

Process Waste Tanks



Kent Stainless were established in 1982 and today are one of Irelands' leading stainless steel engineering firms with over 110 employees and over 20 design engineers.

Kent Stainless have a growing range of Stainless Steel Process Waste Tanks for storing and handling hazardous waste from Pharmaceutical factory processing.



Richmond Trading Company is a sister company to Kent Stainless and a long standing business partner. In Ireland, Richmond Trading commercialises all Kent Stainless Building Drainage at contract stage along with a suite of complete products made outside of Kent Stainless.

RTC in turn supply all VDR Vendor Document Requirements, O&M Manuals, and CE Compliance Documents.

Quality Accreditations

- ★ ISO 9001:2015 accredited Quality Management System in operation companywide



- ★ Member of The British Stainless Steel Association (BSSA)



- ★ EN 1090-2:2008 Factory Production Control Certificate – structural components and kits for fabricated structures



- ★ Member of The Fabricated Access Covers Trade Association (FACTA)



- ★ Exova, CERTFIRE - Passive Fire Protection Access Cover Systems (2018)



Health and Safety Accreditations & Awards

- ★ ISO 18001:2015 accredited Occupational Health and Safety Management System in operation companywide



- ★ OSHAS trained and certified personnel

- ★ Prequalified in UK to ConstructionLine Silver Status



- ★ ISO 45001:2018 accredited Occupational Health and Safety Management System in operation companywide

- ★ All employees trained in manual handling

- ★ Safety awards from clients

Environmental Accreditations & Awards

- ★ ISO 14001:2015 accredited Environmental Management System in operation companywide



CPD CERTIFICATION

- ★ Lunch 'n' learn Sessions and 3rd party approved CPDs for Pharmaceutical Factory Drainage including Process Waste Tanks available at your premises



NBS SPECIFICATION CLAUSES

- ★ Most Kent Stainless products are now available with fully approved NBS Specification Clauses



File Formats

- ★ Kent Stainless engineers are trained in 2D CAD and 3D, FEA, PDM and BIM systems. This allows us offer files in the following formats:



SAT



REVIT



IFC



CAD



NAVISWORKS



STEP

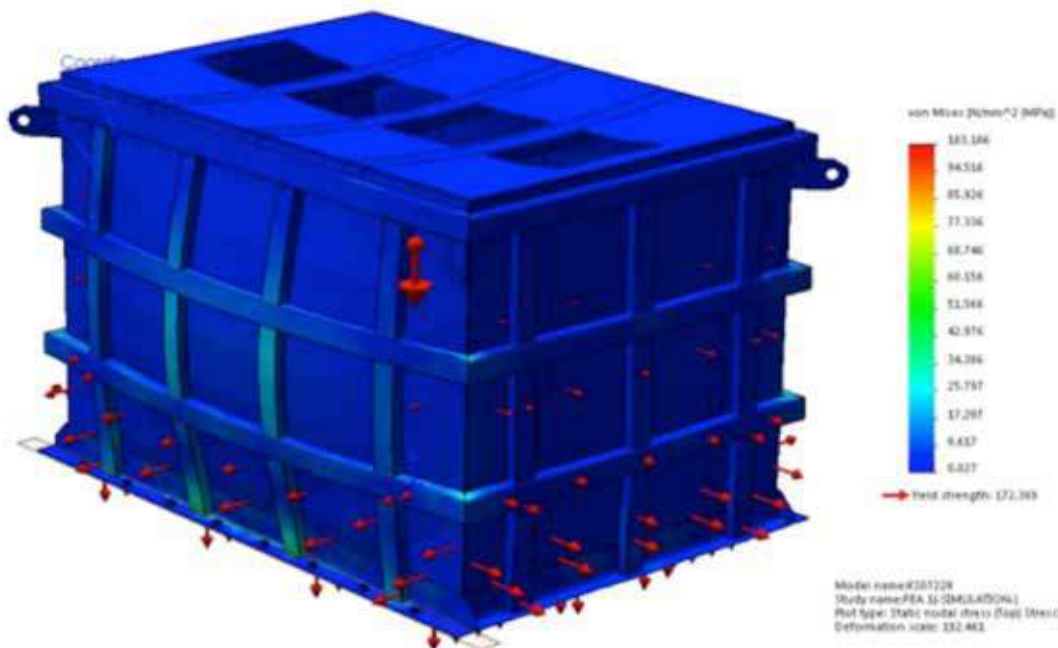


SOLIDWORKS

Finite Element Analysis

Kent Stainless have state of the art software allowing us to apply Finite Element Analysis to all fabrication, welds and pressure points on your tanks. This allows us perform the following tests:

