EMMEGI®
HEAT-EXCHANGERS

WB SERIES

Brazed Plate Heat Exchangers

sales@emmegiinc.com

WB SERIES | Overview

When water can be used to cool the process fluids, our brazed plate WB Series are the optimal cooling solution for various industrial applications such as: Hydraulic systems, Machine tools, Power Units, and CNC Machines. Stainless steel brazed plate construction is one of the most advanced fluid cooling technologies available. This design has several significant features:

SAE O-RING
Oil Connections

STAINLESS STEEL PLATES
Copper Brazed (Nickel and Stainless Steel also available with additional lead time)

MOUNTING BRACKET
for ease of installation

STUDS
may be used for mounting without mounting bracket

NPT
Water Connections

INFORMATION

Introduction

Brazed plate heat exchangers consist of stainless steel plates, stamped with chevron patterns, bonded together with copper. The plates are turned 180° to each other, causing the plate ridges to intersect, and creating a lattice of intersecting channels. The fluids flow in counter-current direction. The entire construction is sealed together by the means of brazing in a special vacuum furnace. Special corrugation patterns promote high turbulence flow. Internal turbulence dramatically improves heat transfer rates and reduces the amount of sediment deposits inside the unit.

Maintenance

Routine maintenance relies on installing water strainers, monitoring for pressure drops, and flushing the unit chemically when performance declines.

Technical Specs

Materials

Plates & Connections:

- AISI 316L Stainless Steel

Brazing Sheets:

- Copper

Mounting Brackets:

- Powder Painted Steel

Ratings

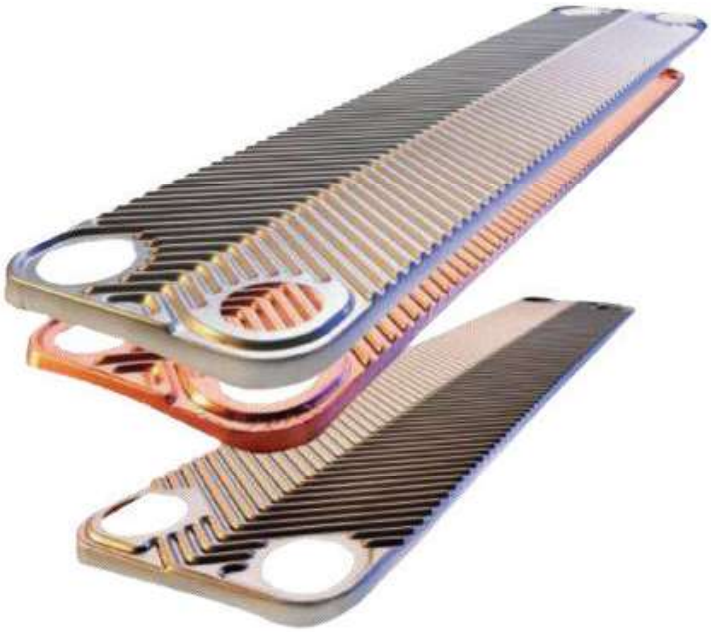
- Operating Pressure: 435 PSI
- Max Operating Temperature: 435°F

Compatible Fluids

- Mineral oils; HL & HLP
- Water - Oil Emulsion
- Water - Glycol
- Consult EMMEGI for other fluids

