

The Vertex
ProClinch™
Series
pneumatic
tools are
designed
to meet your
fastening
needs...



ProClinch™ 4.5

Applies clips supplied on strips. Weighing a mere 4.5 lbs, this hand held tool provides maximum maneuverability while reducing the risk of repetitive motion injuries. Proven design innovations, including composite materials, investment castings and simple pneumatic logic establish this tool as the world wide standard.

ProClinch™ 5.2

Applies clips supplied on rolls. Same lightweight technology as the ProClinch 4.5 adapted for roll format. Typically used with the Complete System for roll fed clips or the more compact spool dispenser frame for remotely activated fixed tool applications. Ideal for use with automated assembly systems.

THE PROCLINCH™ SERIES

Lightweight

A full 35% lighter than the competition to reduce operator fatigue.

User Friendly

Quieter operation and no more morning start-up sluggishness! Easy blade, anvil and pusher spring replacement.

Easy to Handle

Ergonomically designed handle provides for a more comfortable grip.

Reliable

40% fewer components...
40% fewer moving parts...
40% fewer 'O' rings...
Results: Fewer problems!

Use the ProClinch tool for:

- Bedding
- Furniture
- Automotive and van seating
- Animal traps and cages

Options and Accessories

- Blade Jam Release Device utilizes air pressure to release a jammed blade
- ProClinch 5.2 Complete System for roll fed clips
- ProClinch 5.2 'Fish-Mouth' System for clip-ons or soft edge sinuous springs
- Pivoting Anvil Option
- Fixtured Tools for various levels of automation
- Custom Fitting. Vertex engineers will analyze and propose systems for custom applications

VERTEX



FASTENERS INC.

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TOOL PARTS

Part No.	Part Description	Qty.	Part No.	Part Description	Qty.
VC0001	Cap	1	VC0032	Bearing Bracket	1
VC0002	Main Valve Body	1	VC0033	ProClinch™ 4.5 Label	1
VC0003	Main Valve Piston	1	VC0034	Warning Label	1
VC0004	Spring, Piston	1	VC0035	Shoulder Bolt, 5/16 x 1-1/4	4
VC0005	Cylinder Body	1	VC0270	Valve Assembly with Piston	1
VC0006	Piston	1	VC0271	Hanger Assembly	1
VC0007	Pin, Cylinder Body	2	VH0002	1/4-20 Flex Nut	4
VC0008	Yoke	1	VH0003	10-14 x 3/4 Plastite	7
VC0009	Roller	1	VH0004	1/4-20 x 1/2 BHCS	2
VC0010	Pin, Link	2	VH0005	O-Ring, Valve Body, 5/8 x 3/4	3
VC0011	Link	2	VH0006	O-Ring, Valve Body, 5/16 x 1/2 90D	1
VC0012	Side Plate, R.H.	1	VH0007	O-Ring, Valve Body, 3/8 x 9/16 90D	1
VC0013	Side Plate, L.H.	1	VH0008	O-Ring, Valve Piston, 3/8 x 1/2	1
VC0014	Top Plate	1	VH0009	O-Ring, Cap, 2-7/8 x 3	1
VC0015	Trigger	1	VH0010	O-Ring, Piston, 2-3/4 x 3-1/8	1
VC0016	Trigger Valve Lever	1	VH0011	O-Ring, Trigger, 1/8 x 1/4 90D	1
VC0017	Trigger Valve Piston	1	VH0012	Spring Pin, 1/8 x 1-1/4	1
VC0018	Trigger Valve Sleeve	1	VH0013	Spring Pin, 5/32 x 1	1
VC0019	Front Plate	1	VH0014	Dowel Pin, 1/8 x 7/8	2
VC0023	Spring, Trigger Valve	1	VH0015	Bearing, Hanger	1
VC0024	Spring, Pusher	1	VH0016	1/4-20 x 1 BHCS	1
VC0025	Pusher Latch	1	VH0018	1/4-20 x 3/8 Flange Head	1
VC0026	Spring, Pusher Latch	1	VH0019	Retainer Clip	1
VC0030	Pin, Hanger	1	VH0101	Dowel Pin, 1/8 x 3/4	1
VC0031	Hanger	1			

