



Repair Manual



FLEX-5P

Threaded Insert Power Tool Pull to Pressure Set Up

Part of the FLEX family of modular-based tooling. FLEX tooling has the capability to be upgraded from the original base tool. Upgrades include process-monitoring, conversion to an in-line tool, conversion to a split tool with a remote booster, and conversion to a pull to stroke tool.

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Sherex Warranty

Sherex Fastening Solutions FLEX-5P carries a 6 month warranty against defects that are caused by faulty materials or workmanship. Sherex warranty period commences from the date of delivery which is confirmed either by the invoice or delivery note. The warranty becomes invalidated if the installation tool is misused or not serviced, maintained, and operated according to the instructions in the Quick Start and Repair Manuals.

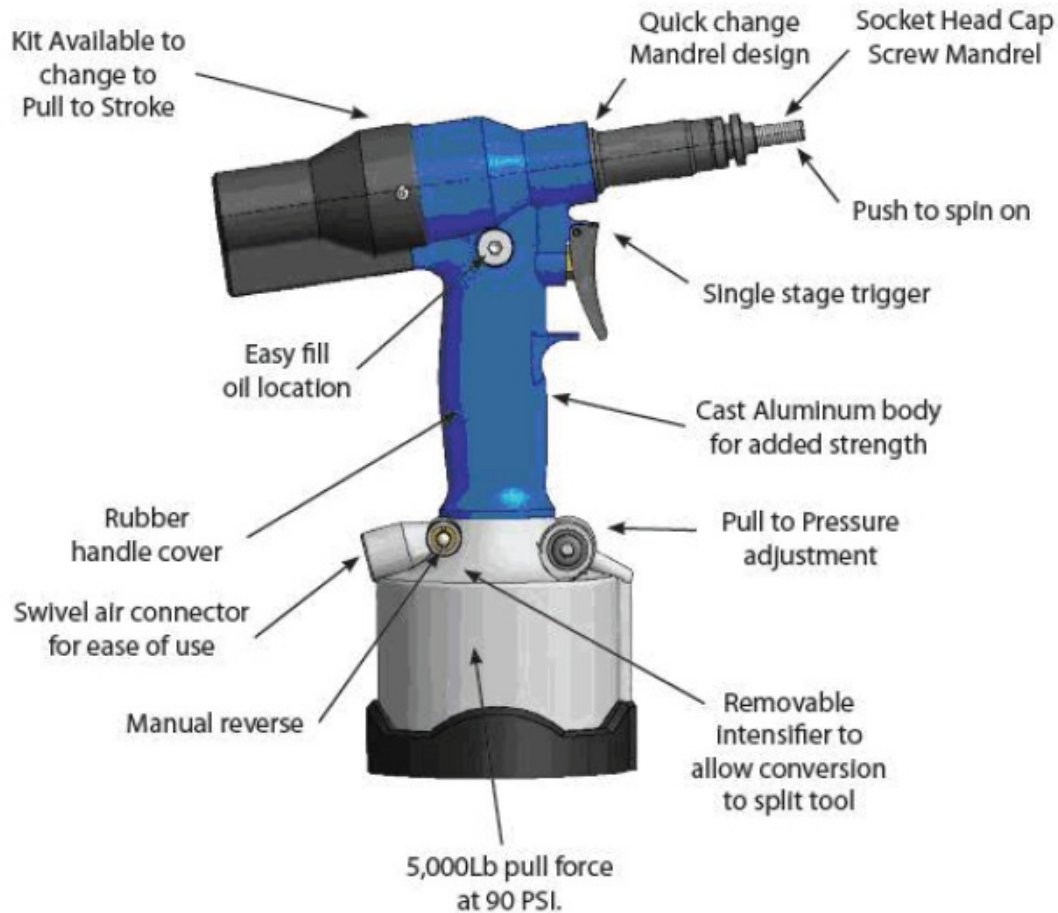
S SAFETY

- ❗ **DO NOT USE THIS TOOL FOR ANY PURPOSE OTHER THAN THOSE SPECIFIED.**
- ❗ **DO NOT USE ANY EQUIPMENT ALONG WITH THE TOOL THAT HAS NOT BEEN RECOMMENDED OR PROVIDED BY SHEREX FASTENING SOLUTIONS.**
 - Failure to do so could result in voided warranty and/or personal injury
- ❗ **THIS TOOL MUST BE KEPT IN EXCELLENT CONDITION AND SHOULD BE CHECKED BY SPECIALIZED PERSONNEL ON A REGULAR BASIS TO DETECT DAMAGES AND EVALUATE ITS OPERATING CONDITION.**
- ❗ **ALWAYS DISCONNECT THE AIR SUPPLY BEFORE SET UP, ADJUSTMENT, OR REMOVAL OF THE HEAD SET.**
- ❗ **AIR INLET SHALL NOT EXCEED 7 BAR (102 PSI).**
- ❗ **DO NOT USE THE TOOL WITHOUT OIL PLUG IN PLACE.**



































































T OOL OVERVIEW

The FLEX-5P tool is designed for installing Sherex threaded insert/rivet nuts. The tool utilizes a pull to pressure installation method. The advantage with this method is that the same insert can be installed into different material thicknesses (within the part grip range) without any adjustments to the tool once the proper pulling pressure has been set. Contact Sherex for the conversion instructions for changing this tool to a pull to stroke (FLEX-5S) installation method.

The tool is designed to install rivet nuts from M3 to M10 & #4-40 to 3/8-24. The recommended operating air pressure is between 5 - 7 bar (72.5 - 101.5 PSI).



SHEREX PART NUMBER	FLEX TOOL DESCRIPTION
FLEX-5P	Pull to Pressure Tool
FLEX-5S	Pull to Stroke Tool
FL5-KIT-P2S	Pressure to Stroke Conversion Kit
FL5-KIT-S2P	Stroke to Pressure Conversion Kit

SHEREX® Rivet Nut Series						
Thread Sizes & Materials	CAL CAK CAH CAO	CPB CPN	CA CFH	CFT CFW	TU	CLM CKM
#6 & M3						
Aluminum	Flex 5S ONLY	X	Flex 5S ONLY	Flex 5S ONLY	Flex 5S ONLY	Flex 5S ONLY
Steel		X				
Stainless Steel		X				
#8 & M4						
Aluminum	Flex 5S ONLY	X	Flex 5S ONLY	Flex 5S ONLY	Flex 5S ONLY	Flex 5S ONLY
Steel		X				
Stainless Steel		X				
#10 & M5						
Aluminum		X				
Steel		X				
Stainless Steel		X				
1/4 & M6						
Aluminum		X				
Steel		X				
Stainless Steel		X				
5/16 & M8						
Aluminum		X		X		
Steel		X		X		
Stainless Steel	Consult Sherex	X	X	X		Consult Sherex
3/8 & M10						
Aluminum		X	X	X		
Steel		X	X	X		
Stainless Steel	Consult Sherex	X	X	X		Consult Sherex

