

## Installation Instructions

**NOTE:** The accessories described in this instruction manual are intended for use with Marley Engineered Products SDH Series Portable High Temperature Blowers.

### **⚠ WARNING ⚠**

This instruction sheet provides information for the proper installation and use of the accessories described. It is to be used in conjunction with the instruction manual that came with the SDH unit. Read, understand and follow the instruction and warnings provided in each manual before operating the unit. Failure to do so could result in improper and / or unsafe operation of the unit that could lead to a fire, personal injury or permanent damage to the unit.

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK:**

1. Always disconnect power to the unit at the main service panel before installing these accessories or performing any maintenance on the unit.
2. Special care should always be used when using the blower unit with the flexible duct accessory to keep the inlet and exhaust open and free from obstructions.

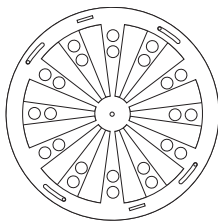
Save these instructions along with the blower instructions for future reference.

**SAVE THESE INSTRUCTIONS**

### **⚠ WARNING ⚠**

**TO REDUCE POTENTIAL FOR FIRE OR ELECTRIC SHOCK, READ AND FOLLOW INSTRUCTIONS AND WARNINGS PROVIDED IN THE HEATER INSTRUCTION MANUAL.**

## INSTALLATION



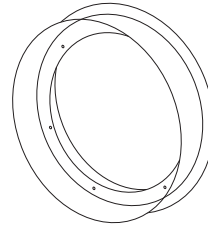
### **SDHAD Adjustable Damper**

The adjustable damper can be attached to the intake side of the Super Dragon heaters to reduce the amount of airflow to insure the required air temperature is realized. This is especially important when the unit will be used without flexible duct.

Remove the four 1/4"- 20, 2-1/2 inch bolts holding the grill and bolt the adapter ring and grill using the same bolts. If the intake is to be connected to return air ducting with the use of an adapter ring, the damper should be placed between the adapter ring and the inlet flange on the intake flange. The grill cannot be used when the adapter ring is installed

## SDH SERIES HIGH TEMPERATURE BLOWER HEATER ACCESSORIES

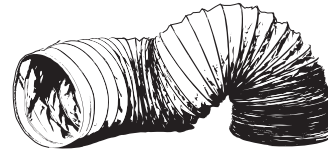
### **SDHDA20 Duct Adapter Ring**



The duct adapter ring provides a means to attach the 20" diameter flexible duct to the inlet or outlet of the SDH series heaters. Two are required if using duct on the inlet and outlet for applications where air is drawn from the outside going to the heat application.

Remove the four 1/4"-20, 2-1/2 inch bolts holding the grill and bolt the adapter ring using the same bolts. The grill will not be used with the adapter ring and can be stored for later use in case the unit is used without the ducting.

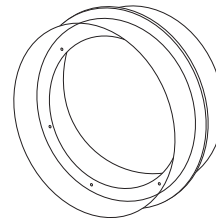
### **SDHFX20 Flexible Duct**



The heavy duty, flexible duct is constructed of 100% polyester based fabric and is 20" diameter and 25' long. It is made to resist wear and is suitable for temperatures from -40° to 220°F. The duct is internally supported with a steel wire helix and can also be used on the air inlet end of the heater without collapsing under the negative pressure.

The duct requires the addition of a SDHDA20 adapter ring to connect to the flanged inlet and/or outlet of the heater. The duct should be slipped over the 20" diameter portion of the adapter ring and secured with a SDHDC duct clamping band.

### **SDHDK20 Flexible Duct Splice Kit**



The flexible duct splice is designed to splice two 25' lengths of 20" flexible duct to create longer lengths.

The two duct sections should be slipped over the two 20" diameter portions of the splice and each secured with SDHDC duct clamping bands.

### **SDHDC Duct Clamp**



Stainless steel band is designed to fit over the flexible duct for a secure attachment to the adapter ring or flexible duct splice.

