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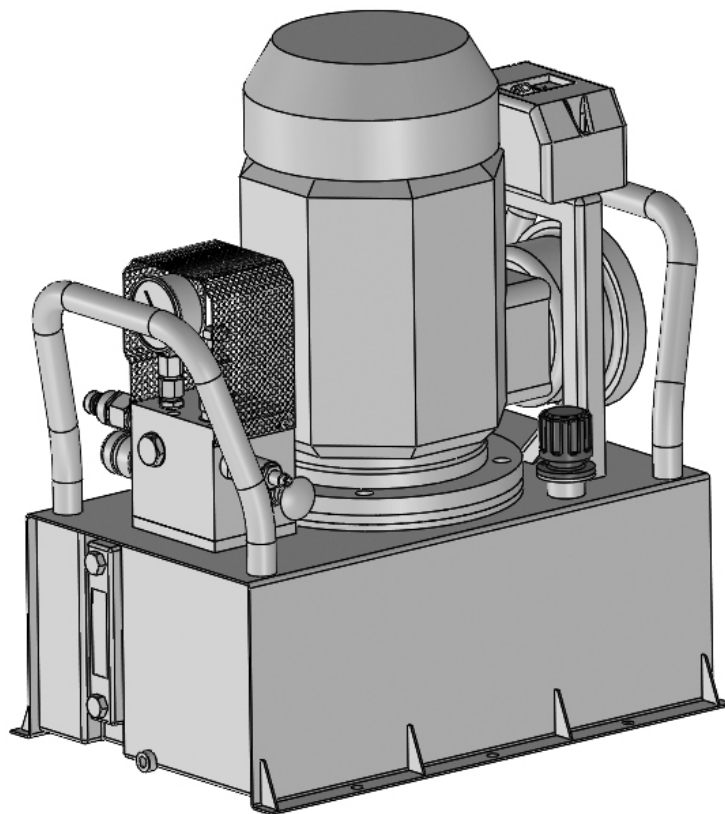
# Hydraulic Immediate Need Power Pack

for use with the Flexco® XP™ Staple Fastening System



Safety, Operation, and Maintenance Manual

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## **WARNING**

Improper use of this tool can result in serious bodily injury! This manual contains important information about product function and safety. Please read and understand this manual BEFORE operating the tool. Please keep this manual available for other users and owners before they use the tool. This manual should be stored in a safe place.