	FLEX-5 Tool Recommended
X	FLEX-5 Tool Not Recommended

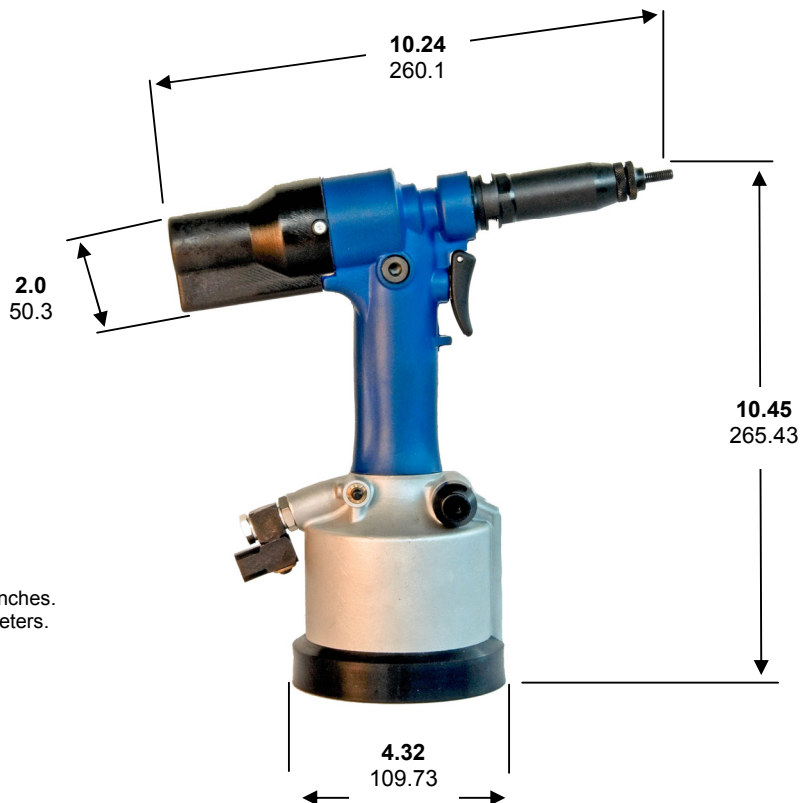
The FLEX-5P & FLEX-5S can install all RIV-FLOAT® & RIV-FLOAT®-SHORT Rivet Nuts up to 5/16-24 (M8)

Reference Page 8 for RIV-FLOAT® & RIV-FLOAT®-SHORT Head Set Part Numbers

SPECIFICATIONS

F L E X - 5 P		T o o l S p e c i f i c a t i o n s	
AIR PRESSURE	Minimum - Maximum	5 – 7 bar	72-101 psi
STROKE	Maximum	7 mm	.280 in
MOTOR SPEED	SPIN ON	1500 rpm	
	SPIN OFF	2000 rpm	
PULL FORCE	@ 6.2 bar	22.25 kN	5,000 lbf
CYCLE TIME	Approximately	2.5 sec	
NOISE LEVEL	Less than	70 dB(A)	
WEIGHT	Without kit	1.9 kg	4.2 lbs
VIBRATION	Less than	2.5 m/s ²	
PLACING FEATURES	Inserts	M3 – M10	#4-40 – 3/8-24
Contact Sherex should you require a pull to stroke setup for this tool (FLEX 5S)			

FLEX-5P TOOL DIMENSIONS



Dimensions shown in **bold** are in inches.
The other dimensions are in millimeters.

AIR SUPPLY

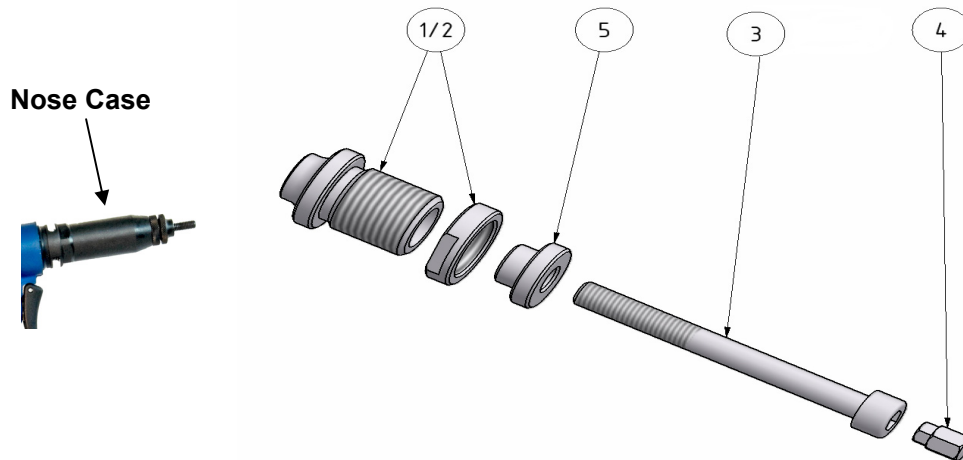
We suggest you use a pressure regulator and automatic oiling / filtering system on the main air supply, to ensure its maximum life cycle with reliable trouble free use.

HEAD SET ASSEMBLY

ASSEMBLY INSTRUCTIONS

IMPORTANT
DISCONNECT THE AIR SUPPLY WHEN SETTING UP OR REMOVING A HEAD SET.

- Choose the proper head set.
- Remove the nose case, if still mounted.
- Unscrew the adaptor nut while moving away the stop pins.
- Insert hex driver **4** into hex hole on spindle, place socket head cap screw (mandrel) **3** on to hex driver **4** and reducing sleeve **5** on mandrel **3**.
- Hold the adaptor nut, ensure the stop pins are seated in the last possible notch on the adapter nut (may require you to turn forward 1 notch).
- Screw on the nose case into the handle casting.
- Screw on the anvil **1/2** onto the nose case.
- To remove the equipment, do the reverse operation.



PLACING RIVET NUT ONTO MANDREL- LENGTH CHECK

- Keeping the tool disconnected from air supply, place an insert on mandrel **3** and adjust anvil **1** and lock nut **2** in order to match the insert and mandrel end. It is ideal to have 1-2 threads of the mandrel protruding from the back of the rivet nut; this will ensure full thread engagement during the installation process. Lock position by tightening lock nut **2** against the nose case.

Head sets should be serviced weekly. Any damaged or worn out parts should be replaced. Check for mandrel wear and replace when necessary. Sherex recommends using high quality socket head cap screws such as Unbrako® and Holo-Krome®.

HEAD SET COMPONENTS

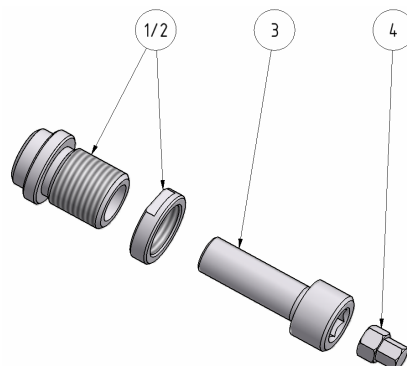
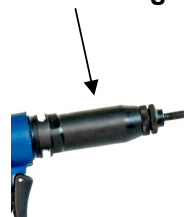
Head sets vary in shape according to the insert thread size. Each head set represents a unique group of components that can be ordered individually and are unique to the size of the fastener. We suggest you keep the components listed below in stock to be used as replacements.
(Numbers refer to sketch on previous page).