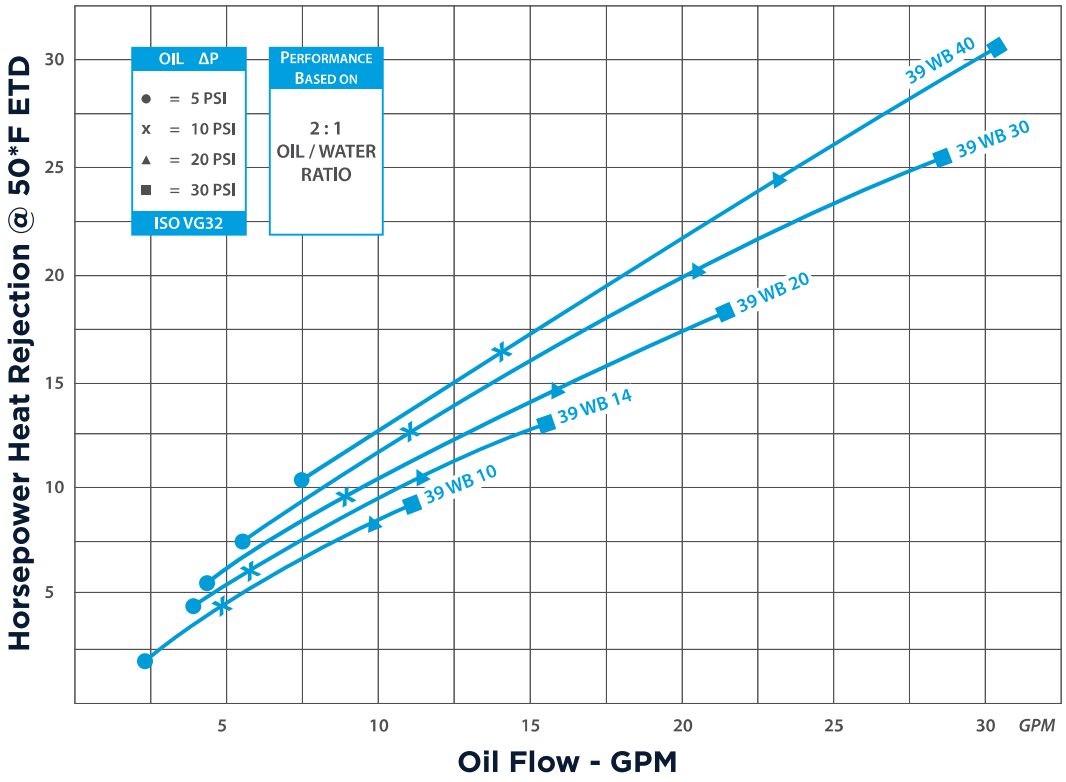
Advantages of Brazed Plate

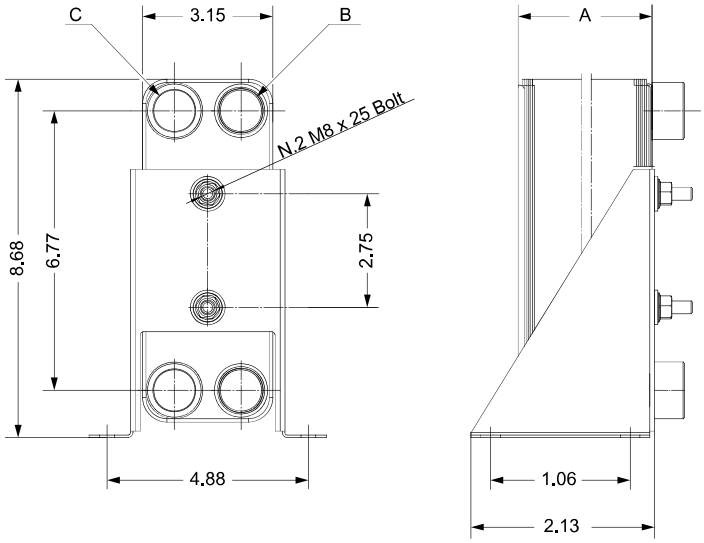
- High heat transfer coefficient
- Small unit size with high heat transfer capacity
- Stainless steel connections
- Easy installation



