

## Cooling-Water Control Valves

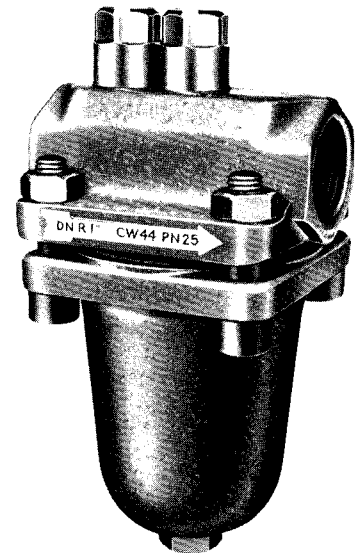
**Gestramat®**
**CW 44, CW 44k**
**PN 25**
**Description**

The cooling-water control valves reduce the cooling water consumption by ensuring that full use is made of the cooling capacity of the water. They ensure perfect distribution of the cooling water and maintain the cooling-water outlet temperature at a preset value suitable for the process.

As direct acting proportional controllers the valves are installed in the cooling-water return line as close to the unit as possible. The desired outlet temperature is adjusted with the setting screw.

An adjustable bleed flow ensures quick response during variations in load and during start-up.

The valves should be installed in horizontal lines (cover pointing downwards). During periods of shut-down of the plant they should be left full of water to prevent the formation of deposits.


**Range**

Max. service pressure . . . 25 barg (360 psig)
Max. differential pressure . . . 16 bar (230 psi)

Differential pressure = **inlet** pressure minus **outlet** pressure

**Connections**

Screwed sockets to BSP  $\frac{3}{8}$ " ,  $\frac{1}{2}$ " ,  $\frac{3}{4}$ " , or 1" .

**Design**

Body in straight-through pattern. Valve cone with spring-loaded solid-state expansion thermostat.

2 setting screws, each provided with a plug to prevent deliberate or accidental maladjustment, one for adjusting outlet temperature, the other for adjusting bleed flow. Adjusting key, 5 mm to DIN 911 fits all sizes.

CW 44 with standard thermostat:

-2 to + 106 °C

CW 44k with thermostat for brine:

-37 to + 71 °C.

**Materials**

Body and cover: Forged steel C 22.8  
(DIN No. 1.0460)

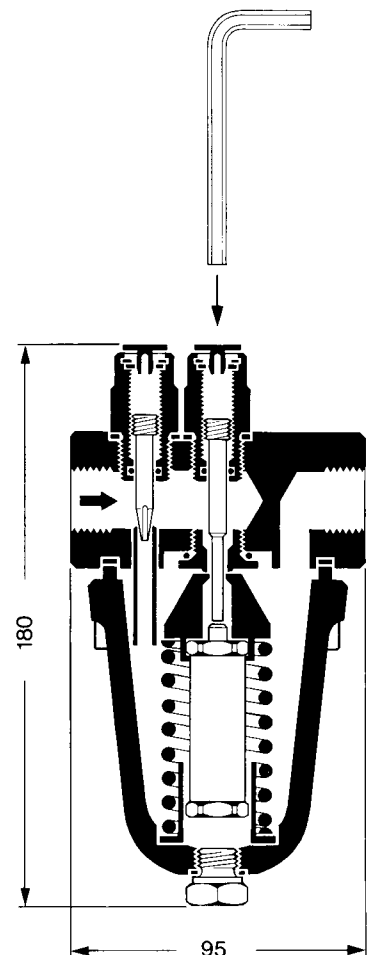
Valve cone and thermostat: Brass  
CuZn 39 Pb 2 (2.0380)

Spring: Stainless steel X 6 CrNiMoTi 17 12 2  
(1.4571)

Valve seat: Stainless steel X 12 CrMoS 17  
(1.4104)

O ring: EPDM

Setting-screw housings: Brass CuZn 39 Pb 3  
(2.0401)



## Enquiry Specification

Cooling-water control valve Gestramat with solid-state thermostat, single valve cone, 2 setting screws one for outlet temperature, one for bleed flow. PN 25, DN . . . screwed BSP, straight-through valve.