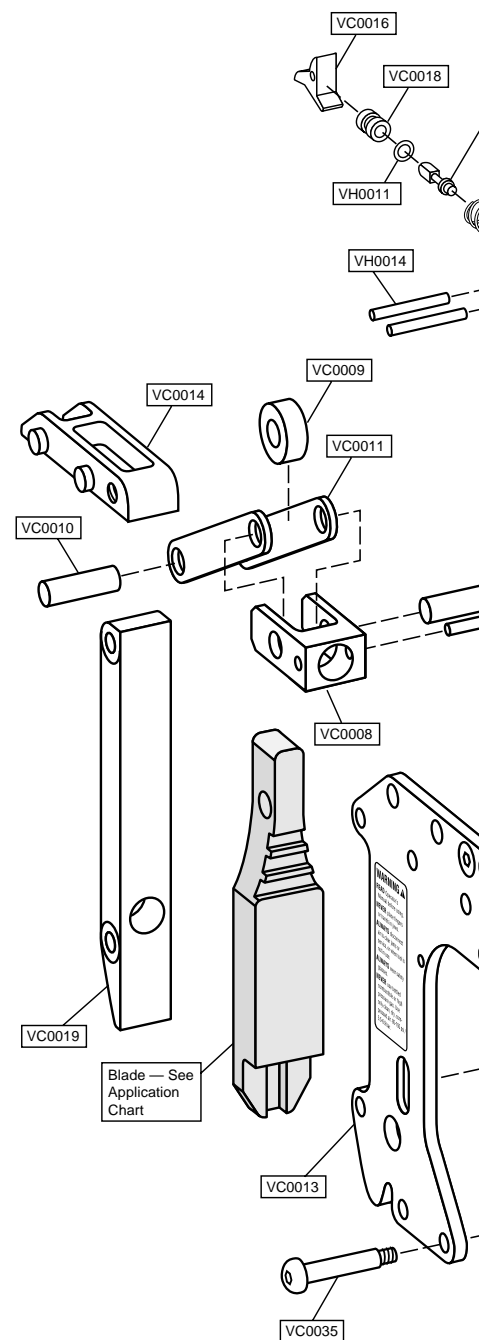
SAFETY INSTRUCTIONS

1. Operators should ALWAYS wear safety glasses while operating, maintaining or repairing a tool.
2. NEVER point the tool toward yourself or anyone else.
3. ALWAYS disconnect the air supply when the tool is not in use, when mechanically clearing a jam, or when performing maintenance.
4. NEVER place hands or fingers near the blade and anvil area when operating the tool or when connecting the air supply to the tool.