THREAD SIZE	COMPLETE HEAD SET	1+2 ANVIL	3 MANDREL	4 HEX DRIVER	5 REDUCING SLEEVE
STANDARD RIVET NUTS					
M3	FL5-HS-M3	FL5-HS-00903	M-M3-40	FL5-HS-01003	FL5-HS-09103
M4	FL5-HS-M4	FL5-HS-00904	M-M4-55	FL5-HS-01004	FL5-HS-09104
M5	FL5-HS-M5	FL5-HS-00905	M-M5-65	FL5-HS-01005	FL5-HS-09105
M6	FL5-HS-M6	FL5-HS-00906	M-M6-65	FL5-HS-01006	FL5-HS-09106
M8	FL5-HS-M8	FL5-HS-00908	M-M8-65	FL5-HS-01008	FL5-HS-09108
M10	FL5-HS-M10	FL5-HS-00910	M-M10-65	FL5-HS-01010	XXXX
# 4-40 UNC	FL5-HS-0440	FL5-HS-00854	M-0440-175	FL5-HS-00754	FL5-HS-09154
# 6-32 UNC	FL5-HS-0632	FL5-HS-00856	M-0632-175	FL5-HS-00756	FL5-HS-09156
# 8-32 UNC	FL5-HS-0832	FL5-HS-00858	M-0832-175	FL5-HS-00758	FL5-HS-09158
# 10-24 UNC	FL5-HS-1024	FL5-HS-00850	M-1024-250	FL5-HS-00750	FL5-HS-09150
# 10-32 UNF	FL5-HS-1032	FL5-HS-00850	M-1032-250	FL5-HS-00750	FL5-HS-09150
1/4-20 UNC	FL5-HS-2520	FL5-HS-00848	M-2520-250	FL5-HS-00748	FL5-HS-09148
1/4-28 UNF	FL5-HS-2528	FL5-HS-00848	M-2528-250	FL5-HS-00748	FL5-HS-09148
5/16-18 UNC	FL5-HS-3118	FL5-HS-00840	M-3118-250	FL5-HS-00740	FL5-HS-09140
5/16-24 UNF	FL5-HS-3124	FL5-HS-00840	M-3124-250	FL5-HS-00740	FL5-HS-09140
3/8-16 UNC	FL5-HS-3716	FL5-HS-00842	M-3716-250	FL5-HS-00742	XXXX
3/8-24 UNF	FL5-HS-3724	FL5-HS-00842	M-3724-250	FL5-HS-00742	XXXX
RIVET NUT STUDS					
M5	FL5-HS-M5S	FL5-HS-S0905	FL5-HS-S0S005	FL5-HS-01010	XXXX
M6	FL5-HS-M6S	FL5-HS-S0906	FL5-HS-S0S006	FL5-HS-01010	XXXX
M8*	FL5-HS-M8S	FL5-HS-S0908	FL5-HS-S0S008	FL5-HS-01010	XXXX
# 10-24 UNC	FL5-HS-1024S	FL5-HS-S0850	FL5-HS-S1024	FL5-HS-01010	XXXX
# 10-32 UNF	FL5-HS-1032S	FL5-HS-S0850	FL5-HS-S1032	FL5-HS-01010	XXXX
1/4-20 UNC	FL5-HS-2520S	FL5-HS-S0848	FL5-HS-S2520	FL5-HS-01010	XXXX
1/4-28 UNF	FL5-HS-2528S	FL5-HS-S0848	FL5-HS-S2528	FL5-HS-01010	XXXX
5/16-18 UNC*	FL5-HS-3118S	FL5-HS-S0840	FL5-HS-S3118	FL5-HS-01010	XXXX
5/16-24 UNF*	FL5-HS-3124S	FL5-HS-S0840	FL5-HS-S3124	FL5-HS-01010	XXXX

*Headsets include p/n FL5-HS-12S92 adaptor nut

RIVET NUT STUD HEAD SET ASSEMBLY

Nose Casing



HEAD SET COMPONENTS - RIV-FLOAT®

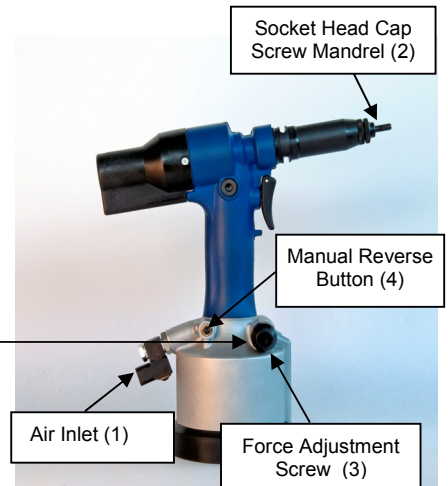
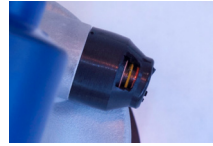
(Numbers refer to sketch on previous page 5)

THREAD SIZE	COMPLETE HEAD SET	1+2 ANVIL	3 MANDREL	4 HEX DRIVER	5 REDUCING SLEEVE
RIV-FLOAT®					
Riv-float® is covered under U.S. Patent No. 7,713,011					
M3	FL5-HS-2528R	FL5-HS-00848	M-2528-225	FL5-HS-00748	FL5-HS-09148
M4	FL5-HS-2528R	FL5-HS-00848	M-2528-225	FL5-HS-00748	FL5-HS-09148
M5	FL5-HS-M5R	FL5-HS-R0995	M-M5-65	FL5-HS-01005	FL5-HS-09105
M6	FL5-HS-M6R	FL5-HS-R0996	M-M6-65	FL5-HS-01006	FL5-HS-09106
# 4-40 UNC	FL5-HS-2528R	FL5-HS-00848	M-2528-225	FL5-HS-00748	FL5-HS-09148
# 6-32 UNC	FL5-HS-2528R	FL5-HS-00848	M-2528-225	FL5-HS-00748	FL5-HS-09148
# 8-32 UNC	FL5-HS-2528R	FL5-HS-00848	M-2528-225	FL5-HS-00748	FL5-HS-09148
# 10-24 UNC	FL5-HS-1024R	FL5-HS-R0950	M-1024-250	FL5-HS-00750	FL5-HS-09150
# 10-32 UNF	FL5-HS-1032R	FL5-HS-R0950	M-1032-250	FL5-HS-00750	FL5-HS-09150
1/4-20 UNC	FL5-HS-2520R	FL5-HS-R0948	M-2520-250	FL5-HS-00748	FL5-HS-09148
1/4-28 UNF	FL5-HS-2528R1	FL5-HS-R0948	M-2528-250	FL5-HS-00748	FL5-HS-09148
RIV-FLOAT®-SHORT					
Patent Pending					
M4	FL5-HS-M4SR	FL5-HS-SR0994	M-M4-55	FL5-HS-01004	FL5-HS-09104
M5	FL5-HS-M5SR	FL5-HS-SR0995	M-M5-65	FL5-HS-01005	FL5-HS-09105
# 8-32 UNC	FL5-HS-0832SR	FL5-HS-SR0858	M-0832-150	FL5-HS-00758	FL5-HS-09158
# 10-24 UNC	FL5-HS-1024SR	FL5-HS-SR0950	M-1024-225	FL5-HS-00750	FL5-HS-09150
# 10-32 UNF	FL5-HS-1032SR	FL5-HS-SR0950	M-1032-225	FL5-HS-00750	FL5-HS-09150

PULL FORCE REGULATION

Install the proper head set for the rivet nut thread size that you will be using. Attach an air supply to the Air Inlet (1) per the recommendations in this manual.

