CRANE FLUID SYSTEMS

TOTAL PRODUCT CATALOGUE

WATER | HEATING | VENTILATION | AIR CON | GAS

- BALANCING VALVES
- BALL VALVES
- BUTTERFLY VALVES
- CHECK VALVES
- DRAIN COCKS
- GATE VALVES
- GLOBE VALVES
- PIPE FITTINGS
- RADIATOR VALVES
- STRAINERS

OUR GENIUS IS VALVES & PIPE FITTINGS

CRANE BUILDING SERVICES & UTILITIES

Contents

FULL TECHNICAL DATA AVAILABLE ON
WWW.CRANEFS.COM

Introduction

Crane Fluid Systems

Crane Fluid Systems is a leading manufacturer of valves, fittings and engineered products in the building services and general industrial markets. We aim to be our customers' preferred supplier by offering products which provide best value together with service levels that exceed our customers' expectations.

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 Bye Laws Sheme (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).

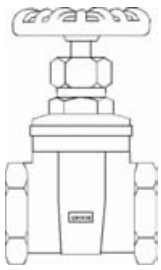
Pressure Equipment Directive

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 Institute who Crane have chosen as their "Notified Body" to monitor their quality assurance system as required by the directive.

Valve Types

Gate Valves

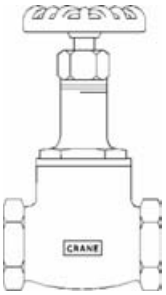


Crane gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. They serve as efficient stop valves with fluid flow in either direction.

The straight through design offers little resistance to flow and reduces pressure drop to a minimum. A gate-like disk – actuated by a stem screw and handwheel – moves up and down at right angles to the path of flow, and seats against two seat faces to shut off the flow.

Gate valves are not recommended for throttling since the control characteristic is not appropriate and subsequent damage, due to erosion, may prevent the valve providing an effective shut off.

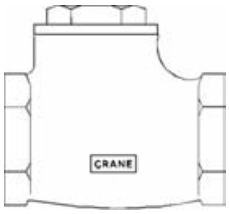
Globe Valves



Crane globe valves are highly efficient for throttling service because seat and disk designs provide flow characteristics with proportionate relationships between valve lift and flow rate. This assures accurate flow control/regulation.

Globe valve bodies are normally of spherical shape, ensuring maximum strength against line pressures and pipeline strains. Wide faced hexagon ends on threaded valves provide a firm wrench grip which prevents damage to the valve.

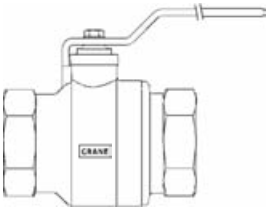
Check Valves



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.

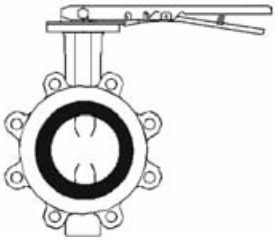
Most Crane swing check valves can be installed in horizontal or vertical upward flow piping. Lift check valves must be used in horizontal lines only.

Ball Valves



The Crane range of copper alloy ball valves consists of compact, lightweight units which are easy to install and operate, yet their ability to withstand robust construction ensures long, trouble-free service life. They offer full flow with minimum turbulence in the open position and bubble tight closure in the closed position. Only a quarter-turn is required to fully open or close the valve.

Butterfly Valves



Crane butterfly valves are compact quarter turn valves. The body is elastomer lined providing a resilient bubble tight shut off.

The valves are supplied in wafer or lugged variants and may be lever or gearbox operated.

Linings are EPDM or Nitrile rubber depending on the intended service conditions.

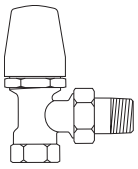
Primarily recommended for on off service, they may also be used for non critical throttling applications. Only a quarter turn is needed to fully open or close the valve.

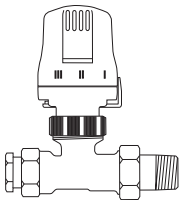
Strainers

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

Generous proportions of Crane strainers allow the units to collect significant quantities of foreign matter before pressure losses necessitate cleaning of the basket.

Radiator Valves

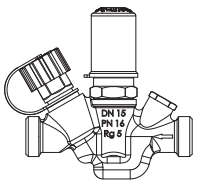




Crane radiator valves are manufactured from high-grade materials and use the same functional design as the industrial bronze globe and gate valve patterns. Considerations of the service for which the valve is intended and also compliance with related standards influences dimensions, internal detail, pressure/temperature ratings and importantly, exterior appearance.

Crane radiator valves are suitable for building services installations where durability and rugged construction are predominant, while satisfying the aesthetic requirements demanded for modern commercial and domestic interiors.

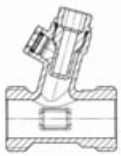
MultiTherm/EtaTherm and MultiTee



MultiTherm

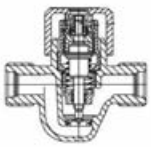
For control of potable hot water services. The Muliti-Therm family enable a constant flow in the system, maintaining temperature and preventing dead-legs.

A thermostatic cartridge in the MultiTherm is factory pre-set at 57°C. Between 52°C and 57°C the valve starts to close, restricting flow and increasing temperature. When set temperature is reached, a minimum volume flows continuously thus preventing dead-legs forming.



EtaTherm

During disinfection, the water storage temperature needs to be increased above 62°C and the MultiTherm opens to allow additional flow through the system.



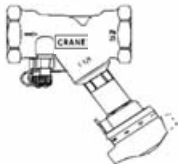
MultiTee

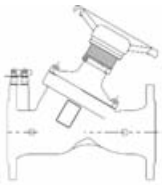
After disinfection, the valve automatically returns to the pre-set position. MultiTherm is recommended for systems with flow rates above 0.007 l/sec. EtaTherm is recommended for systems with flow rates below 0.007 l/sec. MultiTee can be fitted at various points in the system to enable temperature monitoring.

ProBalance

The Crane ProBalance range offers a wide variety of Static Balancing Valves and Flow Management Systems, providing the ultimate in accuracy and reliability.

Static Balancing Valves



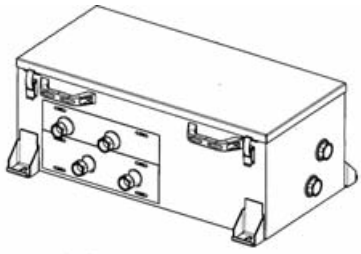


Established H&V practice recommends that wherever possible within heating and chilled water systems, hydraulic losses should be minimal. Thus flow measurement and regulating valves serving such systems should function with pressure losses as low as efficient operation and high accuracy will permit.

However, in certain circumstances where flow velocities are low as a result of system design, it is equally important that adequate differential pressures are available for accurate flow measurement. This requirement is achieved on the basis of a realistic compromise between the need for accuracy and low hydraulic loss.

Crane flow measurement and regulating valves enable systems design engineers to specify standard production valves which will conform to the various system design options arising from current H&V technology, energy conservation considerations and standards legislation.

Flow Management Systems



Alongside Crane's range of static balancing valves, the company can also offer a range of bespoke Flow Management Systems, designed to work within fixed and variable flow systems. These are prefabricated units that combine the essential control components and connecting pipework in one compact module ready for simple and fast on-site connection. These systems are assembled to order for different specified purposes.

