Wire Pilot® Feed Assist Assembly & Maintenance

Model PFA-3 (PFA-LM-20)

1. Installation of the Wire Pilot® Pneumatic Feed Assist should be as close to the wire source (drum, spool or wood reel) as possible (see photos). Dimensional mounting data can be found on the back of this page.
2. Open the clear cover and bail (by lifting the handle up) and install the two drive rolls on the Wire Pilot® motor. Secure them into place with the six screws provided (127mm allen wrench required). Upon initial setup, as well as any time the bail is opened and closed, ensure the two blue markings are facing each other as shown for proper gear alignment.

Drive Roll Screw Torque Setting: 1,25 - 1,38 bar

3. Mount the filter, regulator, lubricator (FRL) so that it is in the vertical position. Fill the reservoir with ISO VG 22 air tool lubricating oil. Set lubricator so it provides 1 drop of oil for every two minutes of operation at 1.4 bar. See back for detailed instructions.
4. Ensure that the ball valve is closed and connect the air supply to the inlet of FRL.
5. Feed the wire through the feed assist and close the bail. Ensure that the wire is between the grooves in the drive rolls.
6. Confirm the air pressure is set at 0 bar on the regulator gauge.
7. Open the ball valve.
8. With the ball valve open, slowly increase the air pressure by turning the knob in a clockwise direction. The amount of air pressure required to push the wire will vary depending on the following: wire diameter, wire source, conduit type, conduit length and the straightness of the conduit. In most applications, it is safe to start with approx. 0.28 – 0.34 bar and adjust the pressure higher or lower until the Feed Assist functions properly (see steps 9 – 10).
9. As the air pressure is increased, the motor will start to push the wire. DO NOT turn the pressure up more than what is needed to push the wire through the conduit alone. The feed assist motor can provide wire speeds in excess of 1200 IPM.
10. To fine tune the Feed Assist, loosen the tension knob on the bail until the wire starts to slip between the drive rolls, then tighten it back 1/4 to 1/2 turn. If the feed assist is set up correctly, the motor should stall when the wire feeder stops feeding and resume pushing the wire when the feeder is active. Do not overtighten drive rolls.

NOTE: When the air pressure is set too high, the wire may “bird’s nest” or push past the drive rolls when the wire feeder is not feeding wire. If the pressure is set too low, it creates drag on the wire feeder causing the drive rolls to slip.

Wire Pilot® Feed Assist Mounted on a WGM-PFA-STAND (wire drum below).

Feed Assist Drum Adapter Kit *PFA-DA*

Adjustable Stand

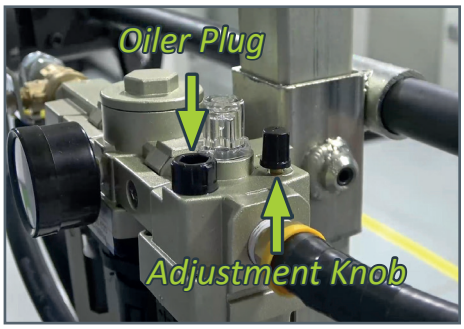
WGM-PFA-STAND

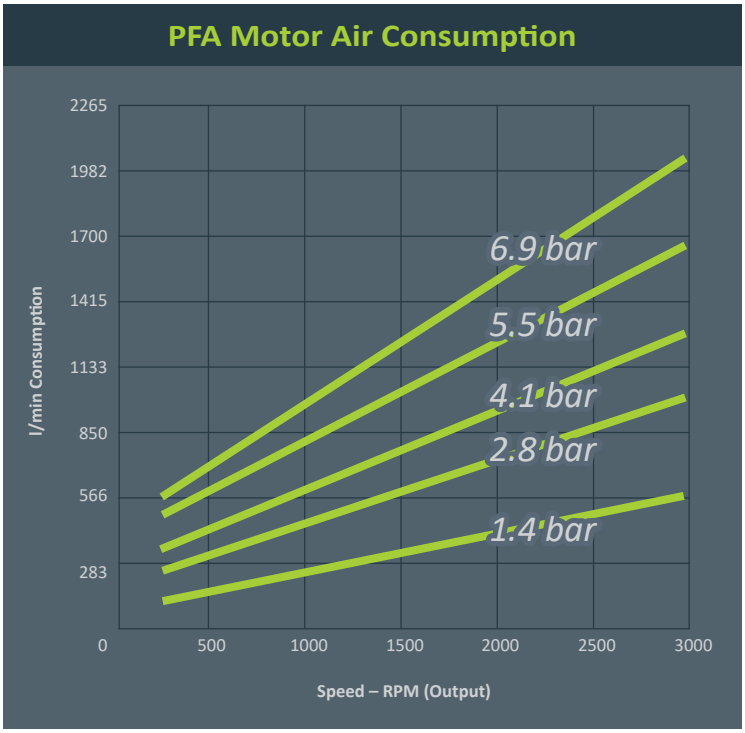
Shown with two Feed Assists and four drums

Oiler Adjustment Instructions

Lubricant is required for this motor.

