

# PROJECT VALVES CATALOGUE






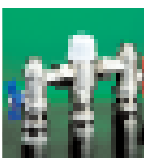




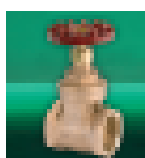

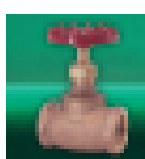

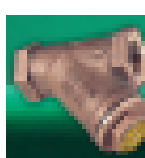
WATER | HEATING | VENTILATION | AIR CON | GAS



OUR GENIUS IS VALVES



# Contents

<b>Introduction</b>		<b>3</b>						
<b>Balancing Valves</b>		<b>4</b>	<b>Valve Family</b>		<b>25</b>	<b>Public Health</b>		<b>76</b>
	<b>Balancing - Automatic</b>	<b>4</b>		<b>Ball Valves</b>	<b>25</b>		<b>Thermal Balancing Valves</b>	<b>76</b>
	<b>Balancing - Static</b>	<b>7</b>		<b>Butterfly Valves</b>	<b>35</b>		<b>Thermostatic Mixing Valves</b>	<b>78</b>
	<b>CommPac</b>	<b>19</b>		<b>Check Valves</b>	<b>39</b>		<b>Pressure Reducing Valves</b>	<b>80</b>
	<b>Differential Pressure Control Valves</b>	<b>21</b>		<b>Gate Valves</b>	<b>46</b>	<b>Typical Kv values</b>		<b>82</b>
	<b>Dominator</b>	<b>22</b>		<b>Globe Valves</b>	<b>65</b>			
	<b>Pressure Independent Control Valve</b>	<b>24</b>		<b>Strainers</b>	<b>71</b>			

<b>Quality Control</b>	<b>83</b>
------------------------	-----------

<b>Project Gallery</b>	<b>84</b>
------------------------	-----------

<b>Index of Figure Numbers</b>	<b>86</b>
--------------------------------	-----------

FULL TECHNICAL DATA AVAILABLE ON  
[WWW.CRANEFSS.COM](http://WWW.CRANEFSS.COM)

# Introduction



## Crane Fluid Systems - Our Genius is Valves

Crane Fluid Systems offers a full range of traditional ball, butterfly, check, gate and globe valves along with the ProBalance range of static and dynamic balancing valves as well as flow management modules. Widely specified in the HVAC industry, product quality, reliability and technical expertise enable Crane Fluid Systems to remain at the forefront of the building services market.

Our Corporate Vision is to be the leading provider of valves, pipe fittings and engineered products for fluid handling applications in building services and general industrial markets. We aim to be our customers preferred supplier by offering products which provide best value together with a service that exceeds customers' expectations.

Crane Fluid Systems is a leading brand of Crane Building Services & Utilities which forms part of the Fluid Handling Group, a division of the parent company Crane Co.



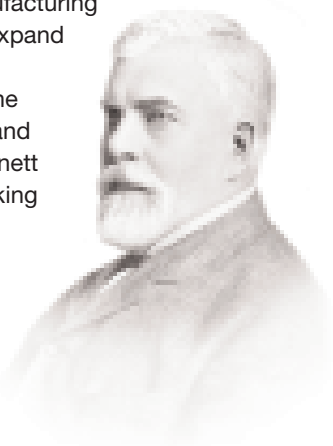
## History

In 1906 James E. Bennett set up a business in London as a Coppersmith. He soon recognised a growing interest in the trade for the latest American pipe fittings and valves, and turned his attention to importing. Amongst the products he introduced to British Industry were those of Crane Co, a thriving American company founded in the mid 19th century.

Crane soon realised that a manufacturing unit in this country would help expand their international business.

In 1919, Crane Co. purchased the assets of the English company and changed its name to Crane-Bennett Limited with the intention of making products in England.

Today as part of Crane Building Services & Utilities, Crane Fluid Systems is joined by an array of complimentary building services brands including NABIC, Brownall, Wade, Rhodes and IAT.



*Richard Teller Crane*

## Today & Tomorrow

Crane Co was founded on the 5th July 1855 by Richard Teller Crane who made the following resolution:

"I am resolved to conduct my business in the strictest honesty and fairness; to avoid all deception and trickery; to deal fairly with both customers and competitors; to be liberal and just towards employees; and to put my whole mind upon the business."

The essence of this resolution is the business policy of Crane Co today.

## D9601

### Automatic Balancing Valve (ABV)

Automatically maintains flow at the specified rate regardless of fluctuations in system pressure.

#### Features & Benefits

- Selection of the appropriate cartridge provides design flow rate.
- Compact size.
- Energy efficient, preventing overflows or excess flow rates.
- Design changes can be easily made by selection of the appropriate cartridge, eliminating the need for recommissioning.
- Male threaded body comes complete with female adaptors which allows for easy installation and removal of cartridge for flushing.
- Can be installed in any pipework configuration - does not require straight lengths of pipe.
- Dynamic flow-limiting characteristics permit variable volume systems to function correctly.
- Tamperproof.
- Also available without test points -(D9600).
- Also available with American threads - (D9600AT without test points) & (D9601AT with test points).

#### Materials

PART	MATERIAL	SPECIFICATION
Union nut	Brass	BS EN 12165 CW617N
Union	DZR Brass	BS EN 12165 CW602N
Union O-ring	EPDM Perox	-
Distance ring	DZR Brass	BS EN 12164 CW602N
Body	DZR Brass	BS EN 12165 CW602N
Plug gasket	Copper	-
Plug	DZR Brass	BS EN 12164 CW602N
Cartridge plug	POM*	-
Shaped opening	Stainless steel	-
Cartridge body	POM*	-
Cartridge spring	Stainless steel	-
Cartridge O-ring	EPDM Perox	-
Test point	DZR Brass	BS EN 12164 CW602N
Tie	Polyp. (blue/red)	-

\*PA66/30G for DN<25

#### Dimensions and Weights

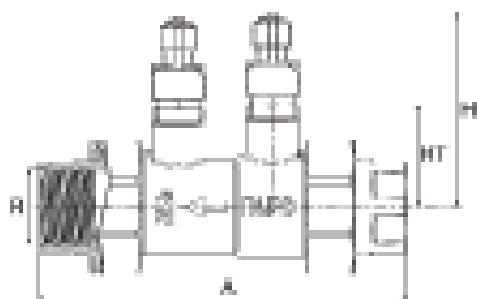
DN	R	A (mm)	HT (mm)	HP (mm)	VALVE WEIGHT (kg)*	CARTRIDGE WEIGHT (kg)
15	1/2"	111	35	67	0.42/0.52	0.04
20	3/4"	117	35	67	0.47/0.53	0.04
25	1"	123	35	67	0.48/0.55	0.04
32	1 1/4"	159	43	75	1.36/1.43	0.10
40	1 1/2"	159	43	75	1.47/1.53	0.10
50	2"	241	60	92	3.00/3.06	0.40
65	2 1/2"	241	60	92	3.98/4.05	0.40
80	3"	292	60	92	4.78/4.85	0.40

\*Without test points/with test points

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



#### Dimensional Drawing





## C960



## ABV Cartridges

### Cartridges

Cartridges are available in 6 ranges of working differential pressure.

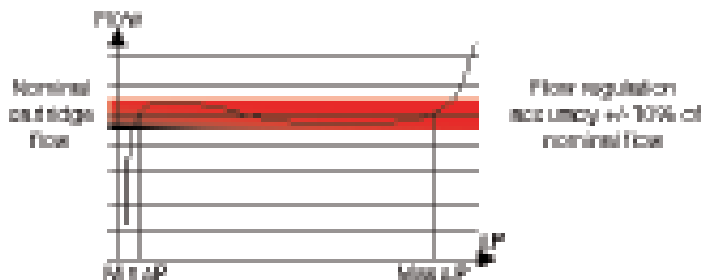
Cartridge colour allows easy identification of each:

- White 15- 85 kPa (**W** code)
- Blue 32-180kPa (**B** code)
- Red 45-280kPa (**R** code)
- Gray 55-380kPa (**O** code)
- Black 60-480kPa (**A** code)
- Green 65-580kPa (**G** code)

A numeric code is stamped on each cartridge, this together with the colour codes, identifies each cartridge.

Example:

**White 15=15-85 kPa - 0.076 l/s | Red 17=45-280 kPa - 0.165 l/s**



Test points allow verification of differential pressure range

### 1/2" to 1" Cartridges

FLOW l/s	WHITE 15-85 kPa	BLUE 32-180 kPa	RED 45-280 kPa	GREY 55-380 kPa	BLACK 60-480 kPa	GREEN 65-580 kPa
0.076	15					
0.095						15
0.103	17					
0.105		13				
0.107		15				
0.111						13
0.117				13		
0.129	23					
0.141	25					
0.151		17				
0.162		21				
0.165			17			
0.169						17
0.170	29					
0.191						21
0.194		25				
0.196		23				
0.206	31					
0.210			23			
0.213			25			
0.216	33					
0.227						23
0.236					21	
0.242				23		
0.253		31				
0.255						25
0.256		29				
0.258	35			25		
0.262			29			
0.272	37					
0.278	39					
0.287		33				
0.291					23	
0.295				29		
0.302			31			
0.313						29
0.323		35				
0.329	43					
0.336	44					
0.341				31		

FLOW l/s	WHITE 15-85 kPa	BLUE 32-180 kPa	RED 45-280 kPa	GREY 55-380 kPa	BLACK 60-480 kPa	GREEN 65-580 kPa
0.353					29	
0.359			33			
0.363						31
0.364		37				
0.368	49	39			31	
0.371	45					
0.374		41				
0.391			35			
0.396		44				
0.400	51					
0.404		43				
0.410				33		
0.420					33	
0.430		45				
0.433			39			
0.435	53					
0.436			37			
0.452				35		
0.458						33
0.465	55					
0.469					35	
0.475						37
0.479				37		
0.495		41				
0.497		49	43			
0.500					37	
0.515				39		
0.526				41		
0.528			44			
0.545						39
0.569		51				
0.570		53				
0.573					39	
0.589				43		
0.590			49			
0.591					41	
0.619			45			
0.623					43	
0.635		55				
0.651			51			

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## C960

## ABV Cartridges

### 1 1/4" to 1 1/2" Cartridges

FLOW l/s	WHITE 15-85 kPa	BLUE 22-180 kPa	RED 32-280 kPa	ORANGE 45-380 kPa	FLOW l/s	WHITE 15-85 kPa	BLUE 22-180 kPa	RED 32-280 kPa	ORANGE 45-380 kPa
0.209	100				0.981			145	
0.244	105				1.011	180			
0.281		100			1.018			140	
0.303	110				1.033		160		
0.324		105			1.067	185			
0.361	115				1.086				145
0.363			105		1.097				140
0.385		110			1.119	190			150
0.392			110		1.133			150	
0.439	120				1.161	195			
0.450		115			1.169			155	155
0.458	125				1.210	200			
0.521	130				1.225		170		
0.525				110	1.242		175		
0.550	135				1.247			160	
0.561		120			1.262				160
0.583			115		1.306	205			
0.596	140				1.333	210			
0.619		125			1.382				170
0.636	145				1.383			170	
0.666	150				1.400		180		
0.713	155				1.439			175	
0.720				120	1.440	215			
0.732			125		1.470		185		
0.735		130			1.494		190		
0.755		135			1.561			180	
0.771		140			1.572		195		
0.796	160				1.600			185	
0.800		145			1.632		200		
0.829				125	1.646				175
0.838			130		1.660			190	
0.878			130		1.742			195	
0.892		150			1.751				180
0.900	170				1.763		205		
0.903				135	1.800		210		
0.908			135		1.910			200	
0.944		155			1.917				185
0.964	175				1.958			205	

2" to 3" cartridge information is available on request

## Flow Measurement Device (FMD) D901/D902 PN25

### Specification

#### D901 & D902

Flow Measurement Devices have square edged entrance orifice plates with tappings for P84 insertion style test points. Flow measurement accuracy of  $\pm 3\%$ .

#### D901 - Sizes 1/2" to 2"

Inlet - BS EN 10226 formerly BS21 (ISO 7) taper female

Outlet - BS EN 10226 formerly BS21 (ISO 7) taper male

#### D901/D902 - Sizes 1/2"

Inlet - (ISO 228) parallel female supplied with compression adaptor to suit 15mm BS EN 1057: Half hard R250 copper tube.

Outlet - BS EN 10226 formerly BS21 (ISO 7) taper male. Discard adaptor if connecting steel pipe.



### Application

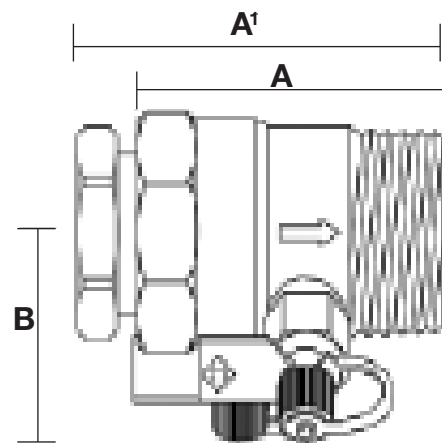
**D901** Flow Measurement Devices are suitable for systems where pipes have been sized on the basis that pipe frictional losses lie in the range 100 to 400 Pa/m.

**D902** Flow Measurement Device (1/2"/15mm size only) is suitable for the measurement of ultra low flows in the range 0.015 to 0.06 l/s e.g. flows to fan coil units.

Please note: The fitting of P82 test points will give an increased temperature rating of 180°C.

Conforms to BS7350\*: 1990

### Dimensional Drawing



### Materials

PART	MATERIAL	SPECIFICATION
Body and Integral orifice	DZR copper alloy	BS EN 12165 CW602N
P84 Pressure test point	DZR copper alloy	BS EN 12164 CW602N

### Pressure/Temperature Ratings

#### Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

#### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation

Maximum temperature 120°C

**Note:** In line with BS EN 1254/2, the maximum pressure must not exceed 16 bar when using compression adaptors.

\*Except pressure rating exceeds BS.

### Dimensions, Coefficients and Weights

CAT. NO.	NOM. SIZE	END TO END		CENTRE-TO-TOP B (mm)	FLOW (Kv)	HEAD LOSS (K)	Kvs	WEIGHT (kg)
		A (mm)	A' (mm)					
D901	1/2" DN15	57	66	55	2.8	13.5	2.2	0.29
	3/4" DN20	58	-	61	6.1	9.1	4.7	0.30
	1" DN25	66	-	65	11.9	6.1	8.6	0.40
	1 1/4" DN32	72	-	71	23.4	4.8	16.6	0.50
	1 1/2" DN40	72	-	73	36.2	3.7	24.5	0.54
	2" DN50	82	-	79	71.6	2.4	46.1	0.77
D902	1/2" DN15	57	66	55	0.57	333	0.54	0.29

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Flow Measurement Device (FMD) DM900 PN25



### Specification

DM900 is a stainless steel orifice plate which has a square edged entrance. The two stainless steel extension tubes are fitted with Crane P84 pressure test points. Accuracy of flow measurement at normal velocities is  $\pm 3\%$ .

### Application

DM900 can be used as a single unit or close coupled to other regulating or isolating valves to provide accurate flow measurement. Suitable for use with PN10, PN16, or PN25 flanges or flanged valves with ratings detailed in the appropriate flange or valve product standard. When fitted with P84 pressure test points, the DM900 is limited to 120°C max. For use at temperatures above 120°C, suitable alternative pressure test points should be fitted. For temperatures between 120-180°C, replace P84 with P82. Please consult Crane Fluid Systems' technical team for more information.

### Installation

The DM900 can be mounted between valve and/or pipe flanges to BS EN 1092-1+2 with PN10, PN16 or PN25 ratings. The outside diameter ensures a proper alignment when installed between PN10/16 flanges and PN25 flanges up to 80mm size. When assembling between PN25 flanges sized 100mm and larger, ensure the device has been correctly centered with the mating flanges.

**Conforms to BS7350: 1990\***

### Materials

PART	MATERIAL
Orifice and carrier	Stainless steel
Extension tubes	Stainless steel
Pressure test points (P84)	DZR

### Dimensions and Weights

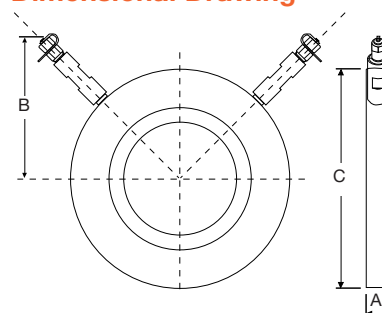
DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	OUTSIDE DIAMETER C (mm)	WEIGHT (kg)
20	18	116	63	0.7
25	18	119	73	0.8
32	18	124	84	1.0
40	18	127	94	1.1
50	18	131	109	1.4
65	18	114	129	1.5
80	18	120	144	1.8
100	18	127	164	2.2
125	18	137	194	2.6
150	18	147	220	3.0
200	18	167	275	4.4
250	18	187	331	5.7
300	18	207	386	7.1
350	21	216	444	12.4
400	21	235	495	14.5
450	21	256	555	18.0
500	21	278	617	22.1
600	25	319	734	36.1

\*Larger sizes available on application. \*Except pressure rating exceeds BS.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



### Dimensional Drawing



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	25.0

### Coefficients

DN	FLOW (Kv)	HEADLOSS (K)	KVS
20	6.0	9.6	4.7
25	11.6	6.6	8.6
32	23	5.1	16.6
40	35	4.0	24.5
50	72	2.5	46.1
65	154	1.5	90
80	220	1.4	120
100	373	1.4	220
125	570	1.4	342
150	789	1.5	468
200	1383	1.6	792
250	2122	1.7	1224
300	3116	1.6	1800
350	2754	2.6	1795
400	3573	2.6	2334
450	4583	2.6	2981
500	5686	2.6	3700
600	8229	2.6	4491

## Double Regulating Valve (DRV) D921/D923 PN25

ProBalance



### Specification

The Double Regulating Valve offers an accuracy of  $\pm 5\%$  on all settings, for precise flow regulation.

They are Y-pattern globe valves with characterised throttling disc tending towards equal percentage performance. Double regulating feature allows valve opening to be set with an Allen key. Operation of the valve is by means of the Microset hand wheel.

WRAS Approved.

### End Connection

Sizes 1" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21. Sizes 1/2" & 3/4" DN15 & DN20 parallel threaded to BS EN ISO 228-1 (formerly BS 2779).

Adaptor kits for use with copper tube also available.

Also available threaded to ANSI B1.20.1. Please add suffix AT to denote American Thread i.e. D921AT/D923AT

### Application

In two unit systems, the D921 has sufficient authority to give effective regulation over the range of flows covered by matching flow measurement devices/valves.

In particular, the D923 low flow regulating valve has an authority matched to the range of ultra low flows covered by the D902 flow measurement device.

Conforms to BS 7350\* : 1990

### Materials

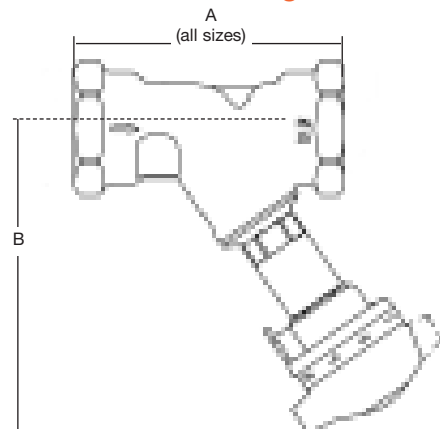
PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Bonnet	DZR copper alloy	BS EN 12165 CW602N
Stem	DZR copper alloy	BS EN 12165 CW602N
Disc	DZR copper alloy	BS EN 12165 CW602N
'O' Ring Seal	EPDM Rubber	
Hand Wheel	Plastic	

### Dimensions, Coefficients and Weights

FIG. NO.	NOM. SIZE	DIMENSIONS (mm)		FULLY OPEN		WEIGHT (kg)
		A	B	FLOW (Kv)	HEAD LOSS (K)	
D921	1/2" DN15	87	105	2.14	23.11	0.54
	3/4" DN20	96	106	3.61	26.14	0.58
	1" DN25	100	127	6.37	21.45	0.88
	1 1/4" DN32	114	128	12.30	17.42	1.05
	1 1/2" DN40	125	143	21.30	10.66	1.43
	2" DN50	146	144	31.30	12.63	1.88
D923	1/2" DN15	87	105	2.26	20.72	0.54



### Dimensional Drawing



### Pressure/Temperature Ratings

#### Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

#### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C

**Note:** In line with BS EN 1254/2 the maximum pressure must not exceed 16 bar when using compression adaptors

\*Except pressure rating which exceeds BS

## Fixed Orifice Double Regulating Valve (FODRV) Balance D931/D933/D934 PN25

### Specification

The Double Regulating Valve, with its integral fixed orifice design, offers an accuracy of  $\pm 5\%$  on all settings, for precise flow regulation and measurement.

They are Y-pattern globe valves having characterised throttling disc tending towards equal percentage performance. Integral square edged entrance orifice plate and P84 insertion test points fitted. Double regulating feature allows valve opening to be set with an Allen key. Operation of the valve is by means of the Microset hand wheel.

The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

### End Connection

Sizes 1" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

Sizes 1/2" & 3/4" DN15 & DN20 BS 2779 (ISO 228) parallel

Adaptor kits for use with copper tube also available

Also available threaded to ANSI B1.20.1AT

Order code D931AT/D933AT/D934AT

### Application

D933 size 1/2" low flow FODRV combines the functions of regulation and flow measurement in a unit of high authority making it particularly suitable for low flow applications in the range of 0.03 to 0.07 l/s.

D934 size 1/2" ultra low flow FODRV combines the functions of regulation and flow measurement in a unit of high authority making it particularly suitable for ultra low flow applications in the range of 0.016 to 0.04 l/s.

### Conforms to BS 7350\* : 1990

### Materials

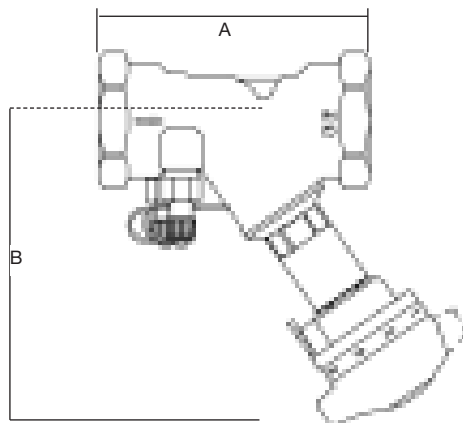
PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Bonnet	DZR copper alloy	BS EN 12165 CW602N
Stem	DZR copper alloy	BS EN 12164 CW602N
Disc	DZR copper alloy	BS EN 12164/5 CW602N
'O' Ring Seal	EPDM Rubber	
Orifice Insert	DZR copper alloy	BS EN 12164 CW602N
P84 test valve	DZR copper alloy	BS EN 12164 CW602N
Hand Wheel	Plastic	

### Dimensions, Coefficients and Weights

FIG. NO.	NOM. SIZE	DIMENSIONS (mm)		FULLY OPEN		KV <sub>s</sub>	WEIGHT (kg)
		A	B	FLOW (Kv)	HEAD LOSS (K)		
D931	1/2" DN15	87	105	1.87	30.27	2.2	0.61
	3/4" DN20	96	106	3.14	34.55	4.7	0.65
	1" DN25	100	127	5.59	27.85	8.6	0.95
	1 1/4" DN32	114	128	10.80	22.60	16.6	1.13
	1 1/2" DN40	125	143	18.10	14.76	24.5	1.52
	2" DN50	146	144	29.10	14.62	46.1	1.98
D933	1/2" DN15	87	105	1.06	94.20	1.1	0.61
D934	1/2" DN15	87	105	0.57	325.8	0.58	0.61



### Dimensional Drawing



### Pressure/Temperature Ratings

#### Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

#### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C

**Note:** In line with BS EN 1254/2, the maximum pressure must not exceed 16 bar when using compression adaptors

\*Except pressure rating exceeds BS

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Fixed Orifice Double Regulating Valve (FODRV) MotoBalance D981P/D983P/D984P PN16

### Specification

Y-pattern globe valve.

Integral square edged entrance orifice plates and P84 insertion test points fitted.

Double regulating feature allows valve opening to be manually set.

Operation of the valve is by means of motorised actuator.

MotoBalance should be fitted with a suitable actuator. These include thermal actuators for on/off control specified 'normally open or normally closed' with either 24V or 230V supply. Alternatively use with a fully modulating control actuator that requires a 24V supply and a control signal 0-10V.

The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

### End Connection

Sizes 1/2" and 3/4" DN15 & DN20 parallel threaded to BS EN ISO 228-1 (formerly BS 2779).

All sizes also available threaded ANSI B1.20.1. Please add suffix AT to denote American Thread.

### Application

The MotoBalance valve is designed for installation in circuits where combined functions of actuated regulation and flow measurement are required. Accuracy of flow measurement is  $\pm 5\%$  across all drive settings.

**D981P** - The 1/2" MotoBalance has a flow range of 0.061 to 0.132 l/s.

The 3/4" MotoBalance has a flow range of 0.131 to 0.289 l/s.

**D983P** - 1/2" low flow MotoBalance is particularly suitable for low flow applications in the range of 0.03 to 0.07 l/s.

**D984P** - 1/2" ultra low flow MotoBalance is particularly suitable for ultra low flow applications in the range of 0.016 to 0.04 l/s.