TROUBLESHOOTING INFORMATION

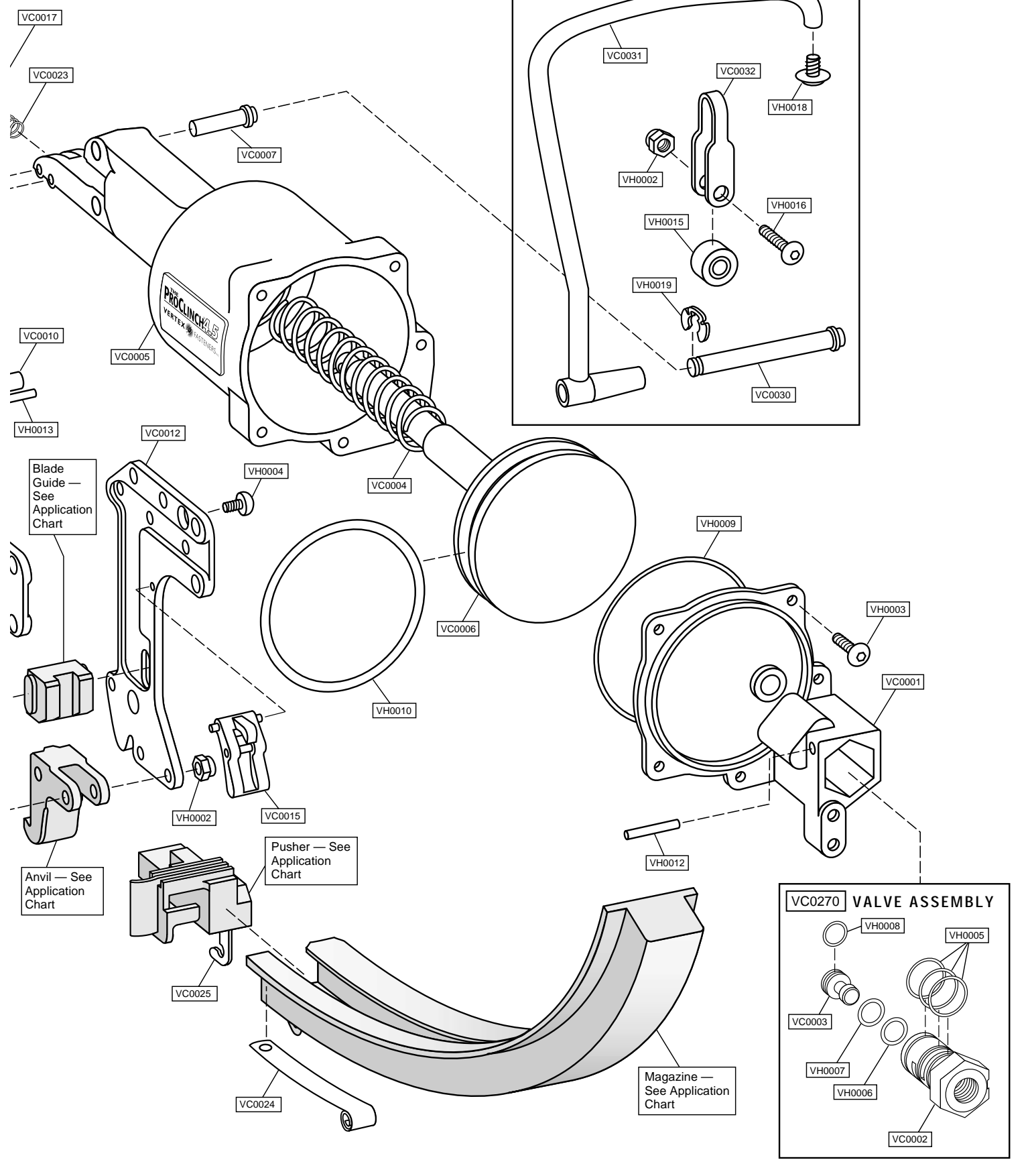
PROBLEM	CAUSE	SOLUTION
Blade does not return.	Sticky main valve.	Lubricate main valve; check that main valve piston moves.
Sluggish tool.	Dry main valve.	Lubricate main valve.
Clips not feeding.	Obstruction in magazine. Broken pusher spring.	Remove obstruction. Replace pusher spring.
Loose clips.	Low air pressure. Worn blade or anvil.	Increase pressure to 80 psi. Replace blade or anvil.
Clip jamming.	Clips are loaded backward into the magazine.	Check that single ear on clip is loaded forward into the magazine.
Tool not cycling.	Clogged trigger valve.	Clean trigger valve assembly.

