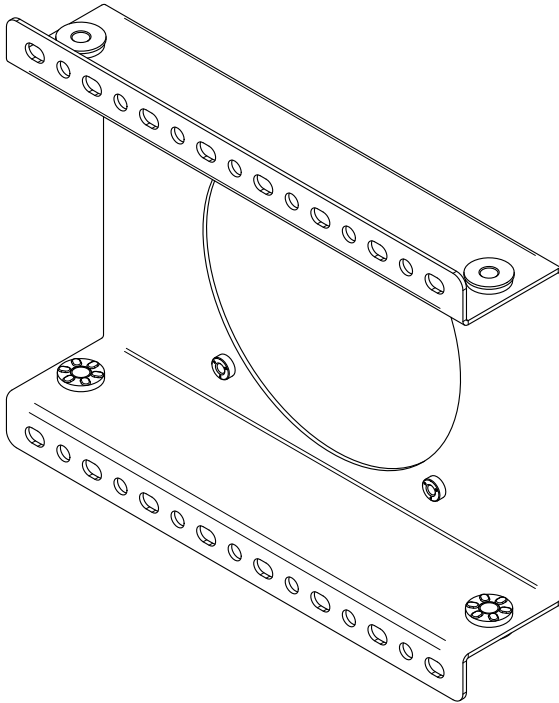




FAN SHROUD FOR MXH SERIES HEAT EXCHANGERS

MADE IN USA



**Important: Read these instructions in their
entirety prior to installation**

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APPLICATIONS

- Improved Racing's fan shrouds for MHX Series heat exchangers are designed for use in spaces where frontal airflow is limited or non-existent.
- MHX series fan shrouds are designed to use SPAL fans offered in blower and suction configurations (*see the table below*).
- A fan relay harness kit (sold separately) with a fused circuit is required to wire the fan.
 - **SPAL Relay Harness Kit Part Number: FRH**

Shroud + Fan Kit Part No.	SPAL Fan Part No.	Fan Shroud Part No.	Compatible Heat Exchanger Part No.
Suction: MHX-514-FSS	30100402	MHX-514-FS	MHX-514
Blower: MHX-514-FSB	30100403		
Suction: MHX-520-FSS	30100392	MHX-520-FS	MHX-520
Blower: MHX-520-FSB	30100381		

SCHEMATIC, PARTS LIST & HARDWARE

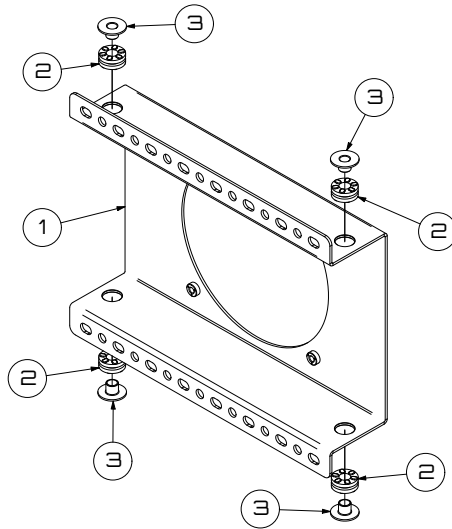


Figure 1 - Fan Shroud Assembly Schematic

Item	Quantity	Part Number	Description
1	1	MHX-5XX-FS	Fan Shroud
2	4	HVR-1002	Rubber Isolator
3	4	HVR-1003	Rubber Isolator Bushing

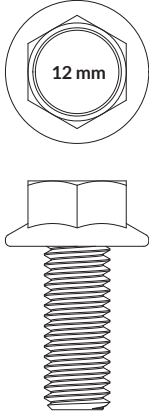
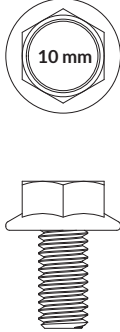
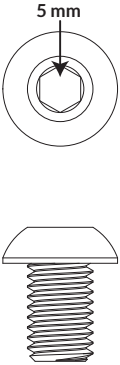
 <p>12 mm</p>	 <p>10 mm</p>	 <p>5 mm</p>
<p>HSC-1041 M8x1.25x20</p>	<p>HSC-1040 M6x1.00x12</p>	<p>HSC-1055 M8x1.25x12</p>
<p>Heat Exchanger to Shroud Screws</p>	<p>6.5" SPAL Fan Screws</p>	<p>9.0" SPAL Fan Screws</p>

Figure 2 - Hardware Table (Not to Scale)

TECHNICAL SPECIFICATIONS

Shroud Material	5052-H32 Aluminum
HVR-1002 Material	Nitrile Rubber
HVR-1003 Material	Zinc-Plated Carbon Steel