HVAC Quick Selection Guide

VALVE FUNCTION	VALVE TYPE		BODY MATERIAL	CHILLED WATER, LTHW AND MTHW								CWS		DHWS		AIR/GAS (See Note 1)		OIL	
				PN6		PN10		PN16		PN25									
				≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm	≤50mm	≥65mm
ISOLATION	GATE	THREADED	BRONZE	D151	D151	D151	D151	D151	D151	D151X	D151X	D151	D151	D151	D151	-	-	D151	D151
		THREADED	DZR	D151A	D151A	D151A	D151A	D151A	D151A	-	-	D151A	D151A	D151A	D151A	-	-	D151A	D151A
		FLANGED	BRONZE	-	-	DM160	DM160	DM160	DM160	DM161	DM161	-	-	-	-	-	-	-	-
		COMPRESSION	BRONZE	D155C	-	D155C	-	D155C	-	-	-	D155C	-	-	-	-	-	-	-
		FLANGED	CAST IRON	-	FM52	-	FM57	-	FM63	-	-	-	-	-	-	-	-	-	FM52
	BALL	THREADED	BRONZE	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171	D171
		THREADED	DZR	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-	D171A	-
		THREADED	BRASS	D191	D191	D191	D191	D191	D191	D191	D191	-	-	-	-	D191	-	D191	-
		COMPRESSION	BRONZE	D171C	-	D171C	-	D171C	-	-	-	D171C	-	D171C	-	D171C	-	D171C	-
	BUTTERFLY (See Note 2)	SEMI LUGGED	DUCTILE IRON	-	-	F621 F621 F626	F611/2 F621/2 F626/7	F611 F621 F626	F611/2 F621/2 F626/7	-	-	F621 WRAS	F621/2 WRAS	F621 WRAS	F621/2 WRAS	F611	F611/2	REFER TO CRANE	
		LUGGED WAFER		-	-	F614 F624 F628	F614/5 F624/5 F628/9	F614 F624 F628	F614/5 F624/5 F628/9	DM 975G	DM 975G	F624 WRAS	F624/5 WRAS	F624 WRAS	F624/5 WRAS	F614	F614/5		
NON RETURN	SWING CHECK	RESILIENT SEAT	BRONZE	D140	D140	D140	D140	D140	D140	D140	D140	-	-	-	-	D140	-	-	-
		METAL SEAT		D138	D138	D138	D138	D138	D138	D138	D138	-	-	-	-	D138	-	D138	-
		RESILIENT SEAT	CAST IRON	-	-	-	-	-	FM469	-	-	-	-	-	-	-	FM469	-	-
		METAL SEAT		-	-	-	-	-	FM492	-	-	-	-	-	-	-	-	-	-
	WAFER CHECK	RESILIENT SEAT	CAST IRON	-	-	-	FM451 FM453	-	FM451 FM453	FM455	FM455	-	-	-	-	-	-	-	-
		METAL SEAT		-	-	-	FM450	-	FM450	-	-	-	-	-	-	-	-	-	-
PIPELINE PROTECTION	STRAINER Y-TYPE	THREADED	BRONZE	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-	D295 D297 D298	-
		FLANGED	CAST IRON	-	-	-	FM276	-	FM276	FM278	FM278	-	-	-	-	-	FM276	-	FM276
		THREADED	MALLEABLE IRON	F273	-	F273	-	F273	-	F273	-	-	-	-	-	-	-	-	-
DRAINING	DRAW OFF BALL		BRONZE	D171 MHU	- -	D171 MHU	- -	D171 MHU	-	-	-	D171 MHU	-	D171 MHU	-	-	-	-	-
	DRAINING TAP		BRONZE	D340	-	D340	-	D340	-	-	-	D340	-	D340	-	-	-	-	-
	DRAW OFF COCK		BRONZE	D3441/2	-	D3441/2	-	D3441/2	-	-	-	D3441/2	-	D3441/2	-	-	-	-	-
RADIATOR VALVES	ANGLE	TRV	CHROME PLATED BRASS	-	-	D885 +T90	-	-	TRV HEAD WITH REMOTE SENSOR 2 METRES = D889 RS2 8 METRES = D889 RS8										
		HANDWHEEL		-	-	D885 +T80	-	-											
		LOCKSHIELD		-	-	D887	-	-											
	STRAIGHT	TRV		-	-	D886 +T90	-	-	TRV HEAD REMOTE TRANSMITTER 2 METRES = D889 RT2 8 METRES = D889 RT8										
		HANDWHEEL		-	-	D886 +T80	-	-											
		LOCKSHIELD		-	-	D886	-	-											

HVAC Quick Selection Guide

FUNCTION	TYPE			BODY MATERIAL	THREADED	FLANGED
REGULATION	DRV		DOUBLE REGULATING VALVE	BRONZE	D921/D923*	-
				CAST IRON	-	DM925G DM975G
				DUCTILE IRON	-	DM921
FLOW MEASUREMENT	FMD		FLOW MEASUREMENT DEVICE	DZR	D901 D902*	-
				STAINLESS STEEL	-	DM900
CIRCUIT BALANCING	TWO UNIT	DRV + FMD	DOUBLE REGULATING VALVE + FLOW MEASUREMENT DEVICE	BRONZE	D921 + D901 DRV FMD	-
					D923* + D902* DRV FMD	
				DUCTILE IRON	-	DM921 DRV DM900 FMD
				CAST IRON	-	DM925G DRV DM975G DRV DM900 FMD
	SINGLE UNIT	FODRV	FIXED ORIFICE DOUBLE REGULATING VALVE	BRONZE	D931 D981P† D933* D983P*† D934** D984P**†	-
				CAST IRON	-	DM950G
				DUCTILE IRON	-	DM941/DA941
		VODRV	VARIABLE ORIFICE DOUBLE REGULATING VALVE	DUCTILE IRON	-	DM931 DA931

* LOW FLOW APPLICATIONS

** ULTRA LOW FLOW APPLICATIONS

† FOR USE WITH ACTUATOR

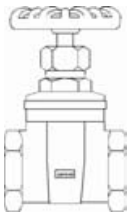
NOTES:

1) FOR AIR/GAS APPLICATIONS:-
The D191 ball valve is suitable for use on Group 1 gasses. All other products listed are only suitable for use on Group 2 gasses.

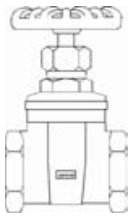
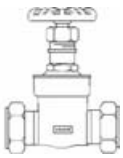
2) ALL SEMI-LUGGED VALVES:-
F611, F621, F626, F612, F622, F627 valves are suitable for use with flanges conforming to BSEN 1092-2 PN10 or PN16 and ANSI B16.1 Class 125 (sizes 2”-12”). Sizes 350mm to 600mm are suitable for use with PN16 flanges only.

ALL FULLY-LUGGED VALVES:-
F614, F624, F628, F615, F625, F629 valves are suitable for use with flanges conforming to BSEN 1092-2 PN10 or PN16. Sizes 65mm to 200mm. Sizes 250mm to 600mm are suitable for PN16 flanges only.

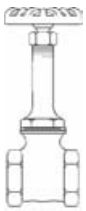
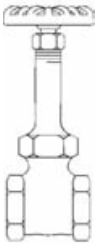
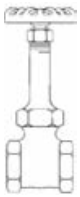
DZR

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D151A** PN20 BSEN 12288 SERIES B DZR gate valve Non rising stem *Female threaded ends to BSEN 10226*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	43 43 50 54 62 70 72 82 97 111	0.20 0.19 0.23 0.36 0.50 0.82 1.08 1.83 2.90 3.97
	**Figure number: D237A** PN20 BSEN 12288 SERIES B DZR gate valve Non rising stem, Lockshield operated *Female threaded ends to BSEN 10226*	1/2" 3/4" 1" 1 1/4" 1 1/2" 2"	50 54 62 70 72 82	0.23 0.36 0.50 0.82 1.08 1.83

Bronze

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D151** PN20 BSEN 12288 SERIES B Bronze gate valve Non rising stem 1/4"-3 version BSEN 10226 Kitemarked to BSEN 12288 *Female threaded ends to BSEN 10226 or NPT* WRAS listed	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3" 4"	46 46 51 55 63 71 73 83 96 105 162	0.27 0.26 0.27 0.38 0.59 0.84 1.25 1.88 4.37 6.40 19.7
	**Figure number: D237** PN20 BSEN 12288 SERIES B Bronze gate valve Non rising stem Kitemarked to BSEN 12288 *Female threaded ends to BSEN 10226* WRAS listed	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	51 55 63 71 73 83 96 105	0.27 0.38 0.59 0.83 1.25 1.88 4.15 6.24
	**Figure number: D155C** PN16 BS EN 12288 SERIES B Bronze gate valve Non Rising Stem *Compression ends to suit BSEN 1057 table 4 R250 Half Hard Copper*	15mm 22mm 28mm 35mm 42mm 54mm	65 70 76 92 101 125	0.34 0.49 0.75 1.06 1.36 2.37
	**Figure number: D255C** PN16 BS EN12288 SERIES B Bronze gate valve Non Rising Stem, Lockshield operated *Compression ends to suit BSEN 1057 table 4 R250 Half Hard Copper*	15mm 22mm 28mm 35mm 42mm 54mm	65 70 76 92 101 125	0.28 0.41 0.63 0.91 1.21 2.07

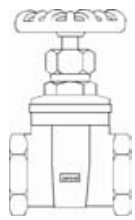
Bronze (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D151X** PN25 BSEN 12288 SERIES B Bronze gate valve Non Rising Stem *Female threaded ends to BSEN 10226 or NPT* 1/4" to 3" *BSEN 10226* versions kitemarked to BSEN 12288	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	46 46 51 55 63 71 73 83 105 111	0.27 0.26 0.35 0.55 0.84 1.18 1.66 2.55 4.56 6.38
	**Figure number: D159** PN32 BSEN 12288 SERIES B Bronze gate valve Non Rising Stem *Female threaded ends to BSEN 10226 or NPT* 1/4" to 3" *BSEN 10226* versions kitemarked to BSEN 12288	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3	46 46 51 55 63 71 73 83 105 111	0.36 0.35 0.47 0.60 0.92 1.41 1.92 2.72 5.62 7.89
	**Figure number: D235** PN32 BSEN 12288 SERIES B Bronze gate valve Non Rising Stem, Lockshield operated *Female threaded ends to BSEN 10226 or NPT* 1/2" to 3" *BSEN 10226* versions kitemarked to BSEN 12288	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	51 55 63 71 73 83 105 111	0.47 0.60 0.92 1.41 1.92 2.72 4.90 6.40
	**Figure number: D166** PN32 BSEN 12288 SERIES B Bronze gate valve Rising Stem *Female threaded ends to BSEN 10226 or NPT* 1/4" to 3" *BSEN 10226* versions kitemarked to BSEN 12288	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3	46 46 51 55 63 71 73 83 108 117	0.32 0.31 0.46 0.72 1.10 1.50 2.25 3.20 5.80 8.52
	**Figure number: D180** PN32 BSEN 12288 SERIES A Bronze gate valve Rising Stem, Union Bonnet *Female threaded ends to BSEN 10226 or NPT*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3	46 46 51 55 63 71 73 83 108 117	0.32 0.31 0.46 0.72 1.10 1.50 2.30 3.20 5.80 8.50
	**Figure number: D185AT** PN64 Bronze gate valve Rising Stem, Union Bonnet *Female threaded ends to NPT*	1/2" 3/4" 1" 1 1/4" 1 1/2" 2"	61 70 81 88 96 109	0.81 1.20 1.96 3.24 4.64 7.37

