

# StormPro® BCV400

Sewage Ejector Pump

## OPERATION MANUAL

Dated: 04/20/2012

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### SPECIFICATIONS

Thank you for purchasing a StormPro® sewage ejector pump. Take the time to read the instructions carefully before using this appliance. We strongly recommend that you keep this instruction manual in a safe place for future reference.

Check the nameplate for your pump's specification, refer to the table list.

Be careful not to exceed the given specifications in the use of your pump.

### MARKS & MEANINGS



**DANGER:** Keep the pump equipment out of the reach of children! Warns that the failure to follow the directions given could cause serious risk to individuals or objects.



**WARNING:** This sign warns the operator that the failure to follow an instruction may damage the pump and/or the system.

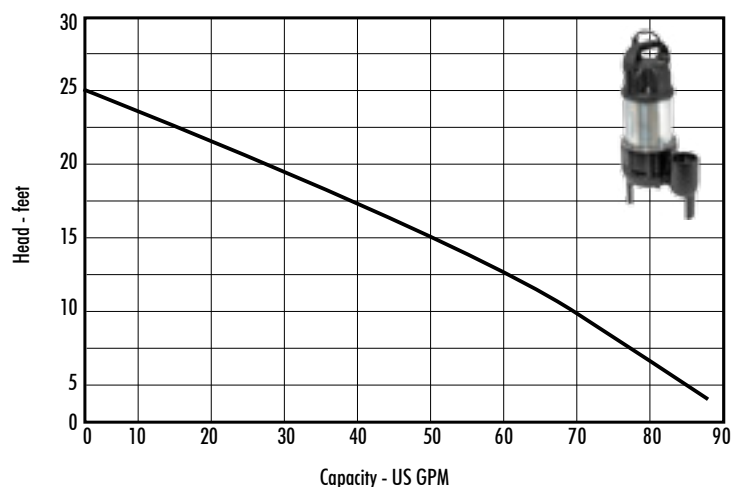
### LIMITATIONS

This pump series is suitable to pump water and also can be used both for permanent and temporary installation.

The pump can be placed in a sump or sewage pit and is capable of passing 2 inch solids.



**WARNING:** The pump can be used for sea water but not inflammable, corrosive, explosive or dangerous liquids. Make sure that the pump never runs without liquids.



Model	Output		Discharge (inch)	Rated		Maximum		Dimensions L x W x H	Weight (lbs)
	HP	Amp		Head (feet)	Flow (GPM)	Head	Flow		
BCV400	1/2	8.5	2	10	70	0 GPM @ 25'	90 GPM @ 0'	9 1/8" x 5 1/2" x 16"	31

Available in Ion switch, Model BCV400A, or manual, Model BCV400M, configurations.



Register your product at [www.sumpro.com](http://www.sumpro.com)

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### INSTALLATION

Drill a 1/8" inch hole into PVC Pipe 4" inches above the pumps discharge.

Do not work on pump until power is unplugged.

Do not cut off ground pin or use an adapter fitting.

Do not use an extension cord.

The pump power cord should be connected to a separately fused, grounded line with a minimum capacity of 15 amps.

It can be connected to non-fuse breaker as the recommended amperes.

Never touch the pump when it is connected to electrical power.

1. Before installing or servicing this pump, be certain pump power source is disconnected.
2. Installation and electrical wiring must adhere to state and local codes and must be completed before priming pump. Check appropriate community agencies, or contact local electrical and pump professionals.
3. Call an electrician when in doubt. Pump should be connected to a separate 15 amp circuit breaker or 15 amp fuse block. Note that, plugging into existing outlets may cause low voltage at motor, causing blown fuses, tripping of motor overload, or burned out motor.
4. A permanent ground connection from pump to the grounding bar at the service panel is mandatory, StormPro® sewage ejector pumps come with a grounding conductor and a grounding-type attachment plug. Do not connect pump to a power supply until permanently grounded. For maximum safety, connect pump to a circuit equipped with a fault interrupter device when you position the pump's grounding wire.
5. Voltage of power supply must match the voltage of the pump.
6. Before installing pump, clear sump basin of any water, debris or sediment.



**WARNING:** Sump basin must be vented in accordance with local plumbing codes. StormPro® sewage ejector pumps are not designed for and can not be installed in locations classified as hazardous.

7. The following may cause severe damage to pump and will void the warranty:
  - a. Using an extension cord.
  - b. Cutting off the ground pin or using an adapter fitting.
  - c. Working on pump or switch while plugged in.
  - d. Removing motor housing, unscrewing impeller, or otherwise removing impeller seal.
  - e. Running the pump continuously.
  - f. Pumping chemicals or corrosive liquids.
  - g. Pumping gasoline or other flammable liquids.
  - h. Piping, plastic PVC pipe could be installed in the outlet piping, but drain hose, galvanized steel or copper pipe may be used if desired. All piping must be clean and free of all foreign matter to prevent clogging. Use thread compound on all threaded joints unless specified otherwise. Be sure to seal the thread connection with tape when your using the pipe fitting to connect the flange.
  - i. Pump will be inadequate if suspension liquids contain solid particles larger than 2".