- ★ Linear
- ★ Buckling
- ★ Dynamic
- ★ Flow Analysis
- ★ Non Linear
- ★ Thermal
- ★ Fatigue



Award Winning



- ★ Irish Exporters Association's overall Exporter of the Year Award 2012
- ★ Wexford Excellence in International Trade Award 2018
- ★ Dublin Airport Authority Award for Quality
- ★ Ulster Bank Business Achievers Award

Our Capabilities

Cranage

- ★ 2 x 15 ton
- ★ 2 x 6 ton
- ★ 2 x 10 ton
- ★ 4 x 4 ton



Sheet Laser Cutting

- ★ Sheet 4000mm x 2000mm
- ★ 0.5mm – 20mm thick stainless
- ★ 1mm – 20mm Thick Mild Steel
- ★ Water Jet Cutting on sub contract – up to 50mm



Tube Laser Cutting

- ★ Tube 220mm diameter
- ★ Square Box Section up to 200mm
- ★ Rectangle Box Section up to 200mm



Press Brake

- ★ Latest C&C Press Brakes
- ★ 4m long Press Brake 320 ton
- ★ 3m long Press Brake 230 ton
- ★ Offline programming from STEP files



Welding Facilities

Full range of welding capabilities including TIG, MIG, MAG, Spray, Pulse Spray Welding.

- ★ Orbital Welders x 1
- ★ Manual Pulse Arc Welders x 16
- ★ Manual Tig Welders x 31
- ★ Manual Mig Welders x 8



Welding Compliance

ASME IX Coded Standard

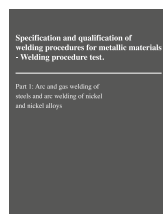
ASME IX covers the qualification of welders and welding operators, welding procedures, brazing operatives and brazing procedures for the complete range of ferrous and non-ferrous engineering metals (steels, copper, nickel, aluminium, titanium and zirconium alloys) and oxy-gas, arc, power beam, resistance and solid phase welding processes



or

EN ISO15614-1:2017

Specification and qualification of welding procedures for metallic materials. Welding procedure test. Arc and gas welding of steels and arc welding of nickel and nickel alloys



- ★ EN 1090:2008 Welding Control Certificate – structural components and kits for fabricated structures
- ★ Weld Procedure Qualification Records (PQRs) approved to ASME IX and EN 15614
- ★ Welder Qualification Test Certification (WQTs) approved to ASME IX and EN 287-1 (EN ISO 9606-1 from early 2018)
- ★ In-house Welding Inspectors qualified to CSWIP Level 2

- ★ In House Weld Inspectors fully trained by certified 3rd parties



- ★ Notified Body Third Party Approved WPS Weld Procedure Specification



- ★ Notified Body Third Party Approved PQR (Procedure Qualification Record)



NDT (Non Destructive Testing)

- ★ Visual Test
- ★ Dye Pen Test
- ★ Radiographic X Ray Test
- ★ PMI Test
- ★ Hydrostatic Test
- ★ Pneumatic Test
- ★ Sloping Drainage Test
- ★ Riboflavin Sprayball Test
- ★ In-house NDT Inspectors qualified to NDT Level 2
- ★ Third Party NDT Inspection to NDT Level 3
- ★ FAT Test
- ★ Bioscope Video
- ★ Surface Roughness Testing



Dye Pen Test



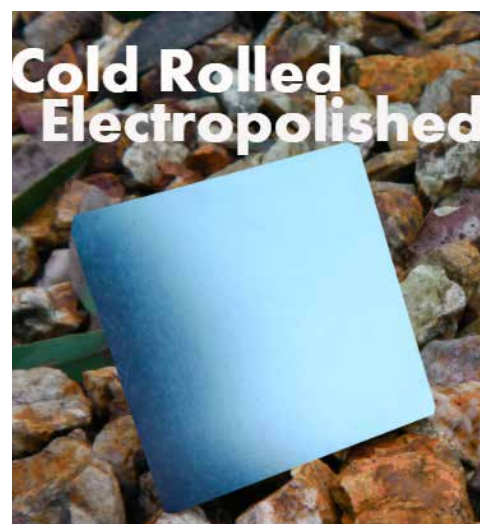
Hydrostatic Test



Weld X Ray Inspections

Pickling & Passivating

- ★ Acid Dip Pickling by immersion (HN03 + HF)
- ★ Bath size 7m x 3m x 1.5m d
- ★ Spray Pickling
- ★ Spray Passivation
- ★ Tig Mop
- ★ Glass Bead Blasting
- ★ Mechanical Polishing
- ★ Electropolishing
- ★ Bath size 7m x 3m x 1.5m

