

# WCME-3W **3-WAY HIGH WATER PRESSURE** DIRECT ACTING WATER REGULATING VALVE

#### PAGE 1 OF 2 SELECTION CRITERIA Fresh water use Union NPT end connections Direct acting 0 3-way configuration Actuation by pressure 3/4" and 1" sizes 0 • Open on pressure increase Manual override • 350 PSI water pressure rating Optional water pressure rating to 500 PSI **C**ONSTRUCTION DETAILS \_\_\_\_ Brass & Stainless Steel internals Cast iron body Brass union fittings All o-ring sealed (Buna-N) 1-27/32 ±1/32 TO CENTERLINE MANUAL OVERRIDE 5-5/16 +1/32 TO CENTERLINE OPTIONAL 1/4" MALE SAE REFRIGERANT FLARE FITTING 36" LONG CAPILLARY TUBE-1/4" SAE FEMALE REFRIGERANT FLARE 6-3/16 ± 1/16 TT. CONNECTION m Ē $\nabla + \Box$ METREX PORT 'B' (BYPASS) INLET 2-25/32 $\pm 1/16$ 3-15/16 ± 1/16 PORT 'A' (CONDENSER) Μ -5-3/4 Reference Metrex drawing WCME-4100-3W

# VALVE SIZING/TRIM SELECTION & PRESSURE RATING

7-15/16 ± 1/16

VALVE PART NUMBER	TRIM DESIGNATOR	PIPE SIZE	$\mathbf{c}_{\mathrm{v}}$		VALVE PART NUMBER	TRIM DESIGNATOR	PIPE SIZE	$\mathbf{c}_{\mathrm{v}}$
				1				
WCME-4075UE-3W-TA	TA	3/4"	8.5		WCME-4075UE-3W-TD	TD	3/4"	3.0
WCME-4075UE-3W-TA	TA	1"	8.5		WCME-4075UE-3W-TD	TD	1"	3.0
WCME-4075UE-3W-TB	ТВ	3/4"	1.5		WCME-4075UE-3W-TF	TF	3/4"	6.0
WCME-4075UE-3W-TB	ТВ	1"	1.5		WCME-4075UE-3W-TF	TF	1"	6.0



PRESSURE RATING								
PRESSURE RATING	STANDARD	Н	EH					
DESIGN PRESSURE	350 PSI	400 PSI	500 PSI					
PROOF PREESURE	525 PSI	600 PSI	750 PSI					

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#### **O**RDERING INFORMATION \_

 Use the valve sizing chart on the preceding page to determine the complete part number.

BASIC PART NO.: WCME\_-4075\_UE-3W-\_ BELLOWS OPTIONS \_\_\_\_\_\_ PRESSURE RATING \_\_\_\_\_\_ VALVE SIZING CHART \_\_\_\_\_

#### **B**ELLOWS OPTIONS

The optional ammonia actuator is designated by an "A" after the WCME\_.

Example: WCMEA-4100UE-3W.

## **P**RESSURE RANGE ADJUSTMENT **\_**

The refrigerant pressure at which the valve begins to open can be adjusted from 50 to 225 PSI. A 45 PSI minimum increase of pressure is required to fully open the condenser port.

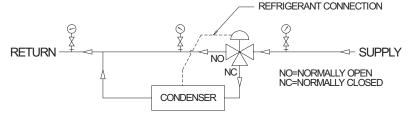
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The optional 1/4" male SAE flare fitting for refrigerant pressure connection is designated by an "F" after the "WCME\_". The 1/4" SAE flare fitting replaces the 36" long capillary tube connection.

Example: WCME<u>F</u>-4100UE-3W-TF.

#### **3-WAY HEAD PRESSURE REGULATOR TYPICAL APPLICATION**

Typically used to modulate the cooling water through a condenser in response to a pressure signal from the condenser. Refrigerant head pressure is maintained over a wide range of operating conditions for a maximum system operating efficiency.



#### **GENERAL DESCRIPTION**

• The WCME series valves are direct acting, modulating water regulating valves utilizing all o-ring construction to accommodate high water pressures up to 500 PSI. Union ends with special o-ring face seals make for quick installation. A manual flushing/override is provided.

#### INSTALLATION INSTRUCTIONS .

- 1) Valves can be mounted in any position without affecting performance. However, for ease of adjustment consider the accessibility of the adjusting screw.
- 2) Connect the incoming water line to the valve inlet. Connect condenser port and bypass port as shown above. Direction of water flow is indicated by the arrow cast on the side of the valve body.
- 3) Connect capillary tube (1/4" flare nut) to refrigerant head pressure connection on condenser.

### ADJUSTMENT\_

• All WCME valves are multi-range valves applicable to both R-12 and R-22 service. The refrigerant pressure at which the valve begins to open can be adjusted from 50 to 225 PSI. A 45 PSI minimum increase of refrigerant pressure is required to fully open the condenser port.

To increase the actuating refrigerant head pressure, insert a pin or hex key into the adjustment nut (item 27) and turn counter-clockwise. To lower actuating refrigerant head pressure, turn adjustment nut clockwise.

### MANUAL OVERRIDE

• To flush the valve through condenser outlet, independent of head pressure setting, insert an allen wrench into the manual flush screw (item 1 on top of the valve) and turn clockwise until the screw bottoms. After flushing, reverse this procedure for automatic operation. <u>Caution</u>: If the manual flushing screw is not unscrewed or backed off sufficiently to clear the flush plate (item 4), the condenser port will not close.

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