PARTS IDENTIFICATION



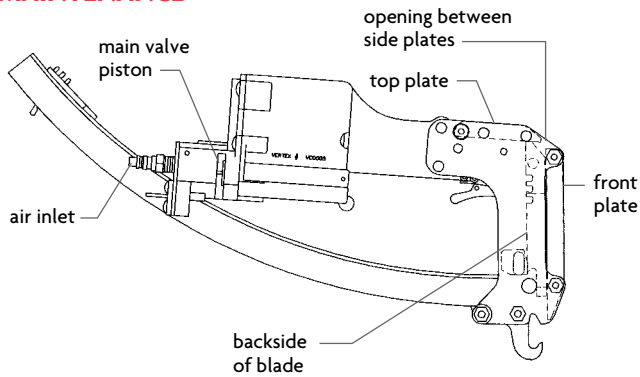
**RECOMMENDED
AIR SUPPLY: 80-90 PSI
(5.5–6.2 BARS) OF DRY,
LUBRICATED AIR**

ATION



PROCLINCH TOOL OPERATING INSTRUCTIONS

MAINTENANCE

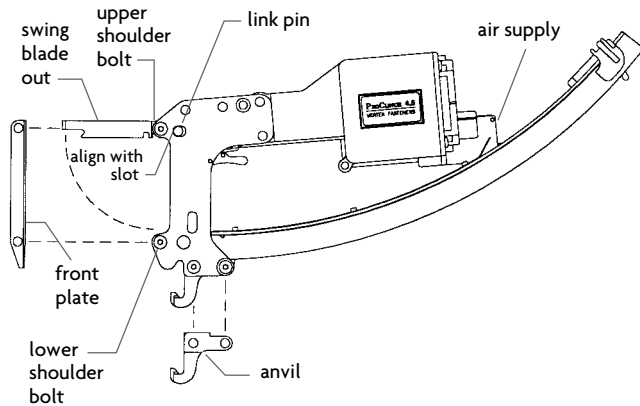


Recommended Daily Maintenance

Add 2-3 drops of oil (recommend 30 weight) to:

1. air inlet
2. main valve piston
3. opening between the side plates at these two locations:
 - between the front plate and top of blade
 - between the top plate and top of blade

BLADE AND ANVIL REPLACEMENT

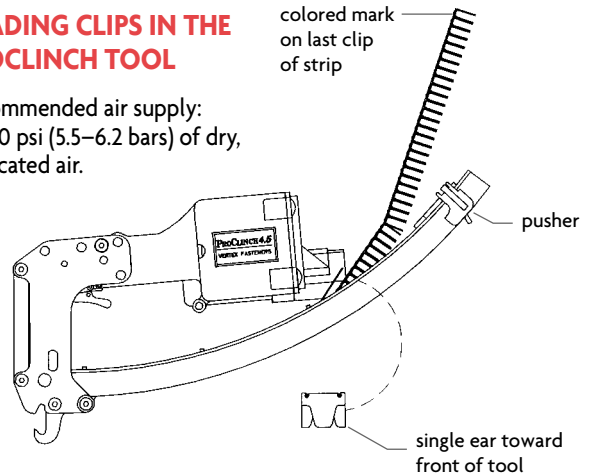


Blade Replacement

1. Disconnect air. Remove clips from tool.
2. Remove upper and lower shoulder bolts; remove front plate.
3. Swing blade from tool and align link pin with slot in side plates. Remove pin through slot and remove blade.
4. Lubricate new blade. Align mounting hole in links and blade with slot; assemble link pin through slot to secure blade and links.
5. Position blade into tool. Re-lubricate front plate and assemble back into tool with upper and lower shoulder bolts.

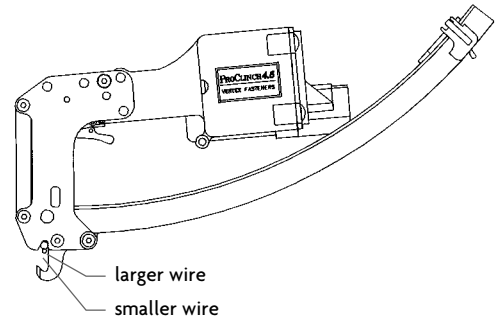
LOADING CLIPS IN THE PROCLINCH TOOL

Recommended air supply:
80-90 psi (5.5-6.2 bars) of dry,
lubricated air.



