

valve  
**cimberio**<sup>®</sup>  
technological solutions



**Balancing valves range**



**cim747**



## Cim 747 Fixed orifice balancing valve

**Cim 747** balancing valves perfectly combine a regulating valve and a flow measuring device in a one-piece body. This solution, ensures high accuracy flow balancing across all valve settings.

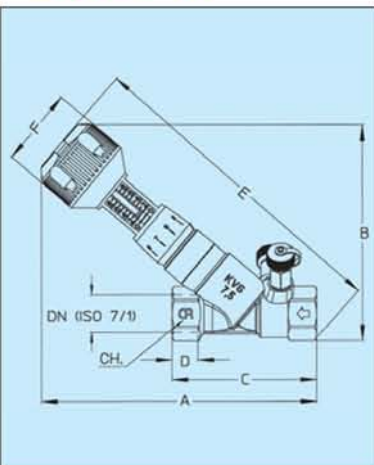
**Cim 747** balancing valves are suitable for both heating (LPHW) and cooling applications at working pressures up to 16 bar.

The main features of **Cim 747** balancing valves are as follows:

- An orifice type flow measurement system permitting high accuracy flow measurement to within  $\pm 5\%$  regardless of valve setting.
- A metal to metal thread locking mechanism so that valve settings can be accurately locked enabling the valve to be closed and re-opened to its exact pre-set position.
- Allen key locking of valve positions.
- A valve position indicator scale which can be read from any angle.
- An EPDM lined valve plug providing tight shut-off for isolation purposes.
- Pressure Class: PN16. Temperature:  $-10^{\circ}\text{C} \div 120^{\circ}\text{C}$

**cim 747**

### FIXED ORIFICE BALANCING VALVE



		Cim 747							
DN	Grms.	A	B	C	D	E	F	CH	Kvs
1/2	680	161	125	85	15	184,5	52	28	1,8
3/4	930	185	145,5	97	16,3	215,5	52	33	4,1
1"	1130	186	158,5	113	19,1	224	52	40	7,5
1 1/4"	1655	207	168,5	144	21,4	245,5	52	51	16,6
1 1/2"	2465	259,5	212	163	21,4	309	58	56	23,0
2"	3725	281	230	193	25,7	337,5	58	71	47,4



## Cim 787 Variable orifice balancing valve

**Cim 787** balancing valves are suitable for both heating (LPHW) and cooling applications at working pressures up to 20 bar. Are available in DZR brass (**Cim 787**) or in standard brass (**Cim 787OT**).

The main features of **Cim 787** balancing valves are as follows:

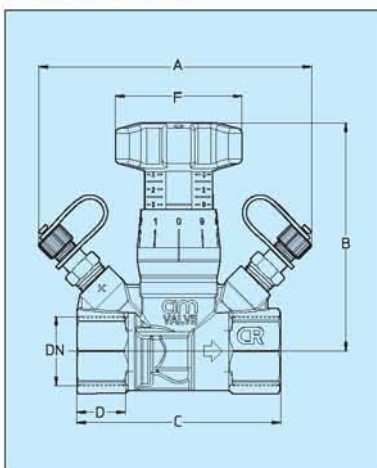
- A thread locking mechanism so that valve settings can be accurately locked enabling the valve to be closed and re-opened to its exact pre-set position.
- Allen key locking of valve positions.
- A valve position indicator scale which can be read from any angle.
- An EPDM lined valve plug providing tight shut-off for isolation purposes.
- Pressure Class: PN20. Temperature: -10°C÷120°C

**cim787**



**cim 787**

### VARIABLE ORIFICE BALANCING VALVE



		Cim 787						
DN	Grms.	A	B	C	D	F	Kvs	
1/2	380	106	87,5	75	16	50	1,7	
3/4	440	107	89,5	80	19	50	2,9	
1"	535	107	91,5	87	21	50	4,1	
1 1/4"	960	123	99	108	22,5	50	6,7	
1 1/2"	1120	128	99	115	23	50	10,4	
2"	1350	132	100	124	26,5	50	15,1	



## Cim 788 Pre-setting regulating valve

**Cim 788** balancing valves are suitable for both heating and cooling applications. Are available in DZR brass (**Cim 788**) or in standard brass (**Cim 788OT**).