Using a 3 mm allen key, unscrew the force adjustment screw (3) out until it stops. You will see the white line when looking inside the window on the top of the black cover. When pulling the trigger the tool should not pull back as this is at minimum force.



Thread an insert/rivet nut on to the mandrel (2) 1 or 2 turns. Apply pressure to the insert and the auto-spin on feature will engage thereby spinning the rivet nut up the mandrel (2) until it comes in contact with the anvil. To adjust the force, start by turning the force adjustment screw in a $\frac{1}{4}$ turn and try to set the rivet nut. Continue turning the screw a $\frac{1}{4}$ turn after each setting attempt until there is deformation of the rivet nut. Continue to adjust the force until the rivet nut fully installs. For second grip parts and larger, you may need to test in material thickness to achieve a proper installation.

Test the tool set up by installing rivet nuts into the representative material thickness to be used in the application and increase the force if needed.

If during the set up process the tool does not automatically reverse out of the rivet nut press the manual reverse button (4).

If you will be installing rivet nuts into different material thicknesses, test the rivet nut in the thickest material location. This position will require the most installation force.

Operation

Operating procedure

- Head Set assembled, tool connected to air supply, force adjustment complete.
- Screw the rivet nut onto the mandrel (2) a couple turns, then a light pressure on it will start the spinning of the mandrel (push to spin) and automatically stop when the rivet nut comes in contact with the anvil.
- Insert fastener into the application.
- Depress the trigger fully. This will place the insert and automatically reverse the tool out of the installed rivet nut. (Depress the trigger and hold until auto-reverse engages). If auto-reverse does not engage and insert has not collapsed, apply a manual pushing force to engage the auto spin-on, and then depress the trigger. (Ensure the air pressure is within the specified range).
- If, at any time, manual-reverse (4) needs to be engaged, depress the button at the base of the handle, to the right of the air inlet.

IMPORTANT

Do not push the mandrel without a rivet nut as this will cause the mandrel to spin automatically. Ensure pressure settings are correct.

Servicing should be performed on a regular basis and a complete inspection will be needed once a year or every 500,000 cycles, whichever comes first.

IMPORTANT

The employer is the sole responsible party for ensuring the training of staff on proper tool use and maintenance. The operator should not perform any servicing or repairs, unless properly trained.

DAILY SERVICING

- Every day, before use, pour a few drops of light lubricating oil on tool air inlet, if the air supply is not equipped with lubricator.
- Check for air leaks. If damaged, hoses and coupling should be replaced.
- Make sure you are using the proper head set.
- Make sure the pull force is correct for the selected rivet nut.
- Check the mandrel for wear or damage and replace if needed.

WEEKLY SERVICING

- Check for oil and air leaks.

MAINTENANCE

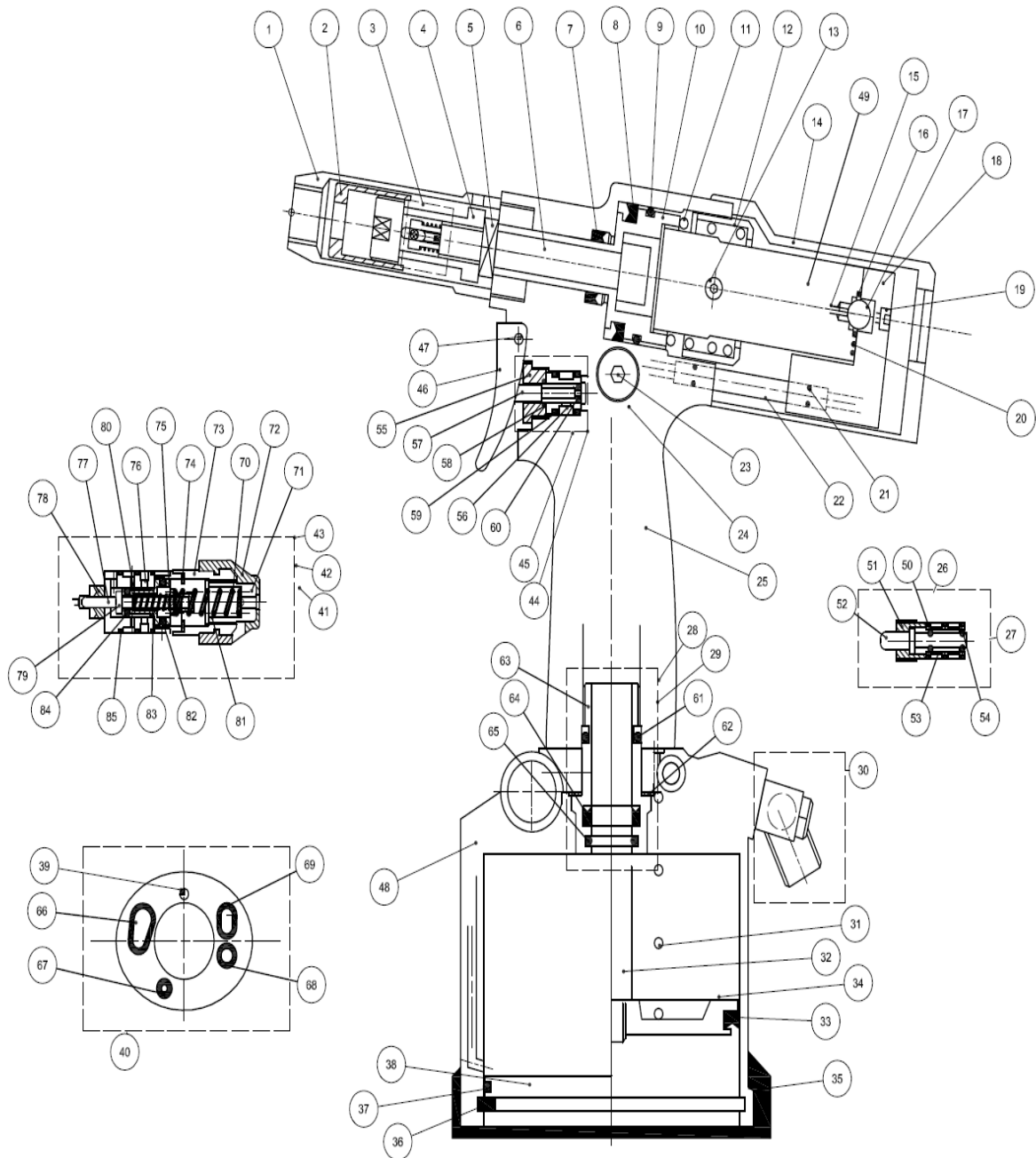
Every 500,000 cycles the tool should be completely checked and parts that are worn or damaged should be replaced. O rings should be replaced and lubricated with Molykote® 55M grease before assembly.