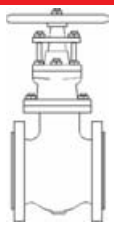
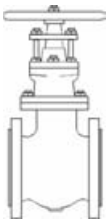
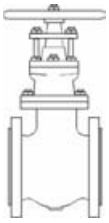
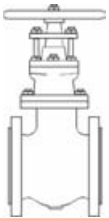
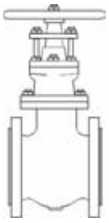
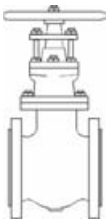
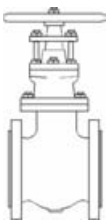
Bronze (Flanged)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: DM160** PN16 BS 5154 SERIES B Bronze gate valve Non Rising Stem *Flanged BSEN 1092-3*	20mm 25mm 32mm 40mm 50mm 65mm 80mm	89 99 110 120 135 165 185	1.57 2.50 3.38 4.93 5.54 8.39 12.25
	**Figure number: DM161** PN25 BS 5154 SERIES B Bronze gate valve Non Rising Stem *Flanged BSEN 1092-3*	20mm 25mm 32mm 40mm 50mm 65mm 80mm	90 100 110 120 135 165 185	1.73 2.50 4.33 5.75 7.50 10.80 14.40
	**Figure number: D160** Class 100 BS 1952 SERIES B Bronze gate valve Non Rising Stem *Flanged BSEN 1092-3*	¾" 1" 1¼" 1½" 2" 2½" 3"	83 89 102 114 127 140 152	1.52 2.16 2.86 3.88 5.25 8.39 11.6
	**Figure number: D161** Class 150 BS 1952 SERIES B Bronze gate valve Non Rising Stem *Flanged BS 10 Table F*	¾" 1" 1¼" 1½" 2" 2½" 3"	83 89 108 121 133 152 171	1.73 2.41 3.53 4.46 6.44 10.40 13.10
	**Figure number: D162** Class 150 BS 5154 SERIES B Bronze gate valve Non Rising Stem *Flanged ANSI 150*	¾" 1" 1¼" 1½" 2" 2½" 3"	83 89 110 120 135 165 185	1.55 2.18 2.86 4.10 5.54 10.22 11.60

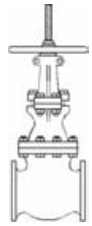
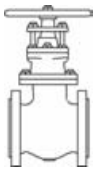
Brass (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D156** PN16 BSEN 12288 SERIES B Brass gate valve Non rising stem *Female threaded ends to BSEN 10226 or NPT*	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2" 2½" 3" 4"	41 41 48 54 62 68 72 82 97 111 131	0.20 0.20 0.22 0.35 0.52 0.77 1.02 1.75 2.77 3.90 6.35

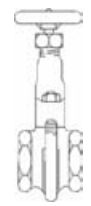
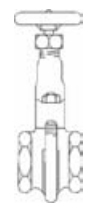
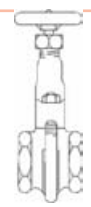
Cast Iron (Flanged)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: FM52** PN6 Cast Iron gate valve to BS EN 1171 Bronze trim, Non rising stem *Flanged ends to BSEN 1092-2 PN6*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	150 170 180 190 200 210 292 330 356	14 16 20 27 39 44 82 123 174
	**Figure number: FM57** PN10 Cast Iron gate valve to BS EN 1171 Bronze trim, Non rising stem *Flanged ends to BSEN 1092-2 PN10*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	178 190 203 229 254 267 292 330 356	14 17 22 30 41 47 85 146 188
	**Figure number: FM63** PN16 Cast Iron gate valve to BSEN 1171 Bronze trim, Non rising stem *Flanged ends to BSEN 1092-2 PN16*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	178 190 203 229 254 267 292 330 356	17.9 20.7 29.3 39.6 60.0 77.5 130.5 194.5 275.5
	**Figure number: FM124** PN16 Cast Iron gate valve to BS 5163 Non rising stem, WRAS listed *Flanged ends to BSEN 1092-2 PN16* **Figure number: FM125** As FM124 with Taper cap adapter *Flanged ends to BSEN 1092-2 PN16*	65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	190 203 229 254 267 292 330 356	13.5 18.5 22.5 32.0 41.0 66.0 100.5 141.0
	**Figure number: F52** Class 100 Cast Iron gate valve to BS 5150 Bronze trim, Non rising stem *Flanged ends to BS 10 Table D or E*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	146 159 165 171 191 210 241 273 305	13.6 15.9 20.0 27.2 39.0 44.5 81.6 122.9 174.2
	**Figure number: F53** Class 125 Cast Iron gate valve to BS 5150 Bronze trim, Non rising stem *Flanged ends to ANSI 125*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	178 190 203 229 254 267 292 330 356	12.7 15.8 19.5 29.3 39.5 45.8 84.0 148.0 198.0
	**Figure number: F54** Class 100 Cast Iron gate valve to BS 5150 All iron, Non rising stem *Flanged ends to BS 10 Table D or E*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	146 159 165 171 191 210 241 273 305	13.6 15.9 20.0 27.2 39.0 44.5 81.6 122.9 174.2

Cast Iron (Flanged)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F58** Class 125 Cast Iron gate valve to BS 5150 Bronze trim, Rising stem *Flanged ends to ANSI 125*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	178 190 203 229 254 267 356 330 356	17 20 28 38 56 60 112 185 242
	**Figure number: F59** Class 125 Cast Iron gate valve to BS 5150 Iron trim, Non rising stem *Flanged ends to ANSI 125*	2" 2½" 3" 4" 5" 6" 8" 10"	178 190 203 229 254 267 392 330	12.7 15.8 19.5 29.3 39.5 45.8 84.0 148.0
	**Figure number: FM82** *Cast Iron gate valve to BSEN 1171* Bronze trim, Rising stem *Flanged ends to BSEN 1092-2*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	178 190 203 229 254 267 292 330 356	21 25 35 50 70 90 141 223 304
	**Figure number: F84** Class 125 Cast Iron gate valve to BS 5150 Bronze trim, Rising stem *Flanged ends to ANSI 125*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	178 190 203 229 254 267 292 330 356	21.5 24.8 29.5 42.7 72.3 88.1 140.0 225.0 314.0

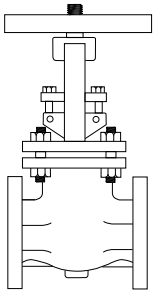
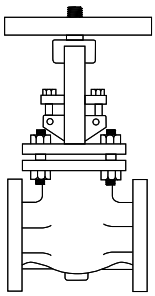
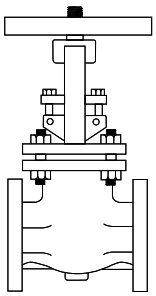
Malleable Iron (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F174** PN16 Malleable Clamp gate valve Bronze trim, Rising stem *Threaded NPT* Sizes 2½-4" PN12	½" ¾" 1" 1¼" 1½" 2" 2½" 3" 4"	52 59 65 73 80 92 105 116 141	0.8 1.1 1.6 2.6 3.2 5.1 9.0 10.5 23.7
	**Figure number: F179** PN16 Malleable Clamp gate valve Iron trim, Rising stem *Threaded to BS 21* Sizes 2½-4" PN12	½" ¾" 1" 1¼" 1½" 2" 2½" 3" 4"	52 59 65 73 80 92 105 116 141	0.8 1.1 1.6 2.6 3.2 5.1 9.0 10.5 23.7
	**Figure number: F182** PN16 Malleable Clamp gate valve Iron trim, Rising stem *Threaded NPT* Sizes 2½-4" PN12	½" ¾" 1" 1¼" 1½" 2" 2½" 3" 4"	52 59 65 73 80 92 105 116 141	0.8 1.1 1.6 2.6 3.2 5.1 9.0 10.5 23.7

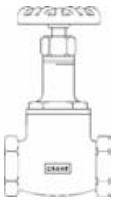
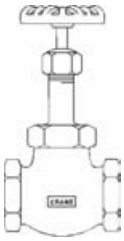
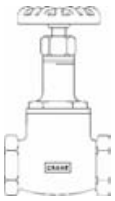
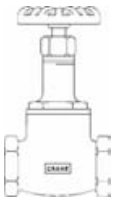
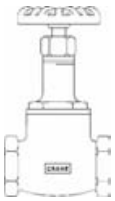
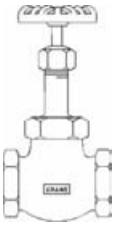
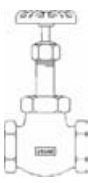
Malleable Iron (Flanged)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F183** Iron trim, Rising stem *Flanged to ANSI Class 125*	1" 1½" 2" 2½" 3" 4"	81 95 108 125 129 172	2.5 4.6 6.5 10.0 14.5 27.0