## SUPER DRAGON PERFORMANCE TABLES

The performance tables are sorted by kW. The CFM and  $\Delta T$  columns show the changes that affect the air flow and temperature rise for various lengths of duct. The  $\Delta T$  w/SDHAD ( $\Delta T$  w/AD) column shows the change in temperature rise by adding the SDHAD adjustable damper. The damper lowers the airflow below the number shown in the CFM column and results in a higher temperature rise for each situation. Listed are the three RPM results which corresponds to the extent of lab testing. By adjusting the pulleys, other RPM's can be achieved and will change the CFM and  $\Delta T$  results. If the results exceed the maximum static load, it will result in the tripping of the over temperature control during normal operation. **DO NOT BYPASS THE OVER TEMPERATURE CONTROL.**

| 30 KW UNIT  |                  |            |                  |          |            |                  |                  |            |                  |
|-------------|------------------|------------|------------------|----------|------------|------------------|------------------|------------|------------------|
| Duct Length | 1500 RPM         |            |                  | 1800 RPM |            |                  | 2200 RPM         |            |                  |
|             | CFM              | $\Delta T$ | $\Delta T$ w/AD  | CFM      | $\Delta T$ | $\Delta T$ w/AD  | CFM              | $\Delta T$ | $\Delta T$ w/AD  |
| 0           | 1750             | 53°F       | 72-82°F          | 2220     | 42°F       | 50-56°F          | 2680             | 35°F       | 39-43°F          |
| 25          | 1610             | 58°F       | 81-88°F          | 2100     | 44°F       | 61-69°F          | 2550             | 37°F       | 49-54°F          |
| 40          | 1500             | 62°F       | Insufficient cfm | 1960     | 48°F       | 69-75°F          | 2390             | 39°F       | 56-58°F          |
| 50          | 1410             | 66°F       |                  | 1925     | 48°F       | 74-79°F          | 2200             | 43°F       | Insufficient cfm |
| 65          | 1325             | 70°F       |                  | 1800     | 52°F       | 80-81°F          | 1950             | 48°F       |                  |
| 75          | 1200             | 78°F       |                  | 1650     | 56°F       | Insufficient cfm | 1750             | 53°F       |                  |
| 90          | 1125             | 82°F       |                  | 1410     | 66°F       |                  | 1620             | 57°F       |                  |
| 100         | 1080             | 86°F       |                  | 1300     | 78°F       |                  | 1600             | 58°F       |                  |
| 115         | Insufficient cfm |            |                  | 1200     | 72°F       |                  | Insufficient cfm |            |                  |
| 125         |                  |            |                  | 1150     | 81°F       |                  |                  |            |                  |
| 150         |                  |            |                  | 1110     | 84°F       |                  |                  |            |                  |
| 160         |                  |            |                  | 1090     | 86°F       |                  |                  |            |                  |

Note: Add an additional 15' of duct for each 90° bend and 25' of duct for each 180° bend.

Example: 50' of duct with a 90° bend and a 180° bend would be equal to a straight section of duct 90' long.