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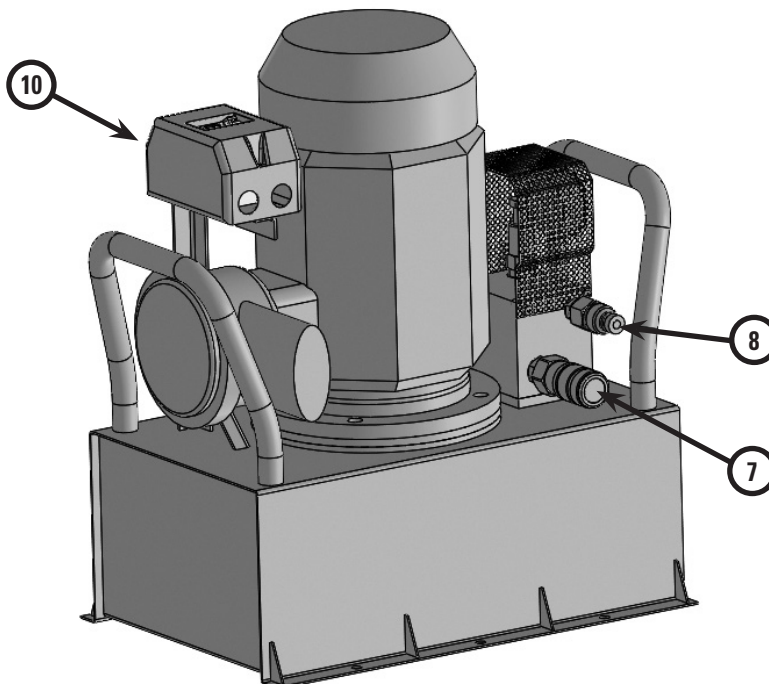
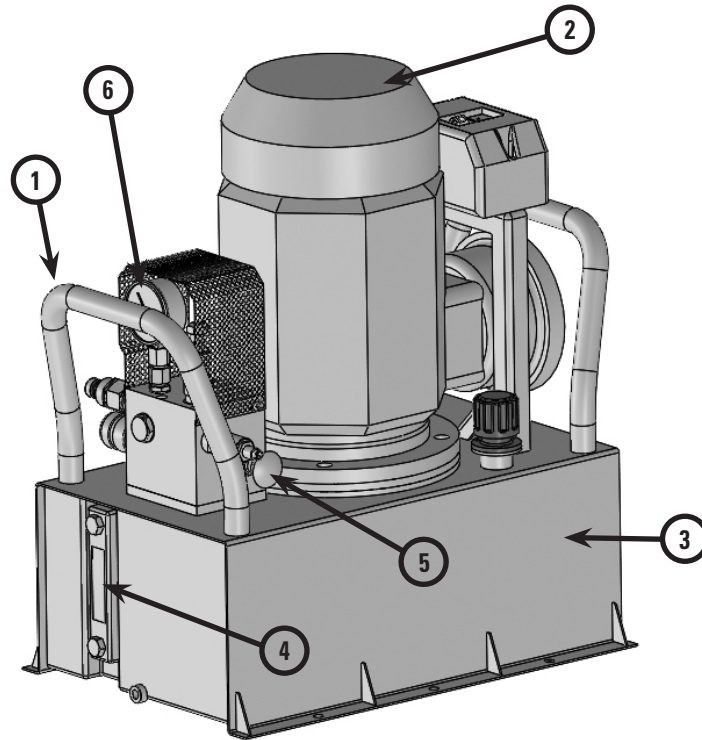
## Limited Warranty

Flexco warrants to the original purchaser that this product is free from defects in material and workmanship, and agrees to repair or replace, at Flexco's option, any defective product within 1 year from the date of purchase. This warranty is not transferable. It only covers damage resulting from defects in material or workmanship, and it does not cover conditions or malfunctions resulting from normal wear, neglect, abuse, accident, or repairs attempted or made by other than our regional repair center or authorized warranty service center.

To obtain warranty service, return the product at your expense together with proof of purchase to Flexco or a Flexco authorized distributor.

## Main Components

Hydraulic Power Pack			
1. Carry handles	4. Hydraulic fluid level gauge	7. Low pressure hose connection fitting 1/2" body size	10. Motor Starter
2. 2.2kW electric motor	5. On/Off valve	8. High pressure hose connection fitting 3/8" body size	
3. 22 liter oil reservoir	6. Pressure gauge	9. Hydraulic hoses, 2 x 10 meters (not shown)	



# Pre-Operative Checklist

This checklist must be checked prior to each use of the Flexco hydraulic power pack. This checklist is to be used as a guideline in conjunction with the maintenance and inspection procedures outlined in this manual. The Flexco hydraulic power pack and related equipment must be thoroughly inspected prior to each use by a trained person. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding safe operational procedures. If you do not have such a person in your organization, please contact Flexco or local distributors and they will assist you with training. Do not permit any person who is not fully trained to operate the Flexco hydraulic power pack or the associated hydraulic tool. It is recommended that this checklist be maintained as a permanent record.

## 1. WORK AREA SELECTION

### **WARNING**

Ensure the Flexco hydraulic power pack is located in a well ventilated area.

Never use the Flexco hydraulic power pack in an explosive atmosphere and/or near combustible material that could be ignited by a spark.

Ensure flammable storage is a least ten feet from the Flexco hydraulic power pack.

