

Ancillary Equipment



Business Philosophy

- Integrity in management
- Quality of product

HISTORY

HAM BAKER is a name most professionals in the water and wastewater industries will instinctively associate with high quality precision-engineered products. Established over 100 years ago the original company has undergone many changes over the last century and more recently changes of ownership.

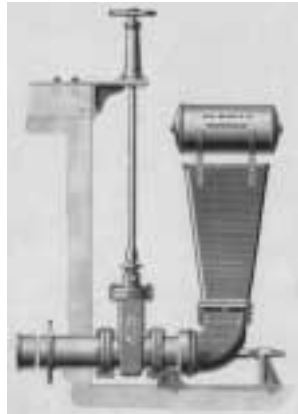
The company is acknowledged as the world's leading designer and manufacturer of penstocks and flap valves. Penstocks and other fluid control products manufactured by Ham Baker can be found operating in almost every country in the world.

The history of the company began in 1884 as a partnership between Frederick Ham, William Baker and Claude Sansom in London and began manufacturing penstocks in 1886, trading under the name of Ham Baker & Company Ltd. In 1902, Hartleys (Stoke-on-Trent) Ltd was founded as a family owned business in Stoke-on-Trent by William Hartley, who gained his early engineering training in the locomotive industry. Initially the company manufactured general engineering items and began specialising in the manufacture of equipment for the water and wastewater industries in 1904.

The two companies merged in 1998 to create a product range unrivalled throughout the world.

In 2001 the company was acquired by the WTB Group of Bristol and continues its proud 100 year history as a leading innovator in the fields of water and wastewater engineering.

Ham Baker Flow Control now produces a range of products in cast iron, ductile iron, stainless steel and plastic to deal with every aspect of fluid control.



15 Reasons Why customers choose Ham Baker Flow Control

1. Reputation

We hold an esteemed reputation globally, for well engineered, high quality equipment.

2. Service

Unsurpassed in service, our team of professionals will help you to find the most effective solution. All our personnel have e-mail contactability, even whilst away from the office. The business world is moving faster exponentially, and we aim always, to move with it.

3. People

We pride ourselves on building long-term, strong relationships with both suppliers and customers to enable us to better understand and meet customer needs.

4. Range

Unique product range with manufacturing capability up to 3m square flap valves.

5. Quality

Our products exceed the requirements of British, and American Waterworks Association, Standards and, indeed, exceed the quality of most of our competitors. All products are manufactured under a BS EN ISO 9001:2000 certified quality assurance system.

6. Delivery

No other company delivers any faster than us. Spares and Fastrack products are often delivered within hours.

7. Flexibility

One of the very few companies who cater for non-standard requirements. "You draw it . . . we'll build it".

8. Partnerships: Experienced in Framework Arrangements

We have worked with and continue to work with a number of Water and Sewage Companies in the UK who are committed to value for money when using Ham Baker Flow Control. A sign of value for money and peace of mind.

9. One Stop Shop

Recognised as the only 'one-stop shop', design, proposals, specification, supply, fix, repair, spares, aftercare, consultation. Why diversify your time, or multiply the risks with several suppliers, when you can have all the contacts under one roof?

10. Peace of Mind

Readily available library of technical information, built up over 100 years, gives you peace of mind regarding design and maintenance. We have flap valves still in practical working order after over 90 years of continuous service.

11. Brand Name

Ham Baker is a household name of stability, in the water treatment business. Most of our competition is unknown to the end user.

12. Continued Innovation

We are at the leading edge of design and development.

13. Unique

Coplastix products are the most cost effective available. Designed and built only by Ham Baker Flow Control.

14. Retro Engineering

Designs are on file from over 60 years ago, to enable parts to be re-engineered, to service older equipment, meaning lower cost of manufacture, with exact specification.

15. Price

Our products are competitively priced and represent excellent over life-time value for money, when considering all aspects of ownership; cost, installation, maintenance, and long-term performance.

Ancillary Equipment

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Registration number 15751

Disc Flushing Valves

DESCRIPTION

The disc flushing valve has a circular aperture and is suitable for wall or flange mounting. A wall hook is utilised to secure the valve in the open and intermediate positions via the lifting handle. The disc flushing valve is supplied with an impact device for ease of opening.

The handle mass may be a determining factor for the duty. Maximum handle lengths of 4 metres are recommended for comfortable operation of the equipment. Lengths in excess of 4 metres can be supplied on request.

The disc is designed to withstand a standard on-seating head of 10 metres but, dependent on size will take a degree of off-seating pressure.

APERTURE SIZE (mm)	MAXIMUM HEAD (Metres)	
	On-Seating	Off-Seating
80	10	4
100	10	3.75
150	10	3.5
200	10	3
250	10	2.5
300	10	2.25
350	10	2
400	10	1.5

Note: Heads taken from invert

FLANGE MOUNTING

Valves all supplied with flanges drilled to BS EN 1092-2 : PN16. Due to the low operating duty a proportion of the specified full number of holes is used for fixing the valve.

FEATURES

- Metal to metal sealing faces
- Robust construction
- Wall hook
- Overtravel stop
- Intermediate disc position
- Impact device for easy operation
- 50-year service life
- Low maintenance

OPTIONS

- Fixing bolts can be supplied on request
- Alternative flange mounting specifications can be supplied on request

MATERIAL SPECIFICATION

Body

Constructed in BS EN 1561 min. 250 cast iron. The sealing face is fixed securely into a machined recess.

Disc

Constructed in BS EN 1561 min. 250 cast iron. The sealing face is fixed securely into a machined recess.

Sealing Faces

Manufactured from Copper alloy to BS EN 1982 : 1999.

Wedge

Constructed in BS EN 1561 min. 250 cast iron for adjusting screws.