Loading Strips

1. Pull pusher back until it latches at end of magazine.
2. Remove strip of clips from box. Load to magazine with last clip toward back of tool (last clip is identified with a colored line).
3. Load entire strip into magazine. Push clips completely forward by unlatching pusher.

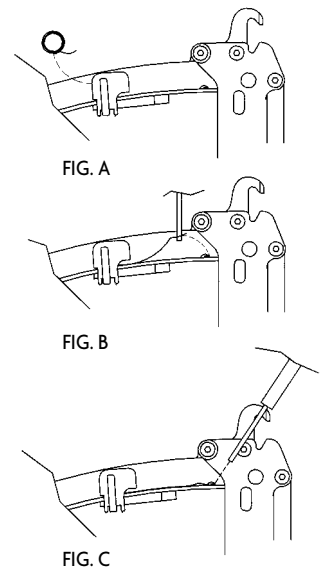


Loading Wires

For best results, smaller wire should be on bottom

PUSHER SPRING (VC0024) REPLACEMENT

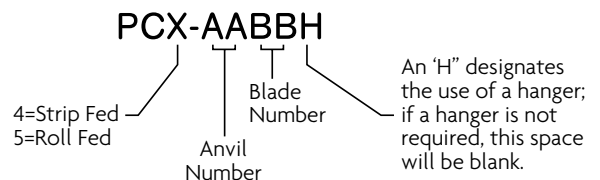
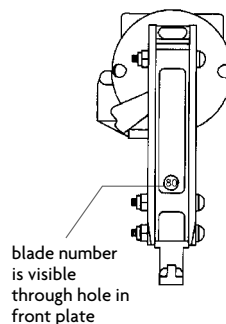
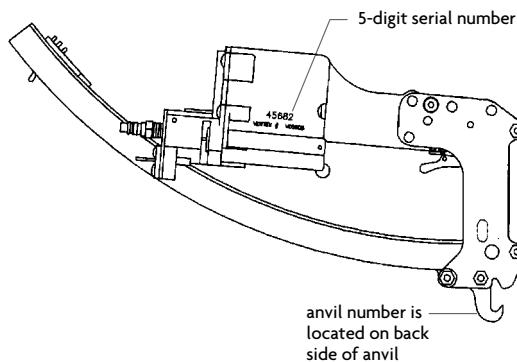
1. Remove damaged pusher spring from magazine.
2. Insert spring into pusher (Fig. A).
3. Pull out spring by inserting a pin or rod through hole in spring. Be careful not to deform spring (Fig. B).
4. Pull spring over mounting tab to secure in place (Fig. C). Pull pusher back and latch at end of magazine.