### Suitable for actuation

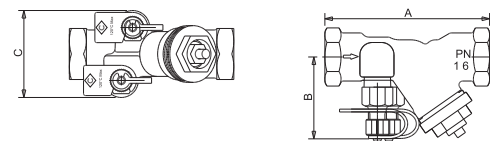
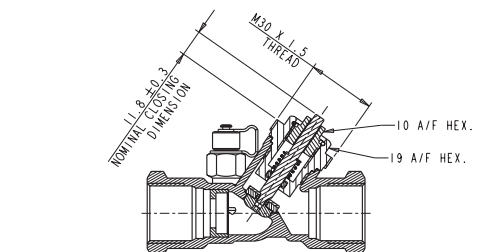
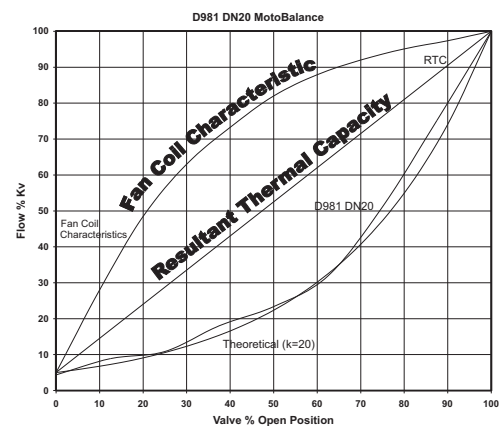
#### Profiled disc gives equal percentage flow control

### Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Bonnet	DZR copper alloy	BS EN 12165 CW602N
Stem	DZR copper alloy	BS EN 12165 CW602N
Disc	EPDM rubber	
'O' Ring Seal	EPDM rubber	BS 4518 0056-024
Orifice Insert	DZR copper alloy	BS EN 12165 CW602N
P84 Test Point	DZR copper alloy	BS EN 12165 CW602N

### Dimensions, Coefficients and Weights

FIG. NO.	NOM. SIZE	DIMENSIONS (mm)			FULLY OPEN		KVs	WEIGHT (kg)
		A	C	B	FLOW (Kv)	HEAD LOSS (K)		
D981P	1/2" DN15	87	50	46	1.245	30.27	2.2	0.41
D983P	3/4" DN20	96	51	51	2.300	34.55	4.7	0.45
D984P	1/2" DN15	87	50	46	0.667	90.42	1.1	0.41
		87	50	46	0.587	325.80	0.58	0.41



### Pressure/Temperature Ratings

The maximum static pressure is 16 bar, the maximum differential pressure is 1.2 bar.  
Maximum working temperature: 120°C  
Minimum working temperature: -10°C

### Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	16.0	14.8	13.5

### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

**Note:** In line with BS EN 1254/2 the maximum pressure must not exceed 16 bar when using compression adaptors

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## Double Regulating Valve (DRV) DM921 PN16

### Specification

Y-pattern globe valve with a characterised throttling disc and ends flanged to BS EN 1092-2 PN16.

The valve opening may be set to control flow at a pre-determined rate. Operation of the valve is by means of a hand wheel incorporating a micrometer device.

The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

### Application

In two unit systems, the DM921 has sufficient authority to regulate flow in circuits incorporating a flow measurement device.

Fitted with 2 x 1/4" BSPT plugs for conversion to DM931 if required.

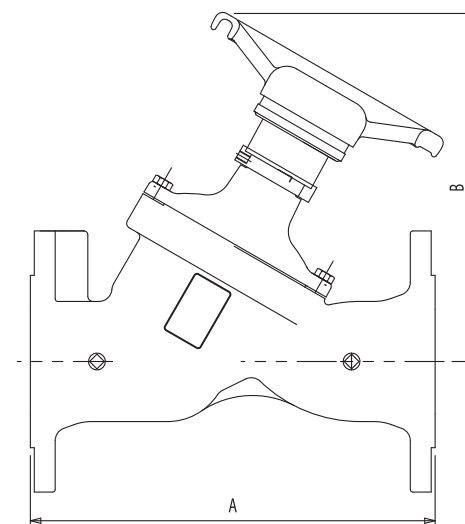
### Conform to BS 7350 : 1990\*

### Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast Iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland nut	Brass
Packing	Non-asbestos
Seat ring	Bronze



DM921 Dimensional Drawing



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS4504)

### Dimensions and Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	15.8
80	310	267	19.5
100	350	300	28.0
125	400	325	37.5
150	480	340	50.5
200	600	525	123.0
250	730	575	192.0
300	850	645	251.0

\* Except pressure rating exceeds BS

### Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)
65	85	4.9
80	111	5.5
100	146	9.2
125	250	7.3
150	380	6.5
200	600	7.8
250	1211	4.6
300	1521	6.0

\* Fully open position

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



# Variable Orifice Double Regulating Valve (VODRV)

**DM931 PN16 DA931 Class 125**



## Specification

These are Y-pattern globe valves supplied with two pressure test points P84 to provide flow measurement, regulation and isolation. Valves conform to requirements of BS 7350: 1990 and ends are flanged to BS EN 1092-2 (formerly BS 4504).

## Application

Primarily used in injection or other circuits requiring a double regulating valve for system balancing. Accuracy of flow measurement is  $\pm 10\%$  at the full open position of the valve. Some reduction in accuracy occurs at partial openings of the valve in accordance with BS 7350.

The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

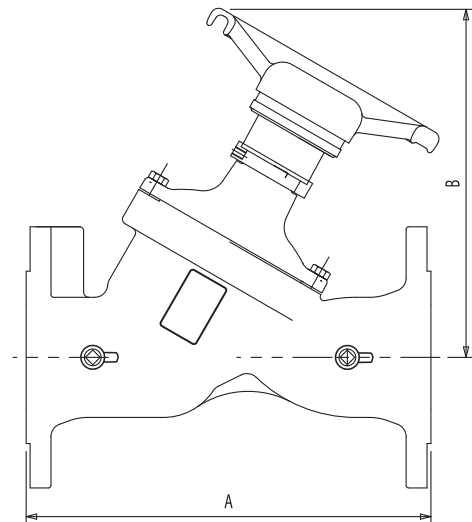


DM931

## Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland nut	Brass
Packing	Non-asbestos
Seat ring	Bronze

## Dimensional Drawing



## Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS4504)

## Dimensions and Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	15.8
80	310	267	19.5
100	350	300	28.0
125	400	325	37.5
150	480	340	50.5
200	600	525	123.0
250	730	575	192.0
300	850	645	251.0

## Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)
65	85	4.9
80	111	5.5
100	146	9.2
125	250	7.3
150	380	6.5
200	600	7.8
250	1211	4.6
300	1521	6.0

\* Fully open position

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Fixed Integral Orifice Double Regulating Valve (FODRV)

**DM941 PN16 DA941 Class 125**



### Specification

Single unit Y-pattern globe valves incorporating an integral orifice plate to form a fixed orifice flow measurement unit with regulation and isolation capacity. Valves conform to requirements of BS 7350: 1990 and ends are flanged to BS EN 1092-2 (formerly BS 4504).

### Application

Primarily used in injection or other circuits requiring a double regulating valve for system balancing. Accuracy of flow measurement is  $\pm 5\%$  at all open positions of the valve in accordance with BS 7350 : 1990.

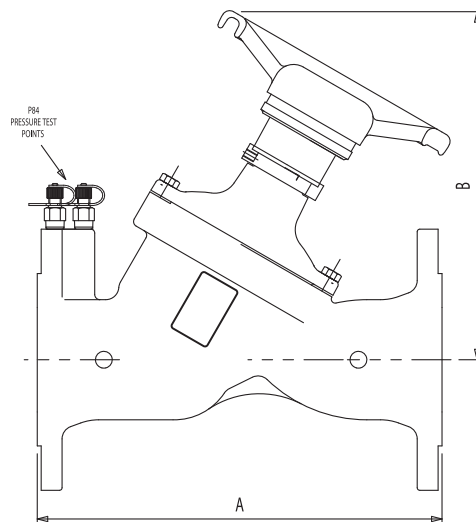
The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.



### Materials

PART	MATERIAL
Body	Ductile Iron
Bonnet	Ductile Iron
Bonnet gasket	Non-asbestos
Disc (All sizes)	EPDM Coated Cast Iron
Disc Bush	Bronze
Stem	410 SS
Gland (65 to 150mm)	Brass
Gland (200 to 300mm)	Cast Iron
Gland nut	Brass
Packing	Non-asbestos
Seat ring	Bronze

### Dimensional Drawing



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Ratings align with BS EN 1092-2 PN16 (formerly BS4504)

### Dimensions and Weights

DN	FACE-TO-FACE A (mm)	CENTRE-TO-TOP B (mm)	WEIGHT (kg)
65	290	262	16.3
80	310	267	20.0
100	350	300	28.5
125	400	325	38.0
150	480	340	51.0
200	600	525	124.0
250	730	575	194.0
300	850	645	254.0

### Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)	Kvs
65	93	6.9	90
80	99	6.8	120
100	136	12.7	220
125	229	8.7	342
150	342	8.9	468
200	550	10.3	792
250	1052	6.0	1224
300	1367	7.8	1800

\* Fully open position

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

# Gearbox Operated Double Regulating Valve

**DM925G PN16 DM925L PN16**



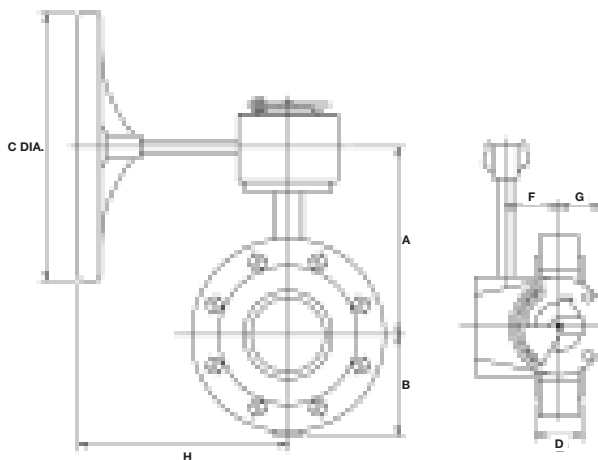
## Specification

The DM925G and DM925L Double Regulating Valves consist of a fully lugged, EPDM liner butterfly valve with a Double Regulating Gearbox or Lever. The gearbox Double Regulating feature allows the valve to be used to isolate and to be re-opened to its pre-set position. The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

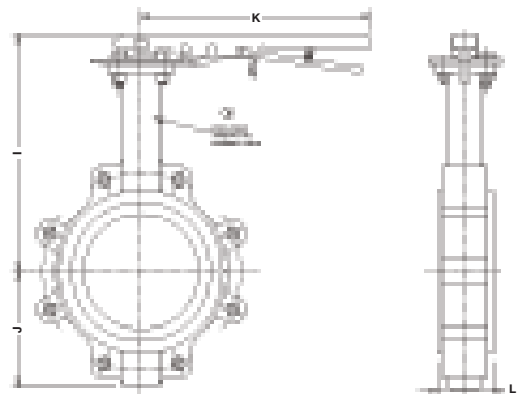
## Installation

As an alternative to the DM921, the DM925G and DM925L can be used in conjunction with a flow measurement device to measure flow.

## Dimensional Drawing



## Dimensional Drawing



## Materials

PART	MATERIAL	SIZES
Body	Ductile Iron ASTM A536 65-45-12	All
Disc	Aluminium Bronze	All
Seat	EPDM	All
Shaft	Stainless Steel ASTM A532 Type 416	All
Taper Pin	Stainless Steel ASTM A276 Type 316	All
Key	Carbon Steel	All
'O' Ring	Nitrile (Buna)	All
Shaft Bushing	PTFE or Bronze	All

## Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 130
PRESSURE (BAR)	16.0

## Dimensions and Weights

DN	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)
50	8.6	162	80	150	42	45	54	158	195	83	260	44
65	9.1	175	89	150	45	45	54	158	207	95	260	48
80	11.8	181	95	150	45	45	54	158	213	102	260	48
100	17.2	200	144	150	52	45	54	158	232	124	260	54
125	18.1	213	127	200	54	45	54	148	245	137	260	57
150	19.5	225	139	200	56	45	54	148	256	150	266	57
200	29.5	260	175	300	61	78	81	226	-	-	-	-
250	39.9	292	203	300	66	78	81	226	-	-	-	-
300	54.9	337	242	300	77	78	81	226	-	-	-	-
350	61.0	406	260	300	78	78	81	226	-	-	-	-
400	94.0	447	290	450	86	120	130	277	-	-	-	-

## Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)
50	100	1.216
65	170	0.856
80	261	0.856
100	519	0.650
125	884	0.553
150	1142	0.483
200	1873	0.367
250	2900	0.315
300	5079	0.266
350	10274	0.129
400	14129	0.116

\* Fully open position

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Gearbox Operated Flow Measurement & Regulating Valve DM950G PN16 DM950L PN16



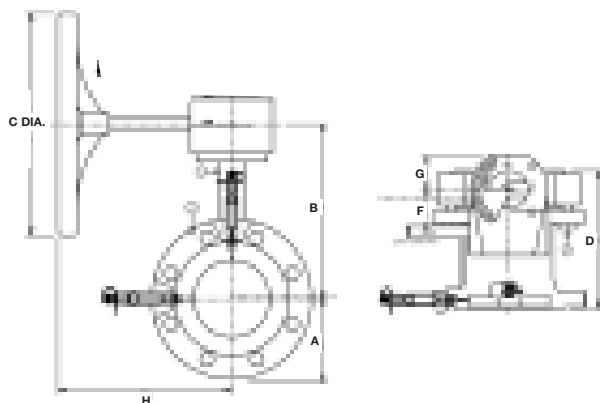
### Specification

The DM950G and DM950L consist of a DM925G/L coupled with a fixed orifice flow measurement device using a spool piece connector, to form a fixed orifice flow measurement unit with regulation and isolation capability. Test points are supplied loose.

### Installation

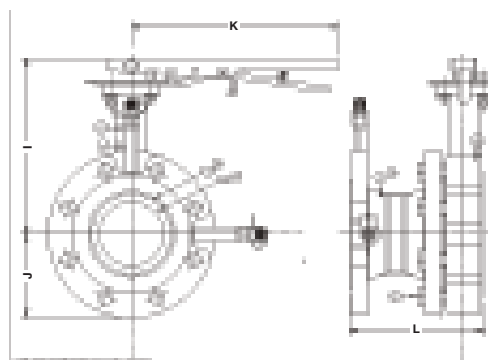
The DM950G and DM950L is supplied ready assembled to site. Suitable gasket and bolting should be provided by the contractor/installer.

### Dimensional Drawing



DM950G

### Dimensional Drawing



### Materials

PART	MATERIAL	SIZES
Extension piece	Steel DIN 17100 R.St.37.2/ASTM A53.Gr.A	150-400mm
Extension piece	Steel DIN 17100 R.St. 37.2	50-125mm
P84 Test Valve	See Fig No P84	All
Orifice Plate Retain	Steel DIN 17100 R.St. 37.2	All
Orifice Plate	Stainless steel BS970 316S31	All
Orifice Plate Gasket	Asbestos free	All
Flange Bolts	Steel BS3692 Gr. 8.8	All
DM925G	See Fig No DM925G Gear Operated	All
Test Point Extension	DZR Brass BS EN 12164 CW602N	All
Test Point Adaptor	DZR Brass BS EN 12164 CW602N	50-125mm
Socket Head Cap Screw	Steel BS4168 Gr. 12.9	All

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16

Note:  
350mm and 400mm limited to 110°C

### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	F (mm)	G (mm)	H (mm)	I (mm)	J (mm)	K (mm)	L (mm)
50	19.7	162	80	150	158	45	54	158	194	83	260	132
65	20.8	175	89	150	161	45	54	158	95	206	150	260
80	23.4	181	95	150	171	45	54	158	213	102	260	165
100	32.5	200	114	150	181	45	54	158	232	124	260	192
125	38.4	213	127	200	190	45	54	148	244	137	260	219
150	47.1	225	139	200	232	45	54	148	257	150	260	246
200	67.8	260	175	300	287	78	81	226	-	-	-	-
250	89.2	292	203	300	345	78	81	226	-	-	-	-
300	124.2	337	242	300	404	78	81	226	-	-	-	-
350	170	406	260	300	451	78	81	226	-	-	-	-
400	250	447	290	450	511	120	130	277	-	-	-	-

### Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)	Kvs
50	58	3.4	46.1
65	114	2.6	90
80	168	2.3	120
100	303	2.0	220
125	479	1.8	342
150	649	1.8	468
200	1113	1.6	792
250	1713	1.6	1224
300	2656	1.5	1800
350	2754	1.3	1795
400	3573	1.3	2334

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

# Gearbox Operated Double Regulating Valve

## DM975G PN25 to BS EN 593 : 2009



### Specification

The DM975G Double Regulating Butterfly Valves consist of:

- A fully lugged butterfly valve for use with PN25 flanges.
- High temperature EPDM liner for applications up to 120°C.
- A Double Regulating Gearbox as standard.

The Double Regulating feature allows the valve to be used for isolation and to be re-opened to its pre-set position to maintain required flow rate.

### Installation

The DM975G can be used in conjunction with a flow measurement device DM900 to regulate and measure flow.

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	25

### Materials

ITEM	PART	MATERIAL
1	Body	Ductile Iron - BS EN 12563 EN GJS 500/7
2	Plug	Carbon Steel
3	Liner	EPDM
4	Shaft (Lower)	Steel - AISI 431
5	Disc	Stainless Steel - SS304
6	Shaft (Upper)	Steel - AISI 431
7	O Ring	EPDM
8	Lock Plate	Brass - ASTM B16 C36000
9	Snap Ring	Carbon Steel
10	Gearbox	

### Dimensions and Weights

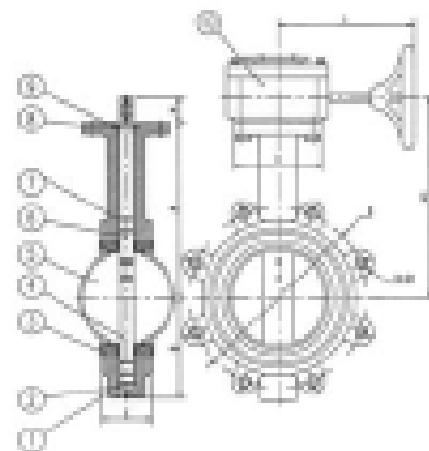
SIZE	WEIGHT (kg)	A (mm)	B (mm)	H (mm)	D (mm)	E (mm)	L (mm)	K (mm)	N-M (mm)	H1 (mm)
50	10.0	140	68	35	90	43	160	125	4-M16	172.5
65	10.8	152	76	35	90	45	160	145	8-M16	184.5
80	11.0	160	85	35	90	46	160	160	8-M16	192.5
100	13.0	180	100	35	90	51.5	160	190	8-M20	212.5
125	16.0	191	120	35	90	56	160	220	8-M24	223.5
150	18.5	202	132	35	90	56.5	160	250	8-M24	234.5
200	29.8	241	160	45	125	60	238	310	8-M24	278.0
250	40.0	274	200	45	125	68.5	238	370	12-M27	311.0
300	53.0	315	230	45	125	79.5	238	430	16-M27	366.0



DM975G

Also available with lever version

### Dimensional Drawing



### Coefficients\*

DN	FLOW (Kv)	HEADLOSS (K)
50	85	1.86
65	204	0.95
80	370	0.50
100	820	0.29
125	982	0.37
150	1353	0.43
200	2923	0.31
250	3374	0.56
300	6350	0.33

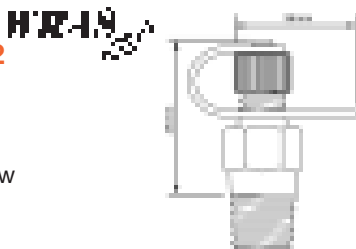
\* Fully open position

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Pressure Test Valve P82/ Extension Tube P83 / Pressure Test Point P84

### Pressure Test Points P84 Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

P84 insertion style pressure test points are fitted as standard to Crane flow measurement and regulation valves.



P84

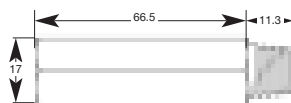
#### Materials

PART	MATERIAL	SPECIFICATION
Cap	DZR copper alloy	BSEN12164 CW602N
Cap Washer	EPDM	
Body	DZR copper alloy	BSEN12164 CW602N
Tie	Polypropylene	
Seal	EPDM	
Retaining Ring	DZR copper alloy	BSEN12164 CW602N

WEIGHT	0.025kg
PRESSURE RATING	PN25
MAX. TEMP.	120°C

### Extension Tube P83 Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

P83 pressure test point extension tubes allow Crane valves to be insulated to a thickness of 2" without the test points being covered.



#### Materials

PART	MATERIAL	SPECIFICATION
P83	DZR copper alloy	BSEN12164 CW602N

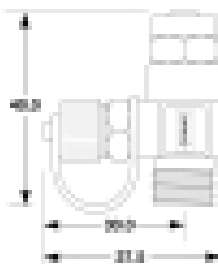


P83

### Pressure Test Valve P82 Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

Pressure test valve P82 is suitable for use in LTHW and MTHW systems. A conventional needle valve, operated by a standard radiator aircock key, is backed by a spring loaded self-sealing ball unit to provide double sealing. The double sealing facility offers maximum operational safety in accordance with the Health & Safety at Work legislation. It also makes it possible, with the valve closed to pipeline pressure, to clear the ball seat of any pipeline debris. Although P82 is also suitable for use in HTHW systems it should not be operated while such a system is 'live'. For 'live' HTHW systems copper bleed tubes should be taken from the valves and terminated in needle valves, e.g. Crane D71 or D72.

The manometer connection on the valve accepts a Mechseal adaptor. When not in use a screw cap protects the connection from dust.



#### Materials

PART	MATERIAL
Body	DZR
Stem	DZR
Shield	Brass
'O' Ring	Viton
Adaptor	DZR
Ball	Stainless Steel
Spring	Stainless Steel
Dust Cap	Brass



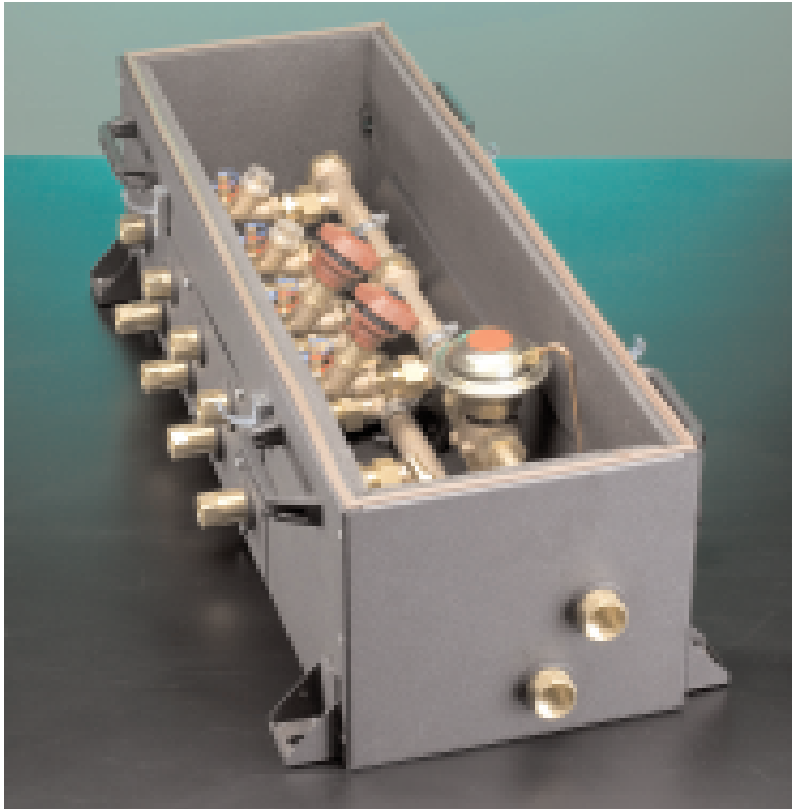
P82

WEIGHT	0.07kg
PRESSURE RATING	PN40
MAX. TEMP.	182°C

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

# CommPac Manifold Commissioning System

Crane CommPac provides one easy access point for commissioning and maintenance of multiple heating/chilled water terminal units.



On large projects, significant time and cost can be eliminated by enabling commissioning at convenient locations. Ends of corridors, or accessible cupboards can be used, which would also eliminate disruption to occupiers during maintenance works.

**The CommPac is an exceptionally robust, efficient, practical and versatile system:**

- Depending on flow rates, up to six terminals can be served from a single CommPac unit.
- All units are custom built to suit site specification.
- All site connections can be made without the need to access the internal components.
- CommPac is suitable for variable flow or constant flow systems.
- All connections are BSPT Female, enabling standard pipe or specialist adapters to be used.
- Fan coil units can be flushed, vented and balanced without the time-consuming 'looping out' procedure. This can be carried out by one commissioning engineer instead of a team.
- A single strainer serves all circuits, eliminating the need for individual strainers.
- All systems can be flushed through the unique Dominator 'H' body.
- The single DPCV maintains constant differential pressure between manifolds.

