

# **CABLE OVERBLOWING JUNCTION BOX**

## **OPERATION & MAINTENANCE MANUAL**



**P/N 89066 for 1.25" SDR**

**P/N 89067 for 1.50" SDR**

**P/N 89068 for 2.00" SDR**

**Copyright 2017 by General Machine Products (KT), LLC**  
All rights reserved. No part of this publication may be copied,  
reproduced or transmitted in any form whatsoever without the  
written permission of **General Machine Products (KT), LLC**

# REVISION HISTORY

<b>Rev #</b>	<b>Date</b>	<b>Details</b>	<b>Author</b>
01	05/31/12	Original Issue	A Konschak
02	01/21/15	Add Allen Key reference; Combined 89066 and 89067 in same manual	A Konschak
03	11/30/15	Added 2" SDR	A Konschak
04	01/17/17	Updated color code on 33218/33219	A Konschak
05	07/28/17	Updated company name, added 7.5-9mm seal	A Konschak

## CONTENTS

1. Safety Instructions
2. General Description
3. Specification
4. Operating procedures
5. Maintenance
6. Troubleshooting Guide
7. Recommended Spares List



**This equipment should be used only by personnel who have been given the appropriate training and who are competent to use it. These instructions are to be made available to operators of this equipment at all times. Failure to observe these safety instructions could result in serious personal injury and/or property damage.**

## **1. SAFETY INSTRUCTIONS**

### **WORK AREA AND GENERAL SAFETY**

1. Read and understand the operation and maintenance manual supplied with this equipment. Keep it in a convenient place for future reference.
2. Keep children and untrained personnel away from this equipment while in operation.
3. Keep all guards and safety in place. Do not operate this equipment with guards removed or damaged.
4. Keep hands, feet and loose clothing away from moving parts.
5. Check equipment before starting for worn or damaged parts. Check that all nuts and bolts are tight.
6. If equipment is left unattended, ensure that unauthorized use is prevented
7. Never leave the equipment unattended while in use.
8. Consider the use of safety barriers, especially when used in public places.
9. Wear ear defenders when power pack engine is running to prevent ear damage.
10. Stay clear of the pressurized innerduct.
11. Only use the equipment for its intended purpose.
12. When operating machine always wear eye protection, hard hat, safety shoes and leather gloves, machine operates with compressed air up to 175 psi (12 bar).
13. Prior to installation ensure the innerduct route is connected properly.
14. Ensure the compressed air supply is not applied to assist the new cable / tube(s) until approximately 100 - 115' (30 – 35 m) of cable / tube(s) have been installed or the hydraulic pressure on the blowing machine begins to rise.
15. The compressed air must not be allowed to enter the Cable Overblowing junction box until all 4 lid-retaining screws have been fully tightened down.

# GENERAL PNEUMATIC SAFETY INSTRUCTIONS

The GMP Overblowing Junction Box is used in conjunction with the GMP Fiber Optical Cable Blowing Machine, both are pneumatic devices, they use pressurized air to project cable at high velocities. Please observe the following precautions when operating the Cable Blowing Machine: -

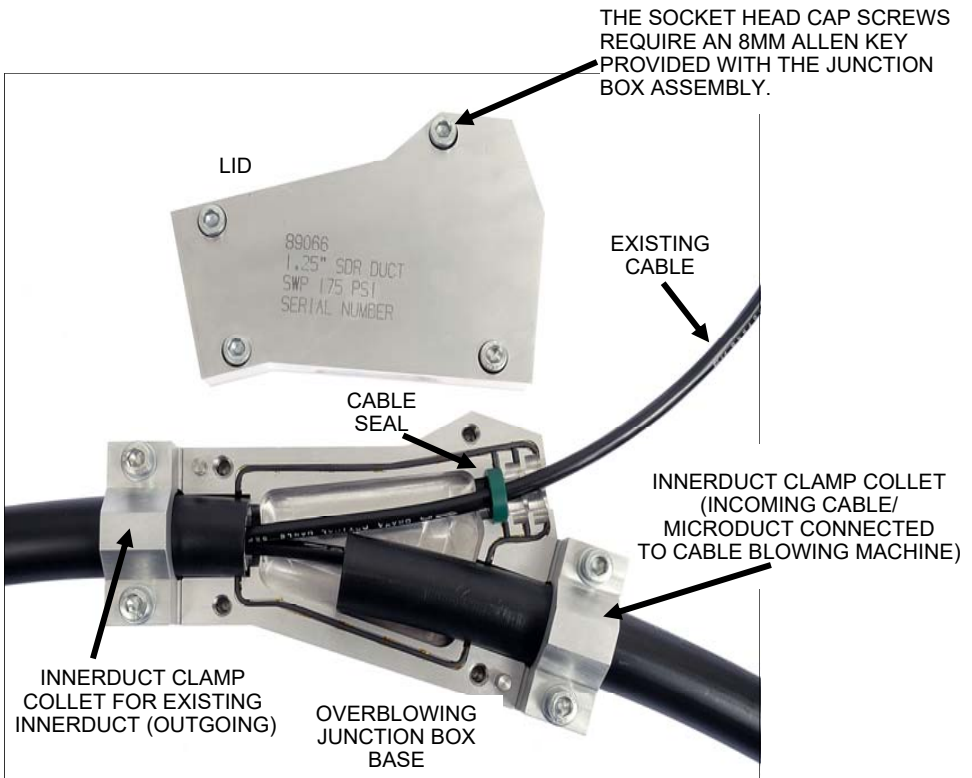
1. Compressed air can cause flying debris. This could cause personal injury. Always wear personal protective equipment.
2. Ensure no personnel are in the manhole at the far end of the cable / tube run. Severe personal injury may result.
3. Never open the Cable Overblowing Junction Box air chamber when pressurized.