The main features of **Cim 788** pre-setting regulating valve are as follow:

- Screw driver adjustable pre-setting.
- 11 positions flow pre-setting.
- Plastic cap enabling the valve to be closed and opened to pre-setted Kv value.
- Designed to be upgraded with thermoelectric actuator (**Cim 788NC, NO, PRO**).
- An EPDM lined valve plug providing tight shut-off for isolation purposes.
- Pressure Class: PN20. Temperature: -10°C ÷ 120°C.

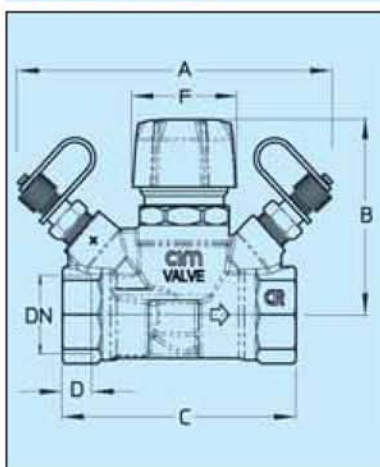


**cim 788**



**cim 788**

### PRE-SETTING REGULATING VALVE



		Cim 788					
DN	Grms.	A	B	C	D	D	Kvs
1/2	350	106	58	75	16	16	0,26 ÷ 1,70
3/4	408	107	60	80	19	19	0,26 ÷ 2,90
1"	504	107	62	87	21	21	0,26 ÷ 3,50
1 1/4"	-	-	-	-	-	-	-
1 1/2"	-	-	-	-	-	-	-
2"	-	-	-	-	-	-	-



**cim 788NC**  
**cim 788NO**  
**cim 788NC24**  
**cim 788NO24**  
**cim 788PRO**

### Cim 788NC - 788NO - 788NC24 - 788NO2

Thermoelectric actuator for opening and closing valves on heating circuit distributors on floor heating systems.

<b>Cim 788NC</b>	normally closed	220V-50/60Hz
<b>Cim 788NO</b>	normally open	220V-50/60Hz
<b>Cim 788NC24</b>	normally closed	24V-50/60Hz
<b>Cim 788NO24</b>	normally open	24V-50/60Hz

<b>Cim 788NC</b>	<b>Cim 788NC24</b>	valve adaptor VA80
<b>Cim 788NO</b>	<b>Cim 788NO24</b>	valve adaptor VA50

- Compact size, small dimensions
- All around functional indicator
- Snap-on installation
- Low power consumption
- Adaptation check on valve
- 100% protection against leaky valves
- High functional safety and long expected service life
- 360° installation position
- Guaranteed over voltage protection

Operating power:	1,8W
Degree/class of protection:	IP54/II (in all installation position)
Actuator travel:	4,5 mm
Actuating force:	100N±5%
Connecting cable:	2x0,75 mm <sup>2</sup> PVC, grey
Cable length:	1000 mm
Housing colour:	grey
Dimension (mm) H/W/L:	54 + 4/44/47
Differential pressure max:	2,2 bar
Opening/closing time:	about 3 min.

### Cim 788PRO - Alpha-Actuator 0-10V Proportional

Thermoelectric actuator-normally closed (NC) with internal electronic unit for proportional control of valves used in building management systems.