Adjusting Screws

Manufactured from Bronze to BS EN 12167 : 1998.

Pivot Pin

Manufactured from stainless steel to BS EN 10088 : 1995 grade 1.4301 (303).

Lifting Handle

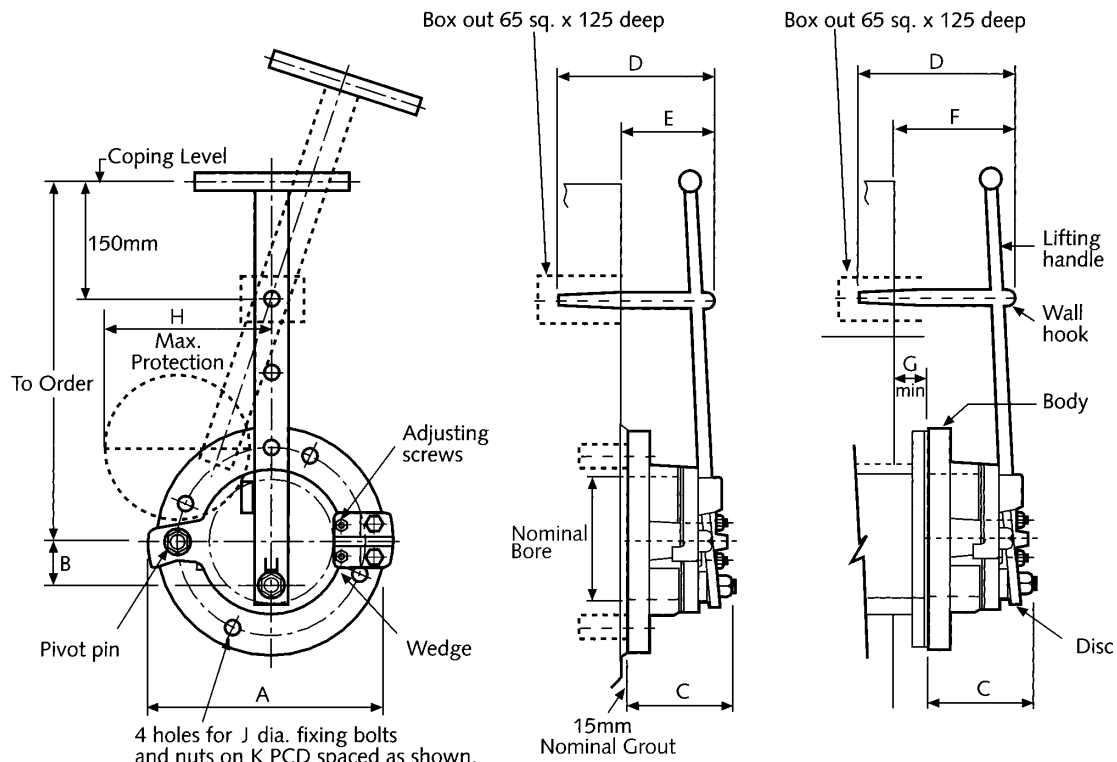
Manufactured from mild steel to BS EN 10025 : 1993 with holes for intermediate disc position.

Wall Hook

Manufactured from mild steel to BS EN 10025 : 1993 incorporating a fish tail for grouting into the box-out.

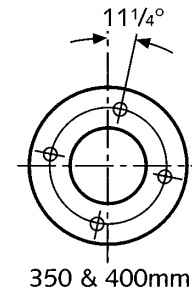
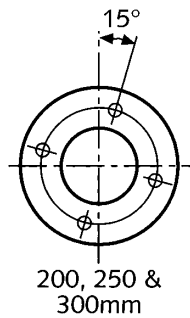
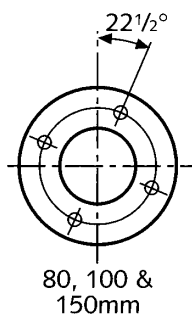
Assembly Fasteners

Standard fasteners are supplied in stainless steel to BS EN 10088 : 1995 grade 1.4401 (316; A4).



WALL MOUNTED

FLANGE MOUNTED



Fixing points for wall and flange mounting

NOMINAL BORE	A	B	C	D	E	F	G	H	J	K
DIMENSIONS IN MILLIMETRES										
80	195	22	105	190	90	120	45	125	M16	160
100	225	35	96	190	90	120	45	155	M16	180
150	295	65	130	190	100	130	50	210	M16	240
200	395	85	145	239	139	160	60	285	M16	295
250	460	110	145	230	130	160	60	335	M20	355
300	540	135	215	305	205	235	60	405	M20	410
350	590	135	215	305	205	235	65	470	M20	470
400	655	160	215	305	205	235	65	540	M20	525

Sludge Plugs and Valves

DESCRIPTION

Sludge plugs and valves are designed for installation in tanks or small chambers where silt and sludge may collect. The valve is mounted in the floor of the tank or chamber for effective desludging.

The sludge plug is handle operated and is the most basic of the two types available. The cone is utilised to guide the metal faced disk onto the body seats; a mild steel lifting handle with cotter supports the valve in the open position from a wall bracket.

The sludge valve is screw thread operated as standard and is of more robust construction than the sludge plug.

The sludge plug and sludge valve are supplied drilled for connection to flanges in accordance with BS EN 1092-2 : PN 16

FEATURES

- Metal to metal sealing faces
- Robust construction
- 50 year service life
- Low maintenance

OPTIONS

- Extensive range of operating equipment available for sludge valves.
- Alternative flange specifications can be supplied on request
- Fixing bolts can be supplied on request

MATERIAL SPECIFICATION

Body

Constructed in BS EN 1561 min. 250 cast iron designed for flange mounting applications. The sealing face is fixed securely into a machined recess.