Cast Steel

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: 47XU-F** Class 150 Carbon Steel Gate Valve to API 600 Outside screw and yoke Flexible Wedge Disk Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12" 14" 16" 18" 20" 24"	178 191 203 229 267 292 330 356 381 406 432 457 508	21 32 35 50 80 141 207 295 391 509 636 966 1418
	**Figure number: 33XU-F** Class 300 Carbon Steel Gate Valve to API 600 Outside screw and yoke Flexible Wedge Disk Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12" 14" 16" 18" 20" 24"	216 241 282 305 403 419 457 502 762 838 914 991 1143	34 36 49 75 145 227 345 464 627 891 1114 1768 2860
	**Figure number: 76XU-F** Class 600 Cast Steel Gate Valve to API 600 Outside screw and yoke Flexible wedge disc Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12"	292 330 356 432 559 660 788 838	38 59 73 136 290 490 703 953

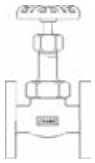
Bronze (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D4** PN20 BS 5154 SERIES B Bronze globe valve Metal disc, Screwed bonnet *Female threaded ends to BS 21 or NPT* ¼" to 2" BS 21 versions kitemarked	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2"	44 44 55 63 77 91 98 118	0.23 0.22 0.31 0.42 0.71 1.12 1.50 2.48
	**Figure number: D7** PN32 BS 5154 SERIES B Bronze globe valve Renewable disc, Union bonnet *Female threaded ends to BS 21 or NPT* ¼" to 3" BS 21 versions kitemarked	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2" 2½" 3"	52 52 62 74 90 100 115 136 184 210	0.50 0.49 0.73 1.09 1.74 2.44 3.32 5.54 10.90 16.40
	**Figure number: D14** PN32* BS 5154 SERIES A Bronze globe valve Metal disc, Screwed bonnet *Female threaded ends to BS 21 or NPT* *2½" & 3" rated PN25	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2 2½" 3"	52 52 62 74 90 100 115 136 166 190	0.39 0.38 0.54 0.65 0.90 1.58 2.06 3.31 5.90 10.30
	**Figure number: D15** PN32* BS 5154 SERIES B Bronze globe valve Renewable disc, Screwed bonnet *Female threaded ends to BS 21 or NPT* ¼" to 3" BS 21 versions kitemarked *2½" & 3" rated PN25	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2 2½" 3"	52 52 62 74 90 100 115 136 166 190	0.40 0.39 0.54 0.65 0.81 1.55 2.01 3.08 6.10 10.50
	**Figure number: D16** PN32* BS 5154 SERIES A Bronze globe valve Renewable disc, Screwed bonnet Stainless steel seat and disc *Female threaded ends to BS 21 or NPT* *2½" & 3" rated PN25	¼" ⅜" ½" ¾" 1 1¼" 1½" 2	52 52 62 74 90 100 115 136	0.33 0.31 0.80 1.24 1.50 1.70 2.16 3.67
	**Figure number: D46** PN40 BS 5154 SERIES A Bronze globe valve Renewable disc, Union bonnet Stainless steel seat and disc *Female threaded ends to BS 21 or NPT*	¼" ⅜" ½" ¾" 1" 1¼" 1½" 2"	59 59 68 81 95 108 121 146	0.56 0.55 0.80 1.24 1.82 2.73 3.78 6.03
	**Figure number: D52** PN64 Bronze globe valve Renewable disc, Union bonnet Stainless steel seat and disc *Female threaded ends to BS 21 or NPT*	½" ¾" 1" 1¼" 1½" 2"	75 89 105 121 133 162	1.00 1.51 2.25 3.59 5.05 8.50

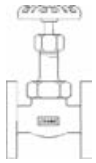
Bronze (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D71** PN32 BS 5154 SERIES B Bronze needle globe valve Straight pattern, Screwed bonnet *Female threaded ends to BS 21 or NPT*	1/8" 1/4" 3/8" 1/2" 3/4"	29 39 45 51 58	0.13 0.15 0.21 0.29 0.46
	**Figure number: D72** PN32 BS 5154 SERIES B Bronze needle globe valve Angle pattern, Screwed bonnet *Female threaded ends to BS 21 or NPT*	1/8" 1/4" 3/8" 1/2" 3/4"	- - - - -	0.13 0.15 0.21 0.29 0.46

Bronze (Flanged - Metric)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: DM6** PN16 BS 5154 SERIES B Bronze globe valve Renewable disc, Screwed bonnet *Flanged ends to BS EN 1092-3*	15mm 20mm 25mm 32mm 40mm 50mm	80 90 100 110 120 135	1.24 1.76 2.30 2.82 5.22 5.71
	**Figure number: DM11** PN25 BS 5154 SERIES B Bronze globe valve Renewable disc, Union bonnet* *Flanged ends to BS EN 1092-3* *sizes 65mm & 80mm Bolted bonnet	15mm 20mm 25mm 32mm 40mm 50mm 65mm 80mm	108 117 127 146 159 190 216 254	1.71 2.18 3.29 4.93 6.28 9.74 16.20 21.60

Bronze (Flanged - ANSI)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D10** Class 150 BS 5154 SERIES B Bronze globe valve Renewable disc, Union bonnet* *Flanged ends to ANSI 150* *sizes 2 1/2" & 3" Bolted bonnet	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	108 117 127 146 159 190 216 254	1.76 1.95 3.20 4.54 6.12 8.67 14.90 20.10

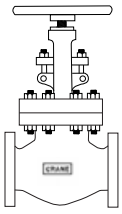
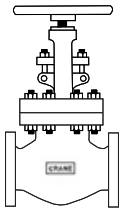
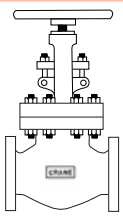
Cast Iron (Flanged)

Diagram	Description	Size	Face to Face (mm)	Weight (Kg)
	**Figure number: FM369** PN16 Cast Iron globe valve to BSEN 13789 Bronze trim, Outside screw and yoke *Flanged ends to BSEN 1092-2 PN16*	50mm 65mm 80mm 100mm 125mm 150mm	203 216 241 292 330 356	24.2 29.0 36.9 56.0 72.3 98.8
	**Figure number: F372** Class 125 Cast Iron globe valve to BS 5152 Bronze trim, Outside screw and yoke *Flanged ends to ANSI 125*	2" 2½" 3" 4" 5" 6"	203 216 241 292 330 356	23.1 27.2 34.5 54.4 70.8 95.3

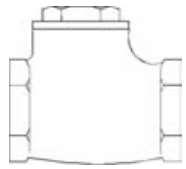
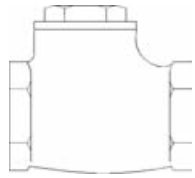
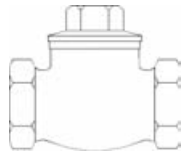
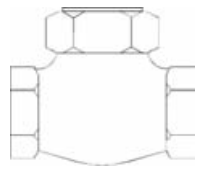
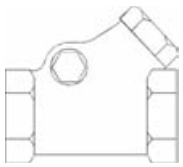
Malleable Iron (Threaded)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F254** PN64 Malleable Iron globe valve Renewable disc, Screwed bonnet Stainless steel seat, Nickel alloy disc *Female threaded ends NPT*	½" ¾" 1" 1¼" 1½" 2"	71 84 99 112 125 152	0.74 1.14 1.71 2.67 3.63 5.74

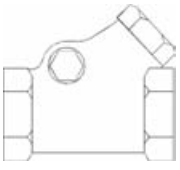
Cast Steel

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: 143XU** Class 150 Carbon Steel Globe Valve to BS 1873 Outside screw and yoke Bolted bonnet Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12"	203 216 241 292 419 495 622 699	24 32 41 65 112 178 275 409
	**Figure number: 151XU** Class 300 Carbon Steel Globe Valve to BS 1873 Outside screw and yoke Bolted Bonnet Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12"	267 292 318 356 445 559 622 711	34 45 60 95 200 315 458 500
	**Figure number: 171XU** Class 600 Cast Steel Globe Valve to BS 1873 Outside screw and yoke Bolted Bonnet Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8"	292 330 356 432 559 660	40 57 73 123 250 454

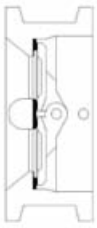
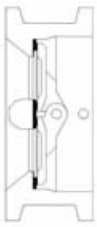
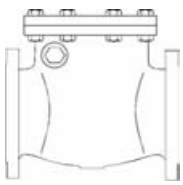
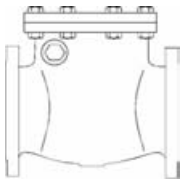
Bronze