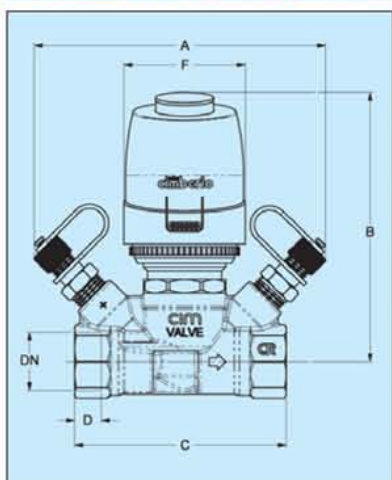
- Adjustment control
- Function indicator
- 100% protection against leaky valves
- Self-calibrating
- First-Open function
- Snap-on installation
- Proportional actuating travel
- Closing point detection

Operating voltage:	24V, -10% until +20% 50/60 Hz
Control voltage:	0-10 V DC
Input resistance:	100 kOhm
Operating power:	1,8 W
Degree of protection:	IP 54
Stroke:	4 mm
Actuating force:	100N ± 5%
Activation current:	<250 mA for max. 2 min.
Average actuating speed:	30 s/mm
Cable (plug-in connector):	3x0,22 mm <sup>2</sup>
Cable length:	1000 mm
Housing colour:	White RAL 9003
Dimensions (mm) H/W/L:	60,5 + 4/44/64
Adaptation:	Valve Adaptor VA50
Differential pressure max:	2,2 bar



## cim 788NC, NO, PRO

### THERMOELECTRIC ACTUATED REGULATING VALVE



		Cim 788NC, NC24, NO, NO24, PRO					
DN	Grms.	A	B	C	D	F	Kvs
1/2	446	106	98	75	16	45	0,26 ÷ 1,70
3/4	507	107	100	80	19	45	0,26 ÷ 2,90
1"	592	107	102	87	21	45	0,26 ÷ 3,50
1 1/4"	-	-	-	-	-	-	-
1 1/2"	-	-	-	-	-	-	-
2"	-	-	-	-	-	-	-

## cim723

binder points



## cim728

insulating case for balancing valves



## cim728C

insulating case for balancing valves



## cim729

measuring niddle



## cim 721



### Cim 721, Cim 3723 Flow measurement device

**Cim 721, Cim 3723** an orifice type flow measurement device permitting high accuracy flow measurement to within  $\pm 5\%$  regardless of valve setting. A perfect installation of the balancing valves and of flow measurement joint **Cim 721, Cim 3723** must be made in accordance with the distances stated in the drawing, in order to regularize the flow and permit an accurate flow measurement.

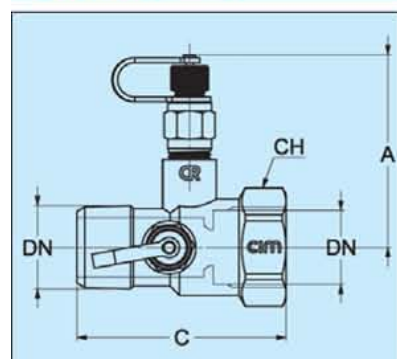
■ Pressure Class: PN16. Temperature:  $-10^{\circ}\text{C} + 120^{\circ}\text{C}$ .

## cim 3723



## cim 721

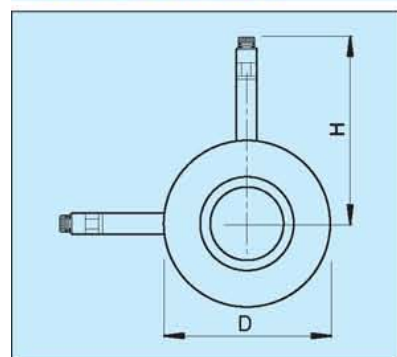
### FLOW MEASUREMENT DEVICE



DN	1/2L	1/2M	1/2S	3/4	1"	1 1/4"	1 1/2"	2"
A	58,5	58,5	58,5	61,5	64,5	69,5	72,5	78,5
C	66,5	66,5	66,5	66,5	63,5	71	71	79,5
CH	28	28	28	34	40	51	56	71
Kvs	0,47	0,98	1,8	4,1	7,5	16,6	23,0	47,4

## cim 3723

### FLOW MEASUREMENT DEVICE



DN	50	65	80	100	125	150	200	250	300	350	400
D	108	127	142	162	192	218	273	329	384	444	496
H	149	159	166	176	191	204	232	260	287	317	343
Flanges thickness	18	18	18	18	18	18	18	18	18	20	23
Kvs	70,5	104,5	120,0	226,3	330,3	527,6	746,0	1.118,3	1.765,2	1.966,8	2.482,6