| 48 KW UNIT  |                  |            |                  |          |            |                  |                  |            |                  |
|-------------|------------------|------------|------------------|----------|------------|------------------|------------------|------------|------------------|
| Duct Length | 1500 RPM         |            |                  | 1800 RPM |            |                  | 2200 RPM         |            |                  |
|             | CFM              | $\Delta T$ | $\Delta T$ w/AD  | CFM      | $\Delta T$ | $\Delta T$ w/AD  | CFM              | $\Delta T$ | $\Delta T$ w/AD  |
| 0           | 1750             | 85°F       | 115-131°F        | 2220     | 67°F       | 80-90°F          | 2680             | 59°F       | 62-69°F          |
| 25          | 1610             | 93°F       | 130-141°F        | 2100     | 71°F       | 98-110°F         | 2550             | 59°F       | 78-86°F          |
| 40          | 1500             | 99°F       | Insufficient cfm | 1960     | 77°F       | 110-120°F        | 2390             | 62°F       | 90-93°F          |
| 50          | 1410             | 106°F      |                  | 1925     | 78°F       | 118-126°F        | 2200             | 69°F       | Insufficient cfm |
| 65          | 1325             | 112°F      |                  | 1800     | 83°F       | 128-130°F        | 1950             | 77°F       |                  |
| 75          | 1200             | 125°F      |                  | 1650     | 91°F       | Insufficient cfm | 1750             | 86°F       |                  |
| 90          | 1125             | 131°F      |                  | 1410     | 106°F      |                  | 1620             | 91°F       |                  |
| 100         | 1080             | 138°F      |                  | 1300     | 115°F      |                  | 1600             | 93°F       |                  |
| 115         | Insufficient cfm |            |                  | 1200     | 124°F      |                  | Insufficient cfm |            |                  |
| 125         |                  |            |                  | 1150     | 130°F      |                  |                  |            |                  |
| 150         |                  |            |                  | 1110     | 134°F      |                  |                  |            |                  |
| 165         |                  |            |                  | 1090     | 138°F      |                  |                  |            |                  |

Note: Add an additional 15' of duct for each 90° bend and 25' of duct for each 180° bend.

Example: 50' of duct with a 90° bend and a 180° bend would be equal to a straight section of duct 90' long.

| 60 KW UNIT  |                  |            |                  |          |            |                  |                  |            |                  |
|-------------|------------------|------------|------------------|----------|------------|------------------|------------------|------------|------------------|
| Duct Length | 1500 RPM         |            |                  | 1800 RPM |            |                  | 2200 RPM         |            |                  |
|             | CFM              | $\Delta T$ | $\Delta T$ w/AD  | CFM      | $\Delta T$ | $\Delta T$ w/AD  | CFM              | $\Delta T$ | $\Delta T$ w/AD  |
| 0           | 1750             | 106°F      | 144-164°F        | 2220     | 84°F       | 100-112°F        | 2680             | 70°F       | 78-86°F          |
| 25          | 1610             | 116°F      | Insufficient cfm | 2100     | 88°F       | 122-138°F        | 2550             | 74°F       | 98-108°F         |
| 40          | 1500             | 124°F      |                  | 1960     | 96°F       | 138-150°F        | 2390             | 78°F       | 112-116°F        |
| 50          | 1410             | 132°F      |                  | 1925     | 96°F       | 148-158°F        | 2200             | 84°F       | Insufficient cfm |
| 65          | 1325             | 140°F      |                  | 1800     | 104°F      | 160-162°F        | 1950             | 96°F       |                  |
| 75          | 1200             | 156°F      |                  | 1650     | 112°F      | Insufficient cfm | 1750             | 106°F      |                  |
| 90          | 1125             | 164°F      |                  | 1410     | 132°F      |                  | 1620             | 116°F      |                  |
| 100         | 1080             | 172°F      |                  | 1300     | 144°F      |                  | 1600             | 116°F      |                  |
| 115         | Insufficient cfm |            |                  | 1200     | 156°F      |                  | Insufficient cfm |            |                  |
| 125         |                  |            |                  | 1150     | 162°F      |                  |                  |            |                  |
| 150         |                  |            |                  | 1110     | 168°F      |                  |                  |            |                  |
| 165         |                  |            |                  | 1090     | 172°F      |                  |                  |            |                  |

Note: Add an additional 15' of duct for each 90° bend and 25' of duct for each 180° bend.

Example: 50' of duct with a 90° bend and a 180° bend would be equal to a straight section of duct 90' long.

### HOW TO OBTAIN WARRANTY SERVICE AND WARRANTY PARTS PLUS GENERAL INFORMATION

1. Warranty Service or Parts **1-800-642-4328**
2. Purchase Replacement Parts **1-800-654-3545**
3. General Product Information **www.marleymep.com**

Note: When obtaining service always have the following:

1. Model number of the product
2. Date of manufacture
3. Part number or description

5200-11019-000

ECR 37887

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# Marley

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