Ensure the Flexco hydraulic power pack is positioned to minimize the amount of construction dust and debris it receives.

Work area is to be kept clear of unauthorized personnel at all times. Place barricades or secure the area in such a manner that no personnel can be injured.

## 2. INITIAL EQUIPMENT STATUS

### **WARNING**

1. Ensure the Flexco hydraulic power pack has been properly maintained.
2. Ensure hydraulic hoses are properly connected and in good condition.
3. Ensure the fluid level in hydraulic reservoir is one inch from the top.

## 3. OPERATING PERSONNEL

1. Operators must be thoroughly trained before operating the Flexco hydraulic power pack and associated equipment. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding safe operational procedures.
2. All crew members at the work site must be wearing personal protective equipment as defined by their employer.
3. Do not use the Flexco hydraulic power pack or associated hydraulic equipment when you are tired or fatigued.
4. Do not operate the Flexco hydraulic power pack or associated hydraulic equipment when under the influence of drugs, alcohol, or medication.

# Introduction

Your Flexco hydraulic power pack has been engineered to provide long-term performance and safety advantages that no other type can match. However, even a well-designed and well-built hydraulic power pack can malfunction or become hazardous in the hands of inexperienced and/or untrained users. Therefore, read this manual and related equipment manuals thoroughly before operating your Flexco hydraulic power pack to provide maximum safety for all operating personnel, and to get the maximum benefit from your equipment.

## Hydraulic Power Pack Specifications

Motor rating	2.2kW, MA certified, Explosion Proof
Electrical rating	380/660VAC, 3 phase, 50Hz
Weight	70 kg
Operating pressure	115 bar, 11.5 Mpa, 1650 psi
Back pressure	7 bar max
Reservoir size	22L, 5.8 gal
Flow rate	8-12 L/m, 2-3 GPM
Hydraulic fluid	MSHA approved fire resistant hydraulic fluid, MA approved #46 or equivalent (not included)
Fitting	ISO 16028 compliant fittings, flat face quick release fitting High pressure out: Male 3/8" body size Low pressure return: Female 1/2" body size
Pump	Single gear pump
Hose, 2 x 10 meters	10 meters, 32.8 feet High pressure hose (smaller hose OD), each end has factory installed male and female 3/8" body size fittings Low pressure return hose (larger hose OD), each end has factory installed male and female 1/2" body size fittings

# General Safety Rules – Save These Instructions

## Signal words

“DANGER” indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury. The signal word is limited to the most extreme situations.

“WARNING” indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

“CAUTION” indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices.

## International Safety Symbol



This international safety symbol is used to identify and call attention to specific safety matters.

## Safety Information

To Avoid Severe Personal Injury or Property Damage, read carefully and understand the following Safety Precautions.

### 1. SAFETY LABELS

#### **WARNING**

These labels warn you of potential hazards that could cause injury. Read them carefully. If a label comes off or becomes illegible, contact Flexco for replacement information.

### 2. SAFETY RULES

#### **WARNING**

Operators must be thoroughly trained before operating the Flexco hydraulic power pack and associated equipment. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding safe operational procedures.

Follow the Pre-Operative Checklist before using the equipment.

#### **DANGER**

Never use the Flexco hydraulic power pack in an explosive atmosphere and/or near combustible material that could be ignited by a spark.

Do not use the Flexco hydraulic power pack or associated hydraulic equipment when you are tired or fatigued.

Do not operate the Flexco hydraulic power pack or associated hydraulic equipment when under the influence of drugs, alcohol, or medication.

Do not operate the Flexco hydraulic power pack when oil temperature is below 10°C or over 100°C.

# General Safety Rules

## **WARNING**

Work area is to be kept clear of unauthorized personnel at all times. Place barricades or secure the area in such a manner that no personnel can be injured.

Keep all clothing and all body parts clear of moving parts.

Never exceed the flow or pressure for which the hydraulic equipment is rated.

