

FLOATING SUCTIONS

INDEX

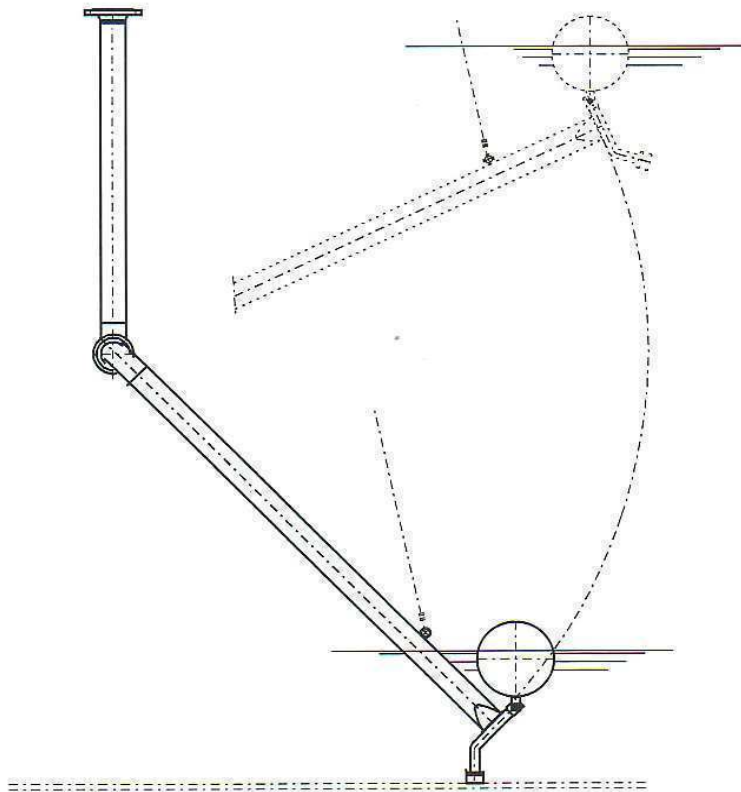
- Technical Information
- Type C1, C2, C3 for use in semi-buried tankage with the outlet on the centre-line
- Type C4, C5, C6, C7 and C8 for use in buried tankage with the outlet through the manhole
- Type C9, C10 and C11 for use in above ground tankage with the outlet near the bottom
- Type C12 and C13 - Articulated units for use in Vertical Storage Tanks
- Type C15 - Articulated unit for use in Floating Roof Tanks
- Type C16 and C17 - Articulated Drainage units for Floating Roof Tanks

When ordering please specify:

1. Series number: i.e. C1 to C17
2. Bore size: i.e. 2", 3", 4", 6", 8", 10" or 12".
3. Style of Tank: i.e. horizontal or vertical
4. Diameter and height (or length) of tank
5. Position of outlet flange: describe fully, preferably with a sketch.
6. Outlet flange: ASA Class 150 (flat face) will be supplied unless otherwise requested.
Bolt holes straddle centre line.
7. Materials:
 - Aluminium
 - Carbon Steel
 - Stainless Steel
8. Seals:
 - Buna N
 - Viton
 - PTFE

There is a floating suction to suit every style and size of storage tank. Please select the style you require from the following pages.

Special designs will be gladly quoted on request.



Sketch: Floating Suction Type C8

For many years it has been established practice to give settling time between 'input' and 'output' from airfield tankage, allowing water and sediment to settle prior to use.

In order to cut settling time and yet still withdraw a moisture-free and solids-free product the use of a floating suction is essential.

Although originally developed for aviation fuel, EMCO floating suctions have since found wide application in the chemical and petrochemical industries where sediments or impurities exist.

Feature include:-

- Low-torque swing joint.
- Split-flange swing joint. No additional flanging required.
- Built for vacuum service but can be used for pressure applications such as tank filling.
- Anti-vortex plate.
- Minimum safe draw-off level.
- Stainless steel safety cable
- All Aluminium construction.
- Resistant to moisture corrosion.
- Available in bore sizes 2" to 12".

Special application gladly studied on request.

Technical Information

FILLING

When filling large capacity vertical storage tanks fitted with floating suctions, always flood the system before putting into operation. Air trapped in the unit may cause the inlet to float above the liquid level.

FIRE FIGHTING

By means of a connection in the discharge line leading from the floating suction, the unit can be used to spread fire fighting foam on the surface of the tank fluid in case of emergency.