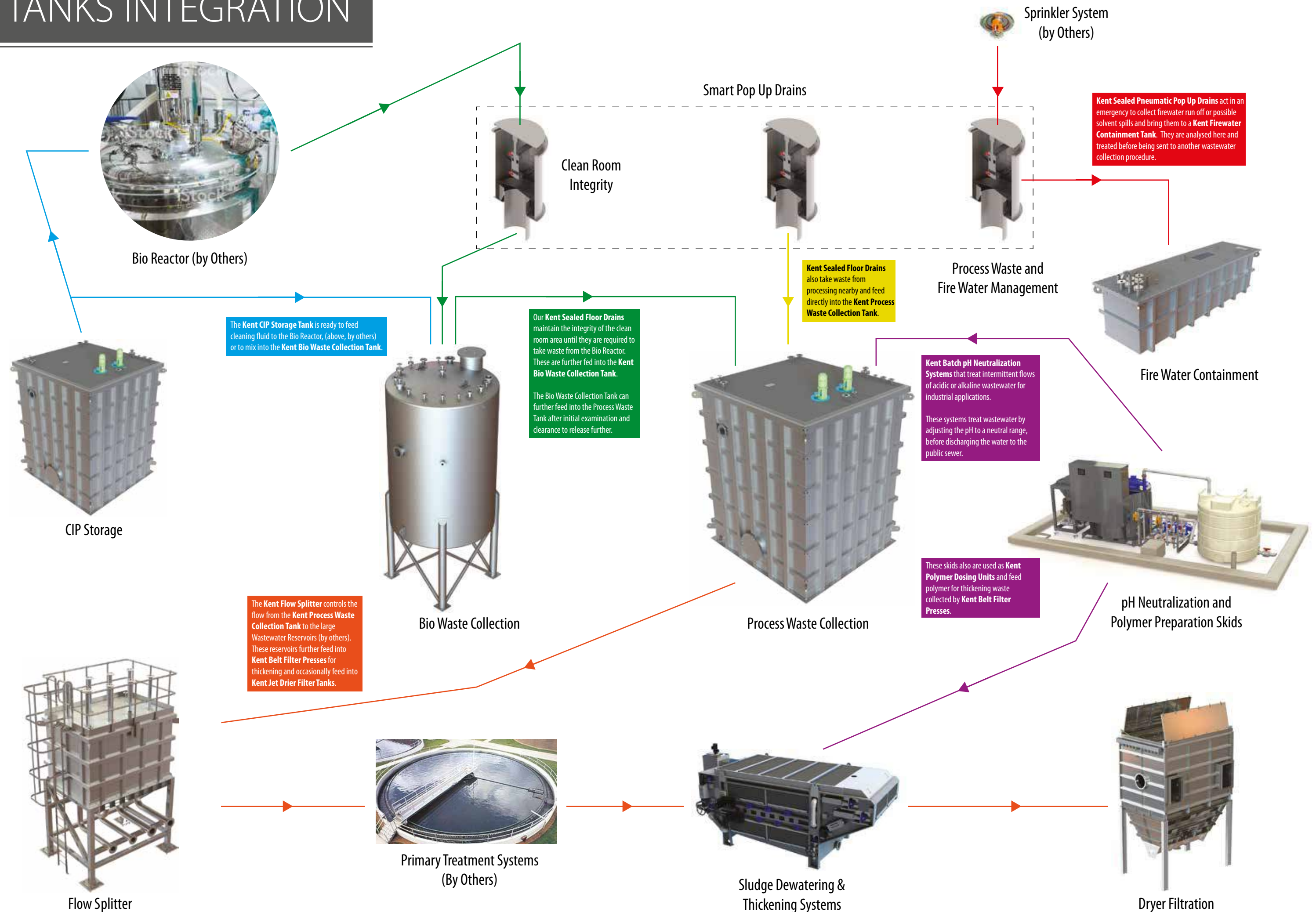


Tanks Case Studies

A selection of examples of Process Waste Tanks, designed for specific client requirements, and customised by Kent Stainless.

The following pages are to show our capabilities only and assure clients of our ability to meet requirements for their project.