### Materials

PART	MATERIAL
H – Body	Bronze (Z3000)
Strainer	Bronze (D297)
Manifolds	Bronze
Isolation Valves	DZR Brass (D171A)
Regulation Valves	Bronze (D931 or D981P Series)

Maximum pressure 16 bar  
Temperature rating -10 to 100°C

### Dimensions & Weights

OUTLETS & INLETS	LENGTH (mm)	HEIGHT (mm)	WIDTH (mm)	WEIGHT (kg)
6x6	1120	250	290	40
5x5	1120	250	290	38
4x4	880	250	290	36
3x3	880	250	290	34
2x2	640	250	290	30

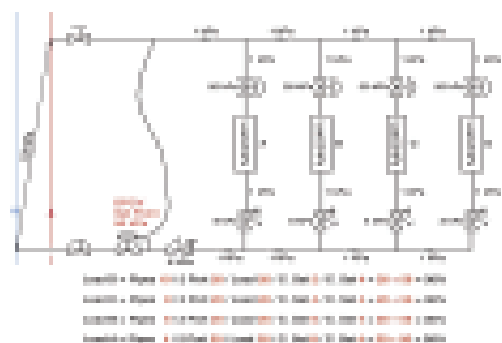
Units with outlets and inlets on same side

### Dimensions & Weights

OUTLETS & INLETS	LENGTH (mm)	HEIGHT (mm)	WIDTH (mm)	WEIGHT (kg)
6x6	1120	200	400	40
5x5	1120	200	400	38
4x4	880	200	400	36
3x3	880	200	400	34
2x2	640	200	400	30

Units with outlets and inlets on opposite side

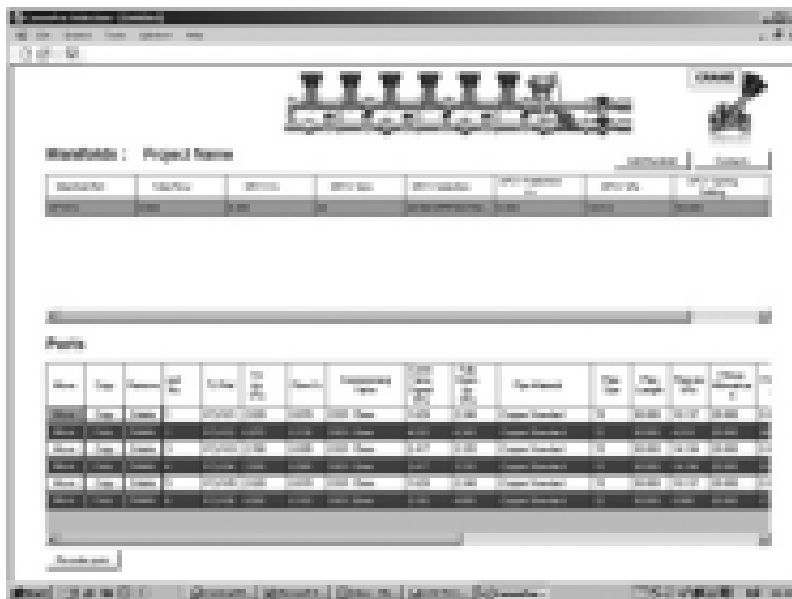
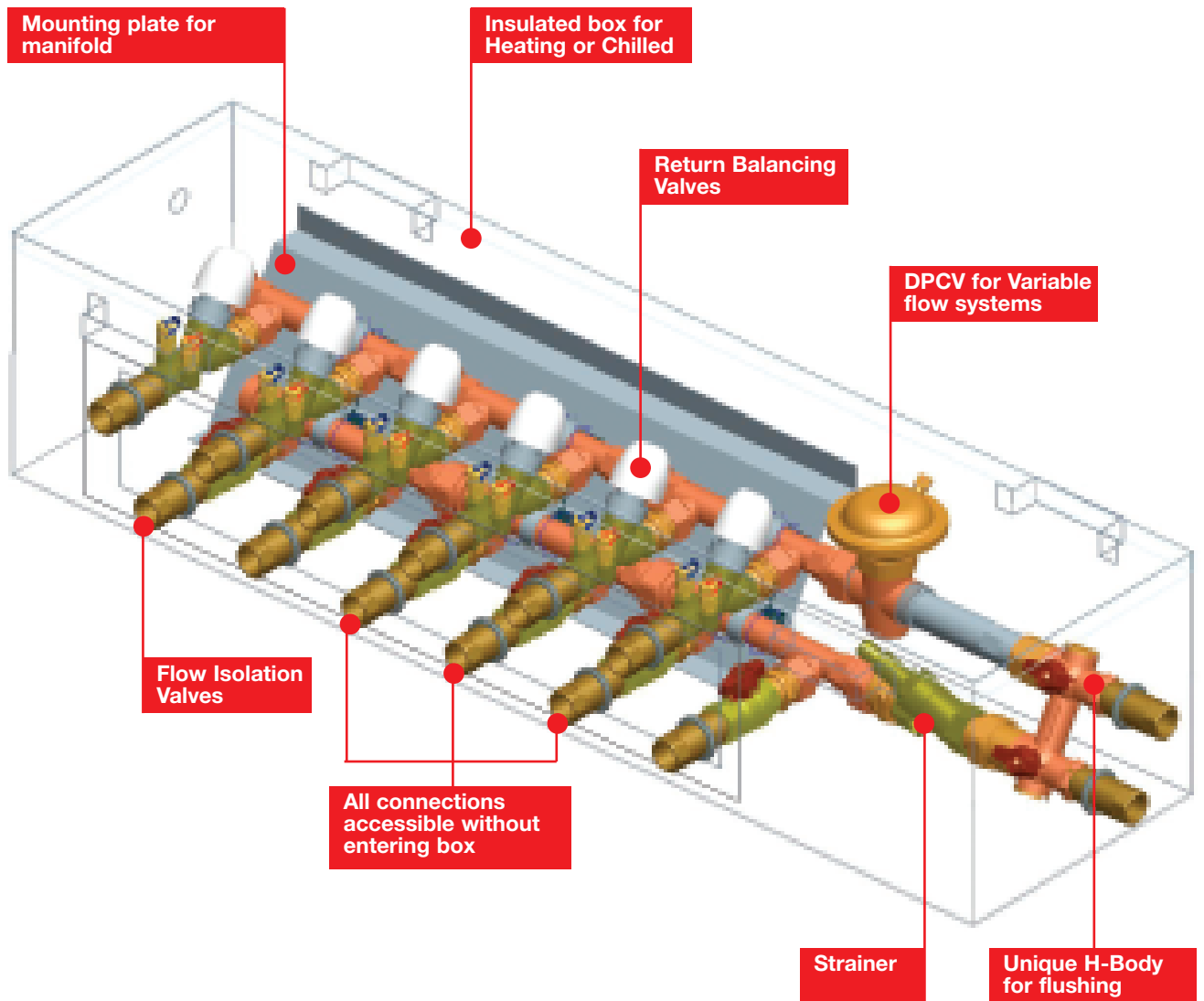
### Typical Schematic



Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



# CommPac Manifold Commissioning System



CommPac modules are built to suit individual project design requirements. Correct selection of balancing valves and differential pressure control valves is essential to ensure comfort control and system efficiency. To streamline this selection process we have developed software that allows all variables to be considered and best valve options selected. The selection programme is used by Crane Sales/Technical staff to input customer information throughout the design process and ensure that the optimum design is achieved.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



# Differential Pressure Control Valves

## DPAF951 Flow DPAR951 Return

To meet the growing use of variable speed pumps for HVAC applications, Crane Fluid Systems has launched a range of Differential Pressure Control Valves (DPCV) specifically aimed at optimising system performance. Extremely efficient, the DPCV is set to a maximum differential pressure which ensures flow cannot exceed a desired rate. It therefore helps reduce energy consumption, the risk of noise and simplifies the commissioning process.

### Materials

ITEM	DESCRIPTION	MATERIAL
1	Body	Bronze BS EN 1982 (CC491K)
2	Bonnet	Bronze BS EN 1982 (CC491K)
3	Chamber	Bronze BS EN 1982 (CC491K)
4	Adjuster	Nylon Grade PA6
INT	Stem / Piston	Stainless Steel BS EN 10088 - 1: 2005
INT	Diaphragm	Rubber EPM
INT	O-Ring Seals	Rubber EPDM

See diagrams for item numbers

INT denotes an internal component not visible on these drawings



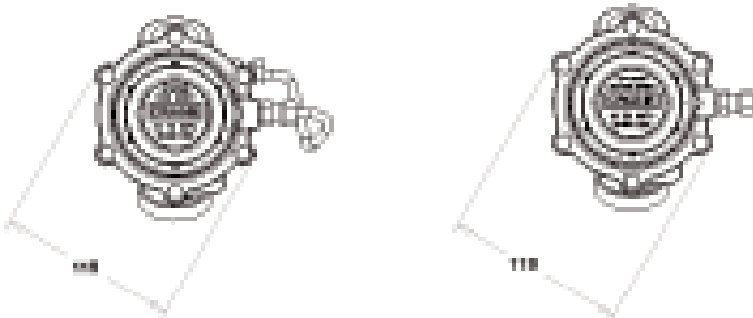
DPCV

### Dimensions and Weights

SIZE	A (mm)	B (mm)	END CONNECTION	WEIGHT (kg)
DN15	90	175	3/4" BSP Parallel Male	2.34
DN20	96	175	1" BSP Parallel Male	2.39
DN25	114	185	1 1/4" BSP Parallel Male	2.62
DN32	132.5	190	1 1/2" BSP Parallel Male	2.76
DN40	150.5	195	1 3/4" BSP Parallel Male	3.07
DN50	184	205	2 3/8" BSP Parallel Male	3.57

Male and female tailpieces are available - please contact Crane Fluid Systems

### Dimensional Drawing

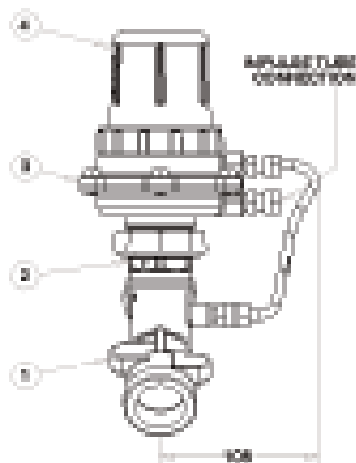


### Flow Configuration

Top View

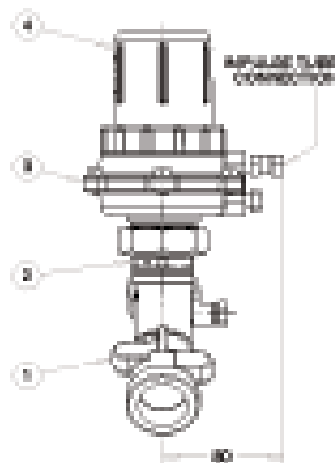
### Return Configuration

Top View



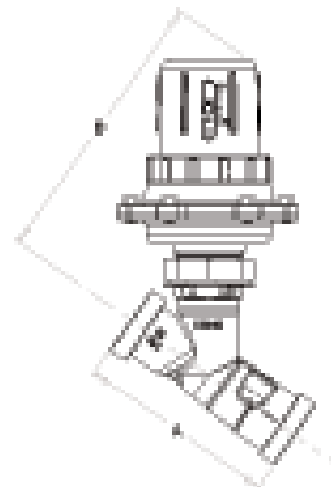
### Flow Configuration

Front View



### Return Configuration

Front View



### Flow & Return Configuration

Side View

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

# Dominator® Z3000 PN16

## Flow Management system for terminal units

The Z3000 is a prefabricated unit combining the essential control components and connecting pipework associated with terminal units, into one compact, fully assembled unit ready for simple and fast on-site connection.

### Features and Benefits

#### The Dominator is compact and lightweight

- The complete unit is factory tested
- 80mm supply/return centres allow for ease of lagging
- Easy to install

#### The unique bypass valve unit comprising two T-ported ball valves

- Allows easy back flushing, forward flushing and isolation
- The position of the T-handle gives clear indication of flow/bypass mode
- Designed around 3/4" full bore ball for optimum flow
- Can be adapted to 1/2", 3/4" and 1" end connections
- Simple attachment to existing hangers

#### The strainer unit has an integral drain cock and pressure test point

- Enabling measurement of pressure drop across load
- Allowing for flushing of strainer and coil without need to remove basket

### Benefits for Design Engineers

- minimal design involvement
- all the necessary components supplied as one tested unit
- no risk of a component being omitted from a system at installation
- known performance of the entire unit
- saves time, reduces specification risks and provides maximum value to the client
- reduces envelope space

### Benefits for Installing Contractors

- Significant reduction in site labour and installation costs
- fast connection of one complete assembly
- standardised components with guaranteed tested performance
- less purchase orders, minimal administration
- simple on-site connection

Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

### Materials

DESCRIPTION	MATERIAL
Bypass valve D931	Bronze to BS EN 1982 CC491K
D299P strainer	Refer to page 5
Union	Bronze to BS EN 1982 CC491K
P84 test points	Brass to BS EN 12165 CW617N
Drain cock	DZR to BS EN 12164 CW602N
	DZR to BS EN 12164 CW614



### Pressure/Temperature Ratings

#### Threaded

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	16.0

Maximum temperature 120°C

#### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

**Dominator® Z3000 PN16****Flow Management system terminal coil units**

The Dominator range consists of three series:

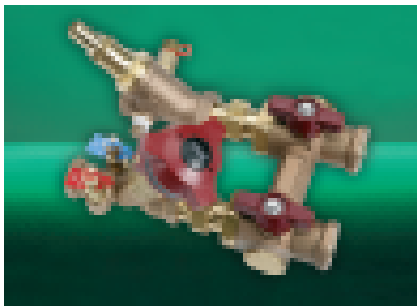
**Z3000 series features the Crane ProBalance Fixed Orifice Double Regulating valve D931.**

**Z3900 series features the Crane MotoBalance Fixed Orifice Double Regulating valve D981P, suitable for use with actuator.**

**Z3300 series features the Crane Pressure Independent Control Valve- see page 22 for details.**

Both series provide versions for heated and chilled water systems and combinations with and without drains and strainers. The versions for chilled water systems include extension stems (EXS) on the ball valve T-handles to allow for lagging. The Z3000 series also includes low flow and ultra low flow versions.

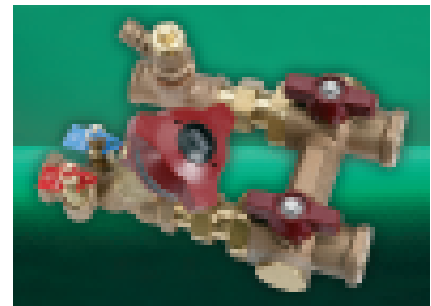
**Z3000 Series comprises the three variants as shown below.**



**Z3000 with drain and strainer**



**Z3010 without drain and strainer**



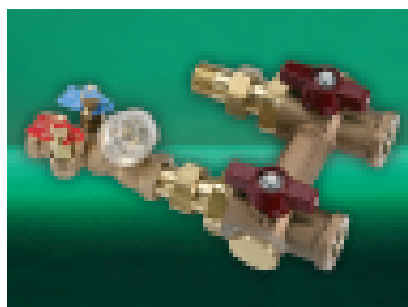
**Z3020 with drain but without strainer**

This series utilises the Crane bronze commissioning valves D931, D933 or D934 depending on flow rate required. All selections are made by Crane and each unit is tagged with individual fan coil reference numbers to assist contractors with site installation. Extension stems are fitted to isolation ball valves for chilled water applications.

**Z3900 Series comprises the three variants as shown below.**



**Z3900 with drain and strainer**



**Z3910 without drain and strainer**



**Z3920 with drain but without strainer**

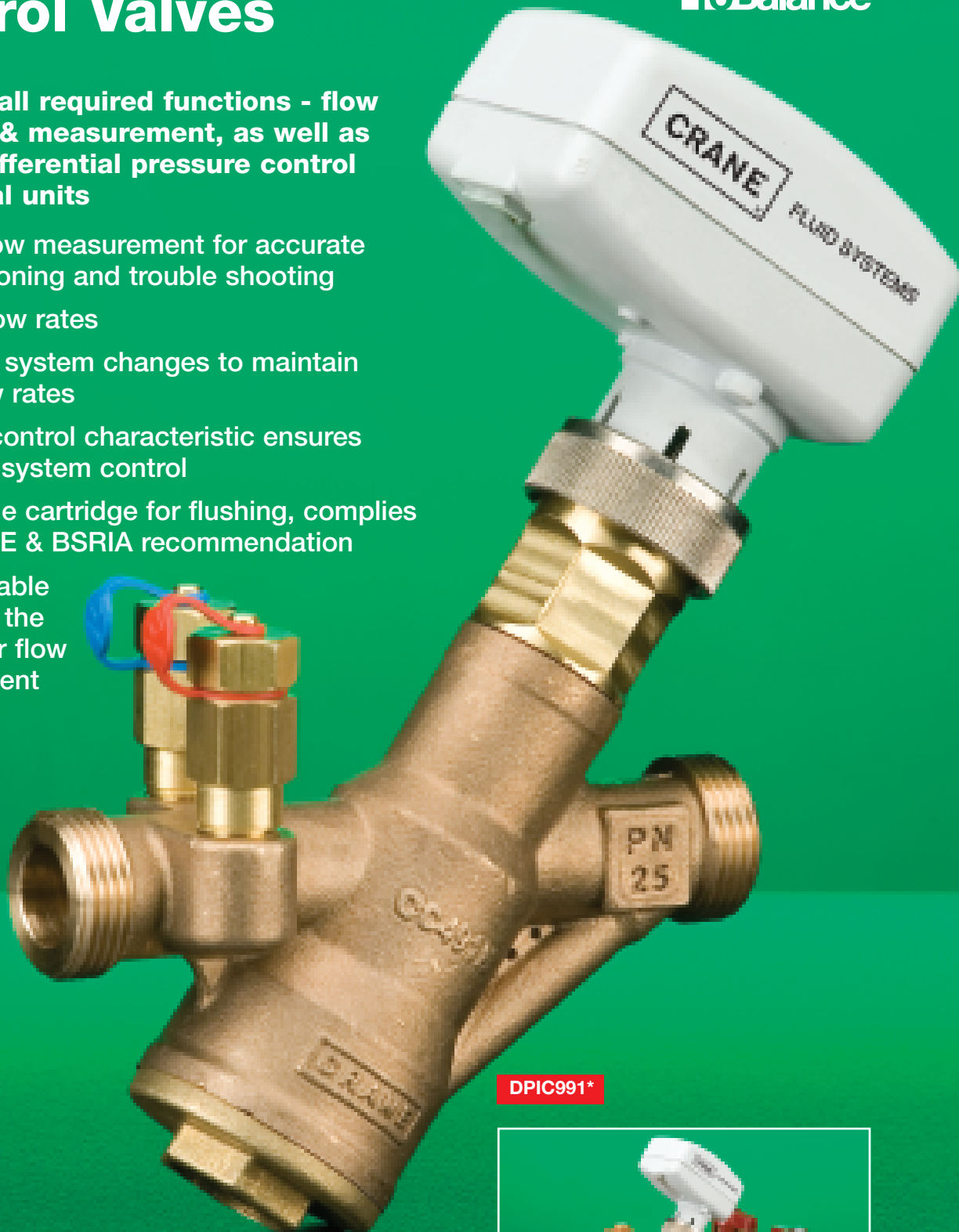
This series utilises the Crane motorised commissioning valves D981P, D983P or D984P depending on flow rate required. The MotoBalance offers on/off or modulating control with equal percentage characteristics. All selections are made by Crane and each unit is tagged with individual fan coil reference numbers to assist contractors with site assembly. Extension stems are fitted to isolation ball valves for chilled water applications.

# Pressure Independent Control Valves

proBalance

Combines all required functions - flow regulation & measurement, as well as 2 port & differential pressure control for terminal units

- Unique flow measurement for accurate commissioning and trouble shooting
- Pre-set flow rates
- Reacts to system changes to maintain stable low rates
- Equal % control characteristic ensures improved system control
- Removable cartridge for flushing, complies with CIBSE & BSRIA recommendation
- Also available as part of the Dominator flow management system



DPIC991\*



Dominator with DPIC991\*

\*PICV and Actuator sold separately

*Details available on request*



## D171 / D171EXS PN25

### D171 Bronze Ball Valve

### D171EXS Extended Stem Bronze Ball Valve

Crane D171 Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171 and D171EXS are WRAS approved.

#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N	All
Seat Ring	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	DZR Brass BS EN 12164 CW602N	1/4 - 2"
Lever	Mild Steel (Zinc Plated)	All
Screw	Mild Steel (Zinc Plated)	All
Lever Cover	P.V.C.	All
Extension Housing	Aluminium	D171EXS
Extension Stem	Brass BS EN 12164 CW602N	D171EXS



D171

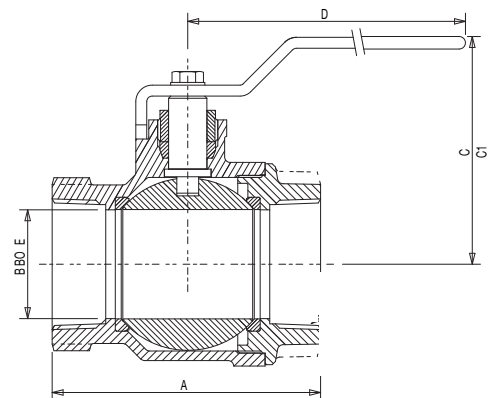


D171EXS

#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171EXS	D (mm)
1/4"	0.15	46	10	39	-	81
3/8"	0.15	46	10	39	-	81
1/2"	0.22	57	15	52	97	92
3/4"	0.45	67	20	58	98	92
1"	0.69	77	25	66	118	127
1 1/4"	1.12	91	32	72	124	127
1 1/2"	1.67	103	40	82	142	142
2"	2.93	122	50	90	149	142
2 1/2"	4.98	153	65	117	-	202
3"	8.75	179	80	132	-	282

#### Dimensional Drawing



#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Lever

#### SPECIFICATION:

Quarter Turn, Tight Shut-Off

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 186°C

## D171T / D171LS

### PN25

#### D171T T-Handle Bronze Ball Valve

#### D171LS Lockshield Bronze Ball Valve

Crane D171 Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171T and D171LS are WRAS approved.

#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N	All
Seats	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	DZR Brass BS EN 12164 CW602N	All
'T' Handle	Aluminium	D171T
Screw	Steel (Zinc Plated)	D171T
Lockshield Cap	Brass BS EN 12164 CW617N	D171LS
Screw	Mild Steel	D171LS
Lockshield Cover	Nylon 6	D171LS



D171T



D171LS

#### Dimensions and Weights

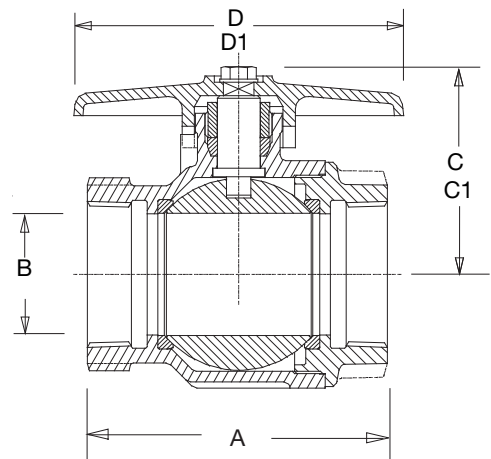
SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171LS	D (mm)	D1 (mm) D171LS
3/8"	0.13	46	10	31	-	38	-
1/2"	0.2	57	15	40	48	55	36
3/4"	0.41	67	20	43	51	55	36
1"	0.64	77	25	53	58	83	39
1 1/4"	1.07	91	32	58	63	83	39
1 1/2"	1.57	103	40	73	76	108	49
2"	2.83	122	50	80	84	108	49

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation

#### Dimensional Drawing



**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** T-Handle / Allen key

#### SPECIFICATION:

End Entry, Quarter Turn, Tight Shut-Off

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 186°C.

## D171MHU / D171MHULS PN25

### D171MHU Bronze Draw-Off Valve

### D171MHULS Bronze Draw-Off Ball Valve with Lockshield

Crane D171MHU / D171MHULS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

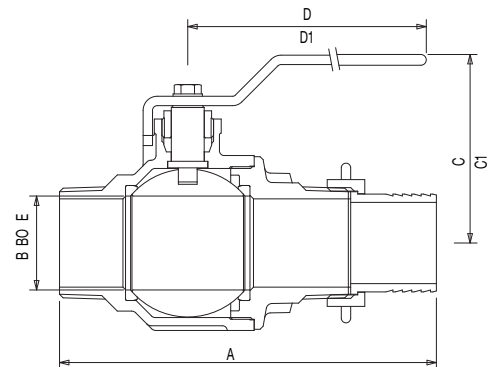
In addition the D171MHU and D171MHULS are WRAS approved.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N-Chrome Plated	All
Seat	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
Lever	Mild Steel (Zinc Plated)	D171MHU
Lever Screw	Mild Steel (Zinc Plated)	D171MHU
Lever Cover	PVC	D171MHU
Hose Connector	Brass BS EN 12164 CW617N	All
Hose Union Nut	Brass BS EN 12165 CW617N	All
Washer	PTFE	All
Lockshield Cap	Brass BS EN 12164 CW617N	D171MHULS
Lockshield Cover	Nylon 6	D171MHULS



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171MHULS	D (mm)	D1 (mm) D171MHULS
1/2"	0.27	104	15	40	47	82	36
3/4"	0.55	124	20	58	51	92	36
1"	0.88	147	25	65	58	127	39

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** Not Specified

**OPERATOR:** Lever / Allen key

### SPECIFICATION:

End Entry, Quarter Turn, Tight Shut-Off  
Male x hose union outlet

This valve is not suitable for use on Group 1 gasses and unstable fluids as defined by the Pressure Equipment Directive 97/23/EC.  
Temperature operating range: -10 to 186°C.

## D171C / D171CEXS PN16

### D171C Compression Ended Bronze Ball Valve

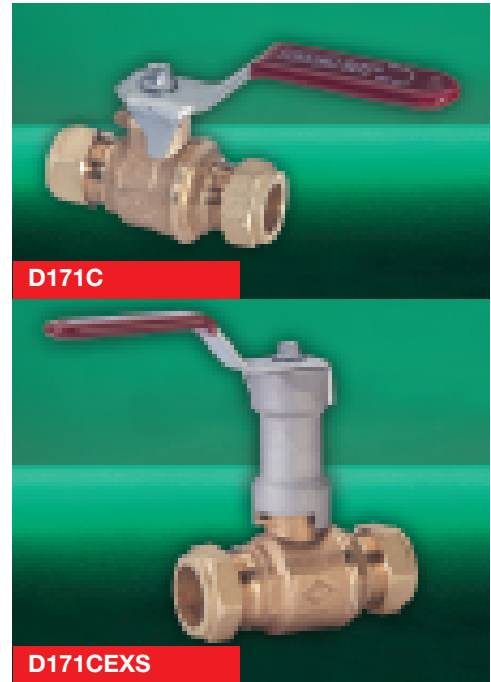
### D171CEXS Compression Ended Bronze Ball Valve with Extension Stem

Crane D171C / D171CEXS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

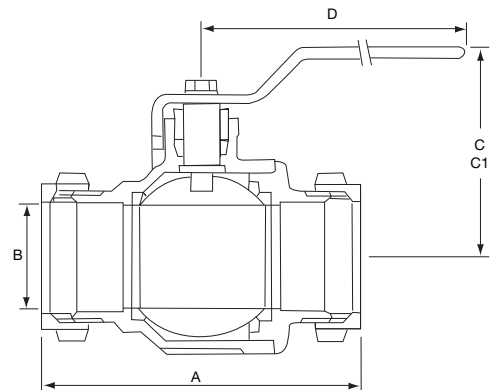
In addition the D171C and D171CEXS are WRAS approved.