MINIMUM SAFE DRAW-OFF LEVEL

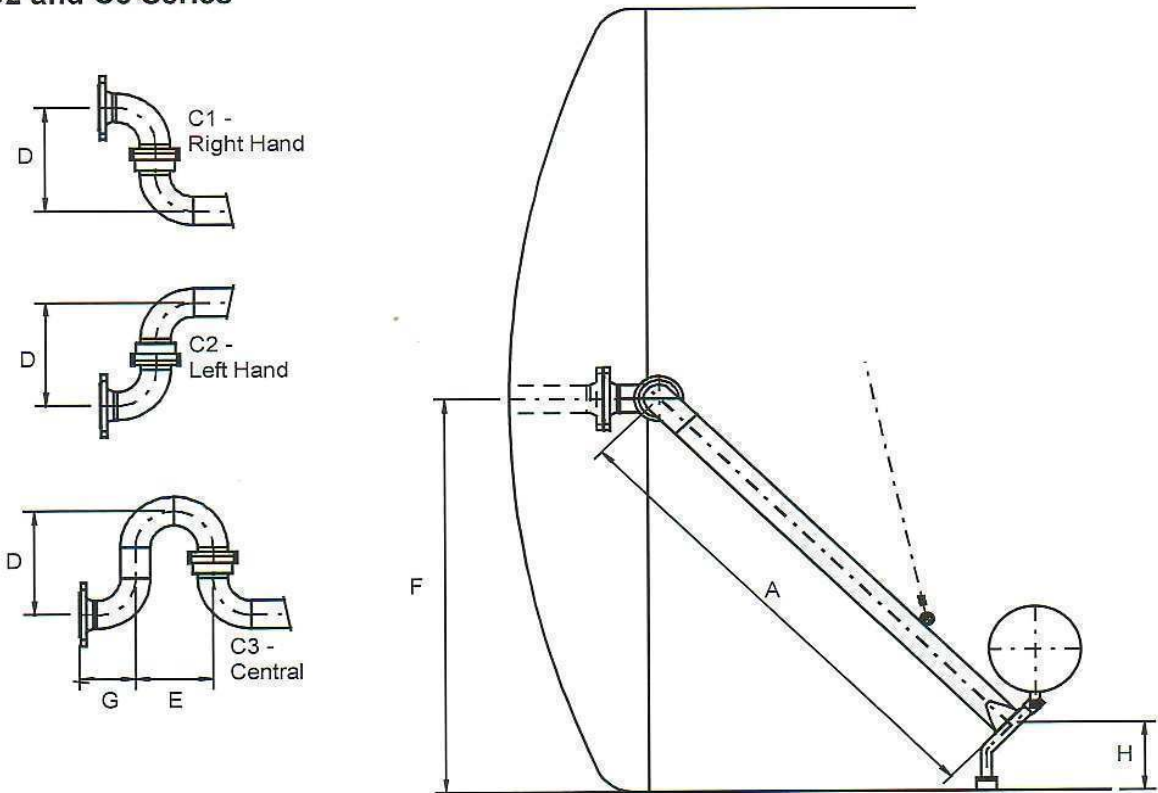
A baffle plate across the intake prevents disturbance of the water and sediment as the tank becomes empty. A stirrup prevents the intake from entering this precipitate.

The minimum safe draw-off level is 9" (230 mm) unless otherwise requested.

ANTI-VORTEX

To prevent vortex formation the intake always faces downwards and ballast weights are added so that the intake is 12" - 14" (300 mm - 350 mm) below the surface.

C1, C2 and C3 Series



These Series are for use in vertical and horizontal tankage with the outlet on the centre-line.

By installing a raiser pipe by the customer a short unit of this style can be used instead of relatively long units (instead of types C9 - C11).

Bolt holes straddle centre-line.

Bore sizes: 2", 3", 4", 6", 8".

When ordering or enquiring please specify 'F' dimension.