Do not adjust the Flexco hydraulic power pack while it is running.

Never adjust or service the associated hydraulic equipment during operation or while connected to the Flexco hydraulic power pack.

Never disconnect hydraulic hoses or fittings while the Flexco hydraulic power pack is running.

At the end of operation, secure the Flexco hydraulic power pack and the associated hydraulic equipment to prevent unauthorized use. Never assume you will find the equipment in the same condition in which you left it.

Only trained personnel are authorized to do repairs.

## **CAUTION**

Always connect the **low pressure return** hose connections prior to connecting the **high pressure** hose connections.

Know how to stop the Flexco hydraulic power pack quickly in case of emergency.

# Operational Instructions

The Flexco Immediate Need Power Pack is designed and engineered to operate in the most challenging conditions. The portable power pack is designed for immediate need splicing operating conditions, such as typical underground coal mine splicing. The power pack is equipped with a rugged steel frame, high clearance casters, a hydraulic pump, and an MA certified explosion proof motor.



**WARNING:** DO NOT OPERATE THE POWER PACK CONTINUOUSLY OVER 20 MINUTES. TURN OFF POWER PACK OR TURN VALVE TO OFF POSITION WHEN IT'S NOT BEING USED. FAILURE TO COMPLY COULD RESULT IN EQUIPMENT DAMAGE.

Prior to operation, make sure the spring loaded On/Off valve is in the "ON" position. The picture to the right shows the On/Off valve in the "ON" position.

Place in "OFF" position by pulling up on knob and turning 90 degrees until rollpin rests in groove. Turn "ON" by pulling up on knob and turning 90 degrees and let roll pin pass through open slot.



### Before Operating the Power Pack



**WARNING:** ONLY TRAINED PERSONNEL SHALL OPERATE THIS EQUIPMENT. A TRAINED PERSON IS ONE WHO HAS READ AND THOROUGHLY UNDERSTANDS THIS INSTRUCTION MANUAL AND RELATED EQUIPMENT MANUALS AND, THROUGH TRAINING AND EXPERIENCE, HAS SHOWN KNOWLEDGE REGARDING SAFE OPERATIONAL PROCEDURES.



**WARNING:** FOLLOW THE PRE-OPERATIVE CHECKLIST IN THE FRONT OF THIS MANUAL BEFORE OPERATING.

### Checking the Hydraulic System

1. Check hydraulic reservoir as follows:
  - a. Fluid level should be one inch from the top of tank.
2. Before making any hydraulic connections, inspect all hydraulic lines, fittings, and hoses for leaks and risks of rupture as follows:



**WARNING:** LIQUID UNDER HIGH PRESSURE CAN PIERCE THE SKIN, CAUSING DEATH OR SERIOUS INJURY. IN CASE OF INJURY, GET IMMEDIATE MEDICAL ATTENTION.

- a. Inspect each hydraulic line, fitting, and hose for breaks, cracks, worn spots, bulges, chemical attack, kinks, or any other damage. Never try to stop any detected leak with any body parts. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic oil.
  - b. Replace a damaged line, fitting, or hose immediately. Never repair the part.
3. The Flexco power pack uses ISO 16028 flat-face quick-release fittings that are durable and easy to clean. Wipe the mating surfaces of the fittings with a clean rag prior to making the connection. They are always fitted such that the male fitting gives oil and the female fitting receives oil.



# Operational Instructions



**WARNING:** Ensure HYDRAULIC HOSES ARE PROPERLY CONNECTED AND IN GOOD CONDITION.

- a. Connect the low pressure return hose:
  - Connect the male fitting (hose) to the female fitting at the power pack.
  - Connect the female fitting (hose) to the male fitting at the hydraulic tool.
- b. Then connect the high pressure hose:
  - Connect the female fitting (hose) to the male fitting at the power pack.
  - Connect the male fitting (hose) to the female fitting at the hydraulic tool.
- c. When making connections, do not over stretch the hoses or bend them at a sharp angle.
- d. To prevent unwanted disconnection, turn the female fitting locking collar about quarter turn to lock the connection.
- e. To disconnect the hose, turn the female locking collar and align the half circle machined groove to the safety ball on the fitting body. Then pull the locking collar to release the connection.