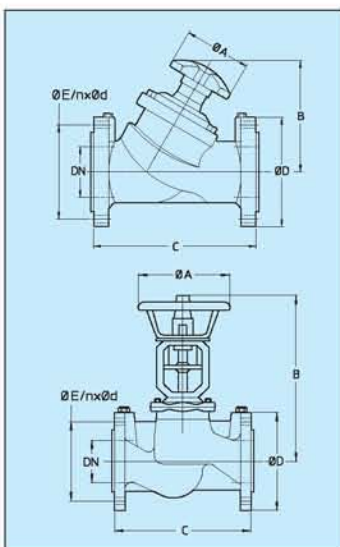


## cim 3739

### Cim 3739 Variable orifice flanged balancing valve PN 16 - CAST IRON 4425

**Cim 3739** flanged balancing valves are used where an accurate flow measurement in big heating or cooling systems is needed. The cast iron valves have flanges PN 16 and a valve position storage device, enabling the opening and closing of the valve at the pre-set position. They are supplied with binder points **Cim 723**.

■ Pressure Class: PN16. Temperature: -10°C÷120°C.



DN	50	65	80	100	125	150	200	250	300
<b>Kg.</b>	10	16	20	29	42	54	196	358	464
<b>Ø A</b>	70	140	140	140	140	140	360	400	400
<b>B</b>	125	187	205	222	251	247	721	808	855
<b>C</b>	230	290	310	350	400	480	600	730	850
<b>Ø D</b>	165	185	200	220	250	285	340	405	460
<b>Ø E</b>	125	145	160	180	210	240	295	355	410
<b>n x Ø d</b>	4x19	4x19	8x19	8x19	8x19	8x23	12x23	12x28	12x28
<b>Kvs</b>	53,8	92,3	121,5	200,0	302,4	398,7	685,6	952,3	1.380,2



## Cim 790 Threaded ends automatic flow balancing valves

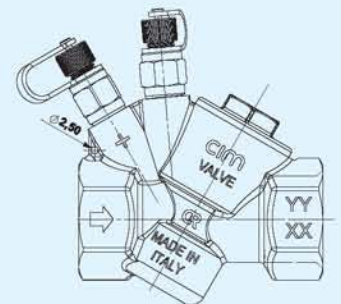
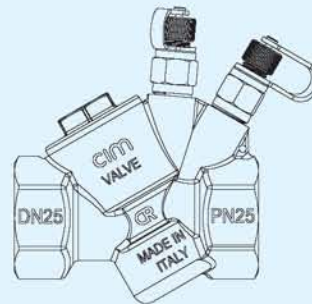
**Cim 790** is designed for the automatic balancing of heating and cooling applications.

**Cim 790** is manufactured to assure constant flows on project values, even if the system is modified after the first installation.

The main features of **Cim 790** are the followings:

- constant flow assured even under fluctuating pressure conditions;
- automatic system balancing due to cartridges providing defined flow;
- cartridge can be replaced without the use of any special tool;
- decrease of installation and balancing costs;
- water hammer absorption due to the cartridge rubber diaphragm;
- working pressure PN25. Temperature range of use:  $-20 \div 120^{\circ}\text{C}$ ;
- maximum differential pressure: 350 KPa.