Door/Disc

Constructed in BS EN 1561 min. 250 cast iron with sealing faces fixed securely into a machined recess.

Sealing Faces

Manufactured from Copper alloy to BS EN 12167 : 1998 which is supplied as the standard material.

Core (Sludge Plug)

Manufactured from a high impact synthetic material to aid the guiding of the disc onto the body seat.

Lifting Handle (Sludge Plug)

Manufactured from mild steel to BS EN 10025 : 1993 incorporating a cotter for supporting the valve in the open position.

Support Bracket (Sludge Plug)

Constructed in BS EN 1561 min. 250 cast iron designed to support the lifting handle and the disc in the open position.

Assembly Fasteners

Standard fasteners are supplied in stainless steel to BS EN 10088 : 1995 grade 1.4401 (316; A4).

Bridge (Sludge Valve)

Constructed in BS EN 1561 min. 250 cast iron designed to transfer the operating thrust to the valve body.

Methods of Operation (Sludge Valve)

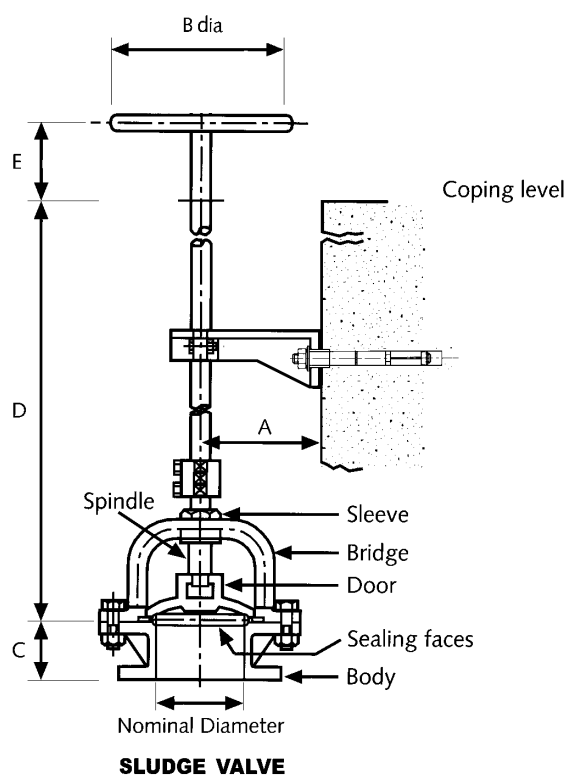
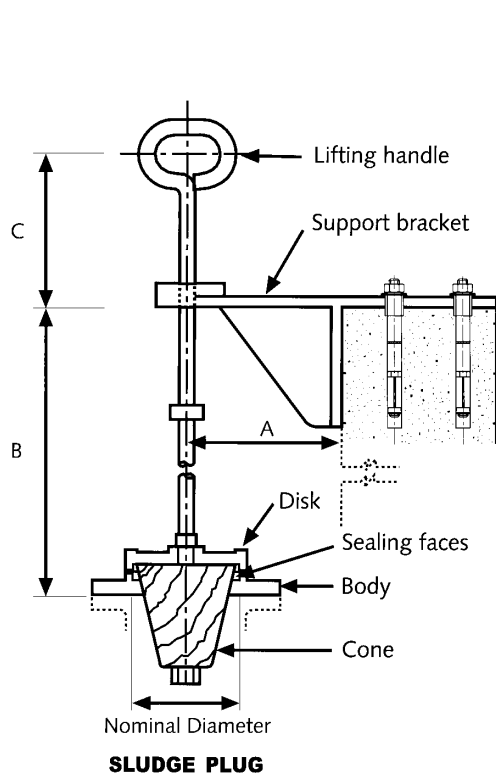
The method of operation will depend on several factors outside the control of the manufacturer. However, the range of operating equipment available is extensive and can be supplied to suit customer requirements.

Stem (Sludge Valve)

Manufactured from stainless steel to BS EN 10088 : 1995. The stem is the rising, revolving type with bronze collar for connection to the door.

Yoke sleeve (Sludge Valve)

Manufactured from bronze to BS EN 12167 : 1998 and fixed securely to the bridge.



SLUDGE PLUG

NOMINAL DIAMETER	A	B	C
DIMENSIONS IN MILLIMETRES			
80	229	TO ORDER	229
100	229	TO ORDER	229
125	229	TO ORDER	229
150	229	TO ORDER	229
200	229	TO ORDER	229

SLUDGE VALVE

NOMINAL DIAMETER	A	B	C	D	E
DIMENSIONS IN MILLIMETRES					
80	TO ORDER	200	102	TO ORDER	TO ORDER
100	TO ORDER	200	102	TO ORDER	TO ORDER
125	TO ORDER	200	102	TO ORDER	TO ORDER
150	TO ORDER	300	102	TO ORDER	TO ORDER
200	TO ORDER	300	153	TO ORDER	TO ORDER
250	TO ORDER	400	153	TO ORDER	TO ORDER
300	TO ORDER	400	153	TO ORDER	TO ORDER
400	TO ORDER	400	191	TO ORDER	TO ORDER
450	TO ORDER	500	191	TO ORDER	TO ORDER

Hydrostatic Valves

DESCRIPTION

Hydrostatic draw-off valves are used for regulating the flow to the filter beds and desludging of activated-sludge or humus tanks. Two versions of the hydrostatic valve are available: the central direct lift type and the side lift type which provides unrestricted flow at the bellmouth. The side lift bellmouth should be used when there is a risk of clogging or ragging of the valve.

Hydrostatic valves are supplied drilled for connection to flanges in accordance with BS EN 1092-2 : PN 16.

FEATURES

- Robust construction.
- Low maintenance.

OPTIONS

- Extensive range of operating equipment.
- Alternative flange mounting specification.
- Fixing bolts can be supplied on request.