### ELECTRICAL WIRE CONNECTION



**WARNING:** Verify that the voltage and frequency of the pump shown on the nameplate correspond to those available on the mains.

The installer must make sure that the electric system is grounded in accordance with the law in force.

It is necessary to use cable with a length of 10 or 20

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### CONSTRUCTION & PARTS LIST

feet for outdoors. The plug and connections should be protected from water splashes. Before using the pump, always inspect it visually (especially power cable and plug).

Do not use the pump if it is damaged.

If the pump is damaged, have it inspected by an authorized service center only.

Make sure that electric connections are protected from inundation. Protect the plug and the power cable from heat, oil or sharp edges.



**WARNING:** The power cable must be replaced by qualified personnel only.

#### Grounding

The plug of the power cable has a double grounding contact, so that grounding can be performed by simply inserting the plug.

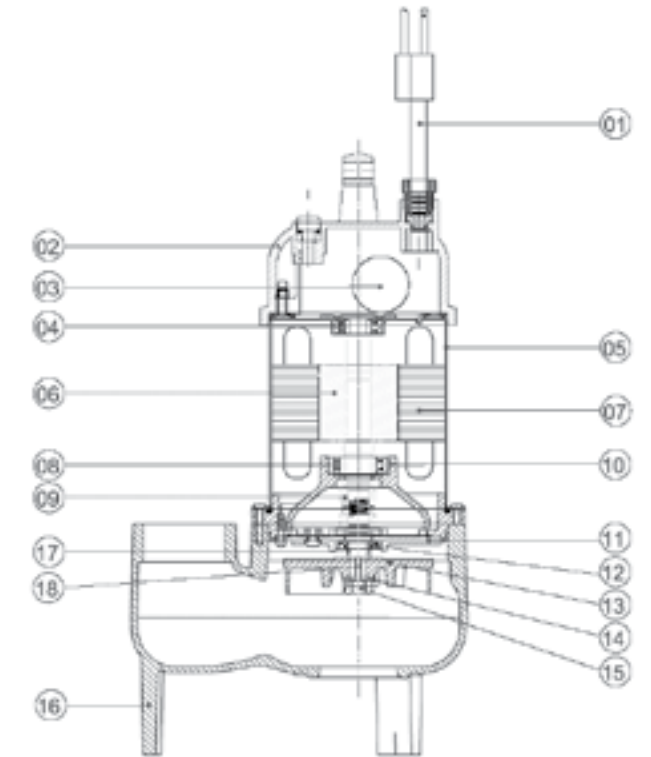
### RECOMMENDED BATTERY BACK-UP



SUMPRO® is the ultimate, fully-automatic auxiliary power source that Metropolitan Industries recommends using as a battery back-up for your BCV400 sewage ejector pump. SUMPRO® features the following:

1. Easy installation, no modifications or piping changes
2. Operates your pump during a power outage keeping your basement dry
3. Provides ultimate protection against blackouts and/or brownouts.

For more information please visit [www.sumpro.com](http://www.sumpro.com).



#	Name	Description
1	Power Cord Set	16AWG
2	Top Cover	NL66+30%GF
3	Capacitor	
4	Upper Bearing	
5	Motor Housing	SUS304
6	Shaft	SUS410
7	Motor Winding	C60
8	Lower Bearing	
9	Mechanical Seal	CA/CE
10	Seal Plate	FC200
11	Oil Seal Cover	FC200
12	Oil Seal	NBR
13	Impeller	FC200
14	Spring Washer	SUS304
15	Screw Nut	SUS304
16	Pump Casing	FC200
17	Bearing Sleeve	SUS304
18	Nut	SUS304




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**TROUBLESHOOTING CHECKLIST**

 **DANGER:** Shut off power to pump.

Problems	Possible Causes
Pump does not run and hums.	1. Line circuit breaker is off, or fuse is burned or loose. 2. Water level in sump has not reached turn-on level. 3. Pump cord is not making contact in receptacle. 4. Float is stuck. It should operate freely in basin. 5. If all of the above are OK, then the motor could be malfunctioning.
Pump runs but does not deliver water.	1. Check valve is installed backwards. Arrow on valve should point in direction of flow. 2. Discharge shut-off valve (if used) may be closed. 3. Impeller or volute openings are fully or partially clogged. Remove pump and clean. 4. Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. Drill a 1/8" inch hole into PVC Pipe. 5. Inlet hole in pump base is clogged. Remove pump and clean the opening. 6. Vertical pumping distance is too high. Reduce distance or change the discharge fittings of the pump.
Pump runs and pumps out sump, but does not stop.	1. Float is stuck in up position. Be sure float operates freely in basin. 2. Defective float switch, replace. 3. Defective vertical switch, replace.
Pump runs but delivers only a small amount of water.	1. Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. Drill a 1/8" inch hole into PVC Pipe. 2. Vertical pumping distance is too high. Reduce distance or change the discharge fitting of the pump. 3. Inlet hole in pump base is clogged. Remove pump and clean the opening. 4. Impeller or volute openings are fully or partially clogged. Remove pump and clean. 5. Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean.
Fuse blows or circuit breaker trips when pump starts.	1. Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. 2. Motor stator may be defective. 3. Fuse size or circuit breaker may be too small. (Must be 15 amps). 4. Impeller or volute opening are fully or partially clogged. Remove pump and clean.
Motor runs for a short time, then stops.	1. Inlet hole in pump base is clogged. Remove pump and clean the opening. 2. Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. 3. Motor stator may be defective. 4. Impeller or volute openings are fully or partially clogged. Remove pump and clean.