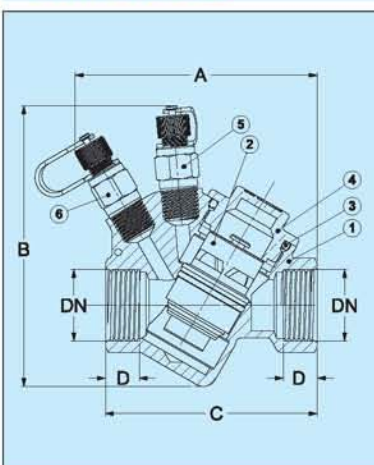
**cim790**



- 1) **Body:** Brass EN12165-CW602N
- 2) **Cartridge:** see cartridge technical note
- 3) **O-Ring:** EPDM 70 Perox
- 4) **Plug:** Brass EN12165-CW602N
- 5) **Binder point:** EN12165-CW617N
- 6) **Binder point:** EN12165-CW617N

**cim 790**

### THREADED ENDS AUTOMATIC FLOW BALANCING VALVES



Cim 790						
DN	Grms.	A	B	C	D	Flow rate (l/h)
15	510	89	103	78	11,5	25 ÷ 2448
20	530	89	103	78	12,5	25 ÷ 2448
25	615	93	103	85	14,5	25 ÷ 2448
25L	1505	125	141	123	14,5	674 ÷ 11355
32	1530	125	141	123	16,8	674 ÷ 11355
40	1590	125	141	123	16,8	674 ÷ 11355
50	1710	130	141	132	21,1	674 ÷ 11355





### Installation notes

- Before installation verify that cartridge flow rate (reported on the label) is properly matching the project requirements;
- Valves may be installed on horizontal or vertical pipes;
- The arrow on valve body must be pointing in the direction of the flow;
- For inlet and outlet no minimum straight-piping is requested.



**cim790**



### Cartridge - Technical data

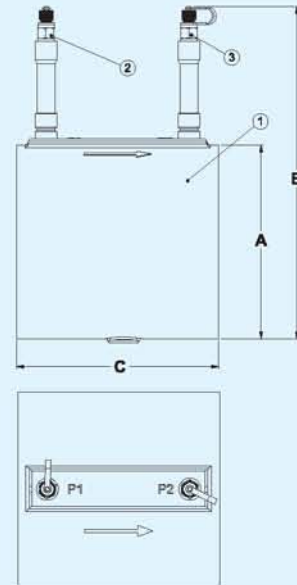
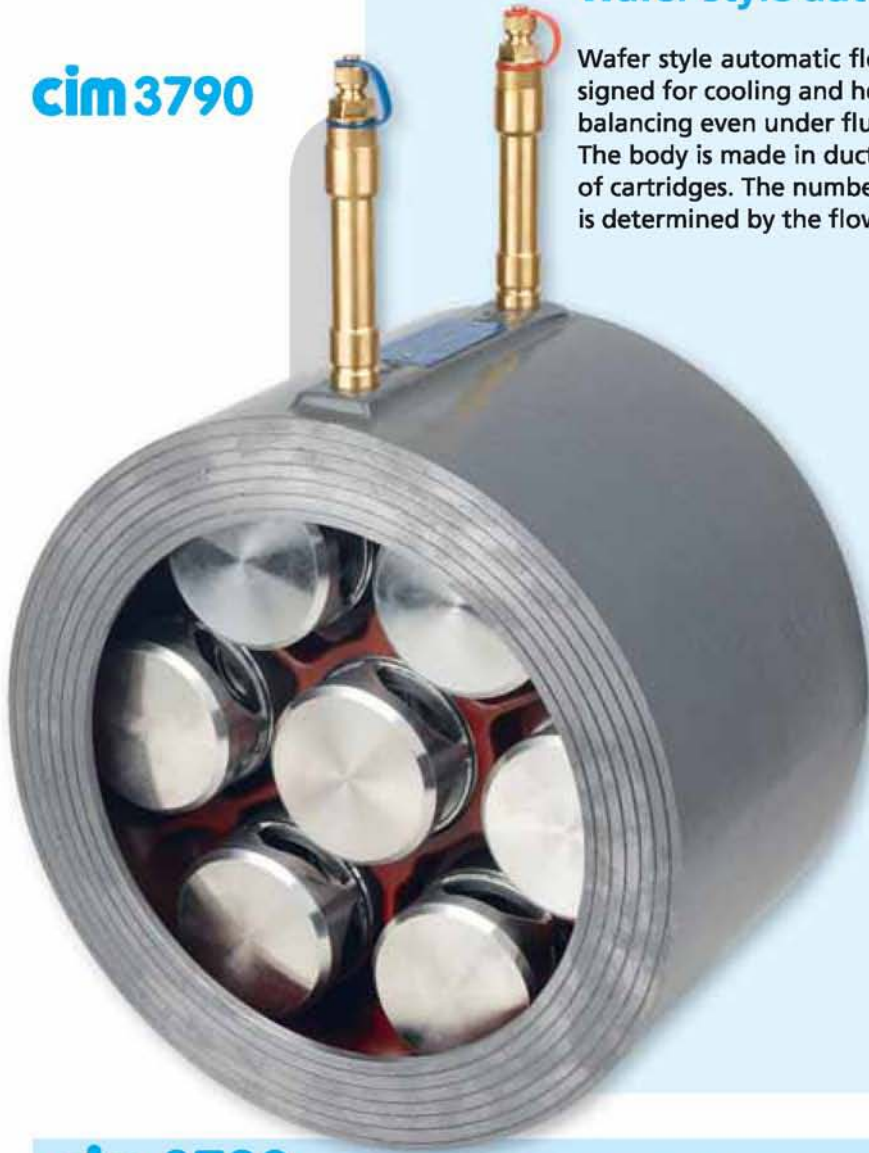
<b>Housing:</b>	Brass
<b>O-rings:</b>	EPDM
<b>Spring:</b>	Stainless Steel
<b>Diaphragm:</b>	HNBR
<b>Maximum <math>\Delta p</math>:</b>	350 KPa
<b>Temperature range:</b>	-20°C ÷ 120°C