39 WB SERIES | Dimensions and Performance

PERFORMANCE CHART

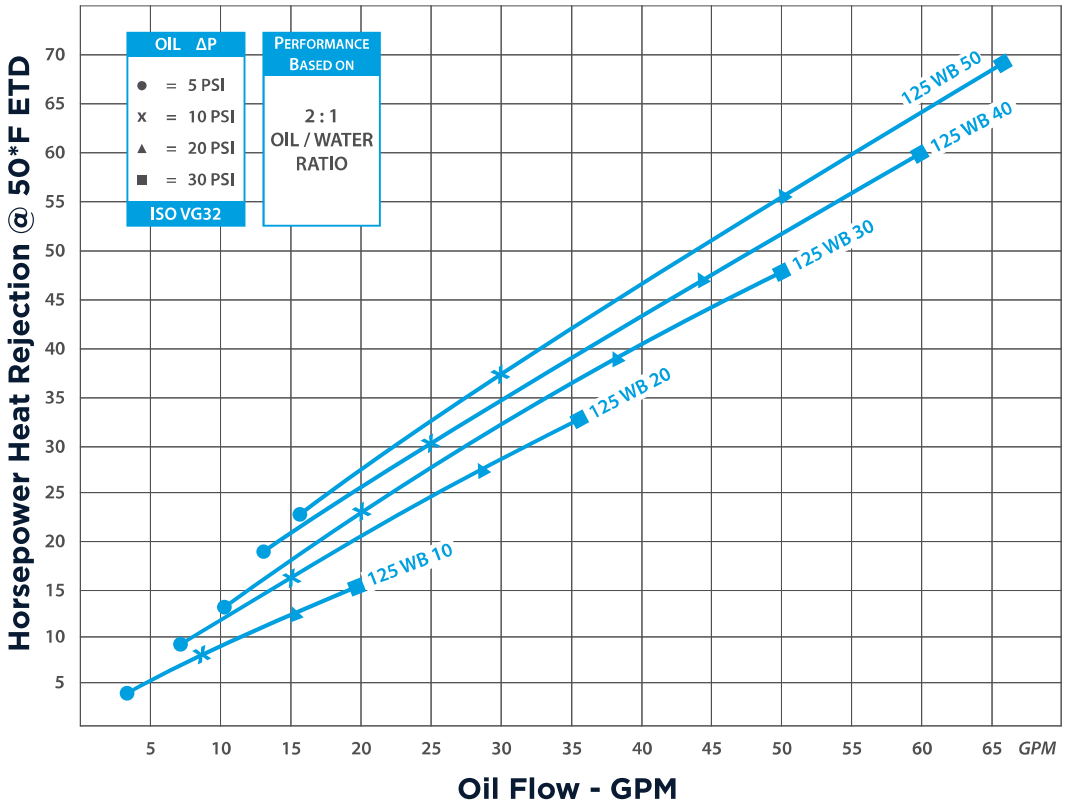


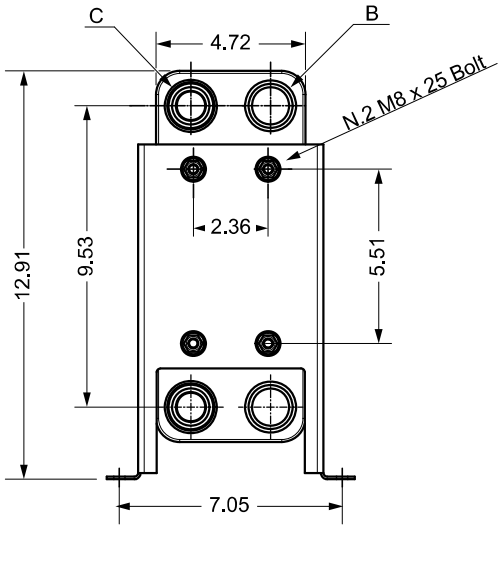


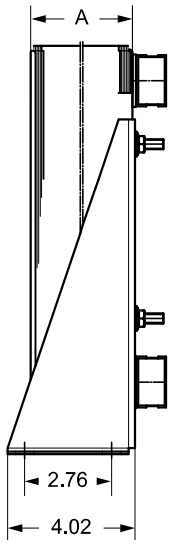
MODEL	A (inch)	Connections		NET WEIGHT LBS.
		B	C	
		Oil	Water	
39 WB 10	1.26	#10 SAE	1/2" NPT	2.6
39 WB 14	1.61			2.9
39 WB 20	2.13	#12 SAE	3/4" NPT	3.5
39 WB 30	3.03			4.4
39 WB 40	3.93			5.3