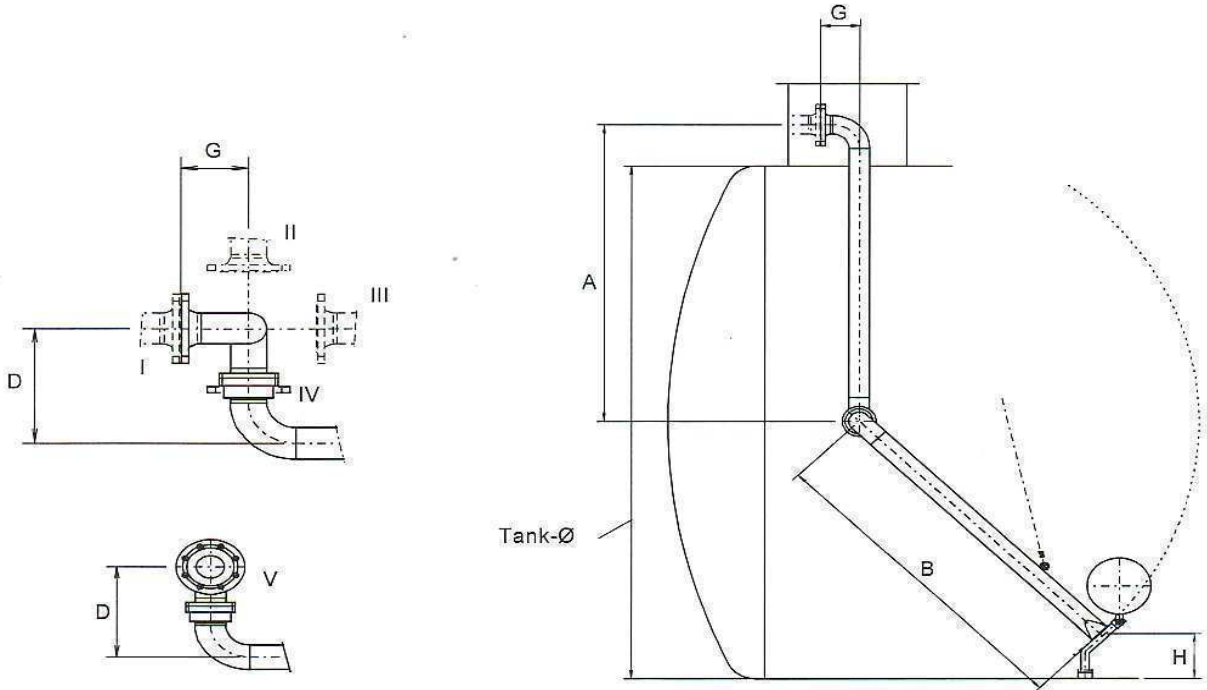
Dimensions in alu: (carbon steel / stainless steel on request)

mm	2"	3"	4"	6"	8"
H	230	230	375	370	395
D	250	327	383	649	855
G	88	132	162	243	333
E	148	232	289	436	614

Typical "A"-Dimensions:

Tank-Diameter	m	2,7	3,2	4,1	4,8
A	m	1,4	1,7	2,4	2,8

C4, C5, C6, C7 and C8 Series



- C4 - Outlet Flange at Position I
- C5 - Outlet Flange at Position II
- C6 - Outlet Flange at Position III
- C7 - Outlet Flange at Position IV
- C8 - Outlet Flange at Position V

These Series are for use in buried tankage with the outlet through the manhole.
Bolt holes straddle centre-line.

Bore sizes: 2", 3", 4", 6", 8"

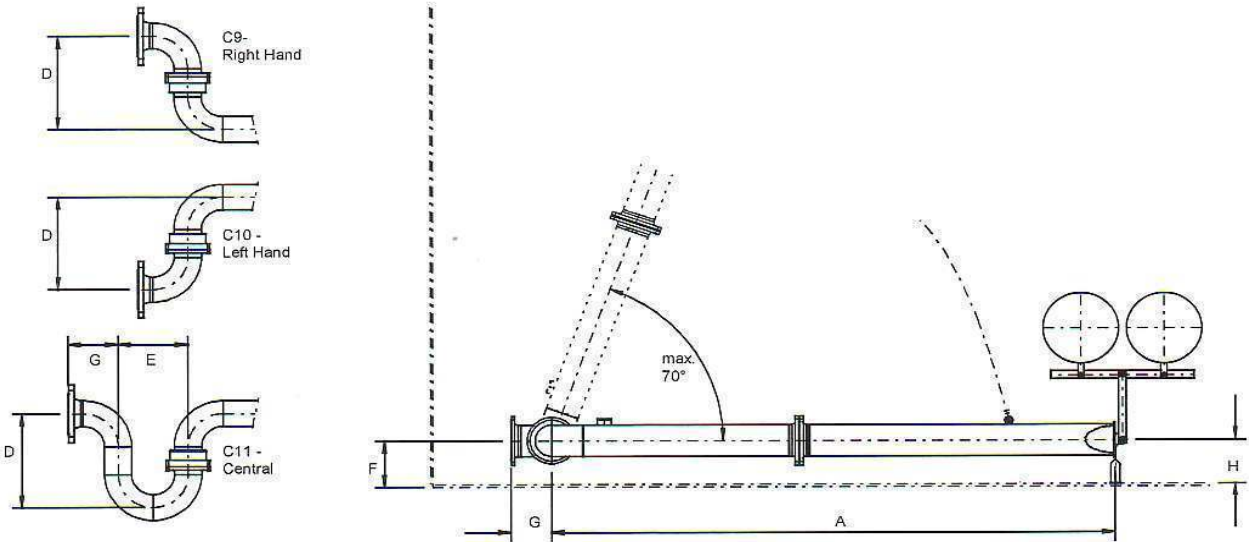
Dimensions in alu: (carbon steel / stainless steel on request)