#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	All
Ball	DZR Brass BS EN 12165 CW602N (Chrome plated)	All
Seat Ring	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
Lever	Mild Steel (Zinc Plated)	D171C
Screw	Mild Steel (Zinc Plated)	D171C
Lever Cover	PVC	D171C
Compression Olive	Brass BS EN 12449 CW505L/CW507L	All
Compression Nut	DZR Brass BS EN 12165 CW617N	All
Extension Housing	Aluminium	D171CEXS
Extension Stem	DZR Brass BS EN 12164 CW602N	D171CEXS



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171CEXS	D (mm)
15mm	0.27	80	15	52	97	92
22mm	0.51	84	20	58	98	92
28mm	0.78	95	25	65	118	127
35mm	1.19	111	32	70	124	127
42mm	1.82	124	40	83	142	142
54mm	3.28	149	50	91	149	142

#### Pressure/Temperature Ratings

##### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression end to suit BS EN 1057: Half Hard R250 copper tube

**OPERATOR:** Lever

#### SPECIFICATION:

Quarter Turn, Tight Shut-Off

This valve is intended for Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature Operating Range: -10 to 120°C



## D171CT / D171CLS

### PN16

#### D171CT Compression Ended T-Handle Ball Valve

#### D171CLS Compression Ended Lockshield Ball Valve

Crane D171CT / D171CLS Ball Valves are light, compact units which are easy to install and operate, yet their robust construction ensures long, trouble free service life.

In addition the D171CT and D171CLS are WRAS approved.

#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Seat Retainer	Bronze BS EN 1982 CC491K	15mm - 28mm
Seat Retainer	Bronze BS EN 1982 CC491K	35mm - 54mm
Ball	DZR Brass BS EN 12165 CW602N	All
Seat	PTFE	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing	PTFE	All
Gland Nut	Brass BS EN 12164 CW617N	All
'T' Handle	Aluminium	D171CT
Screw	Steel (Zinc Plated)	D171CT
Compression Olive	Brass BS EN 12449 CW505L/CW507L	All
Compression Nut	DZR Brass BS EN 12165 CW617N	All
Lockshield	Brass BS2872	D171CLS
Lockshield Cover	Nylon 6	D171CLS



D171CT

D171CLS

#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	C1 (mm) D171CLS	D (mm)	D1(mm) D171CLS
15mm	0.25	80	15	42	48	55	29
22mm	0.47	84	20	43	51	55	36
28mm	0.73	95	25	53	58	83	39

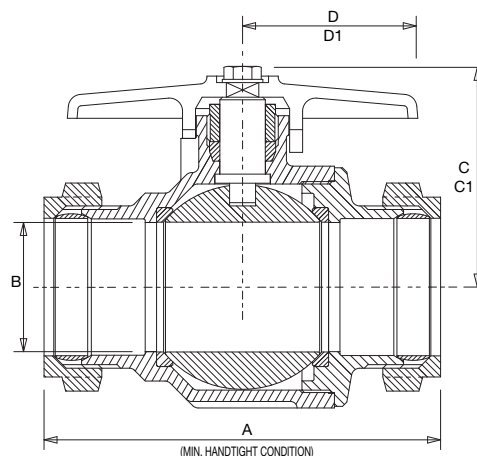
#### Pressure/Temperature Ratings

##### Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation

#### Dimensional Drawing



**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression ends to suit BS EN 1057: Half hard R250 copper tube.

**OPERATOR:** T-Handle / Allen Key

#### SPECIFICATION:

Quarter Turn, Tight Shut-Off

This valve is intended for Group 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

Temperature Operating Range: -10 to 120°C

## D171A / D171AEXS

### PN25

#### D171A Threaded DZR Ball Valve

#### D171AEXS Threaded DZR Ball Valve with Extension Stem

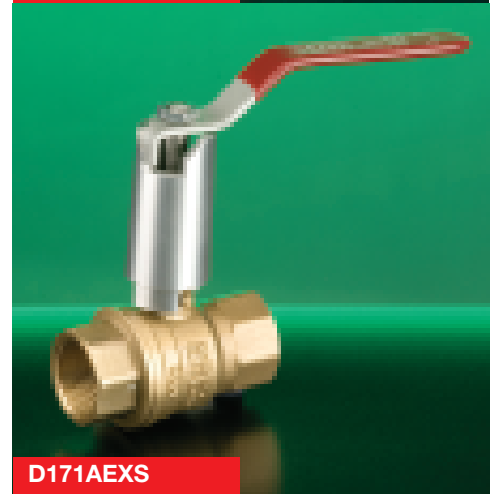
Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.

#### Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
Lever	Steel Dacromet Plated	1
Sleeve	Maroon PVC	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS Approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS Approved	2
Ball	DZR Brass CW602N Chrome Plated	1
O-Ring	Rubber EPDM WRAS Approved	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1
Extension Stem Outer	Aluminium	1
Extension Stem Inner	Steel Plated	1



D171A

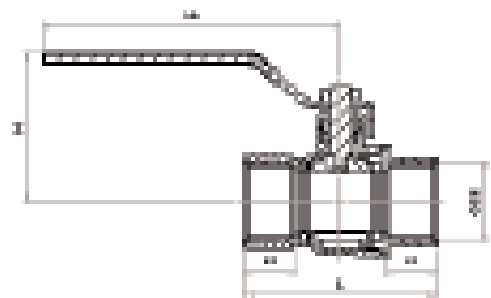


D171AEXS

#### Dimensions and Weights

SIZE	WEIGHT (kg) A	WEIGHT (kg) AEXS	L (mm)	L1 (mm)	L2 (mm) A	H (mm) A	H (mm) AEXS
1/4"	152	-	45.3	12	89	41	-
3/8"	136	-	45.3	12	89	41	-
1/2"	205	270	58.5	15.5	98.5	48	103
3/4"	302	366	67	17	98.5	51	107
1"	511	589	80.5	21	125	62	116
1 1/4"	890	1009	94	23	140	77.5	129
1 1/2"	1292	1410	102	23	140	83.5	135
2"	2238	2283	124	26.5	165	97.5	150

#### Dimensional Drawing



All dimensions are nominal.

#### Pressure/Temperature Ratings

##### Threaded

TEMPERATURE (°C)	-10 to 100	120
PRESSURE (BAR)	25	21.8

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

**OPERATOR:** Lever

##### SPECIFICATION:

Quarter Turn

Temperature Operating Range: -10 to 120°C



## D171ATH / D171ALS PN25

### D171ATH Threaded DZR Ball Valve with T-Handle

### D171ALS Threaded DZR Ball Valve with Lockshield

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.

#### Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
T-Handle	Aluminium AL-46100 Maroon	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS Approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS Approved	2
Ball	DZR Brass CW602N Chrome Plated	1
O-Ring	Rubber EPDM WRAS Approved	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1
Lockshield	Brass CW617N	1
Lockshield Cover	Polypropelene Maroon	1



D171ATH

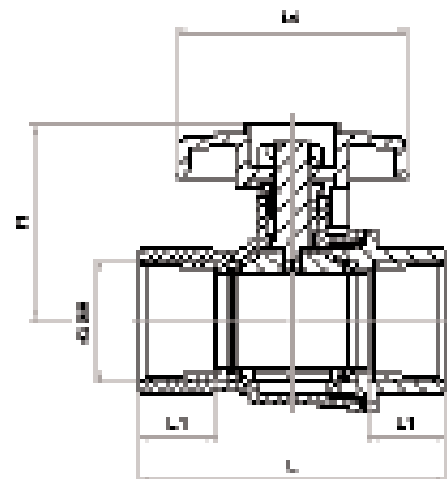


D171ALS

#### Dimensions and Weights

SIZE	WEIGHT (kg) ATH	WEIGHT (kg) ALS	L (mm)	L1 (mm)	L2 (mm) ATH	H (mm) ATH	H (mm) ALS
1/2"	183	207	59	15.5	50	40	42
3/4"	277	302	67	17	50	43	45
1"	470	506	80.5	21	55	54	58
1 1/4"	809	867	94	23	82	61	67
1 1/2"	1210	1269	102	23	82	67	73.5
2"	2106	2166	124	26.5	110	80.5	86.5

#### Dimensional Drawing



All dimensions are nominal.

#### Pressure/Temperature Ratings

##### Threaded

TEMPERATURE (°C)	-10 to 100	120
PRESSURE (BAR)	25	21.8

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

**US END CONNECTION:** ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

**OPERATOR:** T-Handle / Spanner or Socket

##### SPECIFICATION:

Quarter Turn

Temperature Operating Range: -10 to 120°C

## D171AC / D171ACEXS PN16

### D171AC Compression DZR Ball Valve

### D171ACEXS Compression DZR Ball Valve with Extension Stem

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.

#### Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
Lever	Steel Dacromet Plated	1
Handle Sleeve	Maroon PVC	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS Approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS Approved	2
Ball	DZR Brass CW602N Chrome Plated	1
Bonnet	DZR Brass CW602N	1
Compression Olive	Brass BS EN 12449 CW505L/CW507L	2
Compression Nut	DZR Brass BS EN 12165 CW617N	2
Stem	DZR Brass CW602N	1
Extension Stem Outer	Aluminium	1
Extension Stem Inner	Steel Plated	1



D171AC

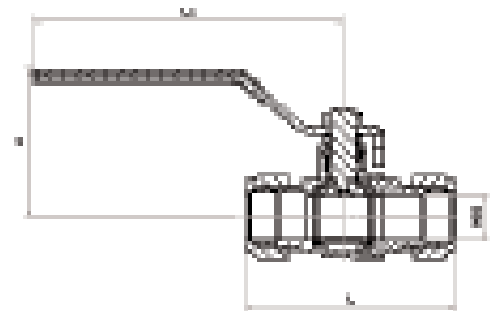


D171ACEXS

#### Dimensions and Weights

SIZE	WEIGHT (kg) AC	WEIGHT (kg) ACEXS	L (mm) AC	L2 (mm) AC	H (mm) AC	H (mm) ACEXS
15mm	212	275	66.5	98.5	47	103
22mm	368	429	80	98.5	51	107
28mm	608	682	92.5	125	62	116
35mm	1007	1125	104.5	140	77.5	129
42mm	1549	1667	122	140	83	135
54mm	2538	2683	141	165	97.5	150

#### Dimensional Drawing



All dimensions are nominal.

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression ends to suit BS EN 1057: Half hard R250 copper tube.

**OPERATOR:** Lever

**SPECIFICATION:**

Quarter Turn

Temperature Operating Range: -10 to 120°C

## D171ACTH / D171ACLS

### PN16

#### D171ACTH Compression DZR Ball Valve with T-Handle

#### D171ACLS Compression DZR Ball Valve with Lockshield

Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve is WRAS approved and features improved leak resistance and reduced risk of damage from over tightening.

#### Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Steel Plated	1
T-Handle	Aluminium AL-46100 Maroon	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE WRAS Approved	1
Body	DZR Brass CW602N	1
Seats	PTFE WRAS Approved	2
Ball	DZR Brass CW602N Chrome Plated	1
Bonnet	DZR Brass CW602N	1
Compression Olive	Brass BS EN 12449 CW505L/CW507L	2
Compression Nut	DZR Brass BS EN 12165 CW617N	2
Stem	DZR Brass CW602N	1
Lockshield	Brass CW617N	1
Lockshield Cover	Polypropelene Maroon	1



D171ACTH



D171ACLS

#### Dimensions and Weights

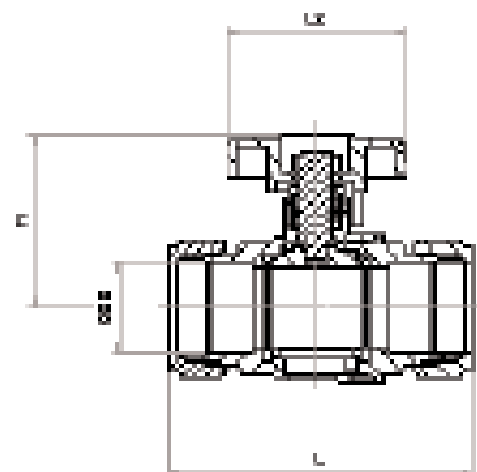
SIZE	WEIGHT (kg) ACTH	WEIGHT (kg) ACLS	L (mm)	L2 (mm) ACTH	H (mm) ACTH	H (mm) ACLS
15mm	187	220	66.5	50	40	42
22mm	343	376	80	50	43	47
28mm	567	614	92.5	55	54	59.5
35mm	977	1039	104.5	82	61	67
42mm	1487	1549	122	82	67	73.5
54mm	2634	2437	141	110	80.5	87.5

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation

#### Dimensional Drawing



All dimensions are nominal.

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression ends to suit BS EN 1057: Half hard R250 copper tube.

**OPERATOR:** T-Handle / Spanner or Socket

**SPECIFICATION:**

Quarter Turn

Temperature Operating Range: -10 to 120°C

## D191

## PN25

### D191 Threaded DZR Ball Valve for Gas Applications

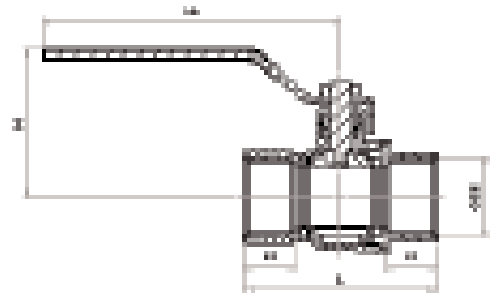
Designed to be light, compact and easy to install and operate, Crane's next generation DZR ball valve features improved leak resistance and reduced risk of damage from over tightening. The D191 is tested by BSI and complies with essential requirements of BS EN 331 :1998

#### Materials

PART	MATERIAL	QUANTITY
Hex-Nut	Dacromet Plated Steel	1
Handle Sleeve	PVC Yellow	1
Handle	Dacromet Plated Steel	1
Packing Nut	Brass CW617N	1
Packing Gland	PTFE	1
Body	DZR Brass CW602N	1
Ball	DZR Brass CW602N	1
Seats	PTFE	2
O-Ring	NBR with BS EN 549 approval	1
Bonnet	DZR Brass CW602N	1
Stem	DZR Brass CW602N	1



#### Dimensional Drawing



All dimensions are nominal.

#### Dimensions and Weights

SIZE	WEIGHT (kg)	L (mm)	L1 (mm)	L2 (mm)	H (mm)
1/4	152	46	12	89	41
3/8 <sup>  </sup>	136	46	12	89	41
1/2 <sup>  </sup>	205	59	15.5	98.5	48
3/4 <sup>  </sup>	302	67	17	98.5	51
1 <sup>  </sup>	511	80.5	21	125	63
1 1/4 <sup>  </sup>	890	94	23	140	78
1 1/2 <sup>  </sup>	1292	102	23	140	83.5
2 <sup>  </sup>	2238	124	26.5	165	97.5

#### Pressure/Temperature Ratings

##### Non Gas Application

TEMPERATURE (°C)	-10 to 100	110
PRESSURE (BAR)	25	23.5

##### Gas Application

TEMPERATURE (°C)	-20 to 60
PRESSURE (BAR)	5

Intermediate pressure ratings shall be determined by interpolation

Gas approved to BS EN 331: 1998

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1:1983 (please add suffix AT to denote American Thread)

**OPERATOR:** Lever

#### SPECIFICATION:

Quarter Turn, PTFE seats and stem seal.

Tested by BSI and complies with the essential requirements of BS EN 331: 1998

Temperature Operating Range: Non Gas -10 to 110°C, Gas -20 to 60°C

## F611, F621, F626 PN16

### Semi-Lugged Lever Operated Butterfly Valves to BS EN 593: 2009

#### Key Features:

- Aluminium Bronze disc
- Stainless steel shaft
- Trigger lever
- Valves are suitable for use with flanges conforming to BSEN1092-2 PN10 or PN16 and ANSI B16.1 Class 125

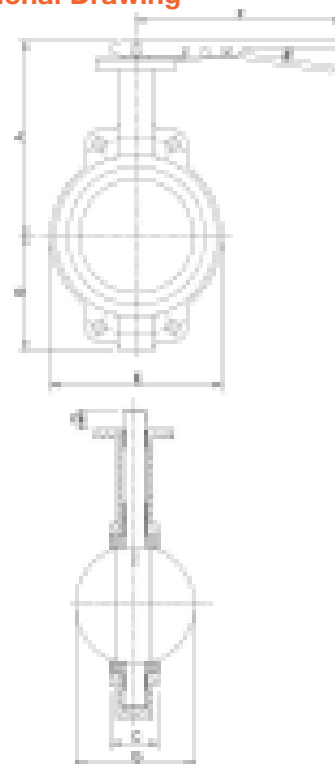
#### Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F611)	Nitrile Temp. -10 to 90°C
Liner (F621)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F626)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O Ring	Buna-N
Bushing	PTFE
Lever & Screw	Carbon Steel (Epoxy Paint)
Stop Plate	Carbon Steel (Zn Plated)



F611

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50mm	3.5	195	83	44	32	102	260	32
65mm	4	207	95	48	32	121	260	46
80mm	5.4	213	102	48	32	130	260	64
100mm	6.7	232	124	54	32	171	260	90
125mm	9	245	136	57	32	197	260	111
150mm	9.9	257	150	57	32	219	260	145
200mm	16.4	305	197	63	44	268	356	193

#### Pressure/Temperature Ratings

	F611	F621	F626
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

**PRESSURE RATING:** PN16 / ANSI Class 125

**END CONNECTION:** Semi Lugged

**OPERATOR:** Trigger lever

#### SPECIFICATION:

F611 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F621 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS Approved.

F626 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

## F612, F622, F627 PN16



### Semi-Lugged Gearbox Operated Butterfly Valves to BS EN 593: 2009

#### Key Features:

- Aluminium Bronze disc
- Stainless steel shaft
- Gearbox operated
- Valves 50-300mm are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 and ANSI B16.1 Class 125
- Sizes 350mm to 600mm are only PN16 flanges

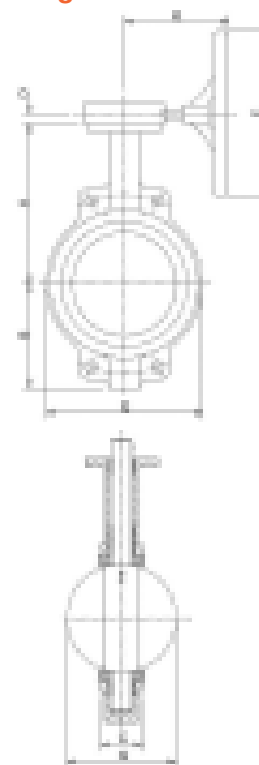
#### Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F612)	Nitrile Temp. -10 to 90°C
Liner (F622)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F627)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O Ring	Buna-N
Bushing	PTFE



F612

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
50mm	15	162	83	44	42	102	150	32	240
65mm	15.5	175	95	48	42	121	150	46	240
80mm	16.9	181	102	48	42	130	150	64	240
100mm	18.2	200	124	54	42	171	150	90	240
125mm	20.5	213	136	57	42	197	300	111	240
150mm	21.4	225	150	57	42	219	300	145	240
200mm	29	260	197	63	40	268	300	193	230
250mm	33.5	292	210	70	40	332	300	241	230
300mm	45.8	337	248	79	40	410	300	290	230
350mm	56.2	368	279	79	40	435	300	325	230
400mm	88.4	400	305	89	-	508	450	380	277
450mm	110.2	422	381	108	-	543	450	427	277
500mm	160.5	479	381	133	-	592	450	474	321
600mm	260	562	457	156	-	708	450	574	335

#### Pressure/Temperature Ratings

	F612	F622	F627
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

**PRESSURE RATING:** PN16 / ANSI Class 125

**END CONNECTION:** Semi-Lugged

**OPERATOR:** Gearbox

#### SPECIFICATION:

F612 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F622 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS Approved.

F627 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## F614, F624, F628 PN16

### Fully-Lugged Lever Operated Butterfly Valves to BS EN 593: 2009

#### Key Features:

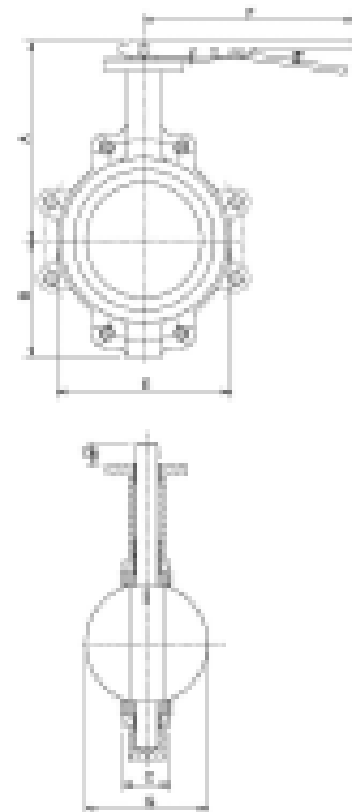
- Aluminium Bronze discs
- Stainless steel shaft
- Trigger lever
- Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16

#### Materials

PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F614)	Nitrile Temp. -10 to 90°C
Liner (F624)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F628)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O Ring	Buna-N
Bushing	PTFE
Lever & Screw	Carbon Steel (Epoxy Paint)
Stop Plate	Carbon Steel (Zn Plated)



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50mm	4	195	83	44	32	102	260	32
65mm	4.5	207	95	48	32	121	260	46
80mm	7.2	213	102	48	32	130	260	64
100mm	12.6	232	124	54	32	171	260	90
125mm	13.5	245	136	57	32	197	260	111
150mm	14.9	257	150	57	32	219	260	145
200mm	24.1	305	197	63	44	268	356	193

#### Pressure/Temperature Ratings

	F614	F624	F628
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

**PRESSURE RATING:** PN16

**END CONNECTION:** Lugged

**OPERATOR:** Trigger lever

#### SPECIFICATION:

F614 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.  
 F624 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS Approved.  
 F628 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## F615, F625, F629 PN16

**HN15**  
Sizes  
50-300mm

### Fully-Lugged Gearbox Operated Butterfly Valves to BS EN 593: 2009

#### Key Features:

- Aluminium Bronze disc
- Stainless steel shaft
- Gearbox operated
- Valves are suitable for use with flanges conforming to BS EN 1092-2 PN10 or PN16 - Sizes 65-200mm
- BS EN 1092-2 PN16 flanges only - Sizes 250-600mm PN16 only

#### Materials

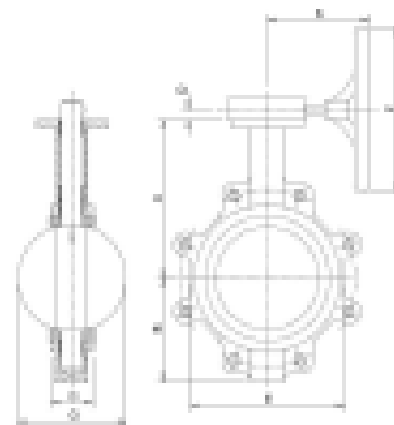
PART	MATERIAL
Body	Ductile Iron ASTM A536 (Epoxy Paint)
Disc	Aluminium Bronze
Liner (F615)	Nitrile Temp. -10 to 90°C
Liner (F625)	EPDM (WRAS Approved) Temp. -10 to 100°C
Liner (F629)	EPDM (High Temperature) Temp. -10 to 130°C
Shaft	Stainless Steel Type 410
Taper Pin	Stainless Steel Type 316
Key	Carbon Steel
O Ring	Buna-N
Bushing	PTFE



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	K (mm)
50mm	15.5	162	83	44	42	102	150	32	240
65mm	16	175	95	48	42	121	150	46	240
80mm	18.7	181	102	48	42	130	150	64	240
100mm	24.1	200	124	54	42	171	150	90	240
125mm	25	213	136	57	42	197	300	111	240
150mm	26.4	225	150	57	42	219	300	145	240
200mm	36.7	260	197	63	40	268	300	193	230
250mm	47.1	292	210	70	40	332	300	241	230
300mm	62.1	337	248	79	40	410	300	290	230
350mm	84.9	368	279	79	40	435	300	325	230
400mm	123.8	400	305	89	-	508	450	380	277
450mm	139.7	422	381	108	-	543	450	427	277
500mm	215.5	479	381	133	-	592	450	474	321
600mm	337.3	562	457	156	-	708	450	574	335

#### Dimensional Drawing



#### Pressure/Temperature Ratings

	F615	F625	F629
TEMPERATURE (°C)	-10 to 90	-10 to 100	-10 to 130
PRESSURE (BAR)	16	16	16

**PRESSURE RATING:** PN16

**END CONNECTION:** Lugged

**OPERATOR:** Gearbox

#### SPECIFICATION:

F615 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

F625 - Suitable for Group 2 liquids only as defined by the Pressure Equipment Directive 97/23/EC and these valves are WRAS Approved.

F629 - Suitable for Group 1 and 2 gases and Group 1 and 2 liquids as defined by the Pressure Equipment Directive 97/23/EC.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



# D138

## PN25

### Bronze Swing Check Valve with Metal Disc

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

The Crane D138 Bronze check valve is of the swing variety.

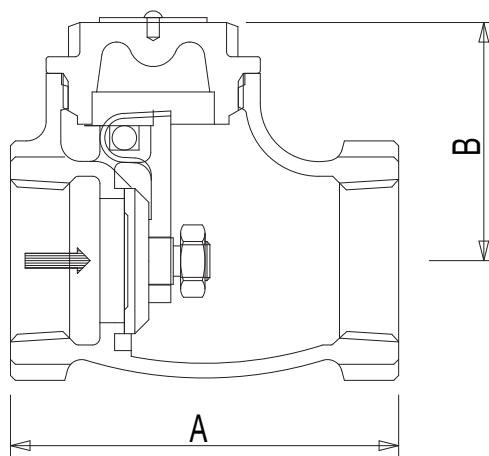
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Disc	Brass BS EN 12164 CW614N	3/8 - 1
Disc	Bronze BS EN 1982 CC491K	1 1/4 - 3
Hinge	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel	3/8 - 2
Hinge Pin	Stainless Steel ASTM A182 Gr.F316	2 1/2 & 3
Hinge Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All
Drive Pin	Steel - Electro Brassed	All
Hinge Pin Plug	Brass BS EN 12164 CW614N	2 1/2 & 3



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)
3/8"	0.19	48	33
1/2"	0.32	58	38
3/4"	0.43	66	42
1"	0.61	80	49
1 1/4"	1.01	89	56
1 1/2"	1.34	95	65
2"	2.12	108	76
2 1/2"	4.08	155	98
3"	5.76	190	99

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Swing Type Check Valve

### SPECIFICATION:

Metal Disc, Screwed in Cap, BSI Kitemark Approved.

Valves are manufactured in accordance with BS5154:1991 PN25 for Series B ratings.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 186°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D140 Bronze PN25



### Bronze Swing Check Valve with Resilient Disc

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

The Crane D140 Bronze check valve is of the swing variety.