Only authorized, fully trained personnel should operate the air compressor.

## 2. GENERAL DESCRIPTION

The GMP Cable Overblowing Junction Box has been designed to install a new cable or duct-tubes into an existing occupied innerduct (subject to space being available).

The Cable Overblowing Junction Box comprises a heavy duty aluminium base and lid that form a pressurized air chamber into which one end of an existing occupied innerduct can be attached. The existing cable can exit the Cable Overblowing Junction Box through an opening that has 3 cable seal slots, one of which will house the seal to suit the size of the existing cable. The third branch is then connected to a GMP Cable Blowing Machine via a short slave length of innerduct for the installation of the new cable or tube(s).



# 3. SPECIFICATIONS

**Cable Diameter Range: 7.5 - 20mm**

The maximum diameter of a new cable for installation is dependent on the diameter of the existing cable and the duct size.

<b>Duct Size:</b>	1 1/4" SDR	1 1/2" SDR	2" SDR
<b>Installation Principle:</b>	Viscous Drag	Viscous Drag	Viscous Drag
<b>Max Operating Pressure:</b>	175 psi (12 Bar)	175 psi (12 Bar)	175 psi (12 Bar)
<b>Length:</b>	12" (305mm)	12" (305mm)	12" (305mm)
<b>Width:</b>	6" (152mm)	6" (152mm)	6 1/2" (165mm)
<b>Height:</b>	3" (76mm)	3" (76mm)	3 3/8" (84mm)
<b>Weight:</b>	9 lbs. (4kg)	9 lbs. (4kg)	14.5 lbs. (4kg)
<b>Min Flow Acceptance:</b>	250 cfm (7m <sup>3</sup> /min)	375 cfm (10m <sup>3</sup> /min)	700 cfm (19m <sup>3</sup> /min)

## 4. OPERATING PROCEDURE



IT IS IMPERATIVE THAT ALL PERSONS USING, OPERATING OR MAINTAINING THE OVERBLOWING CABLE JUNCTION BOX, BLOWING MACHINE, POWER PACK AND AIR COMPRESSOR MUST BE FULLY TRAINED, COMPETENT AND AUTHORIZED TO DO SO, THEY MUST ALSO HAVE READ THE ENTIRE OPERATING MANUAL.

GENERAL MACHINE PRODUCTS (KT), LLC CANNOT BE HELD RESPONSIBLE FOR MIS-USE OF THIS EQUIPMENT.

1. Ensure that the Cable Blowing Junction Box is clean and free from debris, sludge, dirt, water and lubricant.
2. Ensure that all the retaining screws and lower clamp collet screw threads are clean and free from debris, sludge, dirt, water and lubricant.
3. Ensure that all cord seals are fitted and are in good condition, replace any damaged or worn seals.
4. Ensure that the innerduct is fully prepared for use.
  - a. Fully connected
  - b. Pressure tested
  - c. Calibrated
  - d. Cable exit retaining device attached
  - e. Lubricated
5. Position the Cable Overblowing Junction Box into the manhole, duct or trench.
6. Remove the lid and open the innerduct clamps **(F)(A)** , place the existing innerduct **(C)** into the innerduct clamp collet and junction box base collet (this is the single position on the Junction box), ensure the innerduct is fully engaged into the junction box base.
7. Fit the innerduct clamp **(F)** and tighten the two retaining cap screws **(H)**. Do not over tighten the retaining screws.
8. Fit the correct size cable seal **(E)** to the existing cable **(G)** and place into the correct seal housing slot in the junction box base. Note the seal groove faces inboard with the splits positioned vertically downwards in the base.
9. Locate the innerduct **(B)** from the cable blowing machine into cable incoming position, the amount of insertion will depend on the innerduct and cable / duct tube(s) sizes and must be accessed by the operator to give a smooth buckle free entry into the existing duct, to assist the incoming cable / duct it may be beneficial to cut part of the end of the innerduct end to fit around the existing cable,

fit the innerduct clamp (A) and tighten the two retaining cap screws (H). Do not over tighten the retaining screws.