1. Turn air pressure off.
2. Open bail on the right side of the motor.
3. Turn air pressure up to 1.4 bar
4. Adjust oiler until one drop of oil is added for every two minutes of operation.

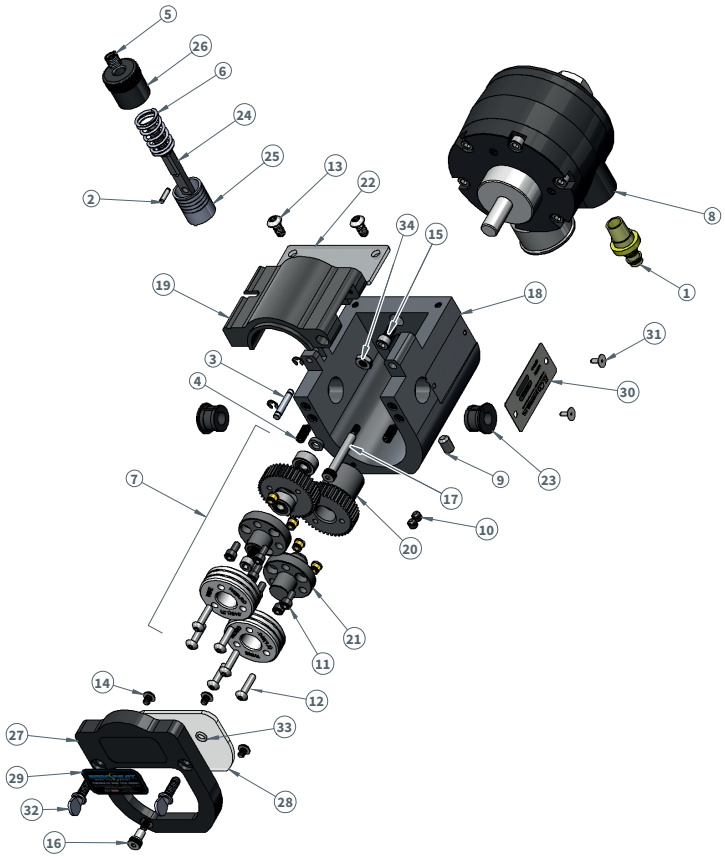




Assembly & replacement parts

PFA-LM-BK Bolt Kit

No.	Part No.	Description	Qty.
1	129P01-6-4	3/8 X 1/4 Barb Fitting	1
2	64075	1/8 DIA. X 1/2 Large Roll Pin	1
3	93890A552	3/16 DIA. X 1-1/32 OAL Clevis Pin with E-Clips	1
4	94115A537	Soft Nose Set Screw	2
5	60569	5/16-18 Heli-Coil Insert	1
6	C0720-085-1250-M	Compression Spring	1
7	PFA-LM-BGA	Bail Gear Assembly	2
8	4AM-NRV-54ANLP	Air Motor	1
9	25439	5/16-18 X 1/2 Large Set Screw	1
10	25326	1/4-20 x .25 Large Set Screw	2
11	23163	10-32 X .38 LG. SHCS	6
12	41312	M5 X .8 X 20MM LG BHSC Zinc	6
13	94049	1/4-20 X .500 BHCS Zinc	2
14	94028	10-24 X .250 BHCS Zinc	4
15	93201	1/4-20 X 1/2 SHCS Zinc	1
16	26301	1/4 X .375 LG Shoulder Bolt	1
17	91259A546	1/4 X 1 1/2 Shoulder Bolt	1
18	PFA-01-1	Housing	1
19	PFA-03-2	Bail	1
20	PFA-19-2	Gear	1
21	PFA-21	Shaft Adapter	1
22	PFA-26-1	Cover	1
23	PFA-33	Bushing	2
24	PFA-36	Pivot Fastener	1
25	PFA-37	Adjuster Knob Base	1
26	PFA-38	Adjuster Knob	1
27	PFA-66	Front Cover	1
28	PFA-67	Window	1
29	WIRE PILOT DECAL-20	Decal	1
30	PFA-LM-20-SERIAL TAG	Model/Serial Tag	1
31	41212	1/8 X 1/4 Pop Aluminum River	2
32	91744A540	1/4-20 X .750 Spade Head Thumb Screw	2
33	2418T112	AS568A-006 Silicone “O”-Ring	2
34	37120	1/4-28 Nylock	1