MATERIAL SPECIFICATION

Cylinder

Constructed in BS EN 1561 min. 250 cast iron suitable for flange mounting applications. Length is calculated to suit customer levels and adjustment.

Bellmouth

Constructed in BS EN 1561 min. 250 cast iron machined for fitting to the tube.

Gland

Constructed in BS EN 1561 min. 250 cast iron to provide a seal between the tube and cylinder.

Bridge

Constructed in BS EN 1561 min. 250 cast iron to provide a connection between the bellmouth/tube and operating equipment.

Guide Rods

Manufactured from bronze to BS EN 10088 : 1995 or stainless steel for guiding the bellmouth/tube through the cylinder when the adjustment is in excess of 1 metre.

Tube

Manufactured from rigid plastic to provide fluid level adjustment for bellmouth and flow into pipe work system.

Sealing Assembly

The stuffing-box arrangement between the tube and the cylinder is packed with greasy hemp to provide a seal and retained by the gland, or alternatively a neoprene lip seal is used.

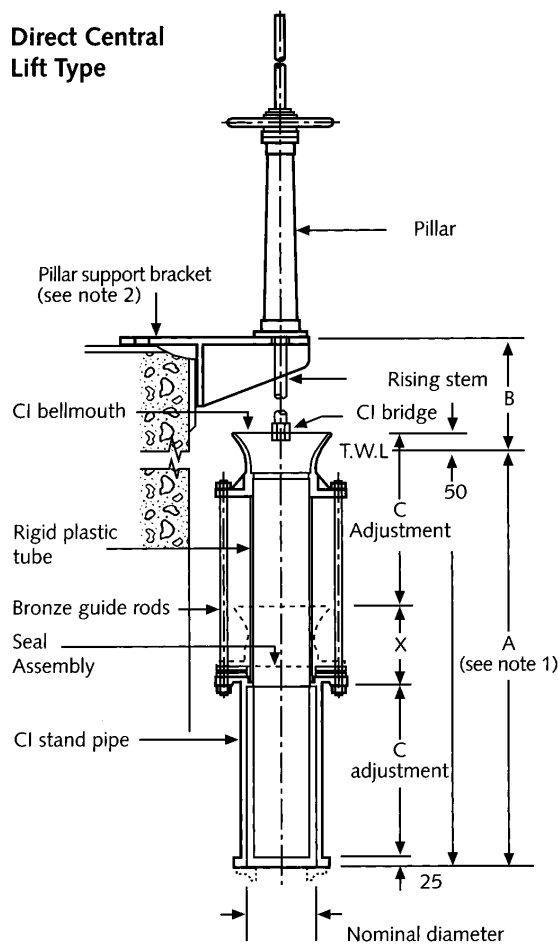
Assembly Fasteners

Standard fasteners are supplied in stainless steel to BS EN 10088 : 1995 grade 1.4401 (316;A4).

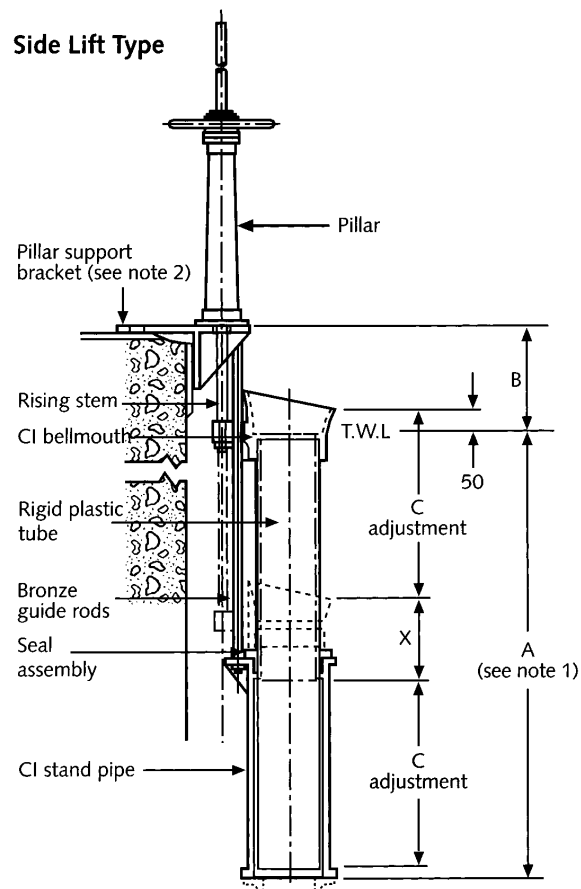
Methods of Operation

The method of operation will depend on several factors which are outside the control of the manufacturer. However, the range of operating equipment available is extensive and can be supplied to suit customer requirements.

Direct Central Lift Type



Side Lift Type



NOMINAL DIAMETER	Dimension X	
	Direct Lift	Side Lift
DIMENSIONS IN MILLIMETRES		
100	197	185
150	210	203
200	292	257
250	340	321
300	321	300
350	425	on application
400	500	388
450	525	on application
500	500	on application
600	600	on application

Notes:

1. Minimum height (Dimension A)
= Adjustment (Dimension C) x 2 + Dimension 'X' - 25.
2. Pillar support brackets can be provided to suit outreaches (wall face to centre of line of stem) of up to 450mm maximum. When the outreach is greater we suggest the pillar is supported on rolled steel channels.

Floating Discharge Arms

DESCRIPTION

The design incorporates a float operated discharge arm designed for use on the outlets from tanks when varying liquid levels are to be accommodated in association with the demand for a controlled rate of gravity discharge.

The floating arm illustrated is a non-constant discharge type with single float arrangement. For more critical flow control the constant discharge floating arm with either single or twin float arrangements is recommended. Details are available on request.