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D138** PN25 BS 5154 SERIES B Bronze swing check valve Metal disk, screwed cap Kitemarked to BS 5154 *Female threaded ends to BS 21 or NPT*	3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	48 58 66 80 89 95 108 155 190	0.19 0.32 0.43 0.61 1.01 1.34 2.12 4.08 5.76
	**Figure number: D140** PN25 BS 5154 SERIES B Bronze swing check valve Resilient disk, screwed cap Kitemarked to BS 5154 *Female threaded ends to BS 21 or NPT*	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	58 66 80 89 95 108 153 188	0.33 0.43 0.63 1.01 1.34 2.12 4.20 6.02
	**Figure number: D104** PN20 BS 5154 SERIES B Bronze lift check valve Metal disk, screwed cap *Female threaded ends to BS 21 or NPT*	1/2" 3/4" 1" 1 1/4" 1 1/2" 2"	55 63 77 91 98 118	0.24 0.35 0.60 0.97 1.26 2.09
	**Figure number: D116** PN32 BS 5154 SERIES B Bronze lift check valve Renewable disc, Union cap *Female threaded ends to BS 21 or NPT*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	59 59 68 81 95 108 121 146 184 210	0.37 0.36 0.51 0.85 1.32 1.97 2.65 4.44 9.00 13.60
	**Figure number: D142** PN32 BS 5154 SERIES A Bronze swing check valve Regrindable disc, screwed cap *Female threaded ends to BS 21 or NPT*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	54 54 62 76 94 110 126 152 186 218	0.26 0.25 0.39 0.62 1.07 1.65 2.56 4.05 6.40 9.30

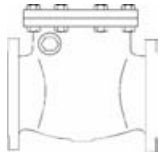
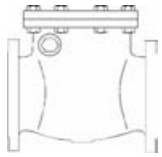
Malleable Iron

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F201** PN64 Malleable Iron swing check valve Regrindable disc and seat, screwed cap *Female threaded ends NPT*	1/2" 3/4" 1" 1 1/4" 1 1/2" 2"	70.1 83.3 102.9 120.4 137.2 168.1	0.43 0.65 1.11 1.30 2.61 4.51

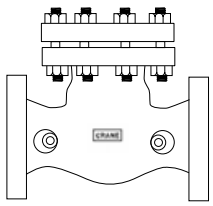
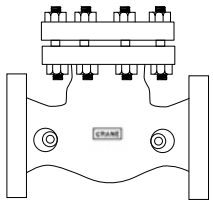
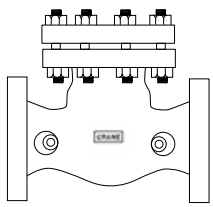
Cast Iron

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: FM450** PN16 Cast Iron wafer check valve Bronze trim *Fits between BSEN 1092-2 PN10/16 flanges* *BS 10 Table D or E and ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	43 46 49 56 64 70 71 76 83	1.3 1.8 2.6 4.7 7.0 9.8 15.0 20.0 30.0
	**Figure number: FM451** PN16 Cast Iron wafer check valve Bronze trim, Resilient seated *Fits between BSEN 1092-2 PN10/16 flanges* *BS 10 Table D or E and ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	43 46 49 56 64 70 71 76 83	1.3 1.8 2.6 4.7 7.0 9.8 15.0 20.0 30.0
NEW 	**Figure number: FM453** PN16 Cast Iron Double door wafer check valve to BS EN 12334 Suitable for fitting between flanges confoming to BS EN 1092-2 PN16 BS10 *Tabled or E and ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	54 54 57 64 70 76 95 108 143 184 191 203 213 222	1.8 2.4 3.2 4.8 7.3 10.1 14.2 23.6 37.6 60 77 99 115 231.5
NEW 	**Figure number: FM455** PN25 Cast Iron Double door wafer check valve to BS EN 12334 Stainless steel disc, EPDM seat Suitable for fitting between flanges conforming to BSEN 1092-2 PN25	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	54 54 57 64 70 76 95 108 143	2.5 3.5 4.5 8.0 10.0 13.0 28.0 45.0 68.0
	**Figure number: FM469** PN16 Cast Iron swing check valve to BSEN 12334 Bronze trim, Resilient seated *Flanged ends to BSEN 1092-2 PN16*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	203 216 241 292 330 356 495 622 698	11.3 15.6 19.3 26.6 44.0 55.5 119.0 175.0 263.0
	**Figure number: FM492** PN16 Cast Iron swing check valve to BSEN 12334 Bronze trim *Flanged ends to BSEN 1092-2 PN16*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	203 216 241 292 330 356 495 622 698	11.3 15.6 19.3 26.6 44.0 55.5 119.0 175.0 263.0

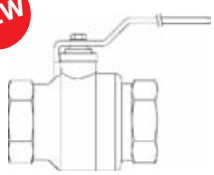
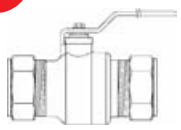
Cast Iron

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F491** Class 100 Cast Iron swing check valve to BS 4090 Bronze trim *Flanged to BS 10 table D or E*	2" 2½" 3" 4" 5" 6" 8"	203 216 241 292 330 356 495	11.3 15.6 19.3 26.6 44.0 55.5 119.0
	**Figure number: F493** Class 125 Cast Iron swing check valve to BS 5153 Bronze trim *Flanged to ANSI 125*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	203 216 241 292 330 356 495 622 698	11.3 15.6 19.3 26.6 44.0 55.5 119.0 175.0 263.0

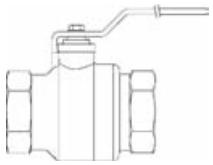
Cast Steel

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: 147XU** Class 150 Carbon Steel Check Valve to BS 1868 Swing check valve, Bolted cap Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12" 14" 16" 18" 20" 24"	203 216 241 292 356 495 622 699 787 864 978 978 1295	15 26 27 42 75 125 200 309 432 557 773 841 1318
	**Figure number: 159XU** Class 300 Carbon Steel Check Valve to BS 1868 Swing check valve, Bolted cap Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12" 14" 16" 18" 20" 24"	267 292 318 356 445 533 622 711 838 864 978 1118 1346	21 30 39 70 126 191 291 455 705 773 1000 1273 1660
	**Figure number: 175XU** Class 600 Cast Steel Swing Check Valve to BS 1868, Bolted cap Carbon Steel to ASTM 216 Grade WCB	2" 2½" 3" 4" 6" 8" 10" 12"	292 330 356 432 559 660 787 838	28 38 52 87 225 354 635 794

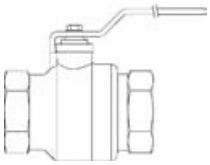
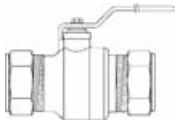
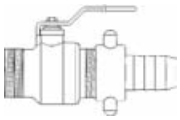
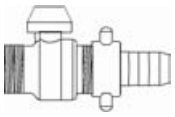
DZR

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
NEW 	**Figure number: D171A** PN25 DZR ball valve, lever operated PTFE seats and stem seal *Female threaded ends to BSEN 10226 Taper or ANSI B1.20.1* WRAS Listed *Extension stems, Lockshields or T-handles can be fitted to Crane ball valves on request*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2"	45.3 45.3 58.5 67 80.5 94.5 102.5 122.5	0.15 0.14 0.21 0.30 0.51 0.89 1.29 2.24
NEW 	**Figure number: D171AC** PN16 DZR ball valve, lever operated PTFE seats and stem seal *Compression ends to BS EN 1254-2* WRAS Listed *Extension stems, Lockshields or T-handles can be fitted to Crane ball valves on request*	15mm 22mm 28mm 35mm 42mm 54mm	66.5 80 92.5 104.5 122 141	0.21 0.37 0.61 1.00 1.55 2.54

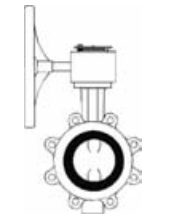
Brass

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D191** PN25 Brass ball valve, lever operated PTFE seats and stem seal *Female threaded ends to BSEN 10226 Taper or NPT* 1/4"-2" British Gas certified *Extension stems, Lockshields or T-handles can be fitted to Crane ball valves on request*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3" 4"	48 48 56 67 77 92 103 122 153 179 212	0.13 0.13 0.25 0.35 0.59 0.89 1.34 2.04 3.96 5.89 9.35

Bronze

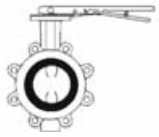
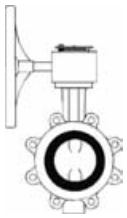
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D171** PN25 Bronze ball valve, lever operated PTFE seats and stem seal *Female threaded ends to BSEN 10226 Taper or NPT* WRAS listed *Extension stems, Lockshields or T-handles can be fitted to Crane ball valves on request*	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3"	46 46 57 67 77 91 103 122 153 179	0.15 0.15 0.22 0.45 0.69 1.12 1.67 2.93 4.98 8.75
	**Figure number: D171C** PN16 Bronze ball valve, lever operated PTFE seats and stem seal *Compression ends* WRAS listed *Extension stems, Lockshields or T-handles can be fitted to Crane ball valves on request*	15mm 22mm 28mm 35mm 42mm 54mm	80 84 95 111 124 149	0.27 0.51 0.78 1.19 1.82 3.28
	**Figure number: D171MHU** PN25 Bronze ball valve, Lever operated Male x hose union outlet WRAS listed *Male threaded ends to BSEN 10226 Taper*	1/2" 3/4" 1"	104 124 147	0.27 0.55 0.88
	**Figure number: D171MHULS** PN25 Bronze ball valve, Lockshield operated Male x hose union outlet WRAS listed *Male threaded ends to BSEN 10226 Taper*	1/2" 3/4" 1"	104 124 147	0.31 0.58 0.90