125 WB SERIES | Dimensions and Performance

PERFORMANCE CHART



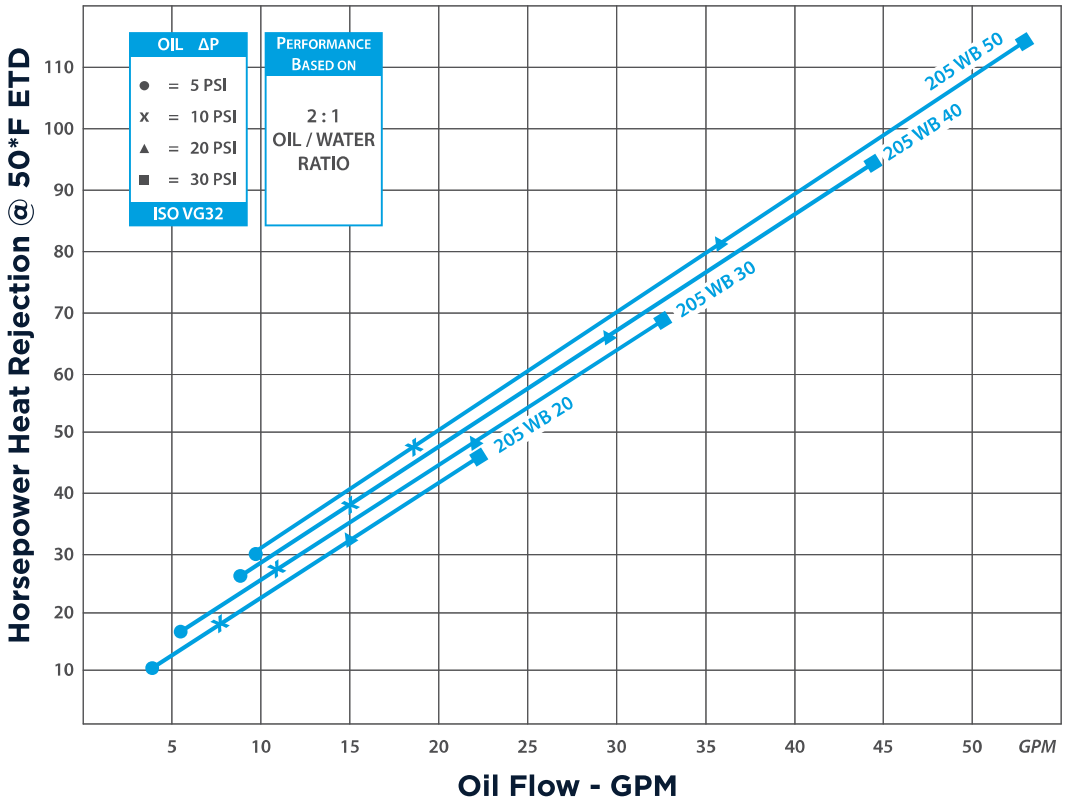


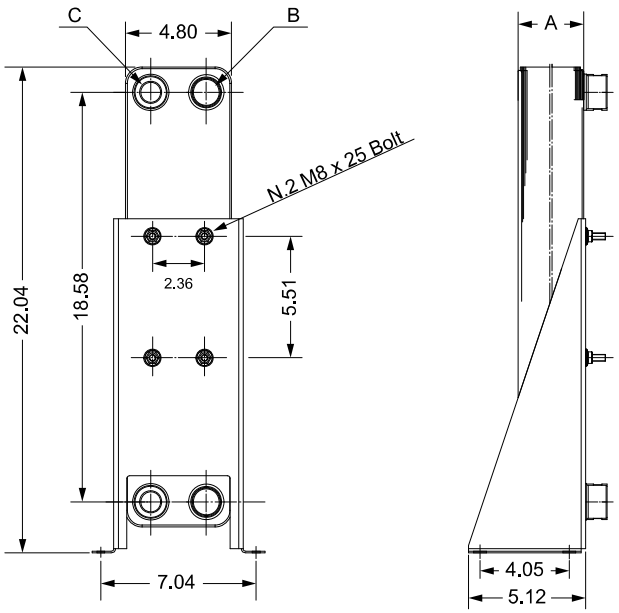


MODEL	A (inch)	Connections		NET WEIGHT LBS.
		B	C	
		Oil	Water	
125 WB 10	1.38	#16 SAE	3/4" NPT	7
125 WB 14	2.24			9.4
125 WB 20	3.07	#20 SAE	1" NPT	10.1
125 WB 30	4.05			12.1
125 WB 40	4.84			14.1