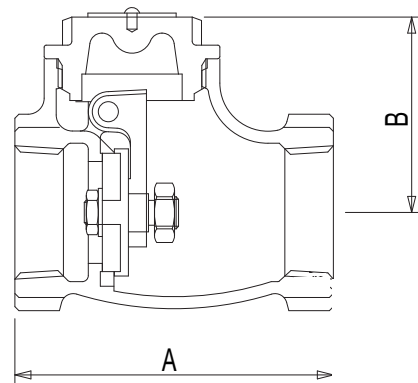
This valve carries the British Standards Institution kitemark - your assurance of exacting quality standards.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Disc Holder	Brass BS EN 12164 CW614N	1/2 - 1
Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
Disc	Nitrile Rubber	All
Disc Retaining Nut	Brass BS EN 12164 CW614N	1/2 - 2 1/2
Disc Retaining Nut	Bronze BS EN 1982 CC491K	3 only
Washer	Brass BS EN 12164 CW614N	1/2 - 2 1/2
Hinge	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel	1/2 - 2
Hinge Pin	Brass BS EN 12164 CW614N	2 1/2 & 3
Hinge Pin Plug	Brass BS EN 12164 CW614N	2 1/2 & 3
Hinge Nut	Brass BS EN 12164 CW614N	All
I.D. Plate	Aluminium	All
Drive Pin	Steel-electro brassed	All



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)
1/2"	0.33	58	38
3/4"	0.43	66	42
1"	0.63	80	49
1 1/4"	1.01	89	56
1 1/2"	1.34	95	65
2"	2.12	108	76
2 1/2"	4.2	153	98
3"	6.02	188	98

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100
PRESSURE (BAR)	25

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Swing Type Check Valve

### SPECIFICATION:

Valves are manufactured in accordance with BS 5154: 1991 PN25 for Series B ratings but are limited to 100 degrees celsius maximum temperature.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC. Temperature operating range: -10 to 100°C.

## FM492

## PN16

### Cast Iron Check Valve

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

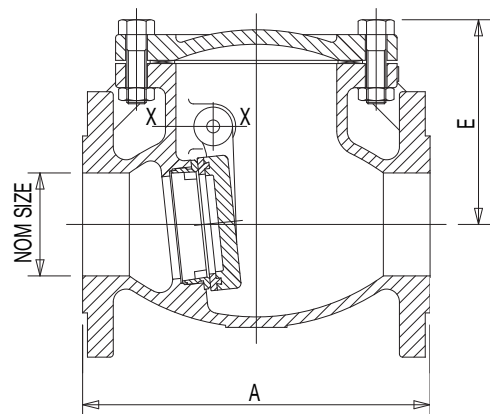
Swing pattern, metal faced disc.

### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	50mm - 100mm
Hinge Pin	13% Cr.Steel AISI Type 410	125mm - 300mm
Cap Bolts	Steel BS3692 Gr.8.8	All
Cap Bolt Nuts	Steel BS3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All



### Dimensional Drawing



SECTION X-X

### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	E (mm)
50mm	11.3	203	113
65mm	15.6	216	126
80mm	19.3	241	136
100mm	26.6	292	153
125mm	44	330	186
150mm	55.5	356	207
200mm	119	495	250
250mm	175	622	352
300mm	263	698	397

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	220
PRESSURE (BAR)	16	12.1

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2

**OPERATOR:** Swing Type Check Valve

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12334: 2001. End flanges conform to BS EN 1092-2 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 220°C.

## F493

### Class 125

#### Cast Iron Check Valve

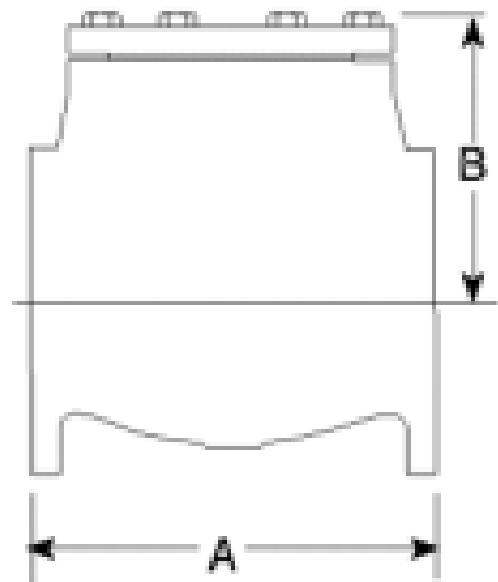
The F493 is a swing check valve with a Bronze trim. Each valve is manufactured to BS 5153:1974

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	2 - 4
Hinge Pin	13% Cr.Steel AISI Type 410	5 - 12
Cap Bolts	Steel BS3692 Gr.8.8	All
Cap Bolts Nuts	Steel BS3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)
2"	11.3	203	113
2 1/2"	15.6	216	126
3"	19.3	241	136
4"	26.6	292	153
5"	44	330	186
6"	55.5	356	207
8"	119	495	250
10"	175	622	352
12"	263	698	397

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Class 125

**OPERATOR:** Swing Check Valve

#### SPECIFICATION:

Valves are manufactured in accordance with BS 5153: 1974 and also meet the requirements of MSS.SP-71. End flanges conform to BS 1560.

Section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 230°C.

## FM469

## PN16

### Cast Iron Check Valve

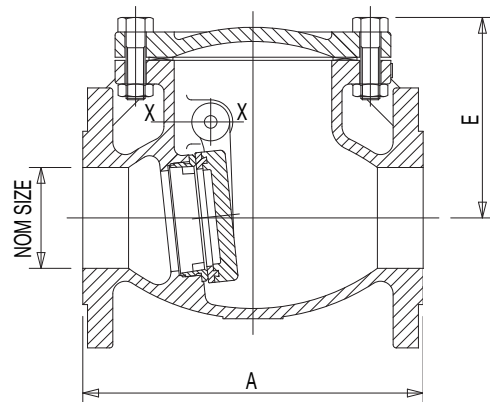
Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.  
Swing pattern, bronze trim, resilient seated.

### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Nitrile Rubber	All
Hinge Pin Bush	Bronze BS EN 1982 CC491K	All
Hinge Pin Plug	Bronze BS EN 1982 CC491K	All
Hinge Pin	Stainless Steel Type 304	50 - 80
Hinge Pin	13% Cr.Steel AISI Type 410	100 - 300
Cap Bolts	Steel BS3692 Gr.8.8	All
Cap Bolt Nuts	Steel BS3692 Gr.8	All
Gasket	Asbestos Free	All
Body Plate	Aluminium	All
Disc Ring Ret'g Nut	Cast Iron BS EN 1561 GJL-250	All
Retaining Nut Pin	Steel	All



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	E (mm)
50mm	11.3	203	113
65mm	15.6	216	126
80mm	19.3	241	136
100mm	26.6	292	153
125mm	44	330	186
150mm	55.5	356	207
200mm	119	495	250
250mm	175	622	352
300mm	263	698	397

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65
PRESSURE (BAR)	16

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2 PN16

**OPERATOR:** Swing check valve

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12334: 2001. End flanges conform to BS EN 1092-2 Section 3.2 Table 11 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 65°C.

## FM450/FM451 Wafer PN16

### Cast Iron Wafer Check Valve

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in action, depending upon pressure and velocity of flow within the line to perform their functions of opening and closing.

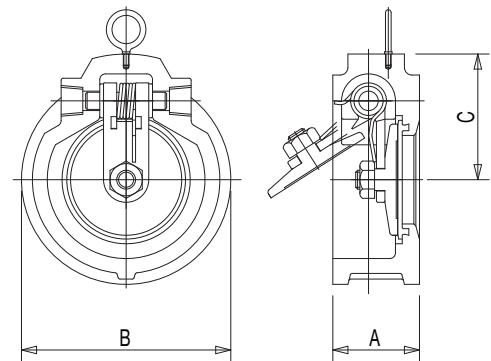
Swing Pattern, Metal Faced Disc (FM450) Resilient Seated (FM451)

### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Disc	SG Cast Iron BS2789	100 - 300
Disc Ring	Bronze BS EN 1982 CC491K	100 - 300
Disc	Bronze BS EN 1982 CC491K	50 - 80
Hinge	Stainless Steel Type 304	All
Hinge Pin	Stainless Steel Type 304	All
Spacer	PTFE (Glass Filled)	All
Spring	Stainless Steel Type 304 or 316	All
Plug	Bronze BS EN 1982 CC491K	All
Hinge Nut	Stainless Steel Type 304	All
Eye Bolt	Steel (Zinc Plated)	150 - 300
Body Seat Ring	Bronze BS EN 1982 CC491K	FM450
Body Seat Ring	Ethylene Propylene Diene Monomer	FM451



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
50mm	1.3	43	99	57
65mm	1.8	46	111	67
80mm	2.6	49	130	73
100mm	4.7	56	162	88
125mm	7	64	194	102
150mm	9.8	70	216	168
200mm	15	71	273	194
250mm	20	76	330	227
300mm	30	83	380	255

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Wafer style one piece flangeless cast iron body. Suitable for use between flanges drilled in accordance with BS EN 1092-2 PN10 and PN16, BS10 Table D or E and ANSI 125

**US END CONNECTION:** BS 1560, ANSI B16-1, ANSI B16-5

**OPERATOR:** Swing type check.

### SPECIFICATION:

Face to Face dimensions conform to ISO 5752.

Suitable for installation in vertical and horizontal pipelines. When installed in vertical pipelines the flow must be in an upward direction.

This valve is suitable for use on group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 230°C (FM450) -10 to 120°C (FM451).



# FM455 Wafer

## PN25

### Ductile Iron Wafer Check valve

Check valves permit flow in one direction only, and close automatically if flow reverses. They are entirely automatic in operation, depending upon pressure and velocity of flow within the pipeline to perform their opening and closing functions.

The FM455 is a Double Door wafer pattern valve, spring loaded to assist closing, and with an EPDM seat for quiet operation.

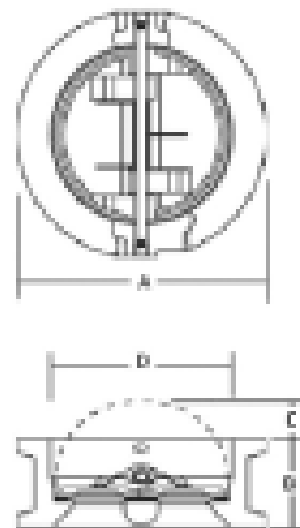
### Materials

PART	MATERIAL
Body	Ductile Iron - BS EN 1561 EN-JL1030
Discs	Stainless Steel SS316
Shaft	Stainless Steel 10088-1 X10CrNi8-10
Stop Pin	Stainless Steel 10088-1 X10CrNi8-10
Seat	EPDM
Springs	Stainless Steel 10088-1 X10CrNi8-10



FM455

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
50	2.5	105	54	8	60
65	3.5	124	54	14	73
80	4.5	137	57	16	89
100	8.0	168	64	25	114
125	10.0	194	70	34	141
150	13.0	222	76	43	168
200	28.0	276	95	61	219
250	45.0	340	108	80	273
300	68.0	400	143	102	324

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120
PRESSURE (BAR)	25

### SPECIFICATION:

Face to Face dimensions conform to BS EN 558-1. Suitable for fitting between flanges conforming to BS EN 1092-2 PN25  
Suitable for mounting in horizontal and vertical pipelines.

When installed in vertical pipelines the flow must be in an upward direction.

This valve is suitable for use on group 2 liquids only as defined by the pressure equipment directive and 97/23/EC.

Temperature operating range: -10 to 120°C.

## D151 PN20



### Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. The D151 carries the British Standards Institution kitemark - your assurance of exacting quality standards. In addition the D151 is WRAS approved.

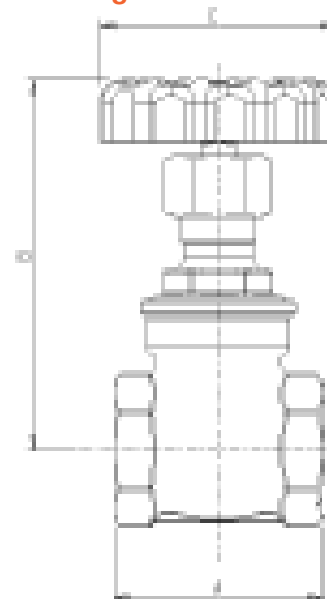
### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	DZR Brass BS EN 12164 CW602N	1/4 - 3
Stem	Manganese Bronze	4
Disc	Bronze BS EN 1982 CC491K	All
Stem Retainer	DZR Brass BS EN 12164 CW602N	1/2 - 2
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4, 3/8, 2 1/2 & 3
Stuffing Box	Bronze BS EN 1982 CC491K	4
Packing	Asbestos Free	All
Packing Gland	Brass BS EN 12164 CW614N	1/4, 3/8, 1 - 3
Packing Gland Nut	Brass BS EN 12164 CW614N	1/2 & 3/4
Packing Gland	Bronze BS EN 1982 CC491K	4
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 3
Packing Nut	Bronze BS EN 1982 CC491K	4
Hand Wheel	Aluminium	1/4 - 3
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	4
ID. Plate	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3 - 4



D151

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.27	46	75	45
3/8"	0.26	46	75	45
1/2"	0.269	50	73	52.5
3/4"	0.384	54	84	60
1"	0.593	62	104	65
1 1/4"	0.844	71	113	70
1 1/2"	1.266	77.5	130	78
2"	1.881	87.5	153	92
2 1/2"	4.37	96	219	103
3"	6.4	105	259	121
4"	19.7	162	366	203

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9
Intermediate pressure ratings shall be determined by interpolation		

**PRESSURE RATING:** PN20

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Solid wedge disc, non-rising stem, screwed in bonnet.

Valves are manufactured in accordance with BS EN 12288: 2010 PN20 series B and are BSI Kitemark approved.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 180°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D151A PN20

### DZR Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

### Materials

PART	MATERIAL	SIZES
Body	DZR Brass BS EN 12165 CW602N	All
Bonnet	DZR Brass BS EN 12165 CW602N	All
Stem	DZR Brass BS EN 12164 CW602N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Packing	PTFE	All
Stem Bush	DZR Brass BS EN 12164 CW602N	All
Disc	DZR Brass BS EN 12165 CW602N	All
Hand Wheel	Aluminium	All
Hand Wheel Nut	Steel (Zinc Plated)	All

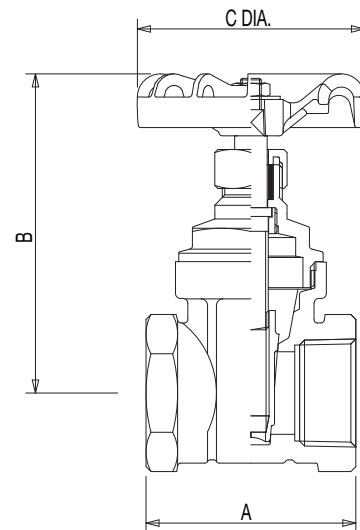


D151A

### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4 <sup>''</sup>	0.2	43	69	45
3/8 <sup>''</sup>	0.19	43	69	45
1/2 <sup>''</sup>	0.23	50	69	45
3/4 <sup>''</sup>	0.36	54	79	52
1 <sup>''</sup>	0.5	62	92	52
1 1/4 <sup>''</sup>	0.82	70	108	65
1 1/2 <sup>''</sup>	1.08	72	125	70
2 <sup>''</sup>	1.83	82	150	92
2 1/2 <sup>''</sup>	2.9	97	176	103
3 <sup>''</sup>	3.97	111	204	120

### Dimensional Drawing



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN20

**END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 PN20 for Series B ratings.

Non Rising Stem

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 180°C.

## D155C PN16



### Features & Benefits

- Robust and high quality bronze body with integral seating surfaces
- Offers the ultimate in dependable service wherever minimum pressure drop is important
- WRAS Approved for use with potable water
- Inside screw pattern with non-rising stem

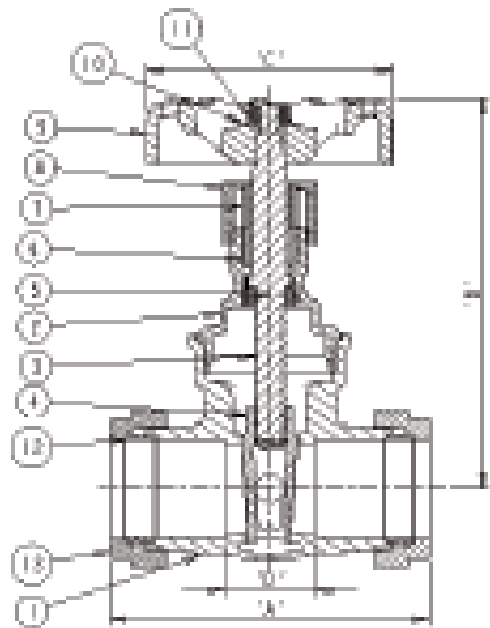
### Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 (CC491K)
Bonnet	Bronze	BS EN 1982 (CC491K)
Stem DZR	Brass	BS EN 12164 CW602N
Disc	Bronze	BS EN 1982 (CC491K)
Stem Retainer	DZR Brass	BS EN 12164 CW602N
Packing Ring	Asbestos Free	
Gland (28-54 only)	Brass	BS EN 12164 CW614N
Packing Nut	Brass	BS EN 12164 CW614N
Handwheel	Aluminium	-
Identification Plate	Aluminium	-
Handwheel Nut	Brass	BS EN 12164 CW614N
Compression Olive	Brass	BS EN 12449:1999 CW505L OR CW507L
Compression Nut	Brass	BS EN 12165 CW617N



D155C

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
15	0.34	69	74	53	26.5
22	0.50	75	86	59	23.5
28	0.70	86	105	65	25.5
35	.95	100	110	70	30.5
42	1.45	111	131	78	34.5
54	2.50	133	152	93	37

### Pressure/Temperature Ratings

TEMPERATURE (°C)	16.0	14.3	12.6	10.0	8.7	7.8	6.9	6.0	5.0
PRESSURE (BAR)	-10 to 30	40	50	65	80	90	100	110	120

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression ends to BS EN 1057: 2006: Half hard R250

**OPERATING INSTRUCTIONS:** Handwheel. Gate valves are best for services that require infrequent valve operation and where the disk is kept either fully open or closed. They are not practical for throttling.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 (formerly BS 5154) PN20 for Series B ratings, but are limited to the pressure/temperature ratings detailed in BS EN 1057: 2006 for compression end fittings. This valve is to be used on Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## D151X PN25

### Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

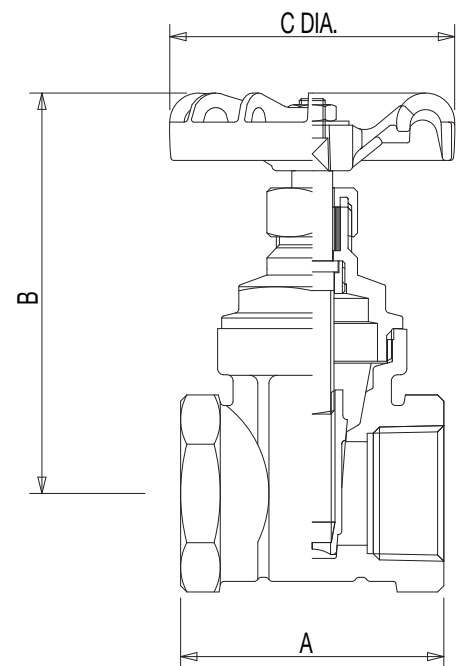
### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	DZR Brass BS EN 12164 CW602N	All
Disc	Bronze BS EN 1982 CC491K	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4 - 2
Stem Bushing	DZR Brass BS EN 12164 CW602N	2 1/2 & 3 only
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Hand Wheel	Aluminium	All
ID. Plate	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3 only



D151X

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.27	46	75	45
3/8"	0.26	46	75	45
1/2"	0.35	51	82	52
3/4"	0.55	55	95	65
1"	0.84	63	118	70
1 1/4"	1.18	71	144	79
1 1/2"	1.66	73	166	92
2"	2.55	83	190	103
2 1/2"	4.56	105	220	103
3"	6.38	111	259	121

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	110	120	186
PRESSURE (BAR)	25.0	23.4	21.8	10.5

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN25

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 PN25 for series B ratings.

All Sizes BSI Kitemarked.

Non Rising Stem

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 186°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D156

## PN16

### Brass Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

### Materials

PART	MATERIAL	SIZES
Body	Brass BS EN 12165 CW617N	All
Bonnet	Brass BS EN 12165 CW617N	All
Stem	Brass BS EN 12164 CW617N	All
Packing Nut	Brass BS EN 12165 CW617N	All
Packing	Asbestos Free	All
Stem Bush	Brass BS EN 12164 CW617N	All
Disc	Brass BS EN 12165 CW617N	All
Hand Wheel	Aluminium	All
Hand Wheel Nut	Steel (Zinc Plated)	All

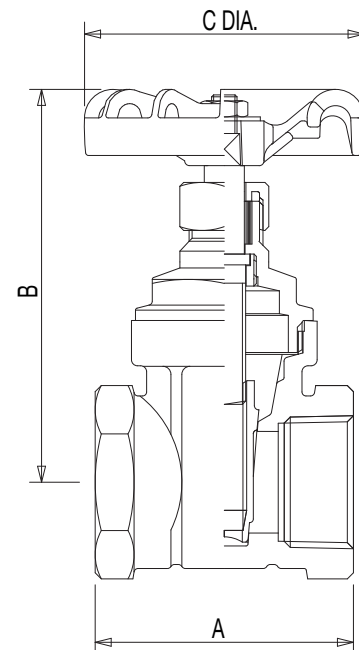


D156

### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4 <sup>''</sup>	0.2	41	69	44
3/8 <sup>''</sup>	0.2	41	69	44
1/2 <sup>''</sup>	0.22	48	69	44
3/4 <sup>''</sup>	0.35	54	79	52
1 <sup>''</sup>	0.52	62	92	52
1 1/4 <sup>''</sup>	0.77	68	108	65
1 1/2 <sup>''</sup>	1.02	72	125	70
2 <sup>''</sup>	1.75	82	150	92
2 1/2 <sup>''</sup>	2.77	97	176	103
3 <sup>''</sup>	3.9	111	204	120
4 <sup>''</sup>	6.35	131	262	152

### Dimensional Drawing



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel.

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Valves 1/4<sup>''</sup> to 2<sup>''</sup> are manufactured in accordance with BS EN 12288: 2010 PN16 for Series B ratings.

Non rising stem

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 170°C.

### AVAILABLE OPTIONS:

P150 locking device.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## D159 PN32

### Bronze Gate Valve

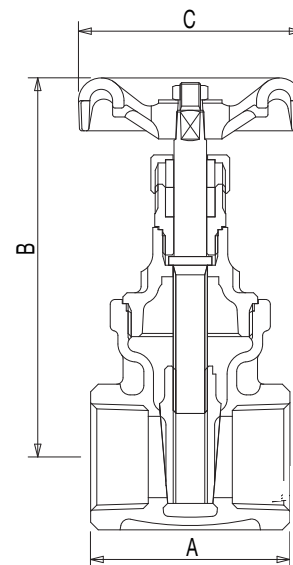
Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	1/4 - 3
Stem	DZR Brass BS EN 12164 CW602N	1/4 - 2
Stem	Bronze BS EN 1982 CC491K	2 1/2 & 3
Disc	Bronze BS EN 1982 CC491K	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	1/4 - 2
Stuffing Box	Bronze BS EN 1982 CC491K	2 1/2 & 3
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Hand Wheel	Aluminium	All
ID. Plate	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
Gasket	Asbestos Free	3 only



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4 <sup>II</sup>	0.36	46	75	45
3/8 <sup>II</sup>	0.35	46	75	45
1/2 <sup>II</sup>	0.47	51	82	52
3/4 <sup>II</sup>	0.6	55	95	65
1 <sup>II</sup>	0.92	63	118	70
1 1/4 <sup>II</sup>	1.41	71	144	79
1 1/2 <sup>II</sup>	1.92	73	166	92
2 <sup>II</sup>	2.72	83	190	103
2 1/2 <sup>II</sup>	5.62	105	232	103
3 <sup>II</sup>	7.89	111	264	121

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 PN32 for series B ratings.

Non Rising Stem.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 198°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D166

## PN32

### Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

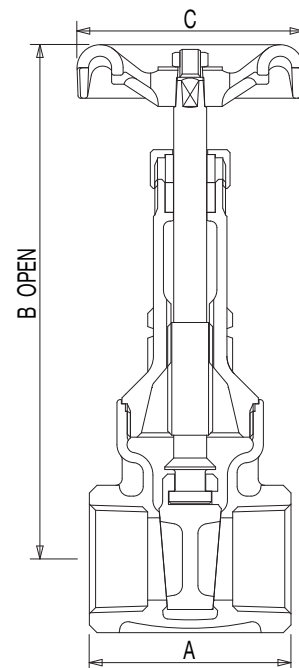
#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	1/4 - 2
Stem	Aluminium Bronze BS EN 12163 CW301G	2 1/2
Stem	Manganese Bronze	3
Disc	Bronze BS EN 1982 CC491K	All
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Hand Wheel	Aluminium	All
ID. Plate	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All



D166

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.32	46	126	45
3/8"	0.31	46	126	45
1/2"	0.46	51	129	52
3/4"	0.72	55	159	65
1"	1.1	63	189	70
1 1/4"	1.5	71	219	78
1 1/2"	2.25	73	246	92
2"	3.2	83	301	92
2 1/2"	5.8	108	369	134
3"	8.52	117	416	134

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation

#### PRESSURE RATING: PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

#### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 PN32 for series B ratings.

Rising stem

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 198°C.