Nitrile Liner

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F611** PN16 Semi Lugged Butterfly valve to EN 593 Aluminium Bronze disc, Nitrile liner -10 to 90 Deg C Lever operated (lockable) *Fits between BSEN 1092-2 PN10/16 flanges and ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm	44 48 48 54 57 57 63	3 4 5 7 8 9 15
	**Figure number: F612** PN16 Semi Lugged Butterfly valve to EN 593 Aluminium Bronze disc, Nitrile liner -10 to 90 Deg C Gearbox operated *Fits between BSEN 1092-2 PN10/16 flanges sizes 350mm to 600mm PN16 only sizes 50-300mm fit between ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	44 48 48 54 57 57 63 70 79 79 89 108 113 156	7 8 9 10 17 18 25 31 44 60 93 112 156 251
	**Figure number: F614** PN16 Fully Lugged Butterfly valve to EN 593 Aluminium Bronze disc, Nitrile liner -10 to 90 Deg C Lever operated (lockable) *Fits between BSEN 1092-2 PN16 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm	44 48 48 54 57 57 63	3 4 6 12 13 14 22
	**Figure number: F615** PN16 Fully Lugged Butterfly valve to EN 593 Aluminium Bronze disc, Nitrile liner -10 to 90 Deg C Gearbox operated *Fits between BSEN 1092-2 PN16 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	44 48 48 54 57 57 63 70 79 79 89 108 113 156	7 8 10 16 25 26 34 43 57 88 124 165 225 313

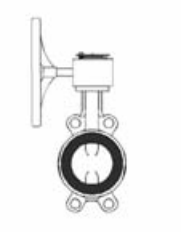
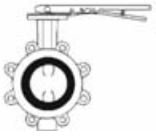
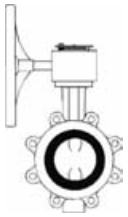
Crane Butterfly valves are also available to suit ANSI 125 end connections. Consult Crane for details.

EPDM Liner – WRAS Listed

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F621** PN16 Semi Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (WRAS listed) -10 up to 100 Deg C Lever operated (lockable) *Fits between BSEN 1092-2 PN6/10/16 flanges* WRAS	50mm 65mm 80mm 100mm 125mm 150mm 200mm	43 46 46 52 56 56 60	2.0 2.7 3.3 5.1 6.1 8.8 12.9
	**Figure number: F622** PN16 Semi Lugged* Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner WRAS listed to 300mm -10 to 100 Deg C Gearbox operated *Fits between BSEN 1092-2 PN6/10/16 flanges sizes 250 & 300mm PN10/16 and 350 to 600mm PN16* * sizes 250mm to 600mm are wafer pattern WRAS	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	43 46 46 52 56 56 60 68 78 78 102 114 127 154	3.0 3.7 4.3 5.9 7.1 10.8 14.9 26.4 40.0 73.0 92.0 138.0 179.0 260.0
	**Figure number: F624** PN16 Fully Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (WRAS listed) -10 to 100 Deg C Lever operated (Lockable) *Fits between BSEN 1092-2 PN16 flanges* WRAS	50mm 65mm 80mm 100mm 125mm 150mm 200mm	43 46 46 52 56 56 60	2.95 3.50 5.00 6.20 9.50 12.00 26.00
	**Figure number: F625** PN16 Fully Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (WRAS listed up to 300mm) -10 to 100 Deg C Gearbox operated *Fits between BSEN 1092-2 PN16 flanges* WRAS	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	43 46 46 52 56 56 60 68 78 78 102 114 127 154	3.95 4.50 6.00 7.00 10.50 18.00 35.00 49.00 56.00 85.00 116.00 163.00 203.00 280.00

Crane Butterfly valves are also available to suit ANSI 125 end connections. Consult Crane for details.

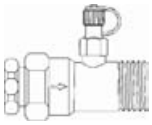
EPDM Liner – High Temperature

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F626** PN16 Semi Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (High temperature) -10 to 130 Deg C Lever operated (lockable) *Fits between BSEN 1092-2 PN10/16 flanges and ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm	44 48 48 54 57 57 63	3 4 5 7 8 9 15
	**Figure number: F627** PN16 Semi Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (High temperature) -10 to 130 Deg C Gearbox operated *Fits between BSEN 1092-2 PN10/16 flanges* *sizes 350-600mm PN16 only* *sizes 50-300mm fit between ANSI 125 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	44 48 48 54 57 57 63 70 79 79 89 108 133 156	7 8 9 10 17 18 25 31 44 60 93 112 156 251
	**Figure number: F628** PN16 Fully Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (High temperature) -10 to 130 Deg C Lever operated (lockable) *Fits between BSEN 1092-2 PN16 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm	44 48 48 54 57 57 63	3 4 6 12 13 14 22
	**Figure number: F629** PN16 Fully Lugged Butterfly valve to EN593 Aluminium Bronze disc, EPDM liner (High temperature) -10 to 130 Deg C Gearbox operated *Fits between BSEN 1092-2 PN16 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm 450mm 500mm 600mm	44 48 48 54 57 57 63 70 79 79 89 108 113 156	7 8 10 16 25 26 34 43 57 88 124 165 225 313

Crane Butterfly valves are also available to suit ANSI 125 end connections. Consult Crane for details.

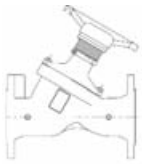
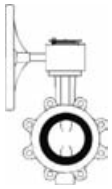
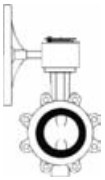
Flow Measurement Devices

ProBalance

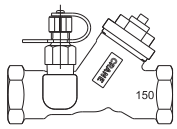
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D901** DZR Flow measurement device to PN25 (Max temp 120°C) *Threaded Female inlet & Male outlet* *BSEN 10226* *Size 1/2" includes complimentary copper to iron adapter* Fitted with two insertion test points **Figure number: D902** As D901 but designed for low flow applications	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 1/2"	57 58 66 72 72 82 57	0.26 0.31 0.39 0.51 0.52 0.81 0.26
	**Figure number: DM900** PN 25 (Max temp 120°C) Stainless Steel Flow measurement device *Wafer pattern to fit between* *BSEN 1092-2 PN10/16 Flanges* Fitted with two insertion test points * larger sizes available please consult Crane	20mm 25mm 32mm 40mm 50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm*	18 18 18 18 18 18 18 18 18 18 18 18 18	0.7 0.8 1.0 1.1 1.4 1.5 1.8 2.2 2.6 3.0 4.4 5.7 7.1

Double Regulating Valves

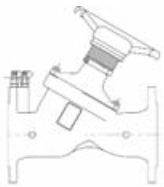
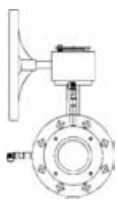
ProBalance

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D921** WRAS listed Bronze double regulating valve to BS 7350 PN25 (Max temp 120°C) *Threaded Female BSEN 10226 or NPT* **Figure number: D923** WRAS listed As D921 but designed for low flow applications	1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 1/2"	87 96 100 114 125 146 87	0.65 0.72 0.91 1.10 1.44 1.90 0.65
	**Figure number: DM921** PN16 Ductile Iron double regulating globe type valve to BS 7350 *Flanged to BSEN 1092-2 PN16*	65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	290 310 350 400 480 600 730 850	15.8 19.5 28.0 37.5 50.5 123.0 192.0 251.0
	**Figure number: DM925G** PN16 Cast Iron double regulating fully lugged butterfly valve to BSEN 593 Al. Bronze disk and EPDM liner Gearbox operated *Fits between BSEN 1092-2 PN16 Flanges* Lever version DM925L	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	43 46 46 52 56 56 60 68 78	8.6 9.1 11.8 17.2 18.1 19.5 29.5 39.9 54.9
	**Figure number: DM975G** PN25 Ductile Iron double regulating fully lugged butterfly valve to BSEN 593 Stainless steel disc and EPDM liner Gearbox operated *For use with PN25 flanges*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	43.0 45.0 46.0 51.5 56.0 56.5 60.0 68.5 79.5	10.0 10.8 11.0 13.0 16.0 18.5 29.8 40.0 53.0

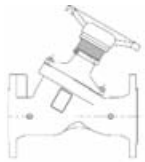
Motobalance Fixed Orifice Double Regulating Valve (Commissioning Set)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D981P** PN16 Bronze commissioning set (Max temp 120°C) *Threaded Female BSP or NPT* Fitted with two insertion test points	½" ¾"	87 96	0.41 0.45
	Figure number: D983P As D981 but designed for low flow applications	½"	87	0.41
	Figure number: D984P As D981 but designed for ultra low flow applications	½"	87	0.41

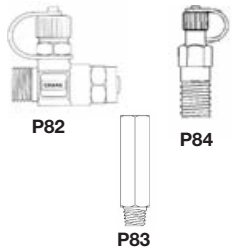
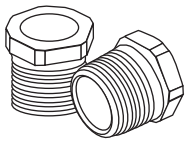
Fixed Orifice Double Regulating Valve (Commissioning Set)