205 WB SERIES | Dimensions and Performance

PERFORMANCE CHART

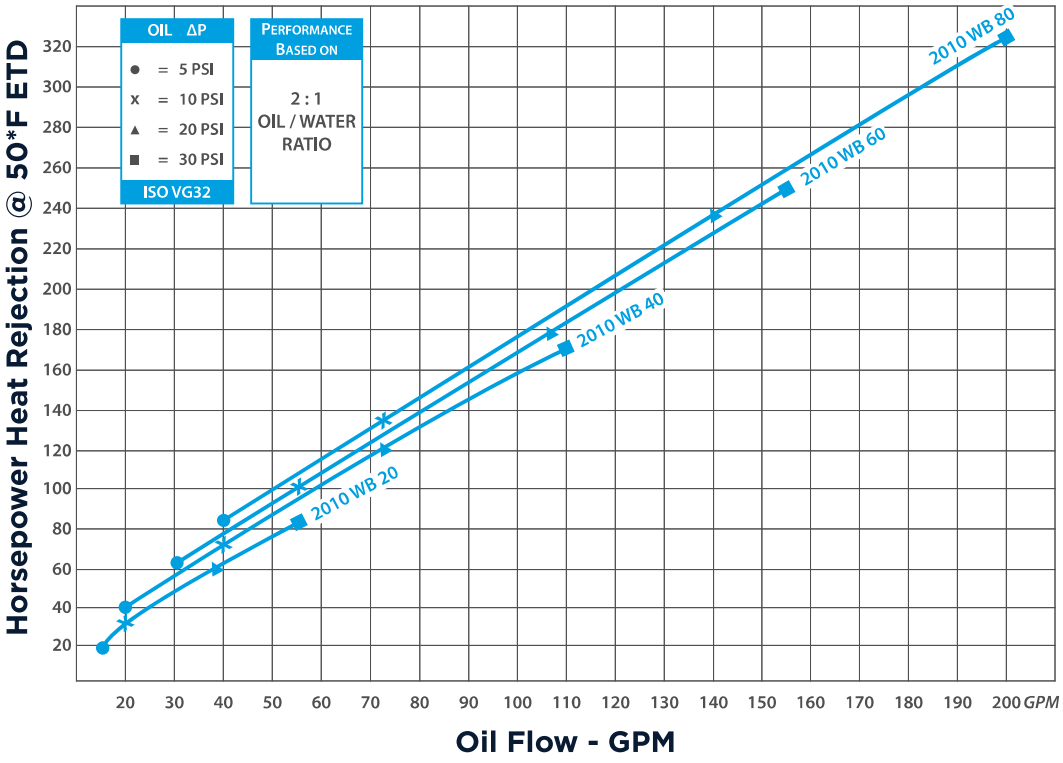


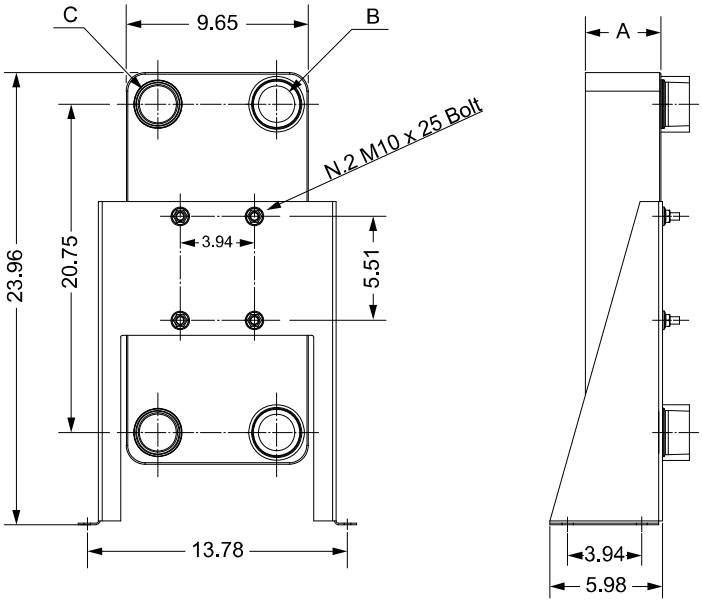


MODEL	A (inch)	Connections		NET WEIGHT LBS.
		B	C	
		Oil	Water	
205 WB 20	2.24	#16 SAE	3/4" NPT	15.3
205 WB 30	3.15			19.1
205 WB 40	4.05	#20 SAE	1" NPT	25.7
205 WB 50	4.96			29.9
205 WB 60	5.87			34