Bore size	2"	3"	4"	6"	8"
H mm	230	230	375	370	395
D mm	250	327	383	649	855
G mm	88	132	162	243	333

Typical "B" Dimensions:

Tank-Diameter	m	2,7	3,2	4,1	4,8
B	m	1,4	1,7	2,4	2,8

C9, C10 and C11 Series



These Series are for use in above-ground tankage both vertical (as illustrated) and horizontal. Where the height exceeds the diameter it is necessary to use an articulated unit (C12, C13).

For details of choice between single arm and articulated units refer to the chart on page 9.

Bolt holes straddle centre-line.

Bore sizes: 2", 3", 4", 6", 8", 10", 12"

When ordering or enquiring please specify 'F' dimension.

Dimensions in alu: (carbon steel / stainless steel on request)

Bore Size mm	2"	3"	4"	6"	8"	10"	12"
H	290	305	405	420	445	535	545
D	250	327	383	649	855	970	1141
G	88	132	162	243	333	---	---
E	148	232	289	436	614	766	918

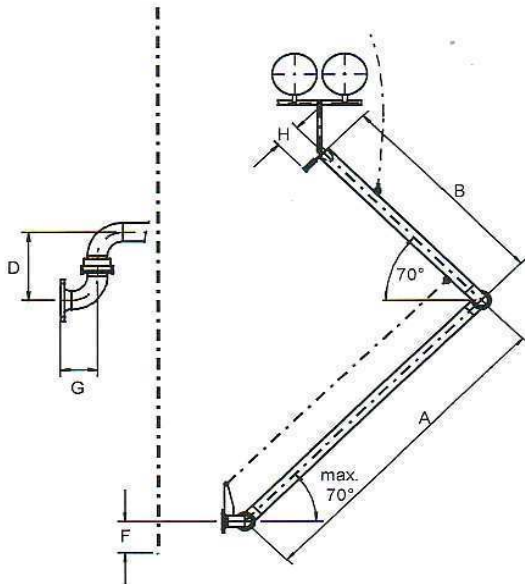
Typical "A" Dimensions (for horizontal tanks):

Tank-Ø m	2,7	3,2	4,1	4,8
Dimension m	1,9	2,5	3,5	4,3

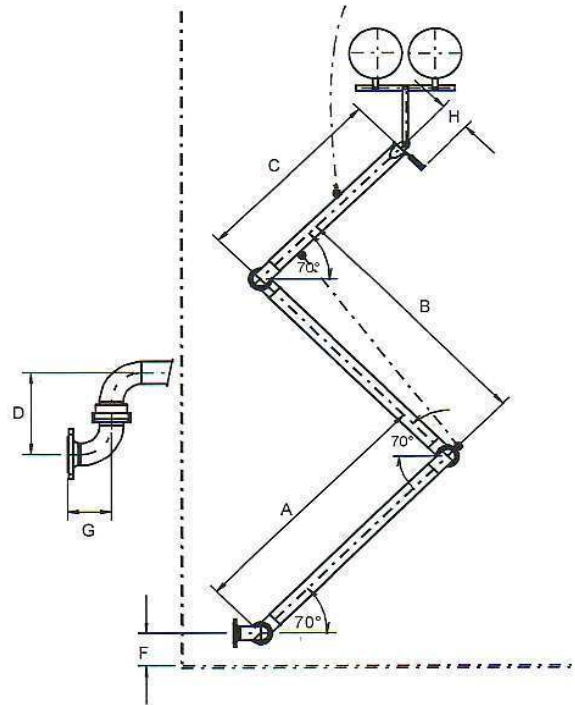
For "A" Dimensions to be used on vertical tanks refer to the chart on page 9.