The outlet flange is supplied drilled for connection to flanges in accordance with BS 1092-2 : PN16.

FEATURES

- Robust construction
- Low maintenance
- Metal to metal swivelling parts
- Galvanised arm
- Constant discharge

OPTIONS

- Twin floats
- Isolating valve
- Alternative flange connection
- Fixing bolts can be supplied if requested
- Lifting chain and wall hook can be supplied on request

MATERIAL SPECIFICATION

Swivel Body

Constructed in BS EN 1561 min. 250 cast iron with outlet flange to BS 4504, PN16 rating.

Swivel Bend

Constructed in BS EN 1561 min. 250 cast iron with flange connection for the arm.

Trunnion Bracket

Constructed in BS EN 1561 min. 250 cast iron designed to support the trunnion pin.

Sole Plate

Constructed in BS EN 1561 min. 250 cast iron with mountings for the swivel body and trunnion bracket. The sole plate is fixed to the chamber floor.

Swivel Seats

Manufactured from bronze to BS EN 12167 : 1998 and machined to provide a rotating seal between the swivel body and swivel bend.

Trunnion Pin

Manufactured from bronze to BS EN 12167 : 1998. Provides a pivot for the floating arm assembly.

Float

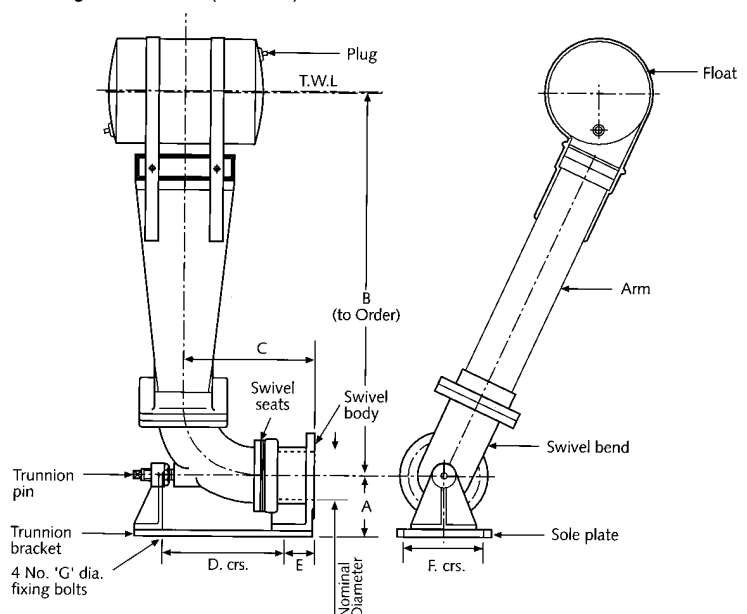
Manufactured in mild steel and heavily galvanised complete with plugs to trim the displacement of the float. The float size is dependent on the weight of parts (e.g. length of arm) to be displaced.

Arm

Manufactured in mild steel and heavily galvanised. The length is calculated to suit operating level requirements.

Fasteners

Standard fasteners are supplied in stainless steel to BS EN 10088 : 1995 grade 1.4401 (316; A4).



NOMINAL DIAMETER	A	B	C	D	E	F	G
DIMENSIONS IN MILLIMETRES							
80	136	To order	295	248	102	206	M16
100	159	To order	330	248	102	206	M16
150	192	To order	416	362	102	254	M16
200	264	To order	422	495	51	298	M20
225	264	To order	416	521	73	298	M20
300	337	To order	497	457	152	330	M20

Decanting Arms

DESCRIPTION

The design comprises a cast iron sole plate, swivelling parts and bracket, bronze swivel seats and trunnion pin, together with a galvanised mild steel chute. The decanting arm is adjusted by means of a mild steel rising stem working on a gunmetal nut.

There are two types of decanting arm:

Type 1 — Standard with Wall Guide.

Incorporates a galvanised mild steel linkage and guide bracket for bolting to an adjacent wall with the controlling hand wheel mounted on top of a cast iron floor mounted pillar.

Type 2 — Swivelling Thrust Housing.

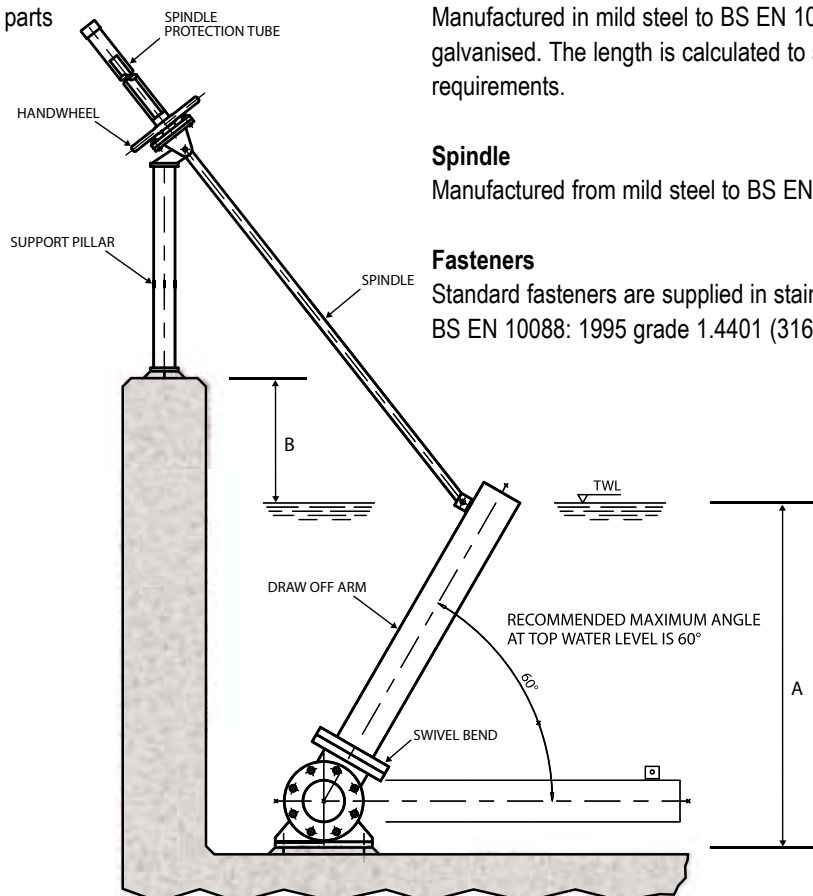
Incorporates a controlling hand wheel mounted in a swivel type thrust housing mounted on top of a cast iron floor mounted pillar.