**cim3790**

## Cim 3790 Wafer style automatic flow balancing valve

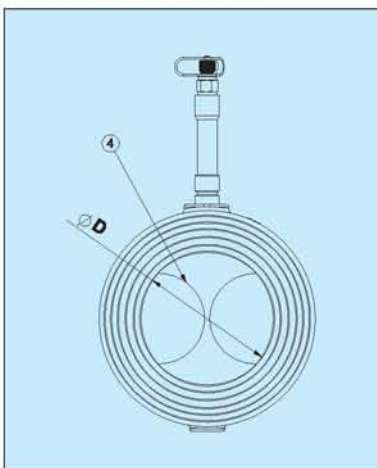
Wafer style automatic flow balancing valves **Cim 3790** are particularly designed for cooling and heating systems. The special cartridge assures system balancing even under fluctuating pressure conditions. The body is made in ductile iron GGG40 and can contain a variable number of cartridges. The number of cartridges, that can reach 85 pieces maximum, is determined by the flow rate requested.



- 1) **Body:** Ductile Iron DIN 1693 GGG-40
- 2) **Binder point:** Brass
- 3) **Binder point:** Brass
- 4) **Cartridge:** see cartridge technical note

**cim 3790**

### FLANGED DUCTILE IRON AUTOMATIC FLOW BALANCING VALVE



Cim 3790 DN	Weight (gr.)	A (mm)	B (mm)	C (mm)	ΦD (mm)	Max n. of cartridges	Flow rate range (l/h)
50	3410	100	218	170	80	1	3820÷40972
65	4910	119	237	170	80	1	3820÷40972
80	4790	131	249	170	80	1	3820÷40972
100	6900	163	281	170	100	2	3820÷81944
125	9000	193	311	170	125	3	3820÷122916
150	11730	216	334	170	150	4	3820÷163888
200	18750	271	389	170	200	7	3820÷286804
250	23440	326	440	170	260	12	3820÷491664
300	33410	383	501	170	315	15	3820÷614580
350	44210	443	561	170	355	19	3820÷778468
400	51630	496	614	170	405	26	3820÷1065272
450	57470	545	663	170	455	33	3820÷1352076
500	67750	601	719	170	508	40	3820÷1638880
600	88900	715	833	170	610	56	3820÷2294432
800	127300	880	998	170	760	85	3820÷3482620



The main features of **Cim 3790** are the followings:

- system balancing assured even under fluctuating pressure conditions;
- decrease of installation and balancing costs;
- water hammer absorption due to the cartridge rubber diaphragm;
- working pressure PN16. Temperature range of use: -20÷110°C;
- maximum differential pressure: 600 KPa.