TANKS INTEGRATION



Process Waste Lift Station

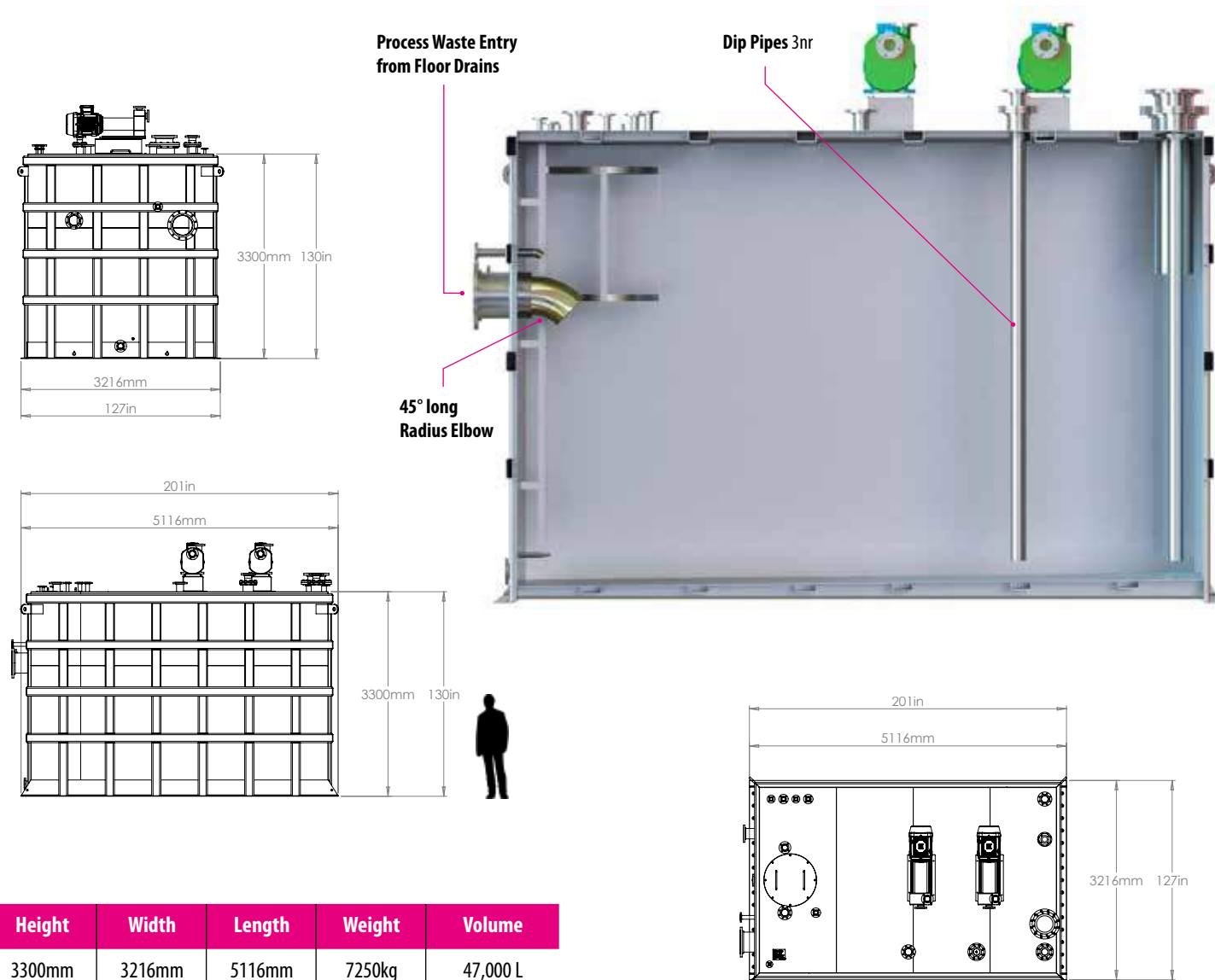
Kent Stainless manufactured this Process Waste Tank for a Biopharmaceutical factory construction project in 2017.

The sizes listed below are a typical size but we have made tanks like this up to 100,000 litres / 265,000 US Gallons.