PROCLINCH CLIP APPLICATION GUIDE

Vertex Clip Size	Replaces Clip Size	ProClinch Tool for Strips	Anvil #VC01__	Blade #VC01__	Blade Guide #VC006__	Side Plates	Magazine Assembly & Pusher Assembly
64A18S	CL-15	PC4-1020	10	20	VC0298	VC0012 & 13	VC0037 & VC0101
68H18S	CL-22	PC4-6080	60	80	0	VC0012 & 13	VC0021 & VC0022
71A18S	CL-13, WD-3V	PC4-1020	10	20	VC0298	VC0012 & 13	VC0037 & VC0101
72E18S	CL-20	PC4-3236	32	36	8	VC0012 & 13	VC0021 & VC0022
74F18S	CL-73	PC4-6080	60	80	0	VC0012 & 13	VC0021 & VC0022
74H18S	CL-23	PC4-6080	60	80	0	VC0012 & 13	VC0021 & VC0022
76A18S	CL-26	PC4-1020	10	20	VC0298	VC0012 & 13	VC0037 & VC0101
76A22S	WD-2V	PC4-1022	10	22	1	VC0012 & 13	VC0037 & VC0101
80F18S		PC4-6080	60	80	0	VC0012 & 13	VC0021 & VC0022
80H18S	CL-25	PC4-6080	60	80	0	VC0012 & 13	VC0021 & VC0022
80F23S	CL-71, CL-312	PC4-6181	61	81	0	VC0012 & 13	VC0021 & VC0022
80H23S	CL-3	PC4-6181	61	81	0	VC0012 & 13	VC0021 & VC0022
85A18S	CL-30	PC4-1020	10	20	1	VC0012 & 13	VC0037 & VC0101
85A22S	CL-33, WD-1V	PC4-1022	10	22	1	VC0012 & 13	VC0037 & VC0101
88A22S	CL-32, WD-OV	PC4-1022	10	22	1	VC0012 & 13	VC0037 & VC0101
88F23S	CL-72, CL-412	PC4-6181 Furniture	61	81	0	VC0012 & 13	VC0021 & VC0022
88F23S	CL-72, CL-412	PC4-6185 Bedding	61	85	0	VC0012 & 13	VC0021 & VC0022
88H23S	CL-4	PC4-6181 Furniture	61	81	0	VC0012 & 13	VC0021 & VC0022
88H23S	CL-4	PC4-6185 Bedding	61	85	0	VC0012 & 13	VC0021 & VC0022
90F18S	CL-24N, CL-74	PC4-6082	60	82	3	VC0012 & 13	VC0021 & VC0022
90H17S	CL-24H	PC4-6082	60	82	3	VC0012 & 13	VC0021 & VC0022
90H18S	CL-24	PC4-6082	60	82	3	VC0012 & 13	VC0021 & VC0022
91A23S	CL-14	PC4-1121	11	21	1	VC0012 & 13	VC0037 & VC0101
91F23S	CL-72L	PC4-6185	61	85	0	VC0012 & 13	VC0021 & VC0022
95F23S	CL-75S	PC4-6185	61	85	0	VC0012 & 13	VC0021 & VC0022
96A23S	CL-9, WD-00V	PC4-1121	11	21	1	VC0012 & 13	VC0037 & VC0101
97F18S		PC4-6082	60	82	3	VC0012 & 13	VC0021 & VC0022
97H18S	CL-24L	PC4-6082	60	82	3	VC0012 & 13	VC0021 & VC0022
101H22S	CL-5	PC4-6183	61	83	3	VC0012 & 13	VC0021 & VC0022
101H23S	CL-34	PC4-6183	61	83	3	VC0012 & 13	VC0021 & VC0022
102A25S	WD-000V	PC4-1125	11	25	1	VC0012 & 13	VC0037 & VC0101
109H22S		PC4-6183	61	83	3	VC0012 & 13	VC0021 & VC0022
109H23S		PC4-6183	61	83	3	VC0012 & 13	VC0021 & VC0022
110A18S		PC4-1024	10	24	7	VC0285 & 286	VC0037 & VC0101
110H25S	CL-36	PC4-6189	61	89	3	VC0012 & 13	VC0021 & VC0022
112D25S	CL-3610	PC4-3135	31	35	2	VC0012 & 13	VC0021 & VC0022
116F33S	CL-77S	N/A	N/A	N/A	N/A	N/A	N/A & N/A
120H23S		PC4-6193	61	93	3	VC0012 & 13	VC0021 & VC0022
135H31S	CL-38	PC4-6788	67	88	6	VC0012 & 13	VC0021 & VC0022
N/A		PC4-4157W	41	57	4	VC0012 & 13	VC0021 & VC0022
N/A		PC4-6187W	61	87	3	VC0012 & 13	VC0021 & VC0022

TOOL IDENTIFICATION

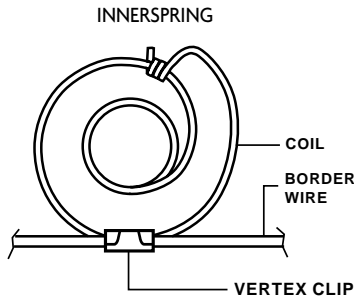


Example: Tool shown at left

PC4-6080
Serial Number: 45682

APPLICATIONS

CLIP GUIDE FOR BEDDING APPLICATIONS



Steel Wire Gage – U.S.