2010 WB SERIES | Dimensions and Performance

PERFORMANCE CHART

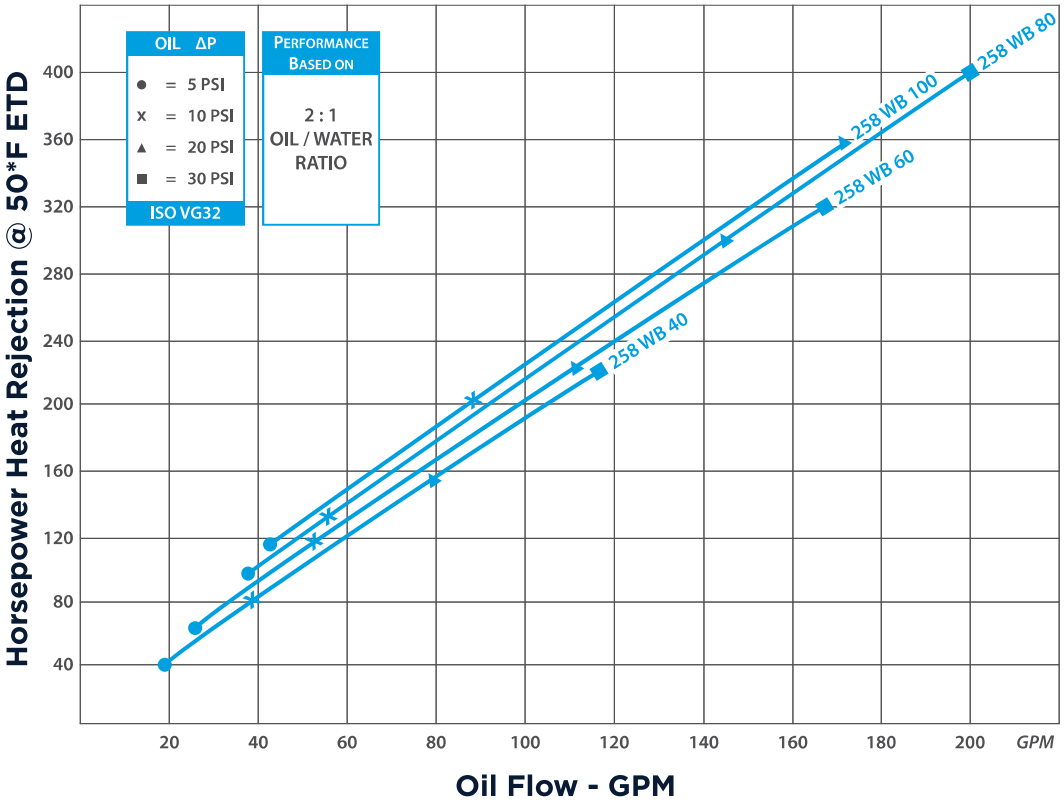


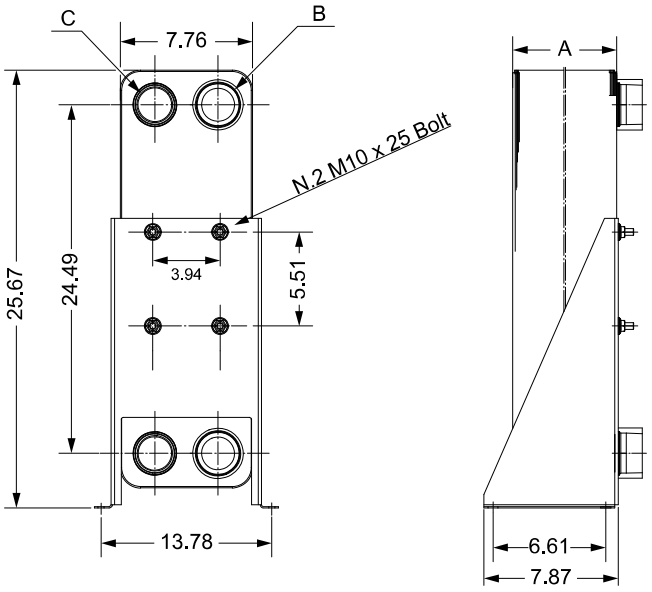


MODEL	A (inch)	Connections		NET WEIGHT LBS.
		B	C	
		Oil	Water	
2010 WB 20	2.36	#20 SAE	1-1/4" NPT	41.6
2010 WB 40	4.17	#24 SAE	1-1/2" NPT	57
2010 WB 60	5.94	#32 SAE	2" NPT	72.5
2010 WB 80	7.75			109.5
2010 WB 100	9.52			112.3

258 WB SERIES | Dimensions and Performance

PERFORMANCE CHART





MODEL	A (inch)	Connections		NET WEIGHT LBS.
		B	C	
		Oil	Water	
258 WB 40	4.25	#24 SAE	1-1/4" NPT	54.2
258 WB 60	6.14	#32 SAE	2" NPT	71.4
258 WB 80	8			97.6
258 WB 100	9.85			114.8

HOW TO ORDER

WB Model Code