Only a trained technician should service the Flex 5P tool. Should the Flex 5P tool require repair, the tool can be sent to the Sherex authorized repair center:

Alcorn Industrial, Inc
5412 Rock Hampton Court
Indianapolis, IN 46268
sales@alcornindustrial.com
1-800-317-4775

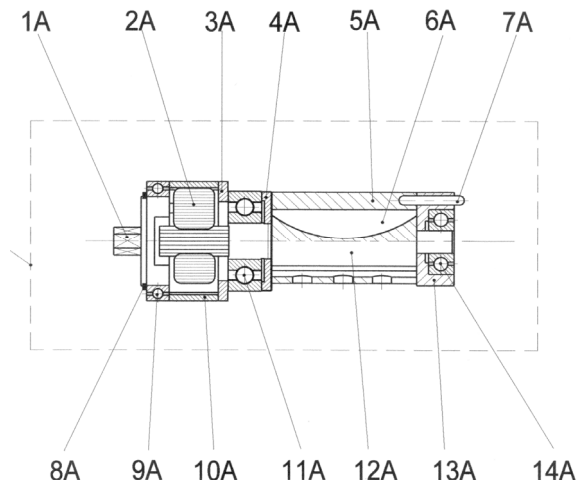
PRIMING PROCEDURE

- Place the tool on its side with the oil plug facing up.
- With a 5mm Allen key, unscrew the oil plug
- Fill tool with DEA Astron HLP 32 hydraulic fluid, or equivalent
- Gently rock tool back and forth to express any trapped air
- Return oil plug and tighten
- Connect air supply and cycle the tool multiple times
- Disconnect air supply and unscrew oil plug a few turns
- Re-tighten oil plug
- If, at any time, oil is leaking from the reservoir, replace the o-ring located at the top of the threaded section.



FLEX-5P SPARE PARTS					
Ref.	Sherex Part Number	Description	Ref.	Sherex Part Number	Description
1	FLEX5-12091	NOSE CASE	44	FLEX5-K4044	O RING KIT 4 pcs
2	FLEX5-12092	ADAPTOR NUT	45	FLEX5-K0045	TRIGGER KIT WITH OR
3	FLEX5-12093	JOINT KIT	46	FLEX5-00046	TRIGGER
4	FLEX5-12044	SPINDLE	47	FLEX5-00047	PIN
5	FLEX5-00803	NUT	48	FLEX5-03013	AIR CYLINDER
6	FLEX5-12056	PISTON ROD	49	FLEX5-12024	AIR MOTOR BODY
7	FLEX5-02004	SEAL	50	FLEX5-00050	O RING
8	FLEX5-12053	SEAL	51	FLEX5-00051	RING NUT
9	FLEX5-12121	O RING	52	FLEX5-00052	SPINDLE
10	FLEX5-12014	OIL PISTON	53	FLEX5-00053	COVER
11	FLEX5-12015	SPRING	54	FLEX5-00054	O RING
12	FLEX5-P0012	RING NUT	55	FLEX5-00055	RING NUT
13	FLEX5-03014	SCREW	56	FLEX5-00056	COVER
14	FLEX5-P0014	MOTOR COVER	57	FLEX5-00057	SPINDLE
15	FLEX5-12078	PUSHING ROD	58	FLEX5-00058	O RING
16	FLEX5-00026	O RING	59	FLEX5-00059	O RING
17	FLEX5-12079	BALL	60	FLEX5-00060	O RING
18	FLEX5-12027	DISTRIBUTOR	61	FLEX5-00061	SEAL
19	FLEX5-12007	SCREW	62	FLEX5-00062	SHIM
20	FLEX5-03022	O RING	63	FLEX5-00063	ROD GUIDE
21	FLEX5-12060	O RING	64	FLEX5-00064	SEAL
22	FLEX5-03009	AIR TUBE	65	FLEX5-00065	O RING
23	FLEX5-01274	OIL PLUG	66	FLEX5-00066	O RING
24	FLEX5-03015	OIL SEAL	67	FLEX5-00067	O RING
25	FLEX5-12037	HANDLE	68	FLEX5-00068	O RING
26	FLEX5-K8026	SCREW OFF KIT 8 pcs	69	FLEX5-00069	O RING
27	FLEX5-K5027	O RING KIT 5 pcs	70	FLEX5-00070	SPRING
28	FLEX5-K5028	ROD GUIDE KIT 5 pcs	71	FLEX5-00071	REGULATOR
29	FLEX5-K3029	SEAL KIT 3 pcs	72	FLEX5-00072	RUBBER CUP
30	FLEX5-K0030	SWIVEL AIR KIT	73	FLEX5-00073	RING NUT
31	FLEX5-00205	SPRING	74	FLEX5-00074	SPACER
32	FLEX5-03018	ROD	75	FLEX5-00075	SLIDER
33	FLEX5-12008	SEAL	76	FLEX5-00076	COVER
34	FLEX5-03020	PISTON	77	FLEX5-00077	SPINDLE
35	FLEX5-12002	RUBBER BASE	78	FLEX5-00078	SEAL
36	FLEX5-12036	ELASTIC RING	79	FLEX5-00079	SPINDLE
37	FLEX5-03023	O RING	80	FLEX5-00080	SPRING
38	FLEX5-00038	PLATE	81	FLEX5-00081	BOTTOM
39	FLEX5-00039	PIN	82	FLEX5-00082	O RING
40	FLEX5-K4040	O RING KIT 4 pcs	83	FLEX5-00083	O RING
41	FLEX5-K1741	PRESSURE KIT 17 pcs	84	FLEX5-00084	O RING
42	FLEX5-K7042	SEALS KIT + OR 7 Pcs	85	FLEX5-00085	O RING
43	FLEX5-K2043	SPRINGS KIT 2 pcs			

AIR MOTOR



FLEX-5P AIR MOTOR SPARE PARTS		
Ref	Sherex Part Number	Description
1A	FLEX5-12063	PLANET GEAR SPINDLE
2A	FLEX5-09208	PLANET
3A	FLEX5-12066	SPACER
4A	FLEX5-09210	FRONT WASHER
5A	FLEX5-09211	STATOR
6A	FLEX5-09213	WING
7A	FLEX5-09216	PLUG
8A	FLEX5-12061	SEEGER
9A	FLEX5-12062	BEARING
10A	FLEX5-12065	CROWN
11A	FLEX5-09206	BEARING
12A	FLEX5-12070	ROTOR
13A	FLEX5-09214	BACK WASHER
14A	FLEX5-09215	BEARING

Safety Instructions appear on pages 2.
The operator should not be involved in maintenance or repair of the tool unless properly trained.