FAN SHROUD DIMENSIONS

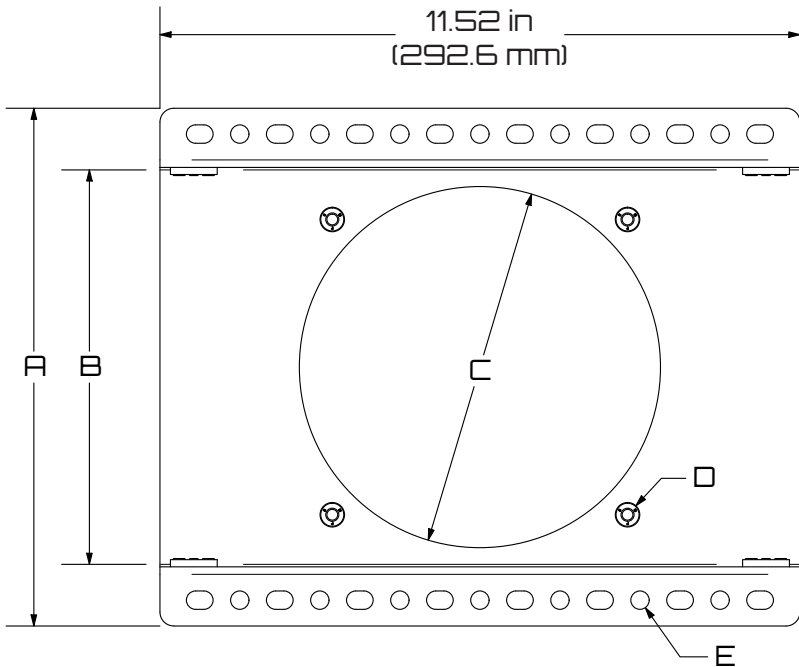


Figure 3 - MHX Fan Shroud Dimensions

Part Number	A	B	C	D	E (MAX)
MHX-514-FS	9.32 in (236.7 mm)	7.19 in (182.6 mm)	6.5 in (165.1 mm)	M6x1.00	5/16 in (M8)
MHX-520-FS	12.11 in (307.6 mm)	9.98 in (253.5 mm)	9.0 in (228.6 mm)	M8x1.25	5/16 in (M8)

PLUMBING ORIENTATION

- The preferred plumbing orientations are shown in Figures 4 and 5.
 - ⚠ Plumbing the heat exchanger with the ports facing down inhibits trapped air from freely escaping and may adversely affect performance.**

INLET & OUTLET
ON TOP

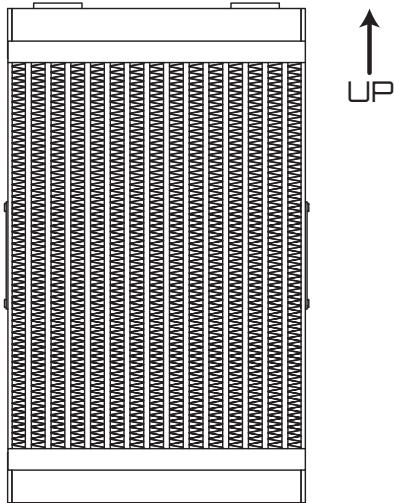
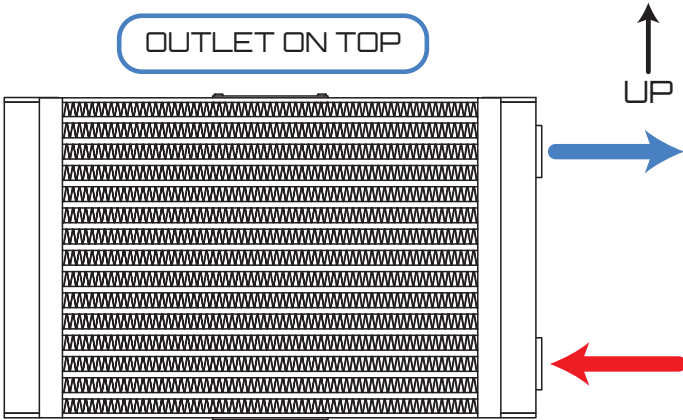


Figure 4 - Vertical plumbing orientation





OUTLET ON TOP



INLET ON BOTTOM

Figure 5 - Horizontal plumbing orientation

INSTALLING THE HEAT EXCHANGER & FAN

1. Test the SPAL fan using the fan relay harness kit and a 12V power supply to validate that the fan is working and moves air in the desired direction.
2. Secure the SPAL fan to the shroud using all four HSC-1040 or HSC-1055 screws provided.
 -  **Do not exceed tightening torque of 12 lb-ft (16 N-m) for M6 (HSC-1040) fan screws.**
 -  **Do not exceed tightening torque of 24 lb-ft (33 N-m) for M8 (HSC-1055) fan screws.**
3. Secure the heat exchanger to the shroud using all four HSC-1041 screws provided.
 -  **Do not exceed tightening torque of 24 lb-ft (33 N-m).**
4. Select an installation location and secure the heat exchanger assembly to the chassis/vehicle with a minimum of three screws.
 -  **Both mounting flanges must be used to secure the shroud to the chassis/vehicle.**
5. Refer to the SPAL instructions to configure and connect the wiring harness.
6. Refer to the heat exchanger instructions for details on pre-filling the heat exchanger, plumbing and connecting the lines, and priming the system.

Thank you for purchasing an Improved Racing product!