The outlet flange is supplied drilled for connection to flanges in accordance with BS 1092-2 : PN16.

FEATURES

- Robust construction
- Low maintenance
- Metal to metal swivelling parts
- Galvanised arm

**TYPE 2
DECANTING ARM**



OPTIONS

- Type 1 — standard with wall guide.
- Type 2 — swivelling thrust housing

MATERIAL SPECIFICATION

Swivel Body

Constructed in BS EN 1561 min. 250 cast iron with outlet flange to BS 4504, PN16 rating.

Trunnion Bracket

Constructed in BS EN 1561 min. 250 cast iron designed to support the trunnion pin.

Sole Plate

Constructed in BS EN 1561 min. 250 cast iron with mountings for the swivel body and trunnion bracket. The sole plate is fixed to the chamber floor.

Swivel Seats

Manufactured from bronze to BS EN 12167 : 1998 and machined to provide a rotating seal between the swivel body and swivel bend.

Trunnion Pin

Manufactured from bronze to BS EN 12167 : 1998. Provides a pivot for the floating-arm assembly.

Arm

Manufactured in mild steel to BS EN 10025 : 1993 and heavily galvanised. The length is calculated to suit operating level requirements.

Spindle

Manufactured from mild steel to BS EN 10025 : 1993.

Fasteners

Standard fasteners are supplied in stainless steel to BS EN 10088: 1995 grade 1.4401 (316, A4).

Ventilating Columns

DESCRIPTION

Ventilating columns are designed to ventilate foul air from sewers.

Type 1 has a 150mm nominal bore spigot connection branch.

Type 2 has a 225mm nominal bore spigot connection branch.

Ventilating columns are supplied with GRP tube for up to a maximum height of 10 metres above ground level. The cast iron base is provided with fixing flange complete with the necessary fixing holes.

FEATURES

- Robust construction
- Aesthetic looking
- Non-corrodible tube
- Wire cage
- Variable height to suit customer requirements

OPTIONS

- Base flange fixing
- Two sizes available
- Tube colour choice (grey or green)

EXTRAS

- Access door
- Dirt box
- Fixing bolts & nuts

MATERIAL SPECIFICATION

Base

Constructed in BS EN 1561 min. 250 cast iron with spigot branch and fixing flange.

Coronet

Constructed in BS EN 1561 min. 250 cast iron for supporting wire cage.

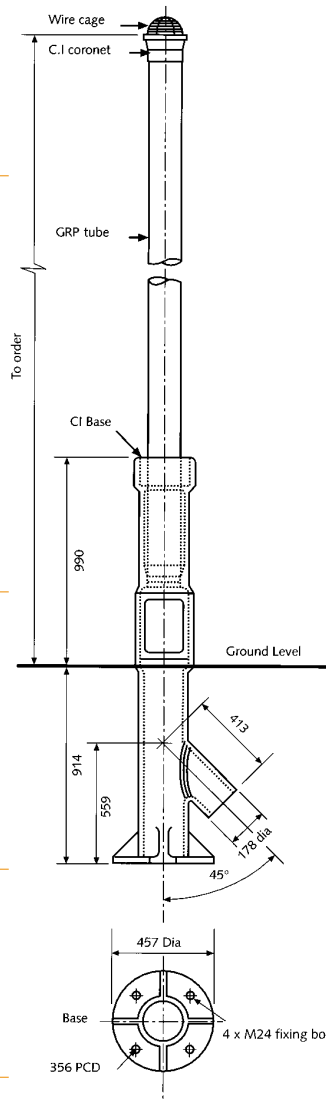
Tube

Manufactured in GRP in length to suit customer requirements: colour grey or green.

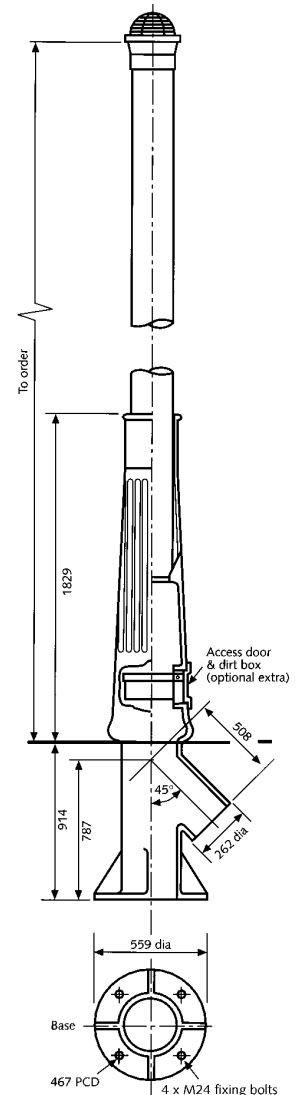
Wire Cage

Manufactured in galvanised mild steel wire to prevent debris entering the tube.