Gage (Inches)	Coil Wire Diameter										
	17 (.054)	16-1/2 (.058)	16 (.062)	15-1/2 (.067)	15 (.072)	14-1/2 (.076)	14 (.080)	13-1/2 (.086)	13 (.091)	12-1/2 (.098)	
Border Wire Diameter – Gage (Inches)	9 (.148)	71A18 74F18	71A18 74F18	71A18 74F18	71A18 74F18	71A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18
	8 (.162)	71A18 74F18	71A18 74F18	71A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18	76A18 80F18 80F23	76A18 80F18 80F23	76A18 80F18 80F23	
	6 (.192)	85A22 80F23	85A22 80F23	85A22 80F23	85A22 80F23	85A22 80F23	85A22 88F23	85A22 88F23	88A22 88F23	88A22 88F23	
	5 (.207)	88A22 88F23	88A22 88F23	88A22 88F23	88A22 88F23	88A22 88F23	96A23 91F23	96A23 91F23	96A23 91F23	96A23 95F23	
	4 (.225)	96A23 91F23	96A23 91F23	96A23 91F23	96A23 91F23	96A23 91F23	96A23 95F23	96A23 95F23	96A23 95F23	96A23 95F23	
	3 (.244)							102A25	102A25	102A25	102A25

Clip Widths: "A" Series = 7/16 inch (maximum value)

"F" Series = 3/4 inch (maximum strength)

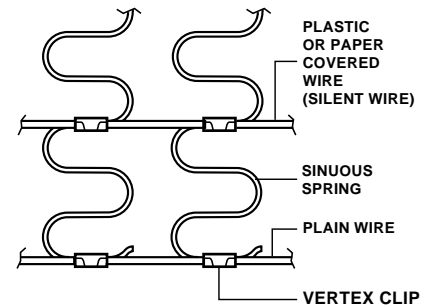
Metric

Metric	Coil Wire Diameter										
	1.6mm	1.7mm	1.8mm	1.9mm	2.0mm	2.1mm	2.2mm	2.3mm	2.4mm	2.5mm	
Border Wire Diameter	4mm	71A18 74F18	71A18 74F18	71A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18	76A18 74F18	76A18 80F18 80F23	76A18 80F18 80F23	
	5mm	85A22 80F23	85A22 80F23	85A22 80F23	85A22 88F23	88A22 88F23	88A22 88F23	88A22 88F23	88A22 88F23	88A22 91F23	

Clip Widths: "A" Series = 11.0 mm (maximum value)

"F" Series = 19.0 mm (maximum strength)

CLIP GUIDE FOR FURNITURE APPLICATIONS



Steel Wire Gage – U.S.

Gage (Inches)	Sinuous Spring Wire Diameter					
	12 (.106)	11 (.121)	10 (.135)	9 (.148)	8 (.162)	
Plastic or Paper Covered Wire	16 (.156)	74F18 80F23	74F18 80F23	74F18 80F23	74F18 80F23	74F18 80F23
	12 (.156)	74F18 80F23	74F18 80F23	74F18 80F23	80F23 90F18	88F23 90F18
Plain Wire	9 (.148)				88F23 or 88H23 90F18 or 90H18	

Metric

Wire Diameter	Sinuous Spring Wire Diameter					
	3.86mm	3.66mm	3.25mm	2.95mm	2.65mm	
Silent Wire	4.0mm	80H18 80H23	80H18 80H23	80H18 80H23	80H18 80H23	80H18 80H23
	4.0mm	90H18 88H23	90H18 88H23	90H18 88H23	90H18 88H23	90H18 88H23

NOTE: Please contact Vertex Fasteners prior to ordering for complete technical assistance.



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ProClinch covered by U.S. Patent No. 5,661,899