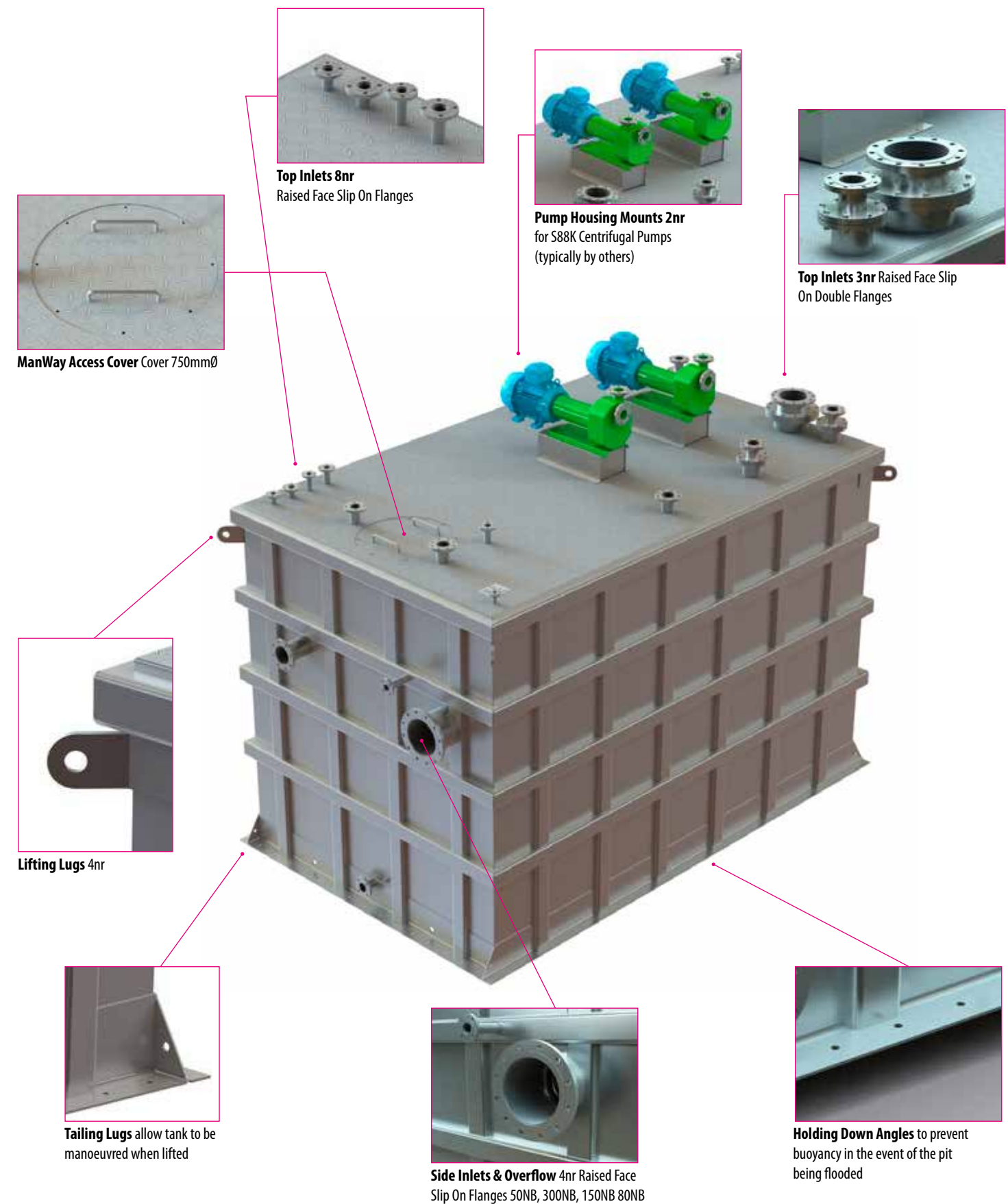
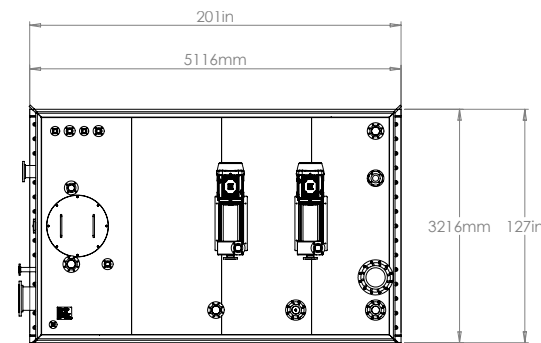
The tank measures 5116mm long x 3216mm wide x 3300mm high (201in x 127in x 130in) and weighs 7250kg empty or 31200kg filled. The sump is made from 6mm thick grade 316L stainless steel and has a 47,000 litre capacity (12,416 US Gallons).