Special Nickel brazed models are available for additional corrosion protection. Consult factory for details.

205 WB - 40 - NB - 1

Size

- 39
- 125
- 205
- 2010
- 258

Number of Plates

- 10 (only available with 39 & 125WB)
- 14 (only available with 39WB)
- 20
- 30
- 40
- 50
- 60
- 80
- 100 (only available with 258WB & 2010WB)

****Other plate counts available upon request w/ lead time*

Mounting Bracket

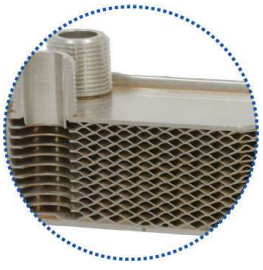
- NB - no bracket

***All models include mounting bracket unless coded NB*

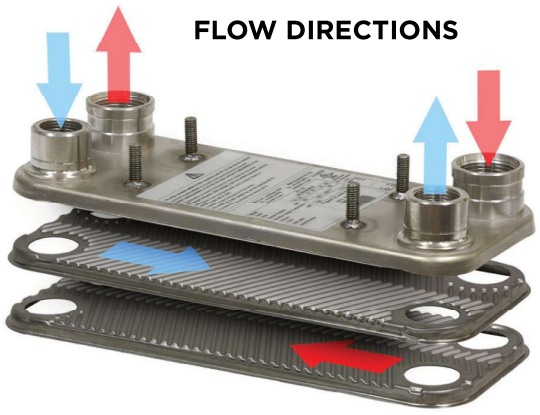
Brazed Plate Construction

Corrosion Resistant: Stainless steel plates and fittings provide long service life.