- The air line must be disconnected before any servicing or dismantling.
- It is recommended that any dismantling operation be carried out in clean conditions.
- Item **numbers** in **bold** refer to the general assembly and parts list on pages **9** and **10**.
- Before dismantling the tool, you should remove the nose assembly. Please refer to the nose assemblies section on page **4** for instructions.
- For a complete tool servicing, we suggest you dismantle the sub-assemblies as shown on pages **11-16**.
- Prime after assembly to restore the full stroke.

OIL DRAINAGE



1: Place the tool on its side, with the oil plug side up

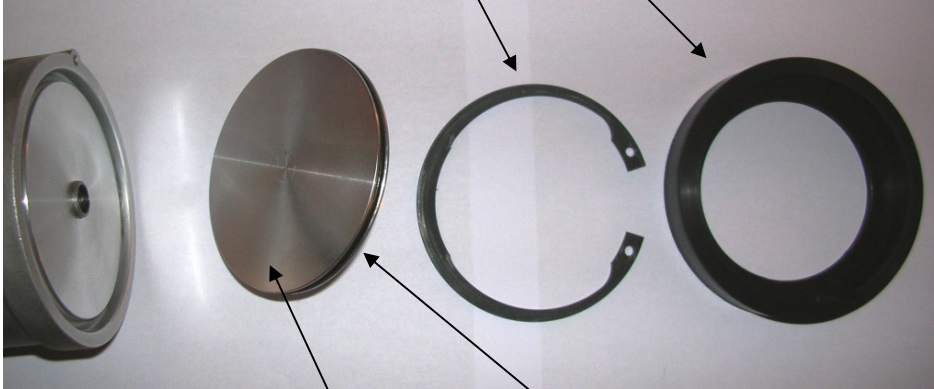
2: With a 5mm Allen key, Unscrew the oil plug **23**.

3: Drain the oil in a proper container

1 PNEUMATIC CYLINDER

1: Remove rubber base cover **35**

2: Remove the snap ring **36**



3: Remove the plate **38** and O Ring **37**



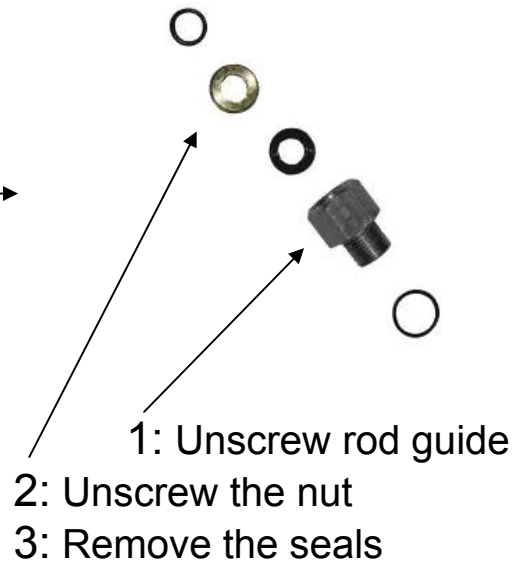
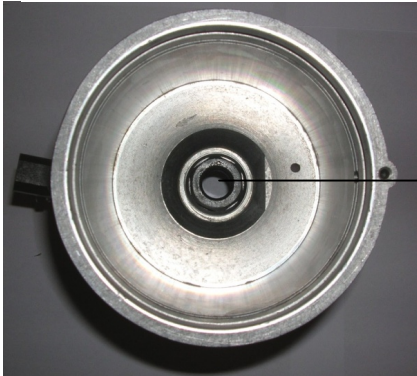
4: Remove pneumatic piston assembly.

This should release itself under the pressure of spring (however it maybe necessary to push the piston against the spring to activate the release)

5: Remove spring **31** and inspect for damaged rod, **32**, piston, **34**, and seal **33**.

2 ROD GUIDE

Ensure oil is drained



1: Unscrew rod guide

2: Unscrew the nut

3: Remove the seals

(28 Complete kit - 5 pcs.)

(29 Seal kit - 3 pcs.)