INDUSTRIES

- BioPharma
- Food & Beverage
- Pharmaceutical



Height	Width	Length	Weight	Volume
3300mm	3216mm	5116mm	7250kg	47,000 L
130in	127in	201in	16,000lb	12,416 Gallon



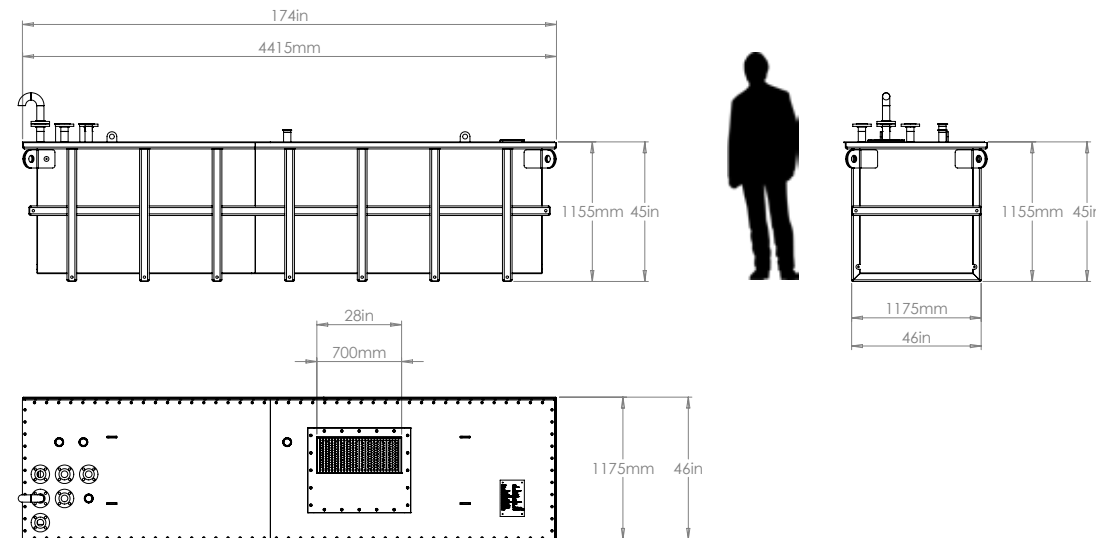
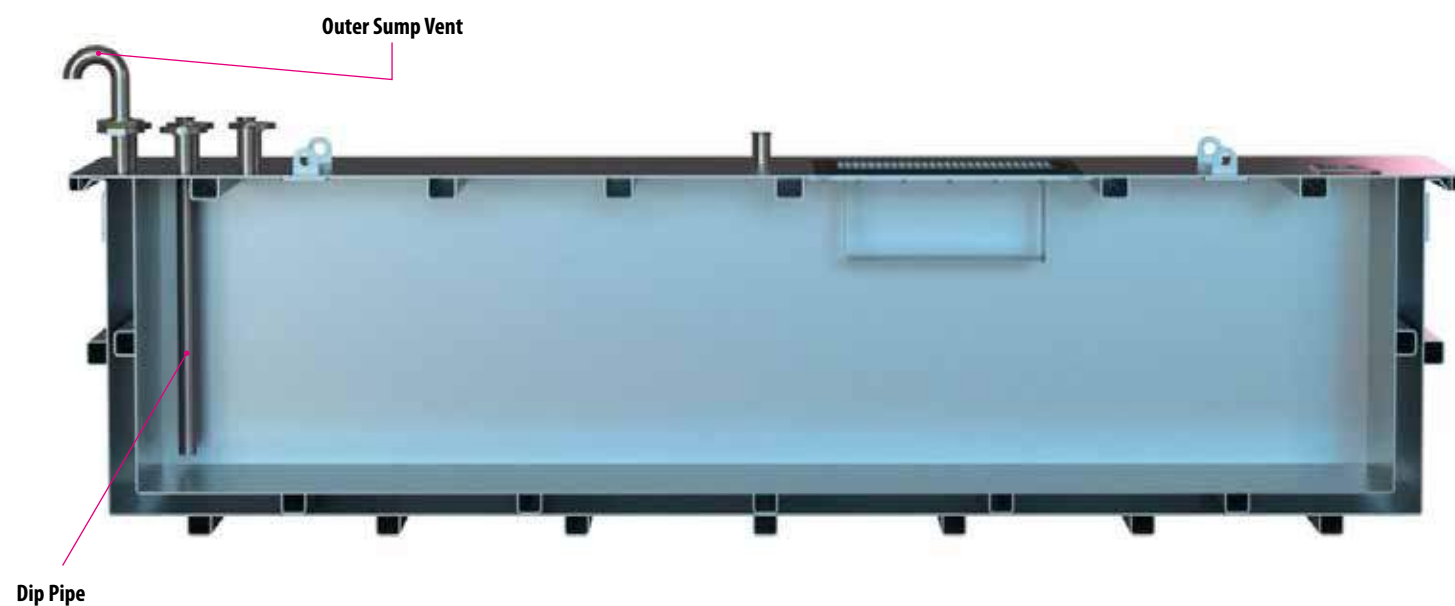
Double Contained Aqueous Waste Sump

KentStainless manufactured this Double Contained Aqueous Waste Tank for a Biopharmaceutical factory construction project in 2017. The Double Containment here is achieved by a second skin fabrication (in some other case studies a second containment has been achieved using the concrete sump as a 2nd wall).