**cim3790**



### Cartridge - Technical data

<b>Body:</b>	AISI 304
<b>O-rings:</b>	EPDM
<b>Spring:</b>	AISI 304
<b>Diaphragm:</b>	HNBR
<b>Maximum <math>\Delta p</math>:</b>	600 KPa
<b>Temperature range:</b>	-20°C ÷ 120°C



PATENT PENDING



# cimdronic<sup>®</sup> AC6 cim726

**Commissioning Unit**  
Electronic commissioning to a new level  
Now with unique "DSP technology" for sensor protection

**Cimdronic 726** is a state of the art electronic commissioning meter for measurement of differential pressures and flow-rates of water in HVAC systems. A wide range of features coupled with a database of over 2500 valves, from 49 world manufacturers, make the **Cimdronic 726** the first choice meter for commissioning engineers.

#### **Simplicity**

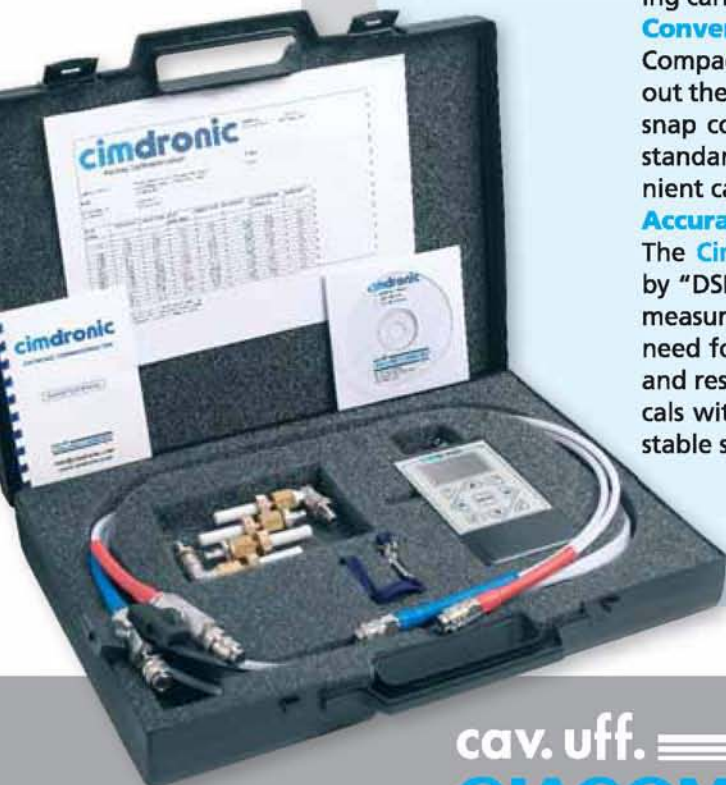
Nine buttons designed for simple navigation allow quick and efficient use of the menu system. The **Cimdronic 726** is arranged with a choice of screen displays-whether it be the full parameter, showing all the data available or simply a screen showing in large text just the differential pressure, the user has the option to select the most appropriate screen for the work being carried out.

#### **Convenience**

Compactness and light weight enable the user to operate effectively without the inconvenience of bulky equipment. Backlit display, anti kink pipes, snap connectors and approximately 20 hours use from readily available standard alkaline PP3 batteries. The **Cimdronic 726** is supplied in a convenient carry case.

#### **Accuracy**

The **Cimdronic 726** uses a sensor calibrated to 20 points and protected by "DSP technology" allowing the use of sensors most appropriate for the measurement ranges experienced in HVAC and not compromised by the need for sensors selected for high over-pressure with their poor accuracy and resolution at low dp readings. Accuracy is better than 1% or 100 Pascals with system damping to further improve reading confidence on unstable systems.



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