3 TRIGGER

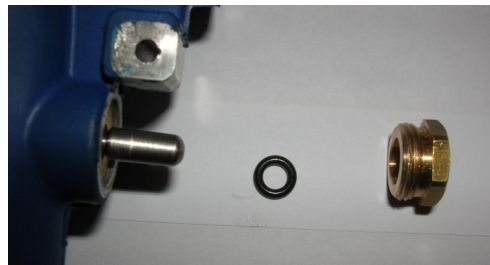


1: Remove pin **47**

2: Remove trigger **46**

44 O Ring kit 4 - pcs.

45 Trigger Kit with O Ring

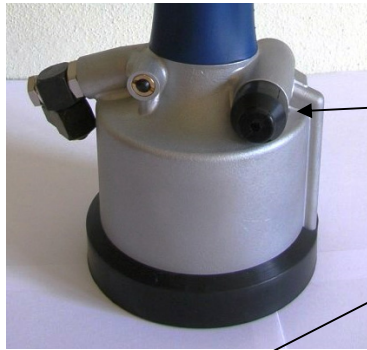


3: Remove nut

4: Remove O ring

5: Remove the pin with pliers

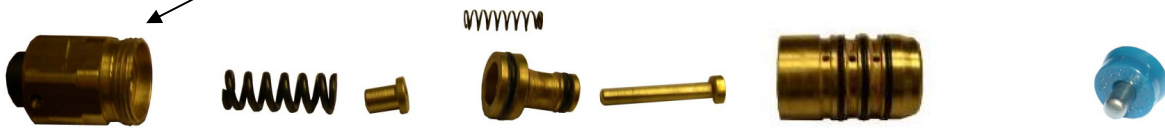
4 PRESSURE REGULATOR



1: Remove rubber cover

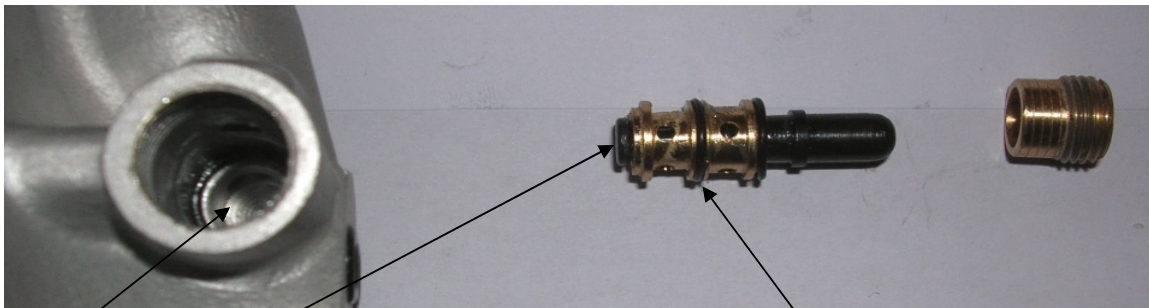
2: Remove end cap

Internal Parts



41 Complete kit 17 - pcs. **42** Seals kit 7 - pcs. **43** Springs kit 2 - pcs.

5 MANUAL REVERSE

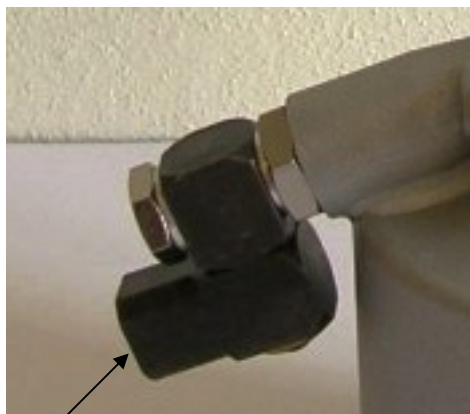


Seat

26 Complete kit valve and O Ring 8 - pcs.

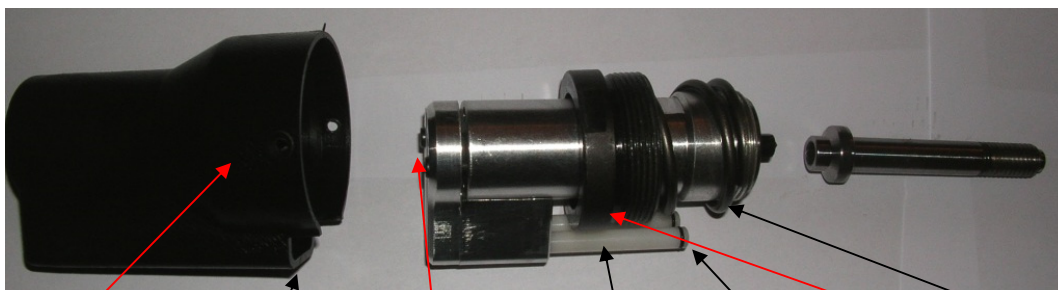
27 O Ring kit 5 - pcs.

6 SWIVEL AIR INLET

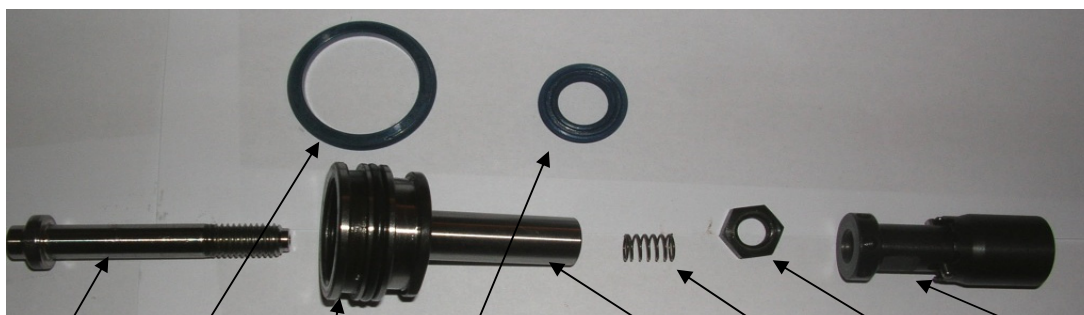


30 Complete kit swivel air inlet

7 AIR MOTOR 8 HYDRAULIC PISTON

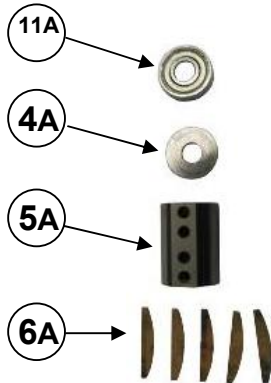
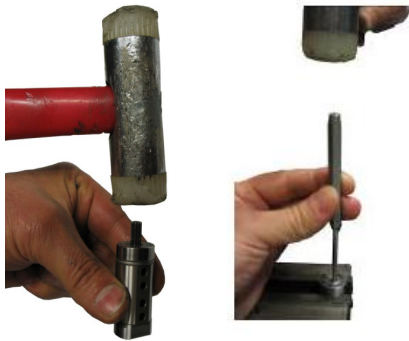


Remove Screws **13** Motor Cover **14** Screws **19** Air Tubes **22** O Ring **21**
Screw off the ring nut **12** Spring **11**



Piston rod **6** Seal **8** O Ring **9** Seal **7** Piston **10** Spring **3** Nut **5** Spindle **4**

7.1 AIR MOTOR ASSEMBLY



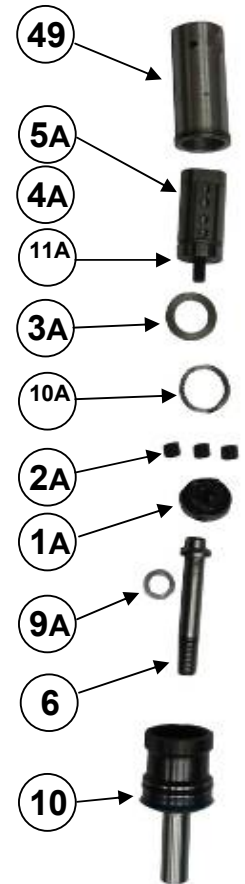
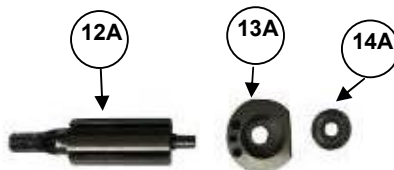
1 Components **11A** to **7A** can be pulled out all together, making sure not to drop pin **7A**.

2 Using a soft mallet, tap splined head of rotor **12A**.

3 Bearing **11A** and the front washer **4A** will come out with stator **5A** and five rotor blades **6A** (rotor **12A** remains in your hands)

4 Place rear end plate **13A** in vice with soft jaws.

5 Using a pin punch, tap rotor **12A**'s center to remove bearing **14A** (turn rotor **12A** upside down and the bearing **14A** will come out).