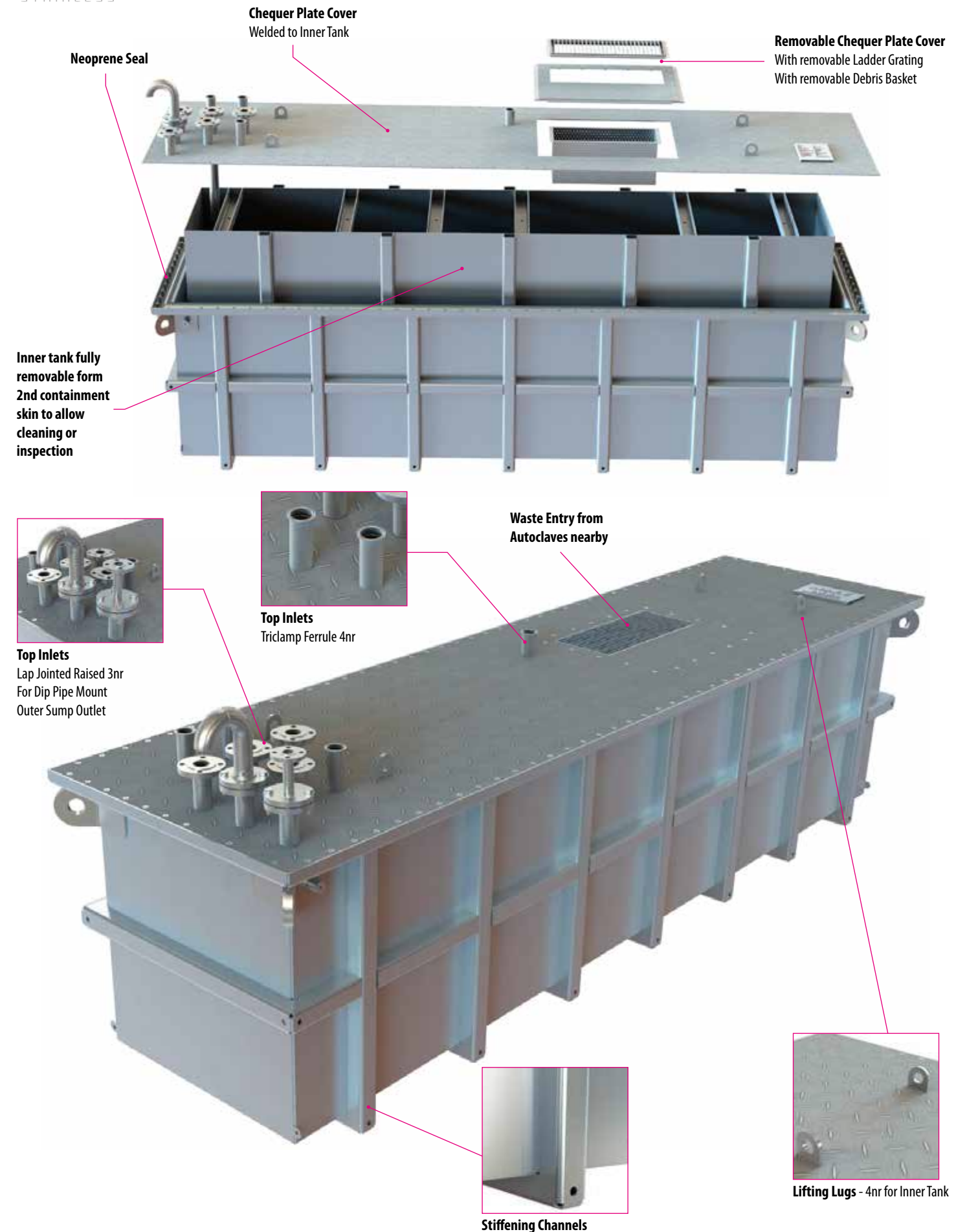
The tank measures 4415mm long x 1175mm wide x 1155 high (174in x 46in x 45in) and weighs 2223kg (4,900lb) empty or 5396kg (11,896lb) filled. The sump is made from 6mm thick (1/4") grade 316L stainless steel and has a 5,360 litre capacity. The size of this tank allows it to receive waste discharge from 2-3 autoclaves installed adjacent to it.