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D931** PN25 Bronze commissioning set to BS 7350 (Max temp 120°C) *Threaded Female BSEN 10226 or NPT* Fitted with two insertion test points WRAS listed	½" ¾" 1" 1¼" 1½" 2"	87 96 100 114 125 146	0.65 0.72 0.91 1.10 1.44 1.90
	Figure number: D933 As D931 but designed for low flow applications WRAS listed	½"	87	0.65
	Figure number: D934 As D931 but designed for ultra low flow applications WRAS listed	½"	87	0.65
	**Figure number: DM941** PN16 Ductile Iron double regulating globe type valve to BS 7350 (Max temp 120°C) with integral fixed orifice *Flanged to BSEN 1092-2 PN16* Fitted with two insertion test points **Figure number: DA941** Flanged to ANSI 125	65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	290 310 350 400 480 600 730 850	16.3 20.0 28.5 38.0 51.0 124.0 194.0 254.0
	**Figure number: DM950G** PN16 Cast Iron butterfly valve commissioning set Al. Bronze disk and EPDM liner (Max temp 120°C) Double regulating gearbox operated *Flanged to BSEN 1092-2 PN16* Lever version DM950L	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm 350mm 400mm	158 161 171 181 190 232 287 345 404 451 511	19.7 20.8 23.4 32.5 38.4 47.1 67.8 89.2 124.2 166.5 180.0

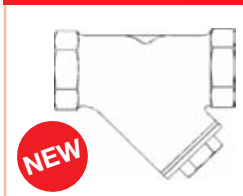
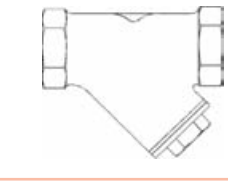
Variable Orifice Double Regulating Valve

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: DM931** PN16 Ductile Iron variable orifice double regulating valve to BS 7350 (Max temp 120°C) *Flanged to BSEN 1092-2 PN16* Fitted with two insertion test points **Figure number: DA931** *Flanged ANSI 125*	65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	290 310 350 400 480 600 730 850	15.8 19.5 28.0 37.5 50.5 123.0 192.0 251.0

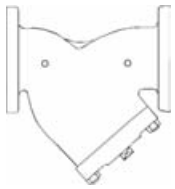
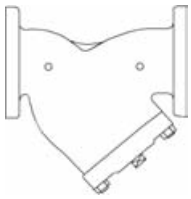
Balancing Valve Accessories

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: P82** Insertion test point for MTHW **Figure number: P83** Extension tube for use on insulated systems. **Figure number: P84** Insertion test point, pack of 10	1/4" 1/4" 1/4"	- - -	- - -
	Compression ends D921, D923, D931, D933, D934, D981P, D983P, D984P, when connecting to copper pipe in accordance with BSEN1057 table 4. (R250 Half Hard Copper). 1/2" (15mm) Kit = Part No 0JG91118S 3/4" (22mm) Kit = Part No 0JG9119T			

Bronze

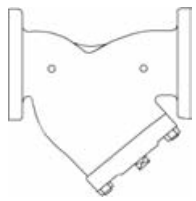
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D295** PN25 Bronze Y Type strainer Stainless steel perforated screen 0.75mm Stainless steel perforated screen 0.75mm *Female threaded ends to BSEN 10226 or NPT* WRAS Listed	½" ¾" 1" 1¼" 1½" 2"	**74.5** 86.5 108 122 135 163	**0.27** 0.43 0.79 1.1 1.58 2.55
	**Figure number: D297** PN32 Bronze Y Type strainer Stainless steel perforated screen 0.75mm *Female threaded ends to BSEN 10226 or NPT* WRAS Listed	½" ¾" 1" 1¼" 1½" 2"	71 86 101 134 148 176	0.38 0.63 0.96 1.81 2.43 4.13
	**Figure number: D298** PN16 Bronze Y Type strainer Stainless steel perforated screen 0.75mm *Female threaded ends to BSEN 10226 or NPT* WRAS Listed	½" ¾" 1" 1¼" 1½" 2"	**58** 70 88 96 107 126	**0.18** 0.29 0.39 0.68 0.93 1.5

Cast Iron

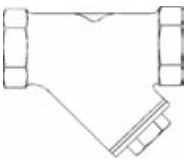
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: FM276** PN16 Cast Iron Y Type strainer Stainless steel perforated screen 1.5mm *Flanged ends to BSEN 1092-2 PN16* Drilled bosses and cap *Sizes 350 to 600mm available on request	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	226 290 306 350 399 480 600 686 757	13.0 23.0 30.0 43.0 71.0 93.0 161.0 266.0 397.0
	**Figure number: F277** ANSI 125 Cast Iron Y Type strainer Stainless steel perforated screen 1.5mm Drilled bosses and cap *Flanged ends to ANSI Class 125*	2" 2½" 3" 4" 5" 6" 8" 10" 12"	152 178 191 229 254 279 342 406 483	13 23 30 43 71 93 161 266 397

*< 300mm = Group 2 gases (including steam)
Group 1 and 2 liquids
> 300mm = Group 1 and 2 liquids only

Ductile Iron

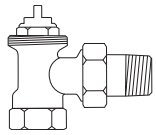
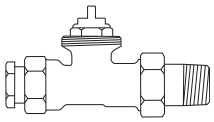
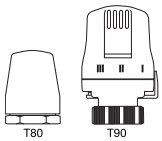
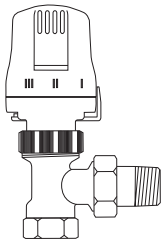
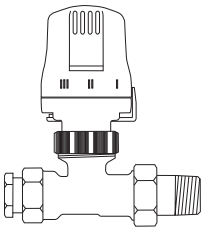
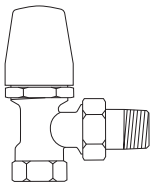
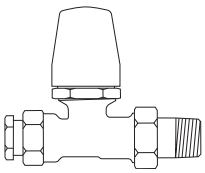
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: FM278** PN25 Ductile Iron Y Type strainer Stainless steel perforated screen 1.6mm *Flanged ends to BSEN 1092-2 PN25*	50mm 65mm 80mm 100mm 125mm 150mm 200mm 250mm 300mm	230 273 295 352 416 470 543 660 770	12.0 25.0 33.0 43.0 73.0 97.0 164.0 270.0 400.0

Malleable Iron

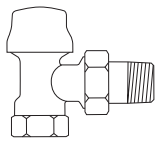
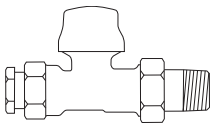
DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: F273** PN64 Malleable Iron Y Type strainer Stainless steel perforated screen 0.75mm *Female threaded ends to BSEN 10226*	½" ¾" 1" 1¼" 1½" 2"	74 89 104 137 150 178	0.37 0.54 0.92 1.55 2.22 4.17

*< 300mm = Group 2 gases (including steam)
Group 1 and 2 liquids
> 300mm = Group 1 and 2 liquids only

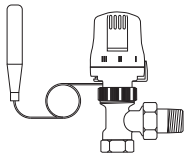
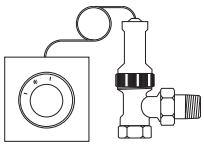
TRV & Wheel Head Connected to Common Valve Body. Chrome Plated Finish

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure number: D885** PN10 Angle pattern TRV and Wheel Head valve body	15mm 22mm	- -
	**Figure number: D886** PN10 Straight pattern TRV and Wheel Head valve body	15mm 22mm	- -
	**Figure number: T80** Wheel Head **Figure number: T90** TRV Head	- - - -	- - - -
	**D885 Angle Body and T90 TRV Head**	15mm 22mm	0.350 0.519
	**D886 Straight Body and T90 TRV Head**	15mm 22mm	0.391 0.580
	**D885 Angle Body and T80 Wheel Head**	15mm 22mm	0.350 0.519
	**D886 Straight Body and T80 Wheel Head**	15mm 22mm	0.391 0.580

Lockshield Valves. Chrome Plated Finish

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure number: D887** PN10 Angle pattern Lockshield valve	15mm 22mm	0.232 0.387
	**Figure number: D888** PN10 Straight pattern Lockshield valve	15mm 22mm	0.273 0.455

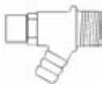
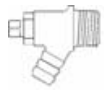
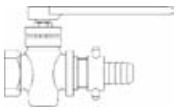
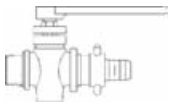
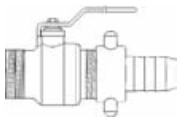
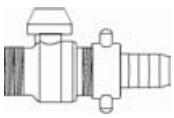
Sensors & Transmitters

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure number: D889 RS2** Remote sensing TRV sensor **Figure number: D889 RS8** Remote sensing TRV sensor	2m 8m	- -
	**Figure number: D889 RT2** Remote adjusting TRV transmitter **Figure number: D889 RT8** Remote adjusting TRV transmitter	2m 8m	- -