Articulated Floating Suctions

C12 Series - Double Arm



C13 Series - Treble Arm



Articulated Floating Suctions are for use in vertical storage tanks where the height exceeds the diameter. For details of choice between Single Arms (C9, C10, C11), Double Arm (C12) and Treble Arm (C13) Units refer to chart on page 9.

Restraining cables prevent the arms from straightening.

Bolt holes straddle centre-line.

Bore sizes: 4", 6", 8"

When ordering or enquiring please specify "F" Dimension.

Dimensions in alu: (carbon steel / stainless steel on request)

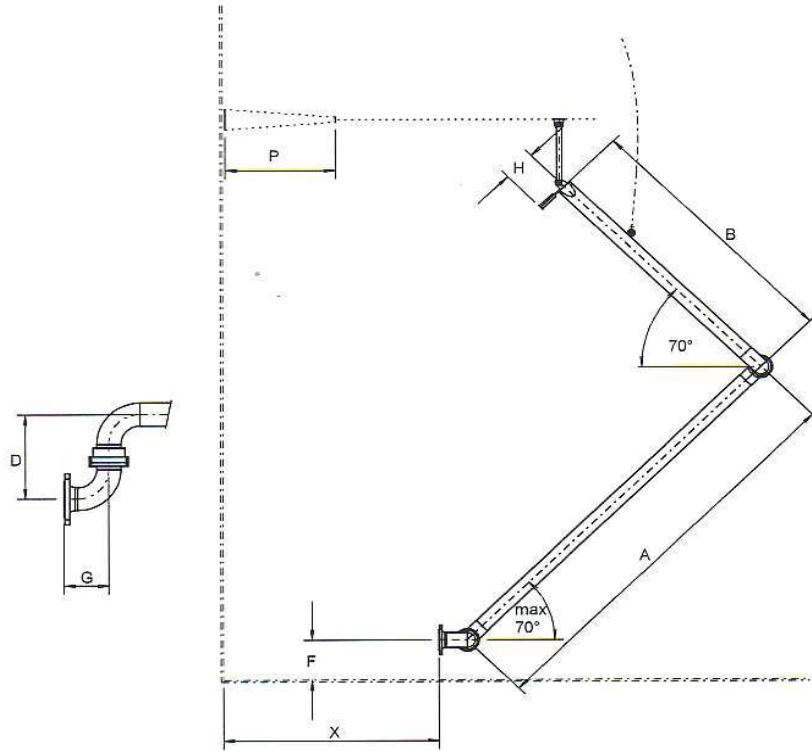
Bore Size mm	4"	6"	8"
H	405	420	445
D	375	370	395
G	383	649	856

Chart for choosing type of Floating Suction, i.e. Single, Double or Treble Arm

Tankheight		Diameter of Tank																
mm	Dim	4500	6000	7500	9000	10500	12000	14500	17000	19500	24500	29000	34000	36500	39000	44000	49000	
4500	A	3000	4500	4500	4500	4500	4500											
	B	1800																
	C																	
5500	A							5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	
	B																	
	C																	
6000	A	3500	4500	6000	6000	6000	6000											
	B	3000	2000															
	C																	
7500	A	3500	4500	5000	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	
	B	2500	3500	3000														
	C	2000																
9000	A	4000	5000	6000	6000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	
	B	3000	4500	3500	3500													
	C	2500																
10500	A		4500	6500	7000	7000	10800											
	B		4000	4500	4000	4000												
	C		2500															
11000	A			Double				11000	11000	11000	11000	11000	11000	11000	11000	11000	11000	
	B																	
	C																	
12000	A		6000	6000	7800	7800	9000			Single								
	B		4500	4500	5000	5000	4000											
	C		2500	2500														
13000	A				7500	9000	9000	13200	13200	13200	13200	13200	13200	13200	13200	13200	13200	
	B				6300	5000	5000											
	C																	
14500	A							10000	15000	15000	15000	15000	15000	15000	15000	15000	15000	
	B							5500										
	C																	
15000	A			6500	6500	9000	10000											
	B			5500	5500	7000	6000											
	C			4000	4000													
16500	A		Treble					11000	11000	17500	17500	17500	17500	17500	17500	17500	17500	
	B							6500	6500									
	C																	
17000	A			6500	7500	9500	10000											
	B			6000	6000	8500	8000											
	C			5500	4500													
18500	A				8000	9000	10500	12000	12000	12000	19500	19500	19500	19500	19500	19500	19500	
	B				6500	6500	9000	7500	7500	7500								
	C				5000	4000												
20000	A				8000	9000	11000	13000	13000	13000	21000	21000	21000	21000	21000	21000	21000	
	B				7000	7500	11000	8000	8000	8000								
	C				6000	4500												
22000	A							13000	15000	15000	15000	23000	23000	23000	23000	23000	23000	
	B							10500	8500	8500	8500							
	C																	
24000	A							13500	15500	15500	15500	25000	25000	25000	25000	25000	25000	
	B							12000	10000	10000	10000							
	C																	