## Starting and Operating the Flexco Power Pack



**CAUTION:** DO NOT OPERATE THE FLEXCO POWER PACK WITH THE TOOL DISCONNECTED.

1. Start the motor by turning electric supply and/or motor starter to “on” position.
2. Ensure ON/OFF flow valve is in the “on” position.



**WARNING:** WHEN OPERATING THE FLEXCO POWER PACK, OBSERVE ALL SAFETY PRECAUTIONS DESCRIBED IN THE FLEXCO POWER PACK AND HYDRAULIC TOOL INSTRUCTION MANUALS. FAILURE TO COMPLY COULD RESULT IN DEATH, SERIOUS INJURY, AND/OR EQUIPMENT DAMAGE.

3. DO NOT attempt to make any equipment adjustments during operation.

## Stopping the Power Pack

At the end of operation, secure the equipment to prevent unauthorized use. Never assume you will find the equipment in the same condition that you left it. Proceed as follows:

1. Turn off the motor by turning electric supply and/or motor starter to “off” position.

# Inspections and Maintenance

## General Maintenance Rules

Proper maintenance of the Flexco power pack and related hydraulic equipment consists of adhering to all the guidelines given in this chapter and in the Pre-Operative Checklist in the front of this manual. Proper maintenance is required to maintain the system in good condition, which is defined as each part being free of damage or functional defects.



**WARNING:** SHUT DOWN THE FLEXCO POWER PACK BEFORE DOING ANY MAINTENANCE OR REPAIRS.



**WARNING:** DO NOT ADJUST OR REMOVE HYDRAULIC COMPONENTS, LINES, OR FITTINGS WHILE THE FLEXCO POWER PACK IS RUNNING OR WHENEVER THE HYDRAULIC FLUID IS HOT.



## Flexco® XP™ Hydraulic Immediate Need Power Pack

1. Review and follow all the safety rules given in the General Safety Rules section before attempting any maintenance.
2. Repairs must be made only by trained personnel. A trained person is one who has read and thoroughly understands this instruction manual and related equipment manuals and, through training and experience, has shown knowledge regarding safe operational procedures.

### Hydraulic System Inspection and Maintenance

1. Check to see that the hydraulic fluid is clean.
2. Before making any hydraulic connections, inspect all hydraulic lines, fittings, and hoses for leaks and risks of rupture as follows:



**WARNING:** LIQUID UNDER HIGH PRESSURE CAN PIERCE THE SKIN, CAUSING DEATH OR SERIOUS INJURY. IN CASE OF INJURY, GET IMMEDIATE MEDICAL ATTENTION.

- a. Inspect each hydraulic line, fitting, and hose for breaks, cracks, worn spots, bulges, chemical attack, kinks or any other damage. Never try to stop any detected leak with any body parts. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic oil.
  - b. Replace a damaged line, fitting, or hose immediately. Never repair the part.
3. The Flexco power pack uses flush-face quick-release fittings that are durable and easy to clean. Wipe the mating surfaces of the fittings with a clean rag prior to making the connection. They are always fitted such that the male fitting gives oil.

### Electrical Inspection and Maintenance

The electrical system requires the following visual inspections before each use of the Flexco Power Pack:

1. Fuses must be secured in their holders.
2. All terminal connections must be intact.
3. Ensure the fan blade is clean and free to rotate.

### Maintenance Schedule

The following table summarizes the type and frequency of maintenance required. Follow the manufacturer's instructions for proper lubrication and detailed maintenance. For repairs, contact the nearest authorized dealer.