## D180

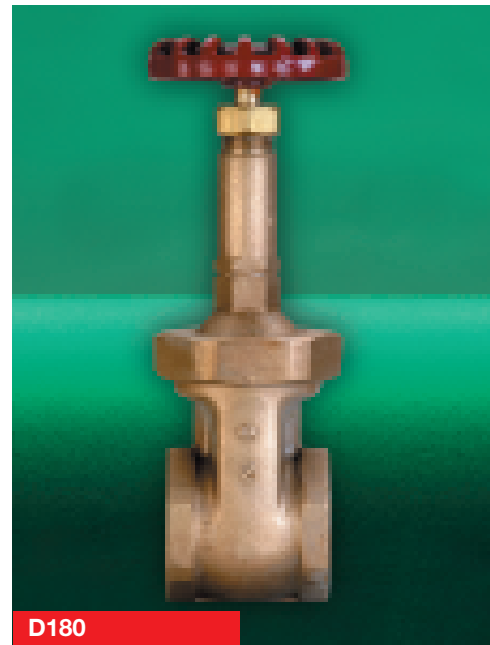
## PN32

### Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

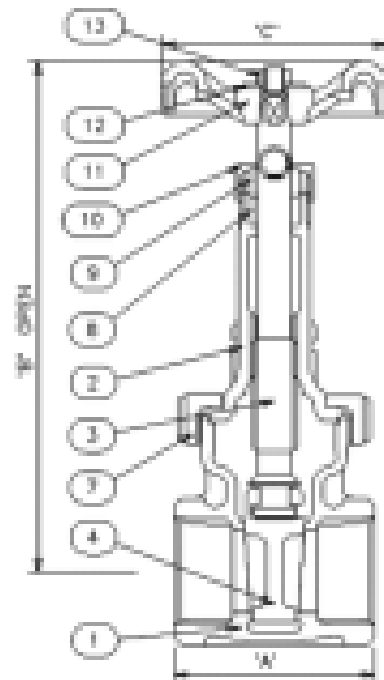
### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	1/4 - 2
Stem	Brass BS EN 12164 CW721R	2 1/2 & 3
Disc	Bronze BS EN 1982 CC491K	All
Union Ring	Bronze BS EN 1982 CC491K	1/4 - 2 only
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Hand Wheel	Aluminium	1/4 - 2
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	2 1/2 & 3
ID. Plate	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
Stud	Steel BS970 070M20	2 1/2 & 3 only
Stud Nut	Steel BS4190 Gr.4	2 1/2 & 3 only
Gasket	Asbestos Free	2 1/2 & 3 only



D180

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.32	46	126	45
3/8"	0.31	46	126	45
1/2"	0.46	51	129	52
3/4"	0.72	55	159	65
1"	1.1	63	189	70
1 1/4"	1.5	71	219	78
1 1/2"	2.3	73	246	92
2"	3.2	83	301	92
2 1/2"	5.8	108	369	134
3"	8.5	117	416	134

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

### PRESSURE RATING: PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 PN32 for series A ratings.

Rising Stem

Sizes 1/4" to 2" have a union bonnet; sizes 2 1/2" and 3" have a bolted bonnet.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 260°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D237

## PN20



### Bronze Gate Valve with Lockshield

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. The D237 carries the British Standards Institution Kitemark - your assurance of exacting quality standards. In addition the D237 is WRAS approved.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	1/2 - 3
Bonnet	Bronze BS EN 1982 CC491K	1/2 - 3
Disc	Bronze BS EN 1982 CC491K	1/2 - 3
Stem	DZR Brass BS EN 12164 CW602N	1/2 - 3
Stuffing Box	DZR Brass BS EN 12164 CW602N	2 1/2 & 3
Stem Retainer	DZR Brass BS EN 12164 CW602N	1/2 - 2
Gland	Brass BS EN 12164 CW614N	1 - 3
Packing	Asbestos Free	1/2 - 3
Lockshield	Brass BS EN 12164 CW614N	1/2 - 3
Box Spanner	Mild Steel	1/2 - 3

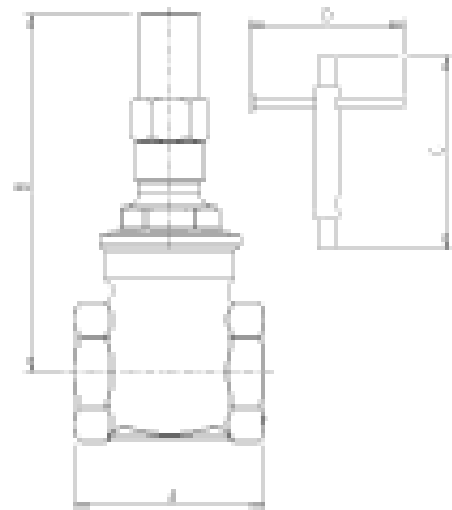


D237

### Dimensional Drawing

### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
1/2"	0.276	50	78	90	100
3/4"	0.389	54	87	90	100
1"	0.593	62	106	125	100
1 1/4"	0.831	71	116	125	100
1 1/2"	1.248	77.5	132	125	100
2"	1.882	87.5	156	125	100
2 1/2"	4.15	96	218	-	-
3"	6.24	105	253	-	-



### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN20

**END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**OPERATOR:** Lockshield

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Solid wedge disc, non-rising stem, screwed in bonnet.

Valves are manufactured in accordance with BS EN 12288: 2010 PN20 series B and are BSI Kitemark approved.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 180°C.

### AVAILABLE OPTIONS:

P103 lockshield key 1/2" - 2"

P100 lockshield key 2 1/2" - 3"

## D237A

## PN20

### Lockshield Operated DZR Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

#### Materials

PART	MATERIAL	SIZES
Body	DZR Brass BS EN 12165 CW602N	All
Bonnet	DZR Brass BS EN 12165 CW602N	All
Stem	DZR Brass BS EN 12164 CW602N	All
Lockshield	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Stem Bush	DZR Brass BS EN 12164 CW602N	All
Disc	DZR Brass BS EN 12165 CW602N	All

#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)
1/2"	0.23	50	65
3/4"	0.36	54	75
1"	0.5	62	81
1 1/4"	0.82	70	105
1 1/2"	1.08	72	122
2"	1.83	82	149

#### Pressure/Temperature Ratings

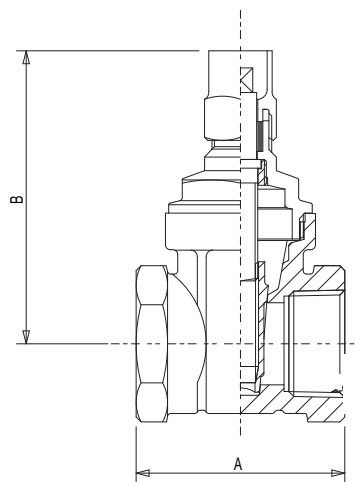
TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation



D237A

#### Dimensional Drawing



**PRESSURE RATING:** PN20

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**OPERATOR:** Lockshield

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

#### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 for Series B ratings.

Non Rising Stem

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 180°C.

#### AVAILABLE OPTIONS:

P103 Lockshield key

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D255C PN16



### Features & Benefits

- Robust and high quality bronze body with integral seating surfaces
- Offers the ultimate in dependable service wherever minimum pressure drop is important
- WRAS Approved for use with potable water
- Inside screw pattern with non-rising stem

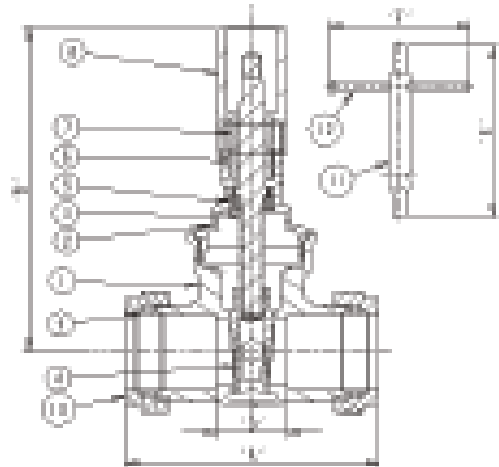
### Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 (CC491K)
Bonnet	Bronze	BS EN 1982 (CC491K)
Stem	DZR Brass	BS EN 12164 CW602N
Disc	Bronze	BS EN 1982 (CC491K)
Stem Retainer	DZR Brass	BS EN 12164 CW602N
Packing Ring	Asbestos Free	
Gland (28-54 only)	Brass	BS EN 12164 CW614N
Locksheild	Brass	BS EN 12164 CW614N
Compression Olive	Brass	BS EN 12449:1999 CW505L OR CW507L
Compression Nut	Brass	BS EN 12165 CW617N



D255C

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	D (mm)
15	0.34	69	78	26.5
22	0.50	75	90	23.5
28	0.70	86	110	25.5
35	0.95	100	115	30.5
42	1.45	111	136	34.5
54	2.50	133	160	37

### Pressure/Temperature Ratings

TEMPERATURE (°C)	16.0	14.3	12.6	10.0	8.7	7.8	6.9	6.0	5.0
PRESSURE (BAR)	-10 to 30	40	50	65	80	90	100	110	120

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Compression ends to BS EN 1057: 2006: Half hard R250

**OPERATING INSTRUCTIONS:** Lockshield. Gate valves are best for services that require infrequent valve operation, and where the disk is kept either fully opened or fully closed. They are not practical for throttling

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 12288: 2010 (formerly BS 5154) PN20 for Series B ratings, but are limited to the pressure/temperature ratings detailed in BS EN 1057: 2006 for compression end fittings. This valve is to be used on Group 2 liquids only, as defined by the Pressure Equipment Directive 97/23/EC.

### AVAILABLE OPTIONS:

P100 and P102 Lockshield Keys

## DM160

### PN16 Series B

#### Bronze Gate Valve

Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

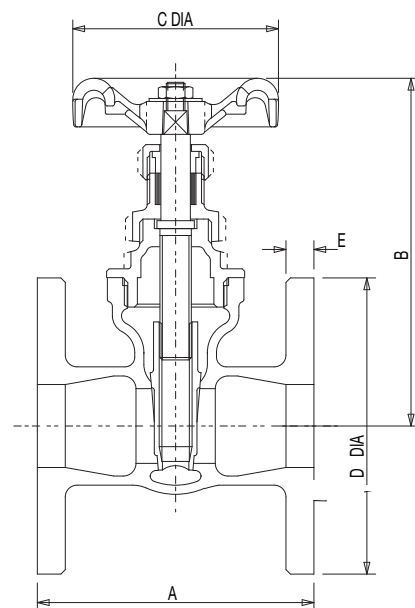
#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc	Bronze BS EN 1982 CC491K	All
Stem	Bronze BS EN 1982 CC491K	2 1/2 & 3
Stem	DZR Brass BS EN 12164 CW602N	3/4 - 2
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Stuffing Box	DZR Brass BS EN 12164 CW602N	1 1/4 & 1 1/2
Stuffing Box	Brass BS EN 12164 CW614N	2 only
Stuffing Box	Bronze BS EN 1982 CC491K	2 1/2 & 3
Stem Bush	Aluminium Bronze BS EN 12163 CW301G	3/4 & 1
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	3 only
Hand Wheel	Aluminium	3/4 - 2 1/2
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All
Gasket	Asbestos Free	3 only



DM160

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
20mm	1.57	89	105	65	105	6
25mm	2.5	99	116	70	115	8
32mm	3.38	110	141	92	140	8
40mm	4.93	120	168	92	150	9
50mm	5.54	135	189	103	165	11
65mm	8.39	165	232	103	185	13
80mm	12.25	185	264	121	200	13

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**END CONNECTION:** Flanged BS EN 1092-3 (formerly BS4504)

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

**AVAILABLE OPTIONS:**

Flanges undrilled, P150 Locking device.

#### SPECIFICATION:

Valves are manufactured in accordance with BS5154: 1991 PN16 for Series B ratings, having 'short' face to face dimensions.

Non Rising Stem

End flanges conform to BS EN 1092-3 with flat face and are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 170°C.

## FM52

### PN6

#### Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. Complete with Bronze trim. Each valve is hydrostatically tested to BS EN 12266-1: 2003. Manufactured in accordance with BS EN 1171: 2002

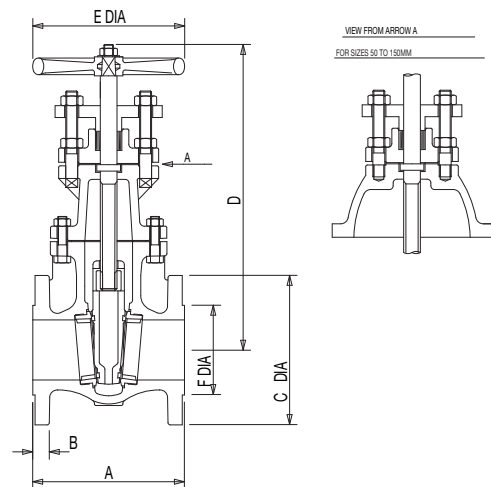
#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS EN 12163 CW721R	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Hand Wheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All



FM52

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
50mm	14	150	16	140	277	140	90
65mm	16	170	16	160	296	140	110
80mm	20	180	18	190	337	152	128
100mm	27	190	18	210	369	203	148
125mm	39	200	20	240	429	229	178
150mm	44	210	20	265	470	229	202
200mm	82	292	22	320	600	305	258
250mm	123	330	24	375	722	356	312
300mm	174	356	24	440	818	406	365

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	150
PRESSURE (BAR)	6	5.4

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN6

**UK END CONNECTION:** Flanged BS EN 1092-2 PN6

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

#### SPECIFICATION:

Wedge Disc, Non-Rising Stem, Inside Screw and Yoke  
This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.  
Temperature operating range: - 10 to 150°C.

#### AVAILABLE OPTIONS:

Flanges undrilled.

## F53

### Class 125

#### Cast Iron Gate Valve

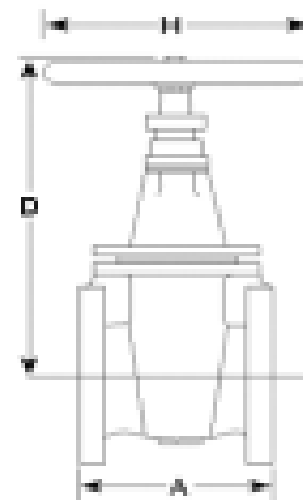
Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS EN 12164 CW721R	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Hand Wheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	D (mm)	H (mm)
2"	12.7	178	277	140
2 1/2"	15.8	190	296	140
3"	19.5	203	337	152
4"	29.3	229	369	203
5"	39.5	254	429	229
6"	45.8	267	470	229
8"	84	292	600	305
10"	148	330	722	356
12"	198	356	818	406

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230
PRESSURE (BAR)	13.8	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Class 125

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

#### SPECIFICATION:

Valves are manufactured in accordance with BS5150:1990. End flanges conform to BS1560 Section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled.

Wedge disc, non-rising stem, inside screw, bronze trim.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 230°C.

#### AVAILABLE OPTIONS:

Flanges undrilled

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## FM57

## PN10

### Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. Complete with Bronze trim. Each valve is hydrostatically tested to BS EN 12266-1: 2003. Manufactured in accordance with BS EN 1171: 2002.

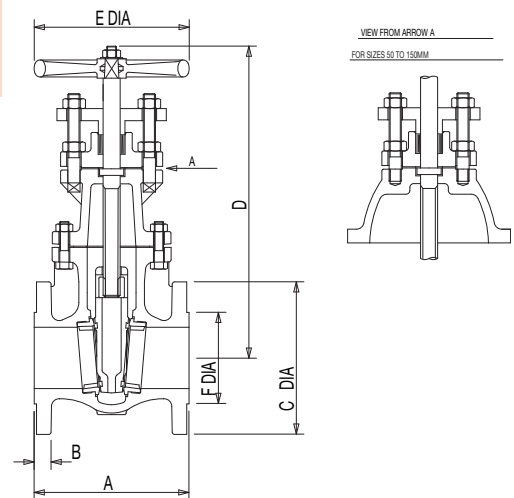
### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Bonnet Gasket	Asbestos Free	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	Brass BS2874 CZ114	All
Stuffing Box	Cast Iron BS EN 1561 GJL-250	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Stuffing Box Gasket	Asbestos Free	All
Packing	Asbestos Free	All
Hand Wheel	Cast Iron	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All



FM57

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
50mm	14	178	20	165	277	140	102
65mm	17	190	20	185	296	140	122
80mm	22	203	22	200	337	152	138
100mm	30	229	24	220	369	203	158
125mm	41	254	26	250	429	229	188
150mm	47	267	26	285	470	229	212
200mm	85	292	26	340	600	305	268
250mm	146	330	28	395	722	356	320
300mm	188	356	28	445	818	406	370

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	10	8.4

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN10

**UK END CONNECTION:** Flanged BS EN 1092-2: PN10

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

### SPECIFICATION:

Long face to face, Wedge Disc, Non-rising stem.

Valves are manufactured in accordance with BS EN 1171: 2002. End flanges conform to BSEN1092-2 PN10 with raised face and are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: - 10 to 180°C.

### AVAILABLE OPTIONS:

Flanges undrilled, P50 locking device.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## FM63

## PN16

### Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. Each valve is manufactured in accordance with BS EN 1171: 2002 and hydrostatically tested to BS EN 12266-1: 2003.

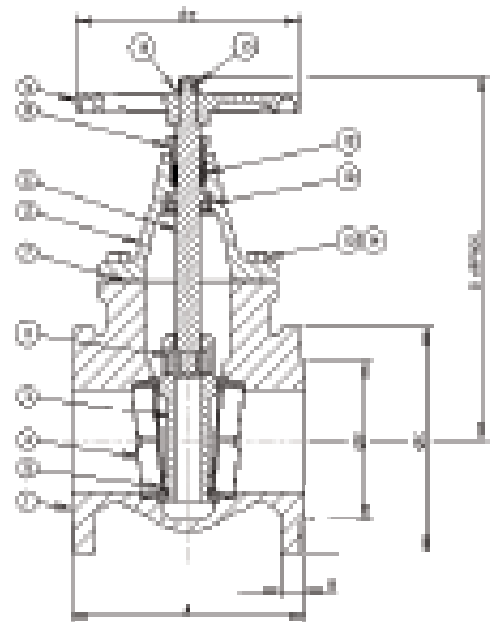
### Materials

ITEM NO	DESCRIPTION	MATERIAL	MATERIAL SPEC
1	Body	Grey Iron	BS EN 1561 GJL-250
2	Bonnet	Grey Iron	BS EN 1561 GJL-250
3	Disc	Grey Iron	BS EN 1561 GJL-250
4	Body Seat Ring	Bronze	BS EN 1982 (CC491K)
5	Disc Seat Ring	Bronze	BS EN 1982 (CC491K)
6	Stem	Stainless Steel	BS970: 410S21
7	Gasket	Graphite	Graphite (Asbestos Free)
8	Gland Packing Nut	Stainless Steel	BS970: 304S31
9	Handwheel	Grey Iron	BS EN 1561 EN-GJL-250
10	Stem Retaining Ring	Stainless Steel	BS970: 304S31
11	Disc Stem Nut	Bronze	BS EN 1982 (CC491K)
12	Packing Ring	Graphite	Graphite (Asbestos Free)
13	Body/Bonnet Bolt	Steel	BS 3692 GR 8.8
14	Body/Bonnet Nut	Steel	BS 3692 GR 8
15	Handwheel Retaining Nut	Steel	BS 4190 GR 4
16	Handwheel Washer	Steel	BS4320
17	Body I.D. Plate (Not Shown)	Aluminium	-



FM63

### Dimensional Drawing



### Dimensions and Weights

SIZE (mm)	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
65	18.7	190	20	185	262	190	118
80	23.9	203	22	200	286	190	132
100	37.6	229	24	220	356	220	156
125	50.7	254	26	250	426	300	184
150	63.8	267	26	285	463	300	211
200	104.3	292	30	340	578	350	266
250	194.5	330	32	405	773	406	319
300	275.5	356	32	460	860	457	370

All dimensions are nominal.

Please note size 50mm is also available, please refer to the website.

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2: PN16

**PRESSURE/ TEMPERATURE OPERATING RANGE:**

-10 to 120°C at 16 bar, 200°C at 12.8 bar

### SPECIFICATION:

Wedge Disk, Non-Rising Stem, Inside Screw, Hand Wheel Operated. This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

### AVAILABLE OPTIONS:

Flanges undrilled, P139 Stem Adapter.

## FM82

## PN16

### Cast Iron Gate Valve

Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. Each valve is hydrostatically tested to BS EN 12266-1: 2003. Manufactured in accordance with BS EN 1171: 2002.

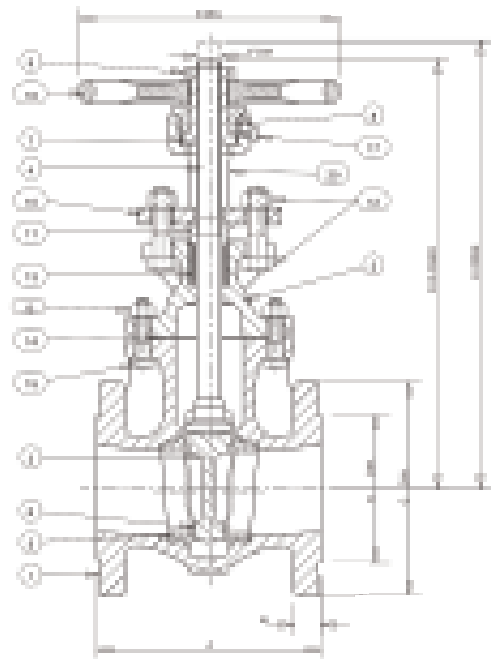
### Materials

NO	PART	MATERIAL
1	Body	Cast Iron BS EN 1561 GJL-250
2	Bonnet/Yoke	Cast Iron BS EN 1561 GJL-250
2	Bonnet	Cast Iron BS EN 1561 GJL-250
3	Disc	Cast Iron BS EN 1561 GJL-250
4	Stem	Stainless Steel 410 S21
5	Body Seat Ring	Bronze BS EN 1982 (CC491K)
6	Disc Seat Ring	Bronze BS EN 1982 (CC491K)
7	Yoke Sleeve	Bronze BS EN 1982 (CC491K)
8	Yoke Sleeve Retg Nut	Ductile Iron ASTM A536 65-45-12
9	Yoke Sleeve Nut	Malleable Iron BS EN 1562 GJMB 300-6
10	Gland Flange	Malleable Iron BS EN 1562 GJMB 300-6
11	Gland (2"-4")	Brass BS EN 12164 CW721R
11	Gland (5"-12")	Malleable Iron BS EN 1562 GJMB-300-6
13	Packing	Graphite
14	Bonnet Gasket	Graphite wrapped with SS304
16	Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6
18	Body Plate	Aluminium
20	Yoke	Cast Iron BS EN 1561 GJL-250



FM82

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
50mm	22.5	178	20	165	334	399	19	203	102
65mm	26.4	190	20	185	354	432	19	203	122
80mm	31	203	22	200	375	469	19	203	135
100mm	44.3	229	24	220	449	566	22	229	155
125mm	72.3	254	26	254	575	714	28.5	305	185
150mm	88.1	267	26	279	649	813	28.5	305	212
200mm	140	292	30	340	800	1013	34.9	356	248
250mm	225	330	32	405	984	1257	39.7	406	320
300mm	314	356	32	460	1127	1454	39.7	457	378

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2 PN16

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

**AVAILABLE OPTIONS:**

Flanges undrilled.

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 1171: 2002. End flanges conform to BSEN1092-2 with raised face and are normally supplied drilled. Bronze trim, rising stem.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: - 10 to 200°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## F84

### Class 125

#### Cast Iron Gate Valve

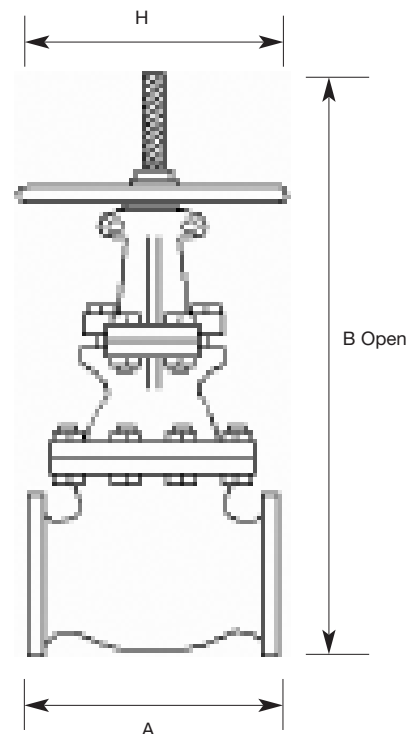
Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. Each valve is manufactured in accordance with BS 5150: 1990.

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc	Bronze BS EN 1982 CC491K	2 - 4
Disc	Cast Iron BS EN 1561 GJL-250	5 - 12
Stem	Brass BS EN 12163 CW721R	2 - 4
Stem	Brass JIS - H3250 Gr.6872	5 - 12
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC481K	5 - 12
Yoke	Cast Iron BS EN 1561 GJL-250	5 - 12
Yoke Hub Bolts/Nuts	Steel BS4190 Gr.4.6/4	5 - 12
Yoke Pad Bolts/Nuts	Steel BS4190 Gr.4.6/4	5 - 12
Yokesleeve	Manganese Bronze ASTM B584-C86400	2 - 4
Yokesleeve	Bronze BS EN 1982 CC491K	5 - 12
Yokesleeve Ret'g Nut	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Yokesleeve Nut	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Yokesleeve Nut	Ductile Iron ASTM A536 65-45-12	5 - 12
Gland	Malleable Iron BS EN 1562 GJMB-300-6	2 - 4
Gland	Cast Iron BS EN 1561 GJL-250	5 - 12
Gland Flange	Ductile Iron ASTM A536 65-45-12	5 - 12
Packing	Asbestos Free	All
Gasket	Asbestos Free	All
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	All
Body Plate	Aluminium	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	H (mm)
2 <sup>1/2</sup> "	21.5	178	399	203
3 <sup>1/2</sup> "	24.8	190	432	203
4 <sup>1/2</sup> "	29.5	203	469	203
5 <sup>1/2</sup> "	42.7	229	566	229
6 <sup>1/2</sup> "	72.3	254	714	305
8 <sup>1/2</sup> "	88.1	267	813	305
10 <sup>1/2</sup> "	140	292	1013	356
12 <sup>1/2</sup> "	225	330	1257	406
14 <sup>1/2</sup> "	314	356	1454	457

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230	Intermediate pressure ratings shall be determined by interpolation
PRESSURE (BAR)	13.8	8.6	

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Flanged

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

**AVAILABLE OPTIONS:**

Flanges Undrilled.

#### SPECIFICATION:

Valves meet the requirements of MSS.SP-70: 1998. End flanges conform to BS1560 Section 3.2/ANSI B16.1.

Class 125 with flat face and are normally supplied drilled.

