	69 2.72
Clamp Volume	cm ³ in ³	7.36 0.449	11.14 0.680	15.07 0.920	21.1 1.288	26.38 1.610	36.93 2.254	64.29 3.923	113.75 6.941
Unclamp Volume	cm ³ in ³	9.57 0.584	14.47 0.883	20.09 1.226	28.13 1.717	31.4 1.916	43.96 2.683	76.54 4.671	135.41 8.263
Clamp Force at 6 bar (87 psi)	N lbf	156 35	253 57	445 100	690 155				
Clamp Weight (without arm)	g lb	326 0.72	374 0.82	537 1.18	608 1.34	730 1.61	830 1.83	1160 2.55	1410 3.10
Rotating Angle		90°							
Rotating Direction		Right Hand or Left Hand							
Rotating Tolerance		± 3°							
Pressure Range		40-100 PSI (3-7 bar)							
Acting Type		Double							
Temperature Range		-20 to 80° C (-4 to 176° F)							



Dimensions and technical information subject to change without notice.

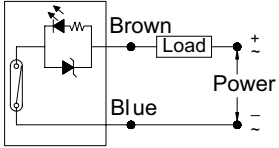
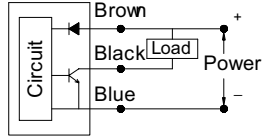
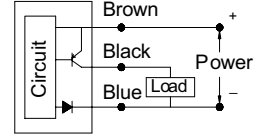
Series 18xxx

Model	Arm Rotation	Port Size	A	B	C	D	E	F	G	H	J	M	N	P	Q	R	R1	S	T	
mm/in.																				
18251CR	R	M5	93.5	73	90.4	10	19.5	23.00 - 22.92	27	6.5	9	28	40	5	10	M8 x 1.25	15	5.5	9	
18252CR	L		3.68	2.87	3.56	0.39	0.77													
18253CR	R		113.5	83	110.4	20	29.5													0.905 - 0.902
18254CR	L		4.47	3.27	4.35	0.79	1.16													
18321CR	R	1/8 NPT	113.5	80	109	10	25	30.00 - 29.92	34.5	9	9	34	45	4.5	14.5	M10 x 1.5	12	5.4	9	
18322CR	L																			4.47
18323CR	R	G-1/8	133.5	90	129	20	35	1.181 - 1.178	1.36	0.35	0.35	1.34	1.77	0.18	0.57	0.47	0.21	0.35		
18324CR	L																		5.26	3.54
18325CR	R	1/8 NPT	133.5	90	129	20	35	1.181 - 1.178	1.36	0.35	0.35	1.34	1.77	0.18	0.57	0.47	0.21	0.35		
18326CR	L																		5.26	3.54
18327CR	R	G-1/8	114.5	80	110	10	25	30.00 - 29.92	34.5	9	12	40	52	5	18	M10 x 1.5	12	5.5	9	
18328CR	L																			4.51
18401CR	R	1/8 NPT	114.5	80	110	10	25	1.181 - 1.178	1.36	0.35	0.47	1.57	2.05	0.20	0.71	0.47	0.22	0.35		
18402CR	L																		5.30	3.54
18403CR	R	G-1/8	134.5	90	130	20	35	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18404CR	L																		5.30	3.54
18405CR	R	1/8 NPT	134.5	90	130	20	35	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18406CR	L																		5.30	3.54
18407CR	R	G-1/8	152	101.5	147.6	20	39	37.00 - 36.92	39	11	13	50	64	7	20	M12 x 1.75	15	6.6	11	
18408CR	L																			5.98
18501CR	R	1/4 NPT	152	101.5	147.6	20	39	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18502CR	L																		8.35	5.18
18503CR	R	G-1/4	212	131.5	207.6	50	69	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18504CR	L																		8.35	5.18
18505CR	R	1/4 NPT	212	131.5	207.6	50	69	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18506CR	L																		8.35	5.18
18507CR	R	G-1/4	212	131.5	207.6	50	69	1.457 - 1.454	1.54	0.43	0.51	1.97	2.52	0.28	0.79	0.59	0.26	0.43		
18508CR	L																		8.35	5.18



Dimensions and technical information subject to change without notice.

Pneumatic Swing Clamp Sensors

Sensor Specifications	18901CR	18902CR	18903CR	18904CR	18905CR	18906CR
Connector	2 wire	M8 Qk. Disc.	3 wire	M8 Qk. Disc.	3 wire	M8 Qk. Disc.
Function	Reed		NPN		PNP	
Load Voltage	5-240V AC/DC			5-28V DC		
Switching Rating	10W Max.			6W Max.		
Voltage Drop	2.5vV Max @ 100mA DC			1.5V Max. @ 200mA (Resistive Load)		
CE & Protection IP	EN60947-5-2		IEC529	IP67(NEMA6)		
Indicator	Red LED		Red LED		Green LED	
Temperature Range	-10 to 70°C (14 to 158° F)					
Wiring						

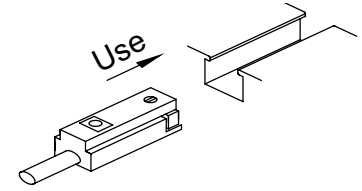
2-Wire Sensor



3-Wire Sensor

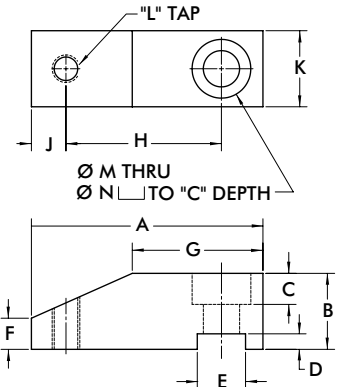
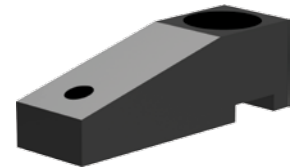


Quick Disconnect Sensor



Clamp Arms

Model	A	B	C	D	E ±0.05	F	G	H	J	K	L	M	N	Weight
Clamp Arm Dimensions mm/in.														kg/lb.
18825CR	51 [2.00]	16 [0.63]	6.7 [0.26]	3.1 [0.12]	9.97 [0.39]	8 [0.31]	18 [0.71]	35 [1.38]	7 [0.28]	16 [0.63]	M6 x 1.0 [0.33]	8.5 [0.55]	14 [0.67]	0.07 [0.15]
18832CR	67 [2.64]	22 [0.87]	9 [0.35]	4.5 [0.18]	13.97 [0.55]	9 [0.35]	37.8 [1.49]	45 [1.77]	10 [.39]	22 [0.87]	M8 x 1.25 [0.41]	10.5 [0.67]	17 [0.67]	0.18 [0.41]
18840CR	67 [2.64]	22 [0.87]	9 [0.35]	4.5 [0.18]	13.97 [0.55]	9 [0.35]	37.8 [1.49]	45 [1.77]	10 [.39]	22 [0.87]	M8 x 1.25 [0.41]	10.5 [0.67]	17 [0.67]	0.18 [0.41]
18850CR	88 [3.46]	25.4 [1.00]	15 [0.59]	4.5 [0.18]	16.97 [0.67]	13 [0.51]	37 [1.46]	65 [2.56]	10 [.39]	25.4 [1.00]	M10 x 1.5 [0.49]	12.5 [0.83]	21 [0.83]	0.31 [0.69]



Dimensions and technical information subject to change without notice.



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