 **WARNING:** Before servicing a pump, always shut off the main power breaker and then unplug the pump. Make sure you are not standing in water and are wearing insulated protective sole shoes, under flooded conditions, Contact your local electric company or a qualified licensed electrician for disconnecting electrical service prior to pump removal.

**WARRANTY REGISTRATION CARD**

Please fill out and send back to: Metropolitan Ind. Warranty Department P.O. Box 7266 Romeoville, IL 60446. Or to register online, go to [www.sumpro.com](http://www.sumpro.com)

**StormPro® BCV400 Warranty Registration Card**  
 To register your purchase, please fill in the following information:

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Installed By: \_\_\_\_\_ Phone: \_\_\_\_\_



### 3 Year Residential Warranty

1. Coverage and Term. Metropolitan Industries, Inc. (“**Metropolitan**”) warrants to the original purchaser (the “Buyer”) of each StormPro/Sumpro product (the “product”), that any part thereof which proves to be defective in material or workmanship within three (3) years from date of manufacture, will be replaced at no charge with a new or remanufactured part, F.O.B. factory. Buyer shall be responsible for all freight charges and all costs of field labor or other charges incurred in the removal and/or reinstallation of any product, part or component thereof.

2. Exclusions. **THE WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND EXCLUSIONS:**

(a) The Warranty excludes products or workmanship which becomes defective as a result of: (i) earthquake, fire, storms, the elements or any other acts of God; (ii) normal wear and tear from use; (iii) accident, misuse, abuse or neglect; (iv) modifications made by Buyer or any third party, other than **Metropolitan**; and (v) Buyer’s failure to properly install, maintain, service and/or operate the product under normal conditions and according to manufacturer’s instructions.

(b) **Metropolitan** shall not be responsible for, and the Warranty shall not cover, extended damage which occurs because of Buyer’s failure to notify **Metropolitan** promptly in writing of apparent defects.

(c) Any part or component designated as manufactured by anyone other than **Metropolitan** shall be covered only by the express warranty of the manufacturer thereof.

(d) The Warranty shall lapse upon Buyer’s failure to fully comply with the terms and conditions of its contract with **Metropolitan**, including Buyer’s failure to pay the purchase price for the product or any portion thereof. Buyer’s subsequent compliance with the terms and conditions of any such contract, will not cause the term of the Warranty to extend beyond the time period set forth above.

(e) No actions taken by **Metropolitan** to correct a defect in a product shall extend the Warranty beyond the period set forth above. **Metropolitan** shall not be obligated to remedy any defect, where otherwise required pursuant to the Warranty unless and until Buyer notifies **Metropolitan** in writing of the defect and then only if such notification is made prior to the expiration of the period set forth above.

3. Process of Claims and Repairs. **Metropolitan** agrees that if the product or any part or component thereof shall fail to conform to the terms of this Warranty, **Metropolitan** shall replace such nonconforming product, part or component at the original point of delivery and furnish instruction for its disposition. Any transportation charges involved in such disposition and all costs of field labor or other charges incurred in the removal and/or reinstallation of any product, part or component thereof shall be the responsibility of Buyer.

4. Limitation on Liability. Notwithstanding any provision to the contrary, **Metropolitan’s** entire liability under this Warranty shall not in the aggregate exceed, and Buyer’s exclusive and sole remedies are, to the extent permitted by law, shall be to secure replacement of the defective product. **UNDER NO CIRCUMSTANCES SHALL METROPOLITAN BE LIABLE UNDER THE WARRANTY FOR ANY INDIRECT, PUNITIVE, SPECIAL, EXEMPLARY, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING LOST PROFITS, REVENUE, USE OR ECONOMIC ADVANTAGE).**

5. Express Waiver of Any Other Warranties. **THE EXPRESS WARRANTY SET FORTH IN THIS WRITTEN WARRANTY IS THE ONLY WARRANTY MADE BY METROPOLITAN, OR ANY OTHER PARTY, IN CONNECTION WITH ANY PRODUCT PURCHASED FROM METROPOLITAN. NEITHER METROPOLITAN, NOR ANY OTHER PARTY, MAKES ANY OTHER EXPRESS OR IMPLIED WARRANTY WHICH IS NOT SET FORTH HEREIN, AND METROPOLITAN HEREBY DISCLAIMS AND BUYER HEREBY WAIVES ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

6. Not Transferable. The Warranty may not be transferred and shall be void on the sale or other transfer of the product.

7. Products and Warranty Subject to Change. **Metropolitan** reserves the right to make revisions to its products and their specifications, and to revise this Warranty and related information without notice.