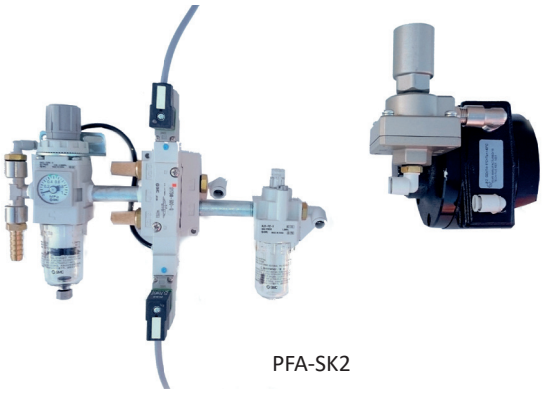


Double solenoid kit

Double action solenoid valve kit used at classic PFA to feed and retract the wire if needed

Kit is supplied with:

- Filter/Regulator
- Liquidator (oil-unit)
- 24Volt Solenoid valve
- 2x 10 meter electrical cable
- 2x 2 meter pneumatic hose 8mm
- Pneumatic quick connectors 8mm with 1/4 thread
- Low threshold quick exhaust for motor outlet
- Exhaust filter



PFA-SK2

Maintenance and Troubleshooting

- Visually inspect unit for damage, especially mechanically stressed components.
- Inspect the filter and bowl on the filter/regulator/lubricator. Clean and replace filter if necessary. Filter must be compatible with an SMC AF30 style filter (Fig. 1).
- Verify air lines connected to the Feed Assist are free of leaks and other damage.
- Ensure the lubricator has lubricant and fill if necessary with ISO VG 22 air tool oil.
- To ensure correct lubricant application, repeat “Oiler Adjustment Instructions.”
- Check drive roll bolts to confirm they are tight.
- Release the bail and check drive roll bearing for any wobble. If there is wobble, the bearing may need to be replaced (see replacement parts list) (Fig. 2).
- Inspect drive rolls during operation to confirm no slippage over the wire. If there is slippage, tighten the tension knob slightly until there is no slippage. If the drive rolls still slip, they should be replaced.
- If wire is birdnesting or bending at the wire feeder, ensure the air pressure is not set too high. Normal operating pressure for most applications is approximately 0.28 – 0.34 bar, but this will vary based on the wire delivery setup.

Figure 1

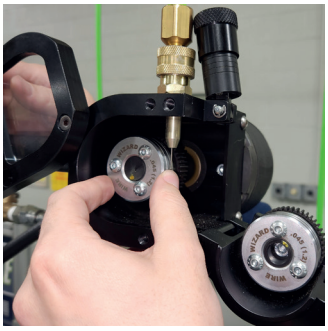


Figure 2

Warranty and liability

All liability on the part of Valk Welding ensuing from an agreement entered into with Valk Welding, the law, an unlawful act or any other legal ground and/or for whatever reason or in respect of whatever case is limited to what is stated in the provisions of this article.

The warranty period is 12 months as from the date of shipping to the buyer and with a maximum of 1,500 operating hours. The warranty covers all parts and labor with the exception of misuse, abuse, neglect and typical consumables as determined by Valk Welding. This warranty excludes damage caused by industrial contaminants, arc shorts, improper installation or improper maintenance. Valk welding will at its option, repair, replace or issue a credit for the value of the defective product within the warranty period.

Upon evaluation and validation of warranty, replacements or repairs can be discussed to send to the buyer. If a replacement is needed immediately, a purchase order is required to cover the cost of the product until the warranty is determined.

Except in the event of intent or wilful recklessness on the part of Valk Welding, all liability on the part of Valk Welding for damage, whether direct, indirect or otherwise, and regardless of whether it is based on the contract entered into with Valk Welding, the law, an unlawful act or any other legal ground and/or for whatever reason or in respect of whatever case shall be excluded.