10. For installing duct tubes, tube end caps will need to be fitted, the duct tubes may also need to be pressurized.

11. Apply a smear of silicon grease to the edge of the cable / tube (s) entry point on the junction box base and lid.

12. The cable blowing machine should be set up ready to install the new cable/duct-tube(s), (refer to procedure in the cable blowing machine operator and maintenance manual). The cable / duct-tube(s) must be fed through the short slave length of innerduct from the cable blowing machine and into the existing innerduct fed into the Cable Overblowing Junction Box by approx. 6 - 15' (2 – 5m).

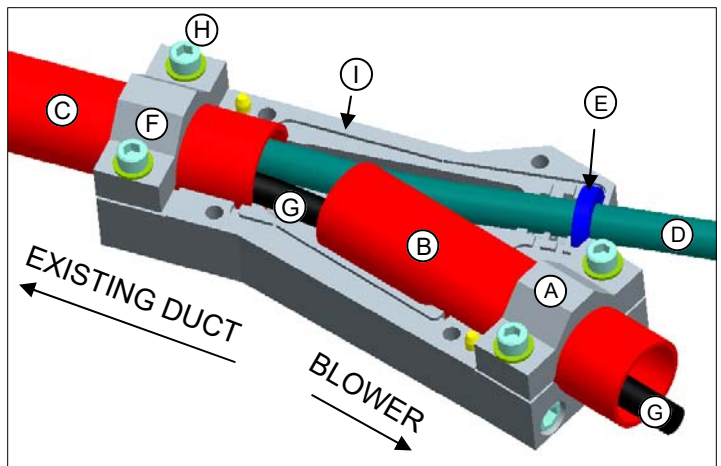
13. Close the Cable Overblowing Junction Box lid and secure by tightening all 4 retaining cap screws. Do not over tighten.

14. The system is now ready to begin installing the new cable / duct tube(s).

15. On completion of the installation it may be necessary to remove the short length slave innerduct with a duct splitter.

**16. DO NOT OPEN THE CABLE OVERBLOWING JUNCTION BOX WHILE UNDER PRESSURE.**

Always check that the air pressure gauge on the blowing machine has reduced to zero before opening.





## **5. MAINTENANCE AND SERVICING**

The GMP Overblowing Junction Box requires very little maintenance or servicing.

- 1.** Always ensure that the unit is clean and free from debris, sludge, dirt, water and lubricant.
- 2.** Ensure that all the retaining screws and lower clamp collet screw threads are clean and free from debris, sludge, dirt, water and lubricant.
- 3.** Always ensure that all cord seals are in good condition and replace any damaged or worn seals. The cord seals should be cut to length and glued into the grooves in the junction box housing upper and lower halves.
- 4.** Always ensure that the cable seals are in good condition and replace if damaged or worn. For best sealing results the cable seal should be the smallest size available, for example, for a 16 mm dia. cable select a cable seal in the range 14-16 mm as opposed to 16-18 mm diameter.
- 5.** Always ensure that the retaining washers on the innerduct clamps and lid retaining cap screws are in good condition, they must prevent the screws from being withdrawn.
- 6.** Always check that the screws are securely tightened.
- 7.** The lid and base should be stored as an assembled unit to ensure that parts aren't lost.

## **6. TROUBLESHOOTING GUIDE**

### **CABLE BLOWING MACHINE STOPS SUDDENLY DURING CABLE INSTALLATION**

- Maximum hydraulic pressure achieved
- Obstacle in duct installation
- Power Pack out of fuel
- Emergency stop button pressed
- Damaged lead between Power Pack and blowing machine

### **EXCESSIVE AIR LEAKAGE FROM OVERBLOWING JUNCTION BOX**

- Damaged cord seal
- Cable seals worn, incorrect size, installed wrong way around.

### **POWER PACK ENGINE DOES NOT STOP AT MAX PRESSURE**

- There is a fault with the cable blowing machine, refer to the cable blowing machine operator and maintenance manual for instructions to rectify the problem.

## 7. SPARES

For spare parts always provide the part number and serial number.










General Machine Products  
3111 Old Lincoln Highway, Trevoese PA 19053 USA

TEL: +1 215 357 5500  
FAX: +1 215 357 6216  
E-MAIL: info@GMPtools.com  
Website: www.GMPtools.com

Please give as much information as possible to ensure correct identification and supply of spare parts.

### RECOMMENDED SPARES LIST

PART No	Description	Qty required
89147	Seal Cord	10'
89588	Sealing Cord Glue	1 Tube
89148	Silicon Grease	1 Tube
33690	Seal 7.5-9mm (red seal) 	1
33218	Seal 9-10.5mm (1 purple line) 	1
33219	Seal 10.5-12mm (2 purple lines) 	1
33220	Seal 12-14mm (1 silver line) 	1
33221	Seal 14-16mm (2 silver lines) 	1
33222	Seal 16-18mm (1 gold line) 	1
33223	Seal 18-20mm (2 gold lines) 	1
33298	Allen Key 8.0mm	1



GMP • 3111 Old Lincoln Hwy • Treose, PA 19053 • USA  
TEL: +1-215-357-5500 • [www.gmptools.com](http://www.gmptools.com)