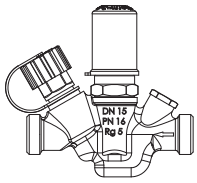
Accessories

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	Figure number: T70 Nut and olive **Figure number: T95** 90° Elbow **Figure number: T100** Tamper proof ring	15mm 22mm - - - -	- - - - - -

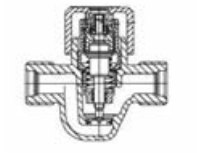
Drain Cocks

DIAGRAM	DESCRIPTION	SIZE	FACE TO FACE (mm)	WEIGHT (Kg)
	**Figure number: D340** PN10 Bronze Drain tap - Lockshield *Threaded Male BS 21 Taper* WRAS listed	½" ¾" 1"	- - -	0.13 0.35 0.59
	**Figure number: D341** PN10 Bronze Drain tap *Threaded Male BS 21 Taper* WRAS listed	½" ¾" 1"	- - -	0.12 0.34 0.58
	**Figure number: D344** PN10 Bronze Draw off cock taper plug type Gland sealed *Threaded Female BS 21 Taper*	½" ¾" 1" 1¼" 1½" 2"	114 136 150 170 204 240	0.45 0.70 1.20 2.01 2.61 4.14
	**Figure number: D344.1/2** PN10 Bronze Draw off cock taper plug type Gland sealed *Threaded Male BS 21 Taper*	½" ¾" 1" 1¼" 1½" 2"	125 145 165 185 220 250	0.48 0.73 1.23 2.10 2.75 4.31
	**Figure number: D171MHU** PN25 Bronze ball valve, Lever operated Male x hose union outlet WRAS listed *Male threaded ends to BSEN 10226 Taper*	½" ¾" 1"	104 124 147	0.27 0.55 0.88
	**Figure number: D171MHULS** PN25 Bronze ball valve, Lockshield operated Male x hose union outlet WRAS listed *Male threaded ends to BSEN 10226 Taper*	½" ¾" 1"	104 124 147	0.31 0.58 0.90

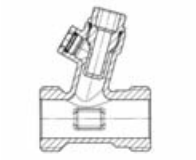
MultiTherm Automatic Circulation Regulating Valve

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure number: D1880** PN16 Bronze MultiTherm valve for circuits greater than 10m length	15mm 20mm 25mm	0.70 0.90 1.20
	Figure number: D1882 Universal drain valve	- -	- -
	Figure number: D1883 Universal thermometer	- -	- -
	Figure number: D1884 Universal insulation shell	- -	- -
	Figure number: D1885 Universal thermal sensor	- -	- -
	Figure number: D1886 Optional mapress ends	15mm 20mm 25mm	- - -
	Figure number: D1887 Optional mepla ends	15mm 20mm 25mm	- - -
	Figure number: D1888 Optional male bsp	1/2" 3/4" 1"	- - -
	Figure number: D1889 Copper tails	- -	- -

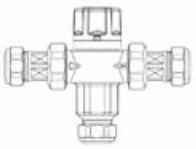
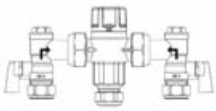
EtaTherm Automatic Circulation Regulating Valve

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure Number: D1890** PN16 Bronze valve for circuits less than 10m length	15mm	0.40

MultiTee Temperature Monitoring Pocket & Thermometer

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure Number: D1892** PN16 provides system temperature validation	15mm 20mm 25mm	0.30 0.40 0.50

Thermostatic Mixing Valves

DIAGRAM	DESCRIPTION	SIZE	WEIGHT (Kg)
	**Figure Number: D1088** PN16 steelvalve with integral filters and check valves	½" ¾"	0.50 0.60
	**Figure Number: D1089** PN16 steel valve with additional isolation ball valves and MX tail pieces	½" ¾"	0.65 0.75

CommPac Manifold Commissioning System

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 efficient, practical and versatile system:-

ProBalance

- 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.

Dimensions & Weights

OUTLETS & INLETS	LENGH (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

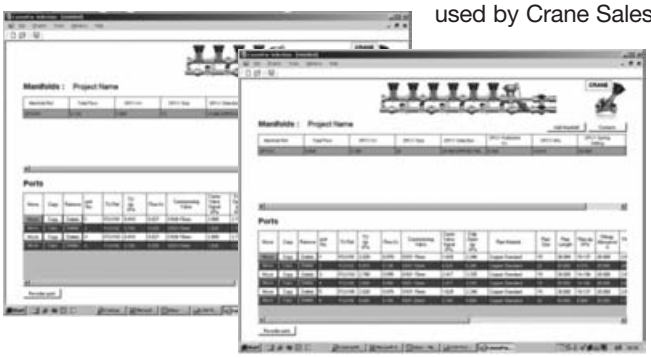
Material Specifications

PART	MATERIAL
H - Body	Bronze (Z3000)
Strainer	Bronze (D297)
Manifolds	Bronze
Isolation Valves	DZR Brass (D171A)
Regulation Valves	Bronze (D931 or D981)

Maximum pressure 16 bar. Temperature rating -10 to 100ºC

CommPac Selection Programme

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. Flow rates, Pipe sizes, Pipe materials, and Pipe losses all have to be calculated to ensure that each CommPac module contains the correct combination of products to achieve the best results.



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.

The outputs from the selection software are used by Consultants, Contractors, Commissioning Engineers, and our own Production team, ensuring consistency throughout the whole process.

Dominator Z3000
Flow Management System for Fan Coil Units

ProBalance

Threaded BSEN10226 formerly BS21 (ISO 7) for Two Unit System

Specification

The unique bypass valve unit comprises two T-ported ball valves allowing 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 and allowing for flushing of strainer and coil without need to remove basket.

Application

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

The Dominator is compact and lightweight

- The complete unit is factory tested
- Integrated union joints allow for custom alignment
- 80mm supply/return centres allow for ease of lagging
- Ease of installation

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 Installing Contractors

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

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

Dimensions & Weights

ITEM	DESCRIPTION	MATERIAL
1	Bypass Valve	Bronze to BSEN 1982 CC491K
2	ProBalance valve (D931)	Refer to ProBalance literature
3	D297 strainer	Bronze to BSEN 1982 CC491K
4	Union	Brass to BSEN 12165 CW617N
5	P84 test point	DZR to BSEN 12164 CW602N
6	Drain cock	DZR to BSEN 12164 CW602N

Pressure/temperature ratings

TEMPERATURE °C	-10 TO 100	110	120
PRESSURE (BAR)	16.0	160.0	16.0

Maximum temperature 120°c

The Dominator range comprises two 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.

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 ProBalance
includes drain and strainer

Z3010 with ProBalance
without drain and strainer

Z3020 with ProBalance
including drain but without strainer

This series utilises the Crane ProBalance 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 ref nos to assist contractors with site assembly. Extension stems are fitted to isolation ball valves for chilled water services.

Z3900 Series comprises the three variants as shown below.

Z3000 with MotoBalance
includes drain and strainer

Z3910 with MotoBalance
without drain and strainer

Z3920 with MotoBalance
including drain but without strainer

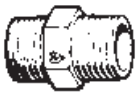
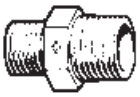
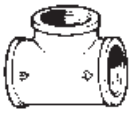
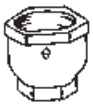
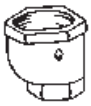
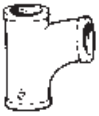
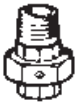
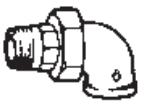
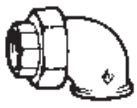
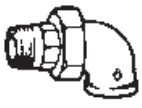
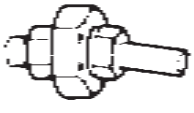
This series utilises the Crane MotoBalance Valves D981P, D983P or D984P depending on flow rate required.

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 ref nos to assist contractors with site assembly. Extension stems are fitted to isolation ball valves for chilled water services.

Index of Figure Numbers

Pipe Fittings Summary

Hexagon Bush  140*	Hexagon Nipple  144*	Hexagon Nipple Reducing  145*	Beaded Plug Solid  146	Plain Plug Hollow  147
Plain Plug Solid  148*	Countersunk Plug  149*	Backnut Parallel Thread to BS 2779  150*	Elbow  151*	M & F Elbow  152*
45° Elbow  155	45° M & F Elbow  156	Tee  161*	M & F Tee  163	Cross  171*
Socket Parallel Thread to BS 2779  176*	Socket Taper Thread  177	Socket Reducing  179*	Eccentric Socket  180	Cap  185*
Male Bend  191	M & F Bend  192	Bend  193	Twin Elbow  197	Pitcher Tee  199
Return Bend  213	Round Flange  233	Union Flat Seat  241	Union Spherical Seat Iron to Iron  256*	M & F Union Spherical Seat Iron to Iron  257
Elbow Union Spherical Seat Iron to Iron  261	M & F Elbow Union Spherical Seat Iron to Iron  262	Union Spherical Seat Bronze to Iron  271	M & F Union Spherical Seat Bronze to Iron  272	Elbow Union Spherical Seat Bronze to Iron  276
M & F Elbow Union Spherical Seat Bronze to Iron  277	Union Spherical Seat Bronze to Bronze  289	Union Self Aligning (SA)  290	*Available in Bronze	

CRANE FLUID SYSTEMS

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