SYMPTOM	POSSIBLE CAUSE	SOLUTION
Pneumatic motor runs slowly	⇒ Motor air leaks ⇒ Low air pressure ⇒ Air vanes jammed	⇒ Check for worn out seals. Replace ⇒ Increase it ⇒ Lubricate tool through air inlet
Insert does not deform properly	⇒ Pull force not set properly ⇒ Air pressure outside limits ⇒ Low oil level ⇒ Insert out of the grip	⇒ Adjust ⇒ Adjust ⇒ Add oil and prime ⇒ Check the insert grip range
Mandrel does not spin	⇒ Mandrel worn/damaged ⇒ Hex Driver worn/damaged ⇒ Loose locking ring	⇒ Replace Mandrel ⇒ Replace Hex Driver ⇒ Tighten Locking Ring
Insert does not spin on the mandrel	⇒ Incorrect insert thread ⇒ Incorrect mandrel ⇒ Mandrel out or damaged	⇒ Replace with proper insert ⇒ Replace with proper mandrel ⇒ Replace
Tool is locked in installed insert	⇒ Excessive pull force ⇒ Defective insert ⇒ Defective or worn out or damaged mandrel	⇒ Depress manual spin off If this does not work, disconnect air, insert a pin through nose casing slots and unscrew. ⇒ Contact Sherex ⇒ Replace Mandrel
Mandrel breaks prematurely	⇒ Excessive pull force ⇒ Side load on mandrel	⇒ Reduce pull force ⇒ Keep the tool square to the application when placing insert
Tool does not spin on insert	⇒ No air supply ⇒ Insufficient distance between locknut and spindle ⇒ Air motor jammed	⇒ Connect ⇒ Set distance between 1.5 and 2 mm ⇒ Lubricate through air inlet or if required contact Sherex authorized repair center
Auto reverse stops working but the manual reverse does work	⇒ Oil level	⇒ Check oil level and add more oil to the tool





Features & Benefits

10 inch color touch panel

Connect up to 4 hand tools to each panel

Measure installation force and stroke distance

For blind rivet nuts form M3 to M10 & #4-40 to 3/8-16

Archive installation data through Ethernet/USB port

Prestroke feature accounts for any gaps between rivet nut & anvil, reducing potential faults

Three levels of password control

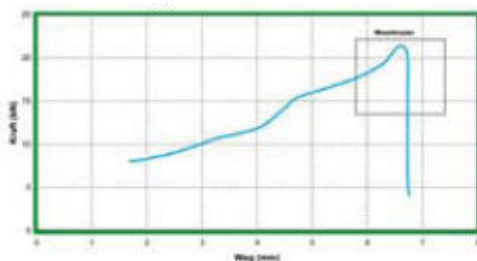
Customer satisfaction through high reliability and product quality

Cost savings by avoiding complaints, rework and recalls

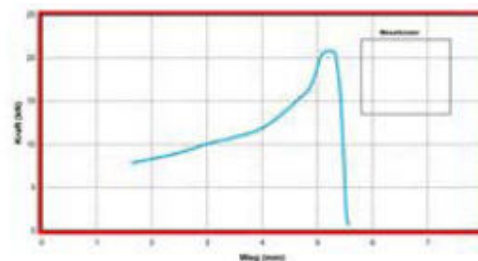
Additional Options: Bar code printer, x-y balancer, in-line configuration & counter

Displacement and force values are recorded during the installation cycle resulting in a plotted "installation curve." Depending on the processed element and component, the curve develops a specific shape. This specific shape must pass through a user-defined control window, or the system displays an error which can be viewed on the large 10" color touch panel. Therefore, no additional laptop is necessary for programming or display. The system can be integrated with a separate PLC in order to increase assembly system functionality.

Process Monitoring Example



Result "OK", installation
(All control parameters achieved)



Result "NOT OK", installation
(Full pull distance not achieved)

Sherex offers installation tools to meet any & all requirements no matter the size of the application or the size of the rivet nut

FLEX-18



FEATURES AND BENEFITS

The most powerful tool on the market able to utilize Pull to Pressure and Pull to Stroke installation methods.

- Installs Rivet Nuts from M8 to M16 and 5/16-18 to 3/4-10
- Push to start nose piece to spin on fastener
- Single stage trigger
- Automatic reverse with manual reverse bypass
- Quick change mandrel design
- Socket head cap screw mandrel for sizes up to M12 and 1/2-20
- Can be suspended from a balancer
- **18,000 lbs. (80 kN) of pulling force**
- **15 mm (.591 in) of available stroke**
- Upgradeable to process monitoring
- 2-3 second cycle time
- Light weight handle (8.0 lbs.)
- All aluminum handle design for improved durability

SSG Pneumatic Series



**800
SERIES**



**900
SERIES**



**910
SERIES**

Known as "Spin-Spin Tools," this line of tooling is designed to set the rivet nut to a pre-set torque allowing thin wall rivet nuts from 6-32 to 1/2-20 (M3-M12) to be installed in various material thicknesses with no adjustment to the tool. The SSG 800 Series is the Pistol Grip version of the tool. Our SSG 900 Series is the inline version of the tool which is ideal for vertical installations & our Right Angle Inline version of the tool, the SSG-910 Series is meant for applications that are difficult to access.

Hand Tools



M4 Hand Tool
1/4-20 - 1/2-20 (M6 - M12)



LHF 202 Hand Tool
6-32 - 1/4-20 (M3 - M6)



RNHT Hand Tool
6-32 - 3/8-24 (M3 - M10)



M5 Hand Tool
6-32 - 3/8-24 (M3 - M10)

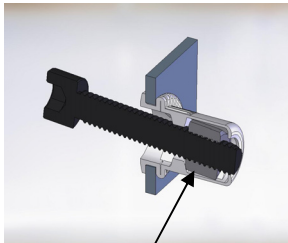
The FLEX line of tooling is just one of many Product lines that Sherex offers to help meet your application requirements

BLIND RIVET NUTS



Blind rivet nuts are suitable for providing load-bearing threads in thin materials & blind applications. Sherex Fastening Solutions offers the most comprehensive line of blind rivet nuts from thin wall parts to heavy duty. Rivet Nuts are available in both an Inch Body Style & Metric Body Style. Special designs are available to meet customer specific needs.

RIV-FLOAT®



Internally Floating Threads

RIV-FLOAT® is the next generation of fastening technology. Internally floating threads allow for component attachment in off-center applications. RIV-FLOAT® was designed for post finish installation in applications where cage nuts, clinch nuts, floating nut plates or weld nuts are typically used. By aligning to the drive angle of the screw, RIV-FLOAT® accounts for tolerance stack up, saving rework of components and downtime associated with stripped or cross threaded fasteners. RIV-FLOAT®-SHORT is available for applications requiring backside clearance similar to that of various riveted nut plates and cage nuts.

BRASS INSERTS



Brass inserts from Sherex Fastening Solutions are designed to provide a threaded hole in plastics that are not strong enough to support a thread. Brass inserts are available in many options such as ultrasonic, press-in, flanged and molded-in. These inserts have a self aligning lead for accurate installation and can be easily mounted. Suitable industry applications include: automotive, communication and computer equipment, or almost anywhere strong, durable threads are required in plastics.

CLINCH NUTS



Sherex offers three different kinds of clinch nuts to meet the specific requirements of the customer's application. Sherex clinch nuts can be used in various high strength steels such as dual phase alloy, HSLA, and TRIPS to meet class 10 nut strength requirements. Sherex clinch nuts can be used in any material that offers access from both sides of the base material.

FASTENER AUTOMATION



Sherex combines world class fastener manufacturing and design capability with industry leading automation equipment to offer the best solution for your application. This "One Source" service ensures that you are receiving the best support before and after the start of production. Whether you are using 10,000 pieces or 10 million pieces, Sherex offers different levels of automation and fastener capability to meet both your budget and performance requirements.



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