Compact Performance: Up to 50% smaller in size than traditional shell & tube construction.

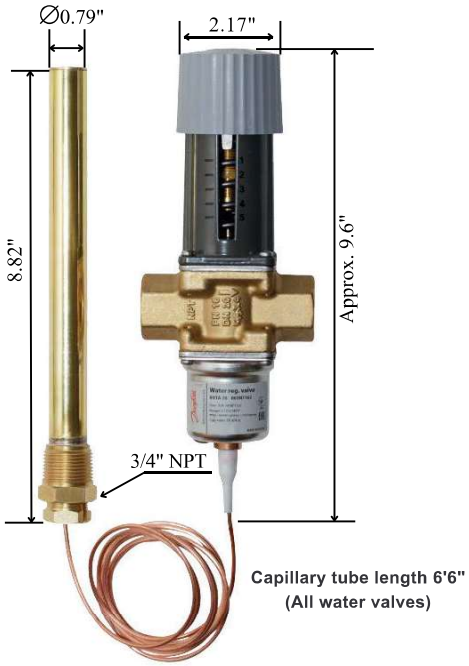


Cutaway to show high density, compact brazed plate construction



Thermostatic Operated Water Valves

Normally closed valve opens on rising temperature at the sensing bulb/bulbwell. Modulates water flow into cooler without the need for any other external input. Typically the sensing bulb/bulbwell are installed in the reservoir.



Installation

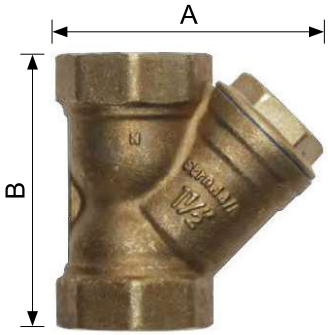
An arrow on the valve body indicates the flow direction. The installation of a WYE Strainer ahead of the valve is recommended. Care should be taken to not kink the capillary tube during/after installation.

Details

- Max Operating Temperature: -13°F - 266°F
- Max Working Pressure: 232 PSI
- Part numbers include both valve and bulbwell

Part Number	Female NPT	Adjustable Temp. Ranges	Max Flow Rate GPM	Weight Lbs.
AVTA - 0.5 - BW	0.5”	77ºF - 149ºF	25	3.2
AVTA - 0.75 - BW	0.75”		44	3.3
AVTA - 1.0 - BW	1”		65	3.6

Bronze WYE Strainer



Part Number	Female NPT	A Inches	B Inches	C Inches	D Inches
WYE 050	1/2”	2.1	2.3	1	0.2
WYE 075	3/4”	2.4	2.7	1.3	0.4
WYE 100	1”	2.4	2.9	1.6	0.6
WYE 125	1-1/4”	3.6	3.6	2	1.2
WYE 150	1-1/2”	3.8	4	2.3	1.6
WYE 200	2”	4.7	5	2.9	2.6

- Max pressure is 125 PSI
- 50 Mesh Screens

PRODUCT LINES

AC Fan Driven

- 2000 K / KBV
- HPV / HPH I
- HPVII

DC Fan Driven

- 2000 K / KBV
- HPV / HPH
- S / SBV

Hydraulic Driven

- 2000 K / KBV
- HP / HPH I
- HPV II

Low Flow / Case Drain

- Rear Mount
- 2010 K
- 2005 K
- Multi-Pass

Hydraulic Offline Cooling

- Silent EVO 3
- EWG

RID

- Specifically designed for gear box offline cooling

Element Only

- Designed to mount in front of radiator

Water / Oil

- WB
- MG

CV4FR

- Mobile cooler with reservoir, filter, and directional valve

Custom Combination

- Off highway engine cooling packages

Accessories

- Filters
- Gauges
- Temperature Switches
- More

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