TYPE OF MAINTENANCE	SERVICE FREQUENCY
Check and clean obstructions from motor fan air intake	Daily
Check that reservoir oil level is within one inch below filler cap—add if required	Daily
Check that hydraulic oil is clean	Daily
Check and clean obstructions from motor cooling fans and external surfaces	100 hrs.

# Troubleshooting

The following chart is intended to assist with troubleshooting the Flexco power pack. While not all inclusive, the chart outlines the most common causes of a problem and the recommended course of action. The troubleshooting guide for the associated hydraulic tool is in the manual specifically for that equipment.



**CAUTION:** IF THE PROBLEM WITH THE MOTOR IS NOT CERTAIN, ALWAYS FOLLOW THE MANUFACTURER'S WARRANTY POLICY BEFORE ANY OTHER REPAIR OR MAINTENANCE IS ATTEMPTED.

Problem	Cause	Correction
Flexco Power Pack won't operate Flexco hydraulic tool—motor operating normally	<ol style="list-style-type: none"><li>1. Low fluid level in reservoir</li><li>2. No hydraulic oil pressure caused by ON/OFF valve</li><li>3. Pressure relief valve set too low</li><li>4. Power pack unit is not turned "ON"</li><li>5. Hoses are not connected</li><li>6. Fittings are not connected properly</li><li>7. Damaged hydraulic pump</li></ol>	<ol style="list-style-type: none"><li>1. Fill fluid to required level</li><li>2. If the valve is in "OFF" position, there can be no pressure</li><li>3. Adjust pressure to 110 bar, 11 Mpa, 1600 psi</li><li>4. Turn "ON" power pack unit</li><li>5. Connect hoses</li><li>6. Check if fittings have been connected properly</li><li>7. Inspect and replace by authorized distributor</li></ol>
Flexco Power Pack is operating hydraulic tool slowly or erratically—motor operating normally	<ol style="list-style-type: none"><li>1. Low fluid level in reservoir</li><li>2. Kinked hoses</li><li>3. Damaged hoses</li><li>4. System filter clogged</li><li>5. Contamination in fluid</li><li>6. Worn hydraulic pump</li><li>7. Pressure relief valve malfunction</li><li>8. Pressure relief valve set too low</li></ol>	<ol style="list-style-type: none"><li>1. Fill fluid to required level</li><li>2. Inspect and place hose properly</li><li>3. Replace hoses</li><li>4. Inspect and replace filter by authorized distributor</li><li>5. Drain and change hydraulic fluid</li><li>6. Inspect and replace by authorized distributor</li><li>7. Inspect and replace by authorized distributor</li><li>8. Adjust pressure to 110 bar, 11 Mpa, 1600 psi</li></ol>
Hydraulic fluid overheats	<ol style="list-style-type: none"><li>1. Low fluid level in reservoir</li><li>2. Severe high operating temperature</li><li>3. Extended duty cycle</li></ol>	<ol style="list-style-type: none"><li>1. Fill fluid to required level</li><li>2. Turn off power pack when it is not being used</li><li>3. Limit Flexco Power Pack use to less than 20 minutes</li></ol>
Oil is foaming	<ol style="list-style-type: none"><li>1. Low fluid level in reservoir</li><li>2. Water contamination</li><li>3. Cross contamination of fluid</li></ol>	<ol style="list-style-type: none"><li>1. Fill fluid to required level</li><li>2. Drain and change hydraulic fluid</li><li>3. Drain and change hydraulic fluid</li></ol>
Electric motor does not start	<ol style="list-style-type: none"><li>1. Power pack unit is not turned "ON"</li><li>2. Defective motor</li><li>3. Incorrect electric cable connection</li></ol>	<ol style="list-style-type: none"><li>1. Turn "ON" power pack unit</li><li>2. Inspect and replace by authorized distributor</li><li>3. Check proper electric cable connection, voltage, and phases</li></ol>

Visit [www.flexco.com](http://www.flexco.com) for other Flexco locations and products, or to find an authorised distributor.

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