Note: Where floats may contact roof structure, rubbing bars or a suitable alternative must be provided to prevent float assembly being retained or damaged.

C15 Series - Articulated Floating Suctions for Floating Roof Tanks



Bore Sizes: 4", 6", 8", 10", 12"

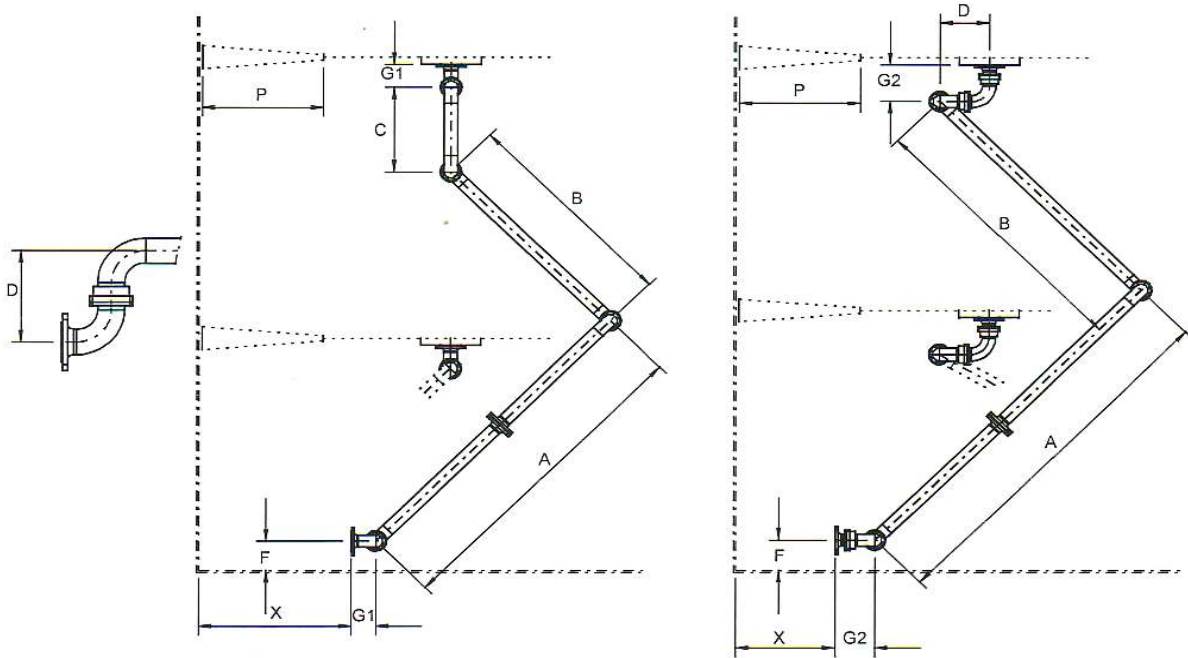
When ordering or enquiring please specify "F", "X" and "P" Dimension.

Dimensions in alu: (carbon steel / stainless steel on request)

Bore Size mm	4"	6"	8"	10"	12"
H	405	420	445	535	545
D	375	370	395	970	1141
G	383	649	856	---	---

We would be pleased to quote units for floating blanket tanks.

C16, C17 Series Articulated Drainage Units for Floating Roof Tanks



C16 with Four Swing Joints where the roof moves in guides and is NOT free to rotate.

C17 with six Swing Joints where the roof is free to rotate.

Bore sizes: 3", 4" adequate for most rainfall.

When ordering or enquiring please specify "F", "X" and "P" Dimension.

Dimensions in alu: (carbon steel /stainless steel on request)

Bore Size mm	D	G1	G2
3"	230	132	234
4"	375	162	264