Wedge Disc, Rising Stem, Outside Screw and Yoke.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature Operating Range: -10 to 230°C

Valves tested in accordance with BS EN 12266-1: 2003

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## F58

### Class 125

#### Cast Iron Gate Valve

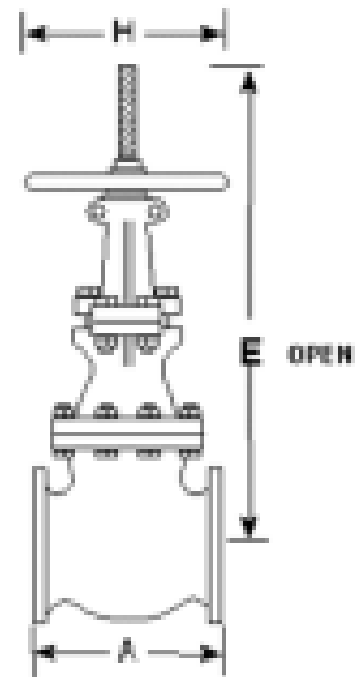
Crane cast iron gate valves offer the ultimate in dependable service wherever minimum pressure drop is important.

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc	Cast Iron BS EN 1561 GJL-250	All
Stem	13% Cr.Steel BS970 Pt.1 410S21 or 431S29	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Disc Ring	Bronze BS EN 1982 CC491K	All
Yokesleeve	Bronze BS EN 1982 CC491K	All
Yokesleeve Nut	Ductile Iron ASTM A536 65-45-12	2, 3, 5, 8 & 10
Yokesleeve Nut	Cast Iron BS EN 1561 GJL-250	2 1/2, 4, 6 & 12
Yokesleeve Ret'g Nut	Ductile Iron ASTM A536 65-45-12	2, 3, & 5
Yokesleeve Ret'g Nut	Cast Iron BS EN 1561 GJL-250	2 1/2, 4, 6 & 12
Disc Stem Nut	Bronze BS EN 1982 CC491K	All
Gland	Cast Iron BS EN 1561 GJL-250	All
Packing	Asbestos Free	All
Gasket	Asbestos Free	All
Yoke	Cast Iron BS EN 1561 GJL-250	8, 10 & 12
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	H (mm)
2"	17	178	365	152
2 1/2"	20	190	448	152
3"	28	203	481	203
4"	38	229	622	229
5"	56	254	672	254
6"	60	267	835	254
8"	112	292	989	305
10"	185	330	1208	356
12"	242	356	1469	406

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	230
PRESSURE (BAR)	13.8	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Class 125

**OPERATOR:** Hand Wheel

Gate valves are best for services that require infrequent valve operation, and where the disc is kept either fully opened or fully closed. They are not practical for throttling.

**AVAILABLE OPTIONS:**

Flanges Undrilled. P50 Locking Device

#### SPECIFICATION:

Valves are manufactured in accordance with BS 5150: 1990. End flanges conform to BS 1560 section 3.2/ANSI B16.1 Class 125 with flat face and are normally supplied drilled.

Wedge disc, Rising Stem, Outside Screw and Yoke

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 230°C.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## D4

## PN20 Series B

### Bronze Globe Valve

Crane Bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

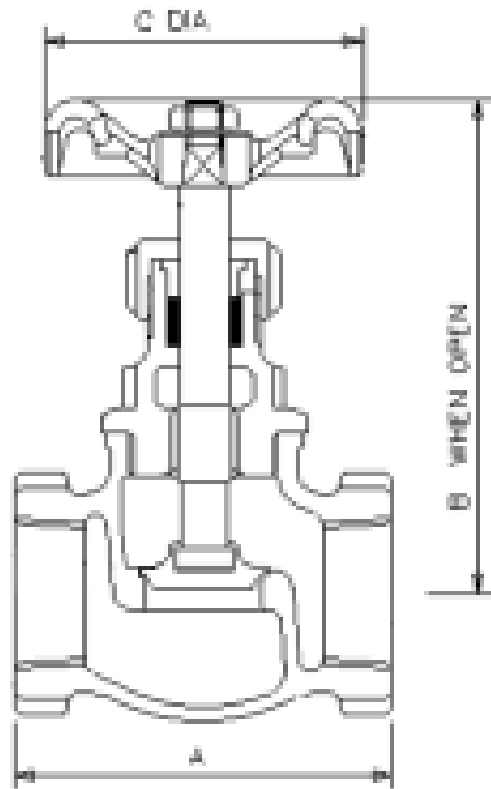
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc	Brass BS EN 12164 CW614N	1/4 - 1 1/2
Disc	Bronze BS EN 1982 CC491K	2
Stem	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Gland	Brass BS EN 12164 CW614N	All
Packing Nut	Brass BS EN 12164 CW614N	All
Disc Stem Ring	Mang.Bronze BS EN 12164 CW721R	2 only
Hand Wheel	Aluminium	All
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.23	44	75	52
3/8"	0.22	44	75	52
1/2"	0.31	55	82	52
3/4"	0.42	63	89	52
1"	0.71	77	102	65
1 1/4"	1.12	91	118	70
1 1/2"	1.5	98	134	78
2"	2.48	118	171	103

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	180
PRESSURE (BAR)	20	9

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN20

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

### SPECIFICATION:

Valves are manufactured in accordance with BS5154: 1991 PN20 for Series B ratings. Body seat is integral and is a narrow contact angled type.

Sizes 1/4" to 2" taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21. versions BSI Kitemarked.

Metal disc, screwed bonnet

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 180°C.

## D14

### PN32\* Series A

#### PN32\* Bronze Globe Valve

Crane Bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

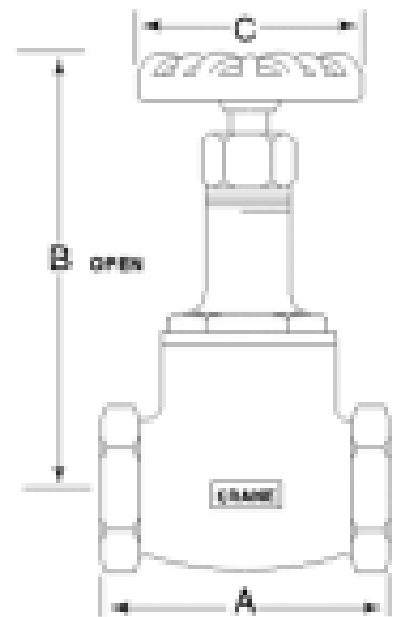
\* Sizes 2 1/2 & 3 rated PN25

#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	Bronze BS EN 1982 CC491K	All
Stem	Manganese Bronze BS EN 12163 CW721R	All
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2 1/2
Packing Nut	Bronze BS EN 1982 CC491K	3 only
Hand Wheel	Aluminium	1/4 - 2 1/2
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	3 only
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All
Gasket	Asbestos Free	2 1/2 - 3



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.39	52	100	52
3/8"	0.38	52	100	52
1/2"	0.54	62	101	52
3/4"	0.65	74	115	52
1"	0.9	90	125	70
1 1/4"	1.58	100	150	70
1 1/2"	2.06	115	159	92
2"	3.31	136	191	103
2 1/2"	5.9	166	220	121
3"	10.3	190	255	152

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

#### SPECIFICATION:

Valves are manufactured in accordance with BS5154:1991 series A, PN32 for sizes 1/4 to 2 and PN25 for sizes 2 1/2 and 3.

Design incorporates a bronze 35 degree wide angle disc retained on stem by a threaded ring; body seat is integral of the narrow contact angled type. This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 260°C.



## D15

## PN32\* Series B

### Bronze Globe Valve

The Crane D15 Bronze Globe Valve is highly efficient for throttling service.

\* Sizes 2 1/2" and 3" are rated at PN25.

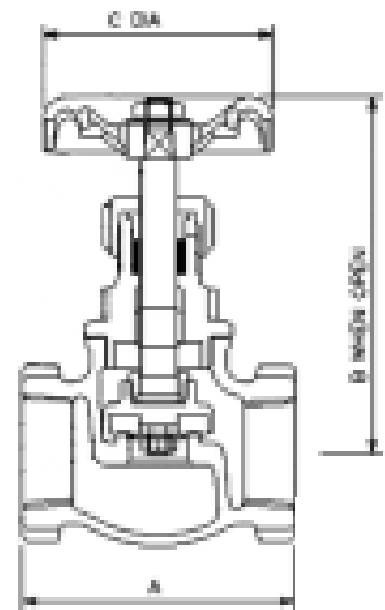
This valve carries the British Standards Institution kitemark - your assurance of exacting quality.

### Bill of Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	PTFE (25% Glass Filled)	All
Disc Holder	Bronze BS EN 1982 CC491K	1 1/4 - 3
Disc Holder	Brass BS EN 12165 CW617N	1/4 - 1
Disc Retaining Nut	Brass BS EN 12164 CW614N	1/4 - 2
Disc Retaining Nut	Bronze BS EN 1982 CC491K	2 1/2 & 3
Washer	Brass BS EN 12164 CW614N	1/4 - 2 only
Stem	Brass BS EN 12163 CW721R	1/4 - 2
Stem	Manganese Bronze	2 1/2 & 3
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	1/4 - 2
Packing Nut	Bronze BS EN 1982 CC491K	2 1/2 - 3
Hand Wheel	Aluminium	1/4 - 2 1/2
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	3 only
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All
Gasket	Asbestos Free	2 1/2 only
Gasket	Stainless Steel	3 only



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
1/4"	0.4	52	100	52
3/8"	0.39	52	100	52
1/2"	0.54	62	101	52
3/4"	0.65	74	115	52
1"	0.81	90	125	70
1 1/4"	1.55	100	150	70
1 1/2"	2.01	115	159	92
2"	3.08	136	191	103
2 1/2"	6.1	166	220	121
3"	10.5	190	255	152

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	198
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21.

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

### SPECIFICATION:

Valves are manufactured in accordance with BS5154: 1991 series B, PN32 for sizes 1/4" to 2" and PN25 for sizes 2 1/2" and 3" Sizes 1/4" to 3" Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21 BSI Kitemarked.

Design incorporates a disc holder retained on stem by a threaded ring; body seat is integral of the semi-crown type.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 198°C.



## D16

### PN32\* Series A

#### Bronze Globe Valve

Crane Bronze globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

\* Please note Sizes 2½" and 3" are rated at PN25

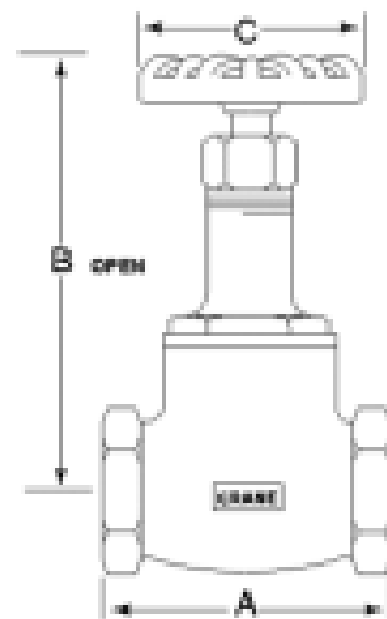
#### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Bonnet	Bronze BS EN 1982 CC491K	All
Body Seat Ring	13% Cr.Steel BS970 Pt.1 410S21 or 431S29	All
Disc Stem Ring	Brass BS EN 12163 CW721R	All
Disc	13% Cr.Steel BS970 Pt.1 410S21 or 431S29	½ - 2
Disc	Nickel Alloy	¼, ⅜, 2½ & 3
Stem	Manganese Bronze BS EN 12163 CW721R	All
Gland	Brass BS EN 12164 CW614N	All
Packing	Asbestos Free	All
Packing Nut	Brass BS EN 12164 CW614N	¼ - 2½
Packing Nut	Bronze BS EN 1982 CC491K	3 only
Hand Wheel	Aluminium	¼ - 2½
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	3 only
Hand Wheel Nut	Brass BS EN 12164 CW614N	All
ID. Plate	Aluminium	All
Gasket	Asbestos Free	2½ - 3



D16

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
¼"	0.33	52	100	52
⅜"	0.31	52	100	52
½"	0.8	62	101	52
¾"	1.24	74	115	52
1"	1.5	90	125	70
1¼"	1.7	100	150	70
1½"	2.16	115	159	92
2"	3.67	136	191	103
2½"	6	166	220	121
3"	10.9	190	255	178

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	260
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

**OPERATOR:** Hand Wheel

#### SPECIFICATION:

Valves are manufactured in accordance with BS 5154: 1991 Series A, PN32 for sizes ¼" to 2" and PN25 for sizes 2½" and 3". Design incorporates a nickel alloy plug type disc retained on the stem by a threaded ring; body seat is a screwed-in stainless steel ring.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 260°C.



## FM369

## PN16

### Cast Iron Globe Valve

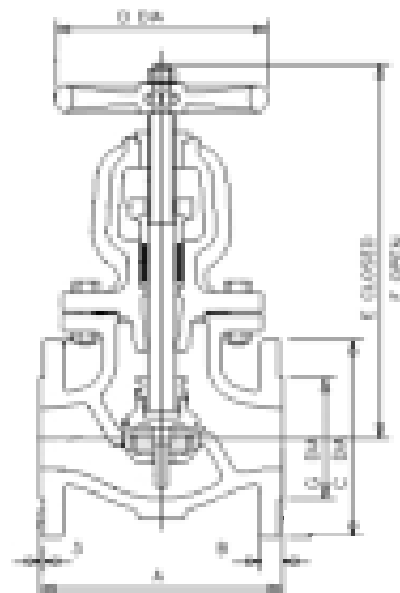
Crane cast iron globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc Guide Pin	Brass BS EN 12164 CW721R	125 - 150
Gland	Brass BS EN 12164 CW614N	All
Gland Flange	Malleable Iron BS EN 1562 GJMB-300-6	All
Gasket	Asbestos Free	All
Disc Stem Ring	Brass BS EN 12164 CW721R	All
Lockwasher	Brass BS EN 1652	All
Disc	Bronze BS EN 1982 CC491K	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Stem	Brass BS EN 12164 CW721R	All
Packing	Asbestos Free	All
Yoke Bushing	Brass BS EN 12164 CW721R	All
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	All



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50mm	24.2	203	20	165	203	310	335	102
65mm	29	216	20	185	203	330	356	122
80mm	36.9	241	22	200	229	362	392	138
100mm	56	292	24	220	254	416	446	158
125mm	72.3	330	26	250	305	457	489	188
150mm	98.8	356	26	285	305	476	516	212

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	220
PRESSURE (BAR)	16	12.1

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2 PN16

**OPERATOR:** Hand Wheel

**AVAILABLE OPTIONS:**

Flanges Undrilled

### SPECIFICATION:

Valves are manufactured in accordance with BS EN 13789:2010. End flanges conform to BS EN 1092-2 PN16 with raised face.

Valves are normally supplied drilled.

This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: - 10 to 220°C.

## F372

### Class 125

#### Cast Iron Globe Valve

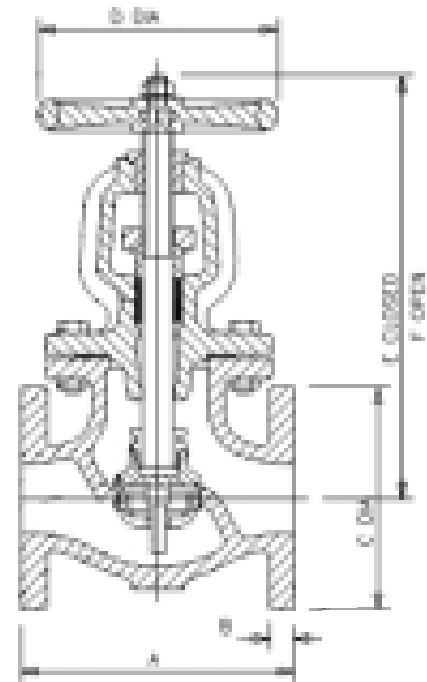
Crane cast iron globe valves are highly efficient for throttling because seat and disc designs provide flow characteristics with proportionate relationships between valve lift and flow rate.

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Bonnet	Cast Iron BS EN 1561 GJL-250	All
Disc Guide Pin	Brass BS EN 12164 CW721R	5 & 6
Gland	Brass BS EN 12164 CW614N	All
Gland Flange	Malleable Iron BS EN 1562 GJMB-300-6	All
Gasket	Asbestos Free	All
Disc Stem Ring	Brass BS EN 12164 CW721R	All
Lockwasher	Brass BS EN 1652	All
Disc	Bronze BS EN 1982 CC491K	All
Body Seat Ring	Bronze BS EN 1982 CC491K	All
Stem	Brass BS EN 12164 CW721R	All
Packing	Asbestos Free	All
Yoke Bushing	Brass BS EN 12164 CW721R	All
Hand Wheel	Malleable Iron BS EN 1562 GJMB-300-6	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
2"	23.1	203	16	152	203	310	335
2 1/2"	27.2	216	17	178	203	330	356
3"	34.5	241	19	191	229	362	392
4"	54.4	292	24	229	254	416	446
5"	70.8	330	24	254	305	457	489
6"	95.3	356	25	279	305	476	516

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Class 125

**OPERATOR:** Hand Wheel

**AVAILABLE OPTIONS:**

Flanges undrilled.

#### SPECIFICATION:

Valves are manufactured in accordance with BS5152: 1974 and also meet the requirements of MSS.SP-85: 2002. End flanges conform to BS1560 Section 3.2/ANSI B16.1 Class 125 with Flat Face and are normally supplied drilled. Valves detailed on this page are dimensioned in metric terms. This valve is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC. Temperature operating range: -10 to 230°C.

## D297 PN32

### Bronze Strainer

Scale and dirt in piping systems cause endless trouble and frequently serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems.

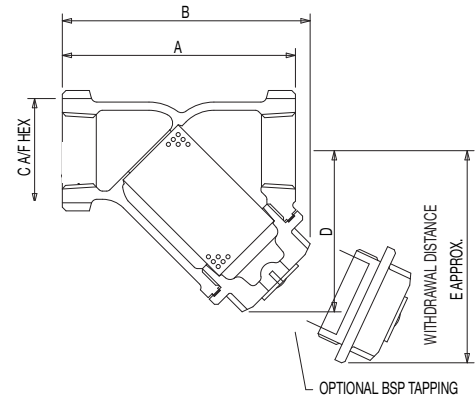
The Crane D297 features: Perforated stainless steel screen, Robust design, Low flow resistance, High Quality Materials, WRAS approved.

### Materials

PART	MATERIAL	SIZES
Body	Bronze BS EN 1982 CC491K	All
Cap	Bronze BS EN 1982 CC491K	All
Gasket	Asbestos Free (WRAS)	All
ID. Plate	Aluminium	All
Pin	Steel - Electro Brassed	All
Screen	Stainless Steel Type 304	All



### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
1/2"	0.38	71	79	30	51	61
3/4"	0.63	86	96	38	64	77
1"	0.96	101	110	47	72	92
1 1/4"	1.81	134	144	56	100	128
1 1/2"	2.43	148	157	65	109	139
2"	4.13	176	183	79	126	160

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	200
PRESSURE (BAR)	32	14

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN32

**UK END CONNECTION:** Taper threaded to BS EN 10226-2 (ISO 7-1) formerly BS 21

**US END CONNECTION:** ANSI B1.20.1 (please add suffix AT to denote American Thread)

### SPECIFICATION:

Strainers fitted with stainless steel perforated strainer element with 0.75mm diameter holes.

Screens fitted into Crane Strainers conform to the high standards of materials and workmanship associated with all Crane products.

This strainer is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 200°C.

## D298

## PN16

### Features

- Robust design
- Threaded ends
- Low flow resistance
- High quality materials

### Application

A generous use of pipeline strainers will make a significant contribution to the reliability of a piping system and to optimise performance of the equipment - pumps, valves, flow measuring devices, traps etc.

Strainers are a low cost investment for any piping system and result in reduced maintenance costs as well as minimising 'downtime' by protecting the circuit from damage by foreign matter.

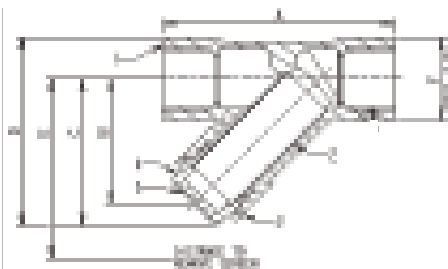
### Materials

NO	PART	MATERIAL
1	Body	Bronze to BS EN 1982 CC491K
2	Mesh	Stainless Steel to A.I.S.I. Type 304
3	Cap Seal	P.T.F.E.
4	Cap	Bronze to BS EN 1982 CC491K
5	ID Plate	Aluminium



D298

### Dimensional Drawing



D = withdrawal distance for the screen

### Dimensions and Weights

DN	MESH HOLE Ø (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	MASS (kg)
15	0.75	58	33	40	55	62	27	0.1875
20	0.75	70	42	54	69	80	33	0.3045
25	0.75	88	48	60	80	93	39	0.4260
32	0.75	96	55	69	95	108	49	0.7437
40	0.75	107	61	76	107	118	55	1.0075
50	0.75	126	79	99	135	153	67	1.4600

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 100	170
PRESSURE (BAR)	16	7

Intermediate pressure ratings shall be determined by interpolation

#### PRESSURE RATING: PN16

16 bar -10° to 100°C

7 bar at 170°C

TEST PRESSURE: 24 bar hydraulic

#### SPECIFICATION:

Bronze body

Screen 304 stainless steel

End connections threaded to BS EN 10266 (BS21 Taper ISO R7) & B1.20.1 ANSI

## FM276

## PN16

### Cast Iron Strainer

Scale and dirt in piping systems cause endless trouble and frequently serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems.

The FM276 offers the integrity of manufacture, quality and reliability which are the hallmarks of all Crane products.

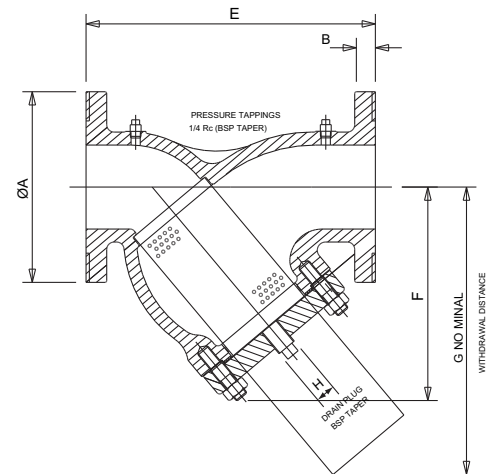
### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 EN-GJL-250	50 - 200
Cap	Ductile Iron BS EN 1563 EN GJS 500/7	250-300
Gasket	Asbestos Free	All
Screen	Stainless Steel AISI Type 304	All
Drain Plug	Malleable Iron	All
Test Point Plug Rc 1/4	Malleable Iron	All



FM276

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
50mm	13	165	20	102	3	226	142	193
65mm	23	185	20	122	3	290	216	272
80mm	30	200	122	138	3	306	226	272
100mm	43	220	24	158	3	350	264	330
125mm	71	250	26	188	3	399	320	406
150mm	93	285	26	212	3	480	356	457
200mm	161	340	30	268	3	600	442	577
250mm	266	405	32	320	3	686	495	696
300mm	397	460	32	378	4	757	579	828
350mm	359	520	36	438	4	946	688	988
400mm	480	580	38	490	4	1076	743	1108
450mm	630	640	40	550	4	1172	990	1410

### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 120	200
PRESSURE (BAR)	16	12.8

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** PN16

**UK END CONNECTION:** Flanged BS EN 1092-2: PN16

### SPECIFICATION:

End flanges conform to BS EN 1092-2 PN16 Section 3.2 table 11 with raised face and are normally supplied drilled. Strainers are normally supplied with a stainless steel perforated strainer element having 1.5mm diameter holes.

This product is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: - 10 to 200°C.

Bosses drilled, tapped and plugged.

## F277

### Class 125

#### Cast Iron Strainer

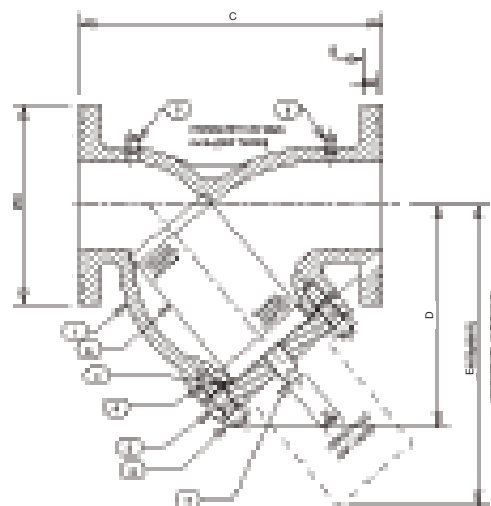
Scale and dirt in piping systems cause endless trouble and frequently serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter within piping systems. Stainless Steel strainer element.

#### Materials

PART	MATERIAL	SIZES
Body	Cast Iron BS EN 1561 GJL-250	All
Cap	Cast Iron BS EN 1561 EN-GJL-250	50 - 200
Cap	Ductile Iron BS EN 1563 EN GJS 500/7	250-300
Gasket	Asbestos Free	All
Screen	Stainless Steel AISI Type 304	All
Drain Plug	Malleable Iron	All
Test Point Plug Rc 1/4	Malleable Iron	All



#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (Rc)	SCREEN AREA cm <sup>2</sup>
2"	13	152	15.9	230	156	213	1"	213
2 1/2"	23	178	17.5	290	210	298	1 1/4"	343
3"	30	191	19.1	310	215	301	1 1/4"	388
4"	43	229	23.8	350	245	350	1 1/4"	575
5"	71	254	23.8	400	297	430	1 1/2"	884
6"	93	279	25.4	480	333	484	1 1/2"	1174
8"	161	342	28.6	600	416	611	2"	1999
10"	266	406	30.2	686	534	788	2"	3213
12"	397	483	31.8	759	624	928	2"	4559

#### Pressure/Temperature Ratings

TEMPERATURE (°C)	-10 to 65	150	230
PRESSURE (BAR)	13.8	11.4	8.6

Intermediate pressure ratings shall be determined by interpolation

**PRESSURE RATING:** Class 125

**US END CONNECTION:** ANSI Class 125

#### SPECIFICATION:

End flanges conform to BS1560 - Section 3.2/ANSI B16.1 with flat face and are normally supplied drilled.

This strainer is supplied with a stainless steel perforated element having 1.5mm diameter holes.

This product is not suitable for use on group 1 gasses or unstable fluids, as defined by the Pressure Equipment Directive 97/23/EC.