## Order Specifications

Indication of type and nominal size (DN) suffices

CW 44 – for cooling water

CW 44k – for brine

Nominal size normally corresponding to that of the pipeline where the CW is to be installed.

## Technical Data

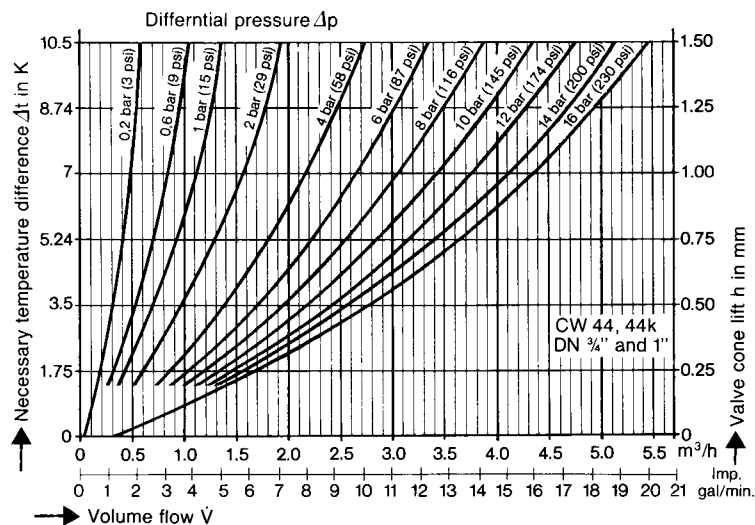
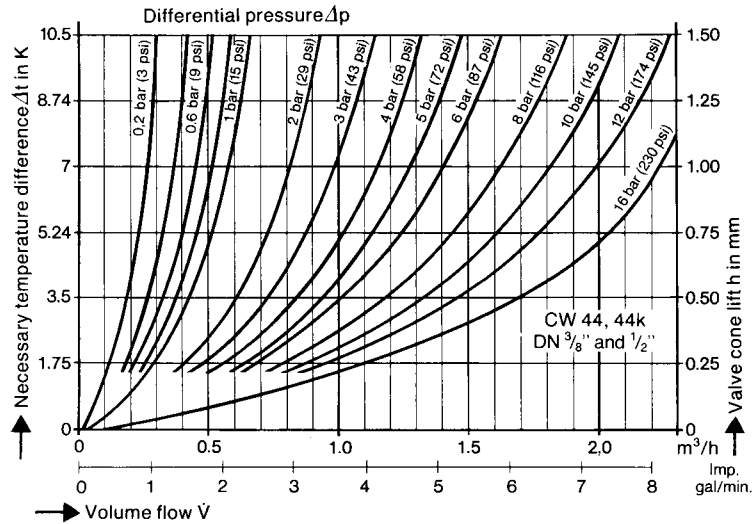
CW 44: Valve with standard thermostat  
CW 44k: Valve with thermostat for brine

Nominal size (DN)		3/8"	1/2"	3/4"	1"
$k_{vs}$ value in m <sup>3</sup> /h		0.66		1.37	
Preset bleed flow in m <sup>3</sup> /h		0.025		0.07	
Necessary $\Delta t$ for full valve lift		10.5 K			
Time constant		60 s			
Hysteresis		3 K			
Adjustable outlet temperatures	CW 44	-2 to +106 °C			
	CW 44k	-37 to +71 °C			
Temporary admissible max. temperature	CW 44	120 °C			
	CW 44 k	85 °C			
Spring force		250 N			
Approx. weight in kg		3.2	3.1	3.1	3

$$C_v(\text{U.S.}) = 1.17 \cdot k_v$$

$$C_v(\text{U.K.}) = 0.98 \cdot k_v$$

## Capacity Charts



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