TYPE 1
150mm dia. Ventilating Column



TYPE 2
225mm dia. Ventilating Column



CONNECTION TO SEWER

Type 1

150mm vitrified clay
Flex-Seal coupling SC200 or similar.
150mm Supersleve (Hepworth)
Standard Supersleve coupling.
160mm PVCu
Flex-Seal coupling AC1924 or similar.

Type 2

225mm vitrified clay
Flex-Seal coupling SC290 and BC 08/265 or similar.
225mm Superseal
Flex-Seal coupling SC265 or similar.
200mm vitrified clay
Flex-Seal coupling AC2656 or similar.
225mm Ultra-Rib
Flex-Seal coupling SC265 or similar.

Weir Plates and Scum Boards

DESCRIPTION

Weir Plates and Scum Boards are intended for scum separation and weir-edge applications in circular and rectangular settlement tanks.

There are two types of Coplastix® weir plates: the **plain type** for use wherever a level weir edge is required around a tank periphery, and the **notched type** (Vee), generally preferred in installations where fluctuations in flow rates are to be expected.

Slotted fixing holes are provided to simplify adjustment of the weir level. Strips of Coplastix-N are bonded to the wall side of the weir plates to make an effective seal with the wall without the use of mastic.

Coplastix® custom weir plates are supplied complete with all the necessary jointing plates and fasteners. Depending on depth, custom weir plates can be supplied in thicknesses ranging from 4.5mm to 10mm.

The custom scum board thickness is also available in the 4.5mm to 10mm range, depending on depth of scum board. These scum boards are usually located on stainless steel wall-mounted brackets, from 100mm to 300mm inwards from weir plates. Scum boards are supplied complete with all the necessary jointing plates and fasteners.

FEATURES

- Robust construction.
- Easy to clean due to smooth finish.
- Algae resistant surface.
- Low coefficient of thermal expansion; use in temperature range -45°C to $+85^{\circ}\text{C}$.

OPTIONS

- Plain edged or 'Vee' notched weirs.
- Variable vertical adjustment to suit customer requirements.
- Custom design if necessary.

INSTALLATION

Circular tanks

In circular tanks weir plates are usually secured around the walls at pitches of 407mm and scum boards at pitches of 814mm. A full length unnotched, undrilled weir plate and a full length scum board are provided as make-up pieces, to be cut to the required length during erection

Rectangular tanks

Custom weir plates and scum boards on rectangular tank applications are usually secured at the same pitch dimensions as on circular tanks. Make-up pieces are supplied.

When plates are supplied for fitting to all four sides of a tank, stainless steel angled pieces are included for joining plates at the corners. When fitted to one side of a tank only, the angled corner pieces are fastened to the adjoining wall.

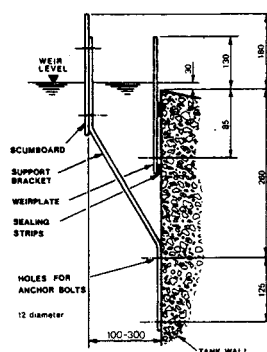
MATERIAL SPECIFICATION

COPLASTIX®

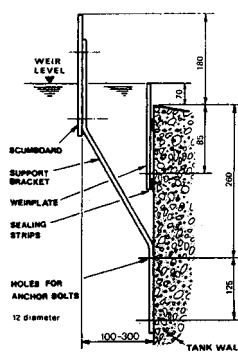
Coplastix® is a rigid, compressed plastic which is asbestos free, ultra violet stabilised and non-toxic. It has a low coefficient of thermal expansion and a smooth, easy to clean surface.

Corner pieces (rectangular tanks). Manufactured from stainless steel to BS EN 10088 : 1995 grade 1.4401 (316).

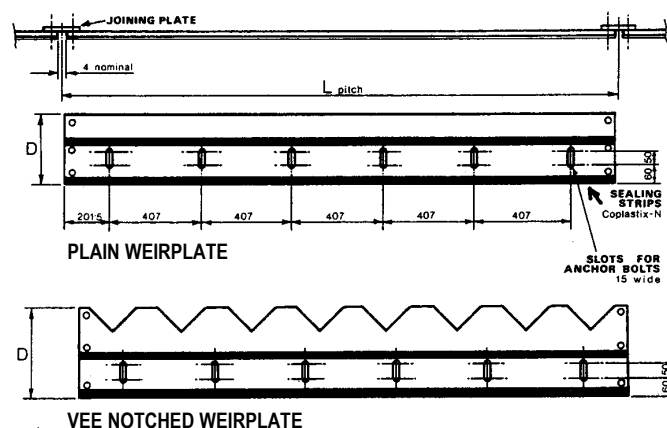
Fixing bolts can be supplied when requested.



Typical position of plain weirplates and scumboards relative to the tank wall



Typical position of vee notched weirplates and scumboards relative to the tank wall



OPTIMUM DIMENSIONS (mm)

L = Lengths	1215 or 2438
T = Thickness	4.5, 6.0 or 10.0
D = Depths	120, 200, 240, 300 400, 600 or 1215

Technical Details

1. PREPARATION AND PROTECTIVE COATING — CAST IRON

Specifies the product range with the appropriate material, preparation and coating for the standard paint systems. The preparation and protective coatings listed are Ham Baker Hartley standards. Alternative preparations can be offered on request.

Standard Paint Specification	Application	Surface treatment
PS4	SEWAGE/SEAWATER: CAST IRON	1. Grit blast to near white 2. Zinc spray 75 microns 3. Mist coat to obtain continuous film for subsequent paint applications 4. Apply epoxy 2 pack epoxy coal tar minimum D.F.T. 125 microns 5. Apply minimum D.F.T. 15 micron of primer 6. Apply final coat bitumastic minimum D.F.T. 125 microns

2. DISCHARGE THROUGH AN ORIFICE

This type of flow occurs where a penstock controls flow into or out of a tank or other large container. If the gate is fully submerged, the flow through and open or partially open penstock and its associated civil engineering structure opening will be given by

$$q = CA \sqrt{2gH}$$

Where

q is the discharge rate — cubic metres per second

C is a discharge coefficient generally taken to be 0.7

A is the aperture area — square metres

The aperture area is the penstock opening if the penstock is fully open. If the penstock is not fully open, the aperture area will be reduced.