Temperature operating range: -10 to 230°C.

## FM278

### PN25

#### PN25 Ductile Iron Strainer

Scale and dirt in piping systems causes endless trouble and frequent serious damage to pipeline equipment. Installation of Crane strainers will help eliminate the problems caused by foreign matter with piping systems.

The FM278 offers the integrity of manufacture, quality and reliability which are the hallmarks of Crane products.

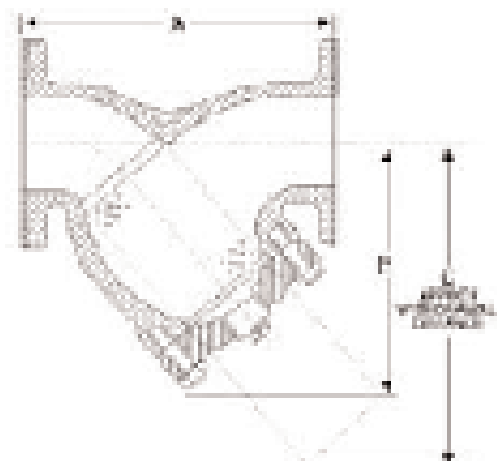
#### Materials

PART	MATERIAL
Body	Ductile Iron - BS EN 1563 EN GJS 500/7
Cap	Ductile Iron - BS EN 1563 EN GJS 500/7
Gasket	Asbestos Free
Plug	Ductile Iron - BS EN 1563 EN GJS 500/7
Screen	304 Stainless Steel



FM278

#### Dimensional Drawing



#### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
50	12.0	230	146	193
65	25.0	273	174	272
80	33.0	295	198	272
100	43.0	352	232	330
125	73.0	416	285	406
150	97.0	470	305	457
200	164.0	543	401	577
250	270.0	660	473	696
300	400.0	770	554	828

#### Pressure/Temperature Ratings

TEMPERATURE °C	-10 to 120
PRESSURE (BAR)	25

**PRESSURE RATING:** PN25

**END CONNECTION:** Flanged to BS EN 1092-2 PN25

#### SPECIFICATION:

Flanges conform to BS EN 1092-2 PN25 Section 3.2 table 11 with raised face. Strainers are supplied with a stainless steel perforated strainer element having 1.6mm diameter holes.

This product is suitable for use on Group 2 liquids only, as defined by the Pressure equipment Directive 97/23/EC.

## Fig. 1900 Multi-Therm PN16

### Features & Benefits

- Ideal for domestic hot water systems to assist with protection against Legionella
- Provides self-balancing, thermostatically controlled regulation of flow and disinfection
- Suitable for circuits greater than 10 metres in length
- Thermostatically controlled regulation of the volume flow -self-balancing
- Assists with disinfection at temperatures above 70°C by increasing the flow automatically
- Has an accuracy of +/- 1°C

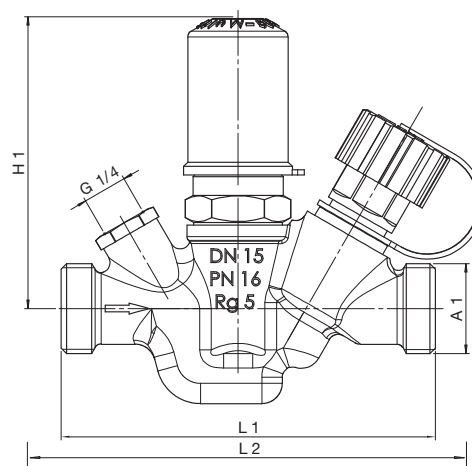
### Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Upper part	Bronze	BS EN 1982 CC491K
Valve stem	Bronze	BS EN 1982 CC491K
Valve cone	Bronze	BS EN 1982 CC491K
Upper part seal, valve stem seal	EPDM	70 EPDM
Closing upper part valve cone seal	PTFE	Teflon
Drain plug	Bronze	BS EN 1982 CC491K
Closing handle	Plastic	Polyacetal (PA)
Plate / clamping band	Plastic	Polyacetal (PA)



Fig. 1900

### Dimensional Drawing



### Dimensions and Weights

NOM INSIDE DIA	mm	15	20	25
Height (H1)	mm	85	85	95
Length (L1)	mm	110	123	133
Length (L2) Copper Tails	mm	176	186	200
Length (L2) Mappress Copper	mm	172	174	182
Length (L2) Mepla	mm	174	178	186
Weight	kg	0.7	0.9	1.2
Flow Kv	cmb/h	0.92	1.70	2.71
Drain Valve (G)	BSP	1/4	1/4	1/4

### Pressure/Temperature Ratings

TEMPERATURE °C	90
PRESSURE (BAR)	16

**PRESSURE RATING:** PN16

**OPERATING INSTRUCTIONS:** When the set point is preset to 57°C, the valve remains completely open up to a valve temperature of 52°C.

Between 52°C and the preset set point of 57°C, the valve starts to close. When the set point temperature has been reached, a minimum volume flow is continuously flowing through the circulation system.

If the storage temperature is further increased to temperatures greater than 70°C to effect disinfection, the valve increases the flow.Nom



## Fig. 1910 Eta-Therm

### Features & Benefits

- Ideal for domestic hot water systems to assist with protection against Legionella
- Provides self-balancing, thermostatically controlled regulation of flow and disinfection
- Suitable for circuits less than 10 metres in length •Thermostatically controlled regulation of the volume flow –self-balancing
- Assists with disinfection at temperatures above 70°C by increasing the flow automatically
- Has an accuracy of +/- 1°C

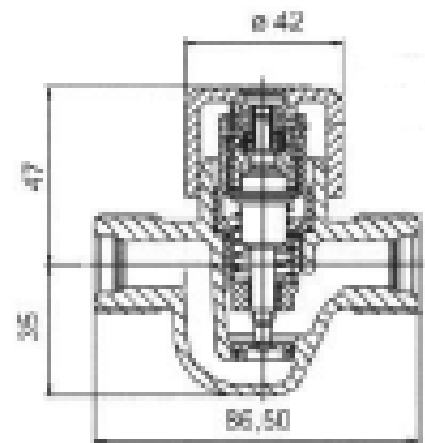
### Materials

PART	MATERIAL	SPECIFICATION
Body	Bronze	BS EN 1982 CC491K
Upper part	Bronze	BS EN 1982 CC491K
Valve stem	Bronze	BS EN 1982 CC491K
Valve cone	Bronze	BS EN 1982 CC491K
Upper part seal, valve stem seal	EPDM	70 EPDM
Closing upper part valve cone seal	PTFE	Teflon
Drain plug	Bronze	BS EN 1982 CC491K
Closing handle	Plastic	Polyacetal (PA)
Plate / clamping band	Plastic	Polyacetal



Fig. 1910

### Dimensional Drawing



### Dimensions and Weights

NOM INSIDE DIA	mm	15
Height	mm	47
Length	mm	86.5
Length Copper Tails	mm	152
Length Mappress	mm	148
Length Mepla	mm	150
Weight	kg	0.4
Flow Kv	-	0.92

### Pressure/Temperature Ratings

TEMPERATURE °C	90
PRESSURE (BAR)	16

**PRESSURE RATING:** PN16

**OPERATING INSTRUCTIONS:** When the set point is preset to 57°C, the valve remains completely open up to a valve temperature of 52°C.

Between 52°C and the preset set point of 57°C, the valve starts to close. When the set point temperature has been reached, a minimum volume flow is continuously flowing through the circulation system.

If the storage temperature is further increased to temperatures greater than 70°C to effect disinfection, the valve increases the flow.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## D1088 TMV 3



### Features & Benefits

- Blends hot and cold water to ensure constant, controlled safe outlet temperature
- Fulfils the 'duty of care' requirements against scalding
- Ideal for healthcare, schools, workplace & domestic environments
- Flat face union ensures easy removal for maintenance
- Integral strainers and check valves
- Tamper proof adjustment

### Materials

PART	MATERIAL	QUANTITY
O-Ring	EPDM Rubber	7
1.5 Strainer	Stainless Steel 304	2
Reduction Union	DZR Brass CW602N	2
Element	Vernet 0304	1
Spring	Stainless Steel 304	1
Top	DZR Brass CW602N	1
Valve Body	DZR Brass CW602N	1

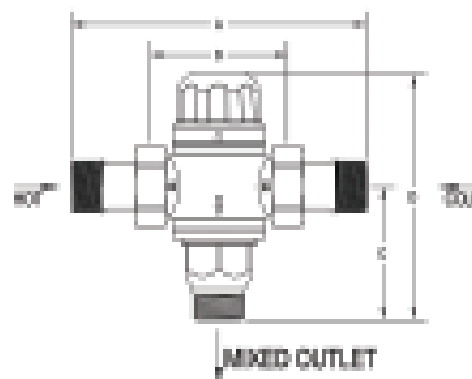
### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)	D (mm)
15mm	0.6	122	58	55	102
22mm	0.8	145	58	70	117

FACTORY SETTING	38°C
TEMPERATURE SETTING RANGE	35-46°C
MINIMUM HOT TO MIX TEMPERATURE	10°C
TEMPERATURE STABILITY	±2°C
MAXIMUM WORKING PRESSURE	10 Bar
KV	1.26
MINIMUM FLOW PRESSURE	0.2 Bar



### Dimensional Drawing



**PRESSURE RATING:** PN10

**OPERATOR:** Lockshield

### SPECIFICATION:

The D1088 has been independently tested and certified as meeting the requirements of the D08 specification under the TMV 3 scheme. Crane products are designed for installation and use within suitably designed systems reflecting CIBSE, BSRIA and HVAC guidelines.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



## D1089 TMV 3

### Features & Benefits

- Blends hot and cold water to ensure constant, controlled safe outlet temperature
- Fulfils the 'duty of care' requirements against scalding
- Ideal for healthcare, schools, workplace & domestic environments
- Flat face union ensures easy removal for maintenance
- Integral strainers and check valves
- Tamper proof adjustment
- Includes ball valves for isolation

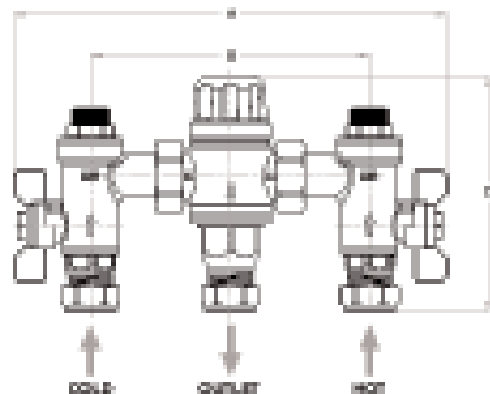
### Materials

PART	MATERIAL	QUANTITY
O-Ring	EPDM Rubber	12
1.5 Strainer	Stainless Steel 304	2
Reduction Union	DZR Brass CW602N	2
Element	Vernet 0304	1
Spring	Stainless Steel 304	1
Top	DZR Brass CW602N	1
Valve Body	DZR Brass CW602N	1
Ball	DZR Brass CW602N	1
T Handle	Al Alloy	1
Ball Seal	PTFE	2



D1089 TMV 3

### Dimensional Drawing



### Dimensions and Weights

SIZE	WEIGHT (kg)	A (mm)	B (mm)	C (mm)
15mm	1.1	200	128	110
22mm	1.3	200	128	110

FACTORY SETTING	38°C
TEMPERATURE SETTING RANGE	35-46°C
MINIMUM HOT TO MIX TEMPERATURE	10°C
TEMPERATURE STABILITY	±2°C
MAXIMUM WORKING PRESSURE	10 Bar
KV	1.26
MINIMUM FLOW PRESSURE	0.2 Bar

**PRESSURE RATING:** PN10

**OPERATOR:** Lockshield

### SPECIFICATION:

The D1089 has been independently tested and certified as meeting the requirements of the D08 specification under the TMV 3 scheme. Crane products are designed for installation and use within suitably designed systems reflecting CIBSE, BSRIA and HVAC guidelines.

## Fig. 430 PN16

### Features & Benefits

- PRVs enable control of pressure from boosted cold water supplies to match site requirements
- Simple to install
- Recommend that isolation valves are fitted upstream and downstream of the valve to enable isolation for cleaning of filter
- WRAS approved
- Manufactured in accordance with BS EN 1567
- Fig.430 must be fitted with adjustable cartridge element pointing downwards

### Materials

PART	MATERIAL
Body	Bronze
Disc	Bronze
Cartridge	Stainless Steel Bronze
Filter	Stainless Steel
Gaskets	Nitrile

### Dimensions and Weights

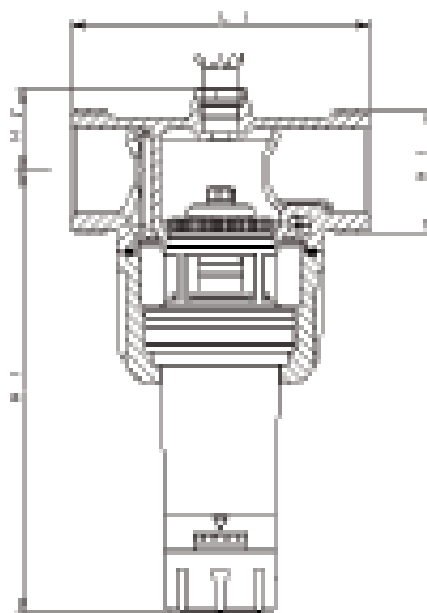
NOM SIZE	mm FIG	15 440	20 440	25 440	32 440	40 440	50 440	GAUGE 445
L1	mm	90	90	100	105	130	140	All
H1	mm	150	150	150	225	225	225	All
H2	mm	25	25	25	38	38	38	All
A1	mm	G <sup>3</sup> / <sub>4</sub>	G1	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>2</sub>	G1 <sup>3</sup> / <sub>4</sub>	G2 <sup>3</sup> / <sub>8</sub>	All
Weight	kg	0.90	0.93	1.00	2.20	2.30	2.50	0.25

### Pressure/Temperature Ratings

TEMPERATURE °C	60
PRESSURE (BAR)	16



### Dimensional Drawing



**PRESSURE RATING:** PN16

### SPECIFICATION:

Suitable for:

- Water
- Compressed Air

# Fig. 440

## PN25

### Features & Benefits

- PRVs enable control of pressure from boosted cold water supplies to match site requirements
- Simple to install
- Recommend that isolation valves are fitted upstream and downstream of the valve to enable isolation for cleaning of filter
- WRAS approved
- Manufactured in accordance with BS EN 1567
- 440 can be installed horizontally or vertically

### Materials

PART	MATERIAL
Body	Bronze
Cover	Bronze
Insert	Stainless Steel Bronze
Filter	Stainless Steel
Spring	Stainless Steel
Disc	Brass

### Dimensions and Weights

NOM SIZE	mm FIG	15 440	20 440	25 440	32 440	40 440	50 440	GAUGE 445
L1	mm	75	92	98	98	128	148	All
H1	mm	110	110	150	160	190	265	All
H2	mm	30	42	46	46	52	75	All
S1	mm	10	10	12	12	12	13	All
S2	mm	13	13	17	17	17	19	All
A1	mm	G <sup>3</sup> / <sub>4</sub>	G1	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>2</sub>	G1 <sup>3</sup> / <sub>4</sub>	G2 <sup>3</sup> / <sub>8</sub>	All
Weight	kg	0.80	1.30	1.70	1.90	3.60	6.70	0.25

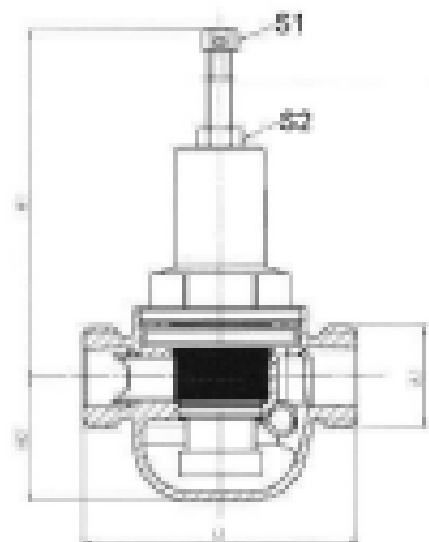
### Pressure/Temperature Ratings

TEMPERATURE °C	90
PRESSURE (BAR)	25



Fig 440

### Dimensional Drawing



**PRESSURE RATING:** PN25

### SPECIFICATION:

Suitable for:

- Water
- Compressed Air

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Typical Kv Values

Typical Kv values for various valves to enable Pressure Drop calculations to be made.  
For other pipe specifications, valve sizes and valve types, please refer to Crane Fluid Systems.

### GATE VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	21.32	38.88	65.69	116.23	161.93	280.6	411.33	635.13	1125.41	1823.03	2718.96	4873.47	7681.73	11315.64

### GLOBE VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	3.27	5.96	10.08	17.83	24.84	43.04	63.1	97.42	172.63	279.64	417.07	747.56	1178.32	1735.74

### BUTTERFLY VALVES

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	--	--	--	--	--	133	240	410	655	900	1800	3550	7350	9100

### BALL VALVES

SIZE (mm)	8	10	15	20	25	32	40	50	65	80
Kv	9	11	20	47	77	1412	198	338	593	82

### CHECK VALVES (Schedule 40 Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	8.53	15.55	26.27	46.49	64.77	112.24	164.53	254.05	450.16	729.21	1087.59	1949.39	3072.69	4526.25

### STRAINERS (Flanged) (BS1387 Medium Grade Steel Pipe)

SIZE (mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Kv	--	--	--	--	33	57	91	131	232	372	544	952	1470	2151

### STRAINERS (Threaded) (BS1387 Medium Grade Steel Pipe)

SIZE (mm)	15	20	25	32	40	50
Kv	4.8	8.8	16.1	25.5	36	68

### COMMISSIONING VALVES: (Fixed Orifice Double Regulating Valve - Crane DM941)

SIZE (mm)	65	80	100	125	150	200	250	300
Kv	72	100	124	229	324	525	1058	1329

### COMMISSIONING VALVES: (Fixed Orifice Double Regulating Valve - Crane D931)

SIZE (mm)	15	20	25	32	40	50
Kv	1.87	3.14	5.59	10.8	18.1	29.1

Please do not hesitate to contact us if you require further information,  
Technical Helpline Tel: +44 (0) 1473 277400

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.

## Customer Service

The satisfaction of customer requirements is the defining philosophy of Crane Fluid Systems. The position we hold in our markets is built on the foundations of product availability from our network of distributors and providing expert technical support to users of valves and pipe fittings.

Customers' orders are received via EDI, fax or telephone by our Customer Service Administrators. Using our state-of-the-art computer-based Enterprise Resource Planning System, we are able to immediately confirm product availability and price. Our computers ensure orders are seamlessly transmitted to our Production Managers who regularly review factory plans to ensure customer requirements are satisfied on time.

Comprehensive product selection and application advice is just a phone call away. Our Internal Sales Engineers are equipped to deal with complex valve application needs, receiving customers' drawings and producing comprehensive valve schedules that will satisfy the design parameters of the heating and ventilating system. Our customers have come to regard this team as one of the most reliable sources of technical support.

## Quality Assurance

Rigid quality control and inspection at all stages of manufacture ensure that Crane products are fully suitable for their intended application and will give reliable service. Every valve and pipe fitting is individually tested in accordance with the relevant product standard.

Crane Fluid Systems is an approved manufacturer under various independent quality schemes, including the British Standards Institution (BSI) Kitemark, and is ISO9001 accredited. In addition, the company has been approved and/or listed by various user organisations including the United Kingdom Water Fittings Byelaws Scheme (WRAS approved).

## Health and Safety at Work Act

Every effort is made to ensure that when properly used, in accordance with stated recommendations, goods supplied are safe and without risk to health.

Should the purchaser be uncertain as to the suitability for uses other than those stated, he/she should check with the distributor or Crane Fluid Systems' technical team.

## Control of Substances Hazardous to Health

Material supplied by Crane Fluid Systems does not constitute "substances" as defined in the approved code of practice of COSHH but complies with the requirements of the Health and Safety at Work Act (1974).

Material supplied by Crane may be handled and stored in complete safety.

Crane products are safe to use provided they are utilised for their intended function and used within the limitations specified by Crane.

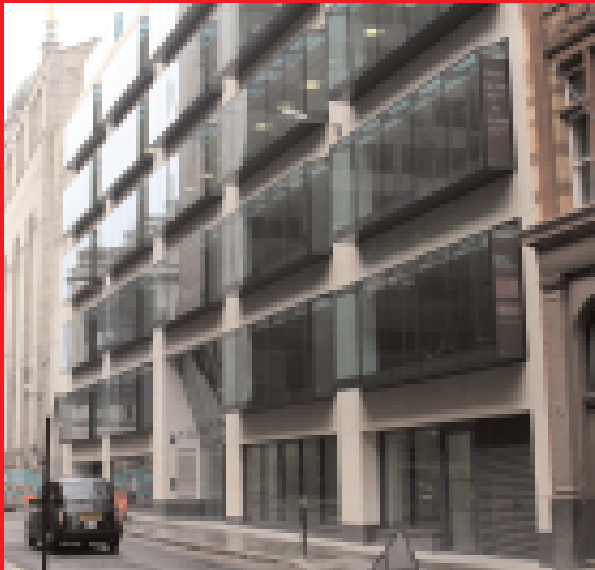
Note: Material is defined as equipment, supplies and spares that form the subject of a contract (ref. BS 4778).

## Pressure Equipment Directive

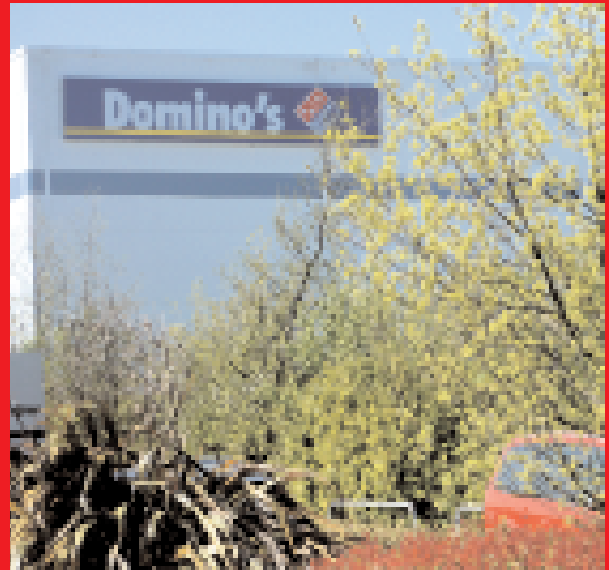
All Crane Fluid Systems products have been assessed in accordance with the Pressure Equipment Directive (PED) 97/23/EC and the Pressure Equipment Regulations 1999 No. 2001. Each product has been classified into a conformity assessment category based on the intended fluid contents – gas or liquid, the classification of the intended fluid contents – Group 1 or Group 2, the maximum allowable pressure and the nominal size (DN).

Crane products fall into either the "Sound Engineering Practice" (SEP), Category 1, Category 2 or Category 3. According to the directive, products classified as "SEP" shall not be CE marked. Category 1 products will bear the CE mark and those products classified as Categories 2 and 3 will bear the CE mark plus the number 0086. The number 0086 is that of the British Standards Institution who Crane have chosen as their "Notified Body" to monitor their quality assurance system as required by the directive.

# Project Gallery



7-10 Old Bailey, London



Domino's Pizza HQ, Milton Keynes



Emirates Football Stadium, London





Walsall College, Walsall



The Apex, Bury St Edmunds



Brierley Hill Health & Social Care Centre, Midlands

# Index of Figure Numbers

FIG NO.	PAGE NO.	FIG NO.	PAGE NO.	FIG NO.	PAGE NO.
430	80	D180	53	F277	74
440	81	D191	34	F372	70
1900	76	D237	54	F493	42
1910	77	D237A	55	F611	35
C960	5-7	D255C	56	F612	36
CommPac	19-20	D297	71	F614	37
D4	65	D298	72	F615	38
D14	66	D901	7	F621	35
D15	67	D902	7	F622	36
D16	68	D921	9	F624	37
D138	39	D923	9	F625	38
D140	40	D931	10	F626	35
D151	46	D933	10	F627	36
D151A	47	D934	10	F628	37
D151X	49	D981P	11	F629	38
D155C	48	D983P	11	FM52	58
D156	50	D984P	11	FM57	60
D159	51	D1088	78	FM63	61
D166	52	D1089	79	FM82	62
D171	25	D9601	4	FM276	73
D171A	30	DA931	13	FM278	75
D171AC	32	DA941	14	FM369	69
D171ACEXS	32	DM160	57	FM450	44
D171ACLS	33	DM900	8	FM451	44
D171ACTH	33	DM921	12	FM455	45
D171AEXS	30	DM925G	15	FM469	43
D171ALS	31	DM925L	15	FM492	41
D171ATH	31	DM931	13	P82	18
D171C	28	DM941	14	P83	18
D171CEXS	28	DM950G	16	P84	18
D171CLS	29	DM950L	16	Z3000	22-23
D171CT	29	DM975G	17	Z3010	22-23
D171EXS	25	DPAF951	21	Z3020	22-23
D171LS	26	DPAR951	21	Z3900	22-23
D171MHU	27	F53	59	Z3910	22-23
D171MHULS	27	F58	64	Z3920	22-23
D171T	26	F84	63	Z3300	22-23

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



FLUID SYSTEMS

CRANE HOUSE, EPSILON TERRACE  
WEST ROAD, IPSWICH  
SUFFOLK IP3 9FJ

TELEPHONE: +44 (0)1473 277300

FAX: +44 (0)1473 277301

EMAIL: [enquiries@cranefs.com](mailto:enquiries@cranefs.com)

[www.cranefs.com](http://www.cranefs.com)



FM311  
ISO 9001



Visit [www.flowoffluids.com](http://www.flowoffluids.com) to order your  
copy of the New Technical Paper 410

- Designed and manufactured under quality management systems in accordance with BS EN ISO 9001:2008
- We hope our communications have an impact on you - but not the environment - we have taken steps to ensure this brochure is printed on Forestry Stewardship Council material and the paper is made by a totally chlorine free process.

Every effort has been made to ensure that the information contained in this publication is accurate at the time of publishing. Crane Ltd assumes no responsibility or liability for typographical errors or omissions or for any misinterpretation of the information within the publication and reserves the right to change without notice.



BUILDING SERVICES & UTILITIES

[www.cranesbu.com](http://www.cranesbu.com)