H is the differential head at the centre of the opening — metres

The differential head is the difference between the upstream and downstream water levels.

g is the acceleration due to gravity — 9.81 m/s²

Enquiry Questionnaires

Certain basic data is essential to allow selection of the correct equipment against a specification.

Please ensure that the following information is given for each item of your enquiry:

Disc Flushing Valves (Page 4)

1. Quantity required.
2. Size of opening diameter.
3. Mounting type — wall or flange.
4. Maximum working head.
5. On-seating/off-seating head.
6. Distance of centre line of opening to centre line of handle.
7. Liquid in which the disc is to operate.
8. Paint system if special operating conditions prevail.

Sludge Plugs and Valves (Page 6)

1. Quantity required.
2. State whether Plug or Valve required.
3. Determine dimensions B for sludge plugs and A, D and E for sludge valves.
4. If (b) state type of operation required, e.g. square cap, handwheel or actuator.
5. Paint system if special operating conditions prevail.

Hydrostatic Valves (Page 8)

1. Quantity required.
2. Bore of the outlet pipe and drilling details of its connecting flange.
3. Distance from base flange to TWL (Top Water Level), dimension A.
4. Distance from TWL to coping or operating level/underside of pillar, dimension B.
5. Depth of adjustment (range of movement) required, dimension C.
6. Direct central lift or side lift type.
7. Materials of spindle.
8. Type of operating equipment.
9. Paint system if special operating conditions prevail.

Floating Discharge Arms (Page 10)

1. Quantity required.
2. Bore of the outlet pipe and drilling details of its flange.
3. Distance from centre line of outlet pipe to TWL (Top Water Level).
4. Type of draw-off arm — non-constant discharge type as illustrated or constant discharge.
5. Proximity of surrounding walls. Submit a sketch giving details and dimensions of tank and location of outlet pipe, etc.
6. State minimum TWL if distance of draw-offs is to be restricted.
7. State if outlet is by gravity or by pump.
8. Paint system if special operating conditions prevail — galvanised float and arm left unpainted.

Decanting Arms (Page 11)

1. Quantity required.
2. Type 1 or Type 2.
3. Distance from base flange to TWL (Top Water Level), dimension A.
4. Distance from TWL to coping or operating level/underside of pillar, dimension B.
5. Diameter of draw off arm.
6. Paint system if special operating conditions prevail.

Ventilating Columns (Page 12)

1. Quantity required.
2. Ground level to coronet height.
3. Type required — 150mm diameter (Type 1) or 225mm diameter (Type 2).
4. Paint system if special operating conditions prevail — grp tube left unpainted.

Weir Plates and Scum Boards (Page 13)

1. Number of sets per tank size.
2. Depth of plates, size, shape and number of notches (if any).
3. Liquid in the settlement tank.
4. Are both weir plates and scum boards required?
5. Is a scum box to be fitted?

INTERNATIONAL STANDARDS

BS EN ISO 9001 : 2000	Quality Management System : Requirements
BS EN 1092-2 : 1997	Flanges and their joints; Circular flanges for pipes, valves, fittings and accessories; PN designated; Cast Iron Flanges
BS EN 1561 : 1997	Founding — Grey Cast Irons
BS EN 1982 : 1999	Copper and Copper Alloys : Ingots and Castings
BS EN 10025 : 1993	Hot rolled products of non-alloy structured steels. Technical delivery conditions
BS EN 10088 : 1995	Stainless steels : Technical delivery conditions
BS EN 12167 : 1998	Copper and Copper Alloys : Profiles and rectangular bar for general purposes

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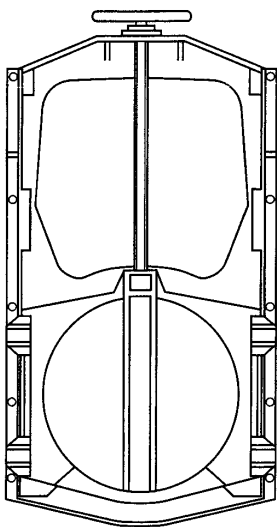
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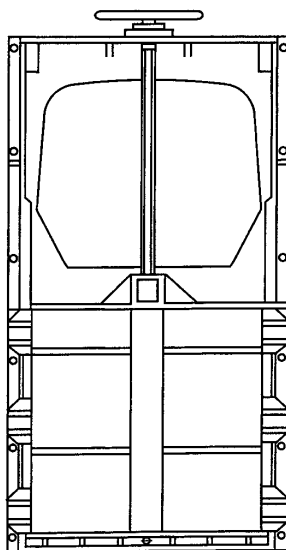
100mm Dia. to 1000mm Dia.



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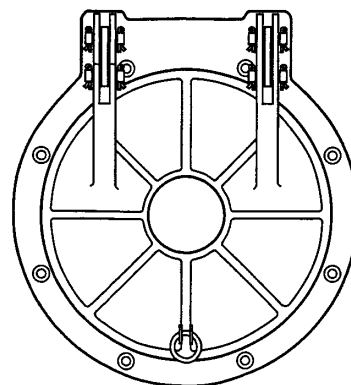
150mm sq. to 1200mm sq.



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Ham Baker Flow Control, Garner Street, Etruria, Stoke on Trent, Staffordshire ST4 7BH, England

Tel: +44 (0)1782 202300 **Fax:** +44 (0)1782 203639