INDUSTRIES

- BioPharma
- Food & Beverage
- Pharmaceutical



Height	Width	Length	Weight	Volume
1155mm	1175mm	4415mm	2223kg	5,360 L
45in	46in	174in	16,000lb	12,416 Gallon



Atmospheric Storage Tank

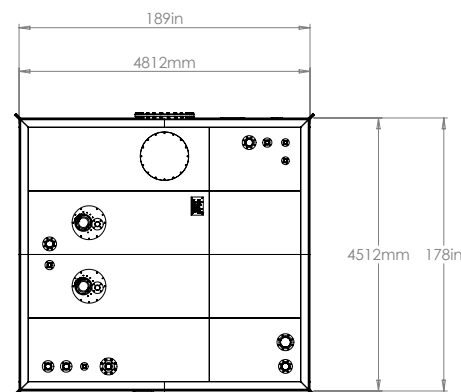
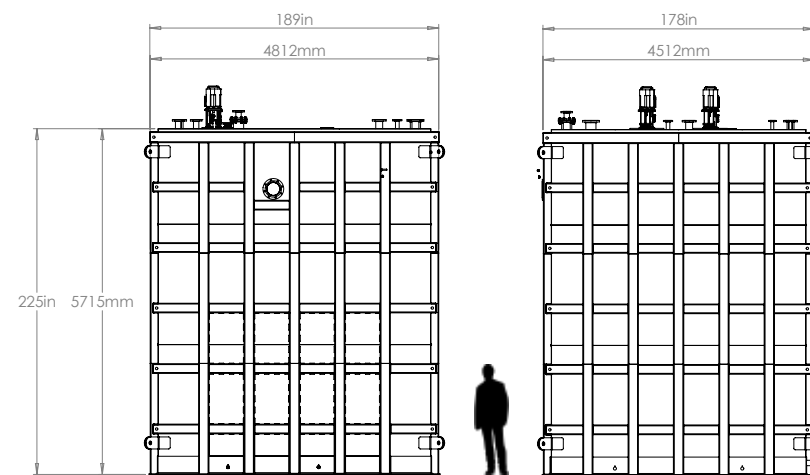
Kent Stainless manufactured this Process Waste Lift Station for a Pharmaceutical factory construction project in 2019. This was used to store caustic CIP solution for wash-down in the factory.

For another tank a variation without top pumps was used elsewhere in the factory as a **Firewater Storage Tank**.

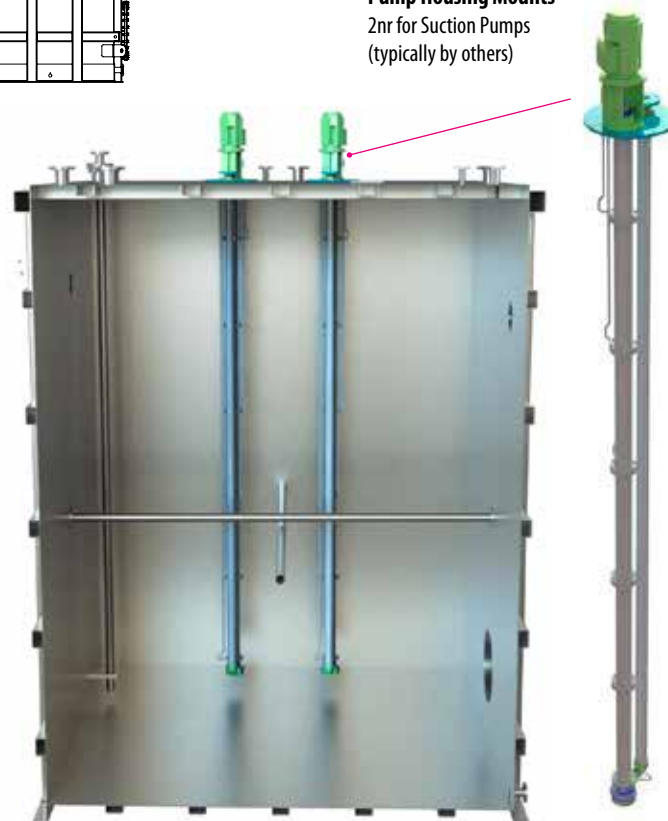
The tank measures 4,812mm long x 4,512mm wide x 5,715mm high (189in x 178in x 225in) and weighs 13,150kg empty (29,000 lb) or 107,150kg filled (236,000 lb). The sump is made from 6mm thick grade 316L stainless steel and has a 80,000 litre working capacity (21,133 US Gallon) or a 104,000 L full capacity (27,473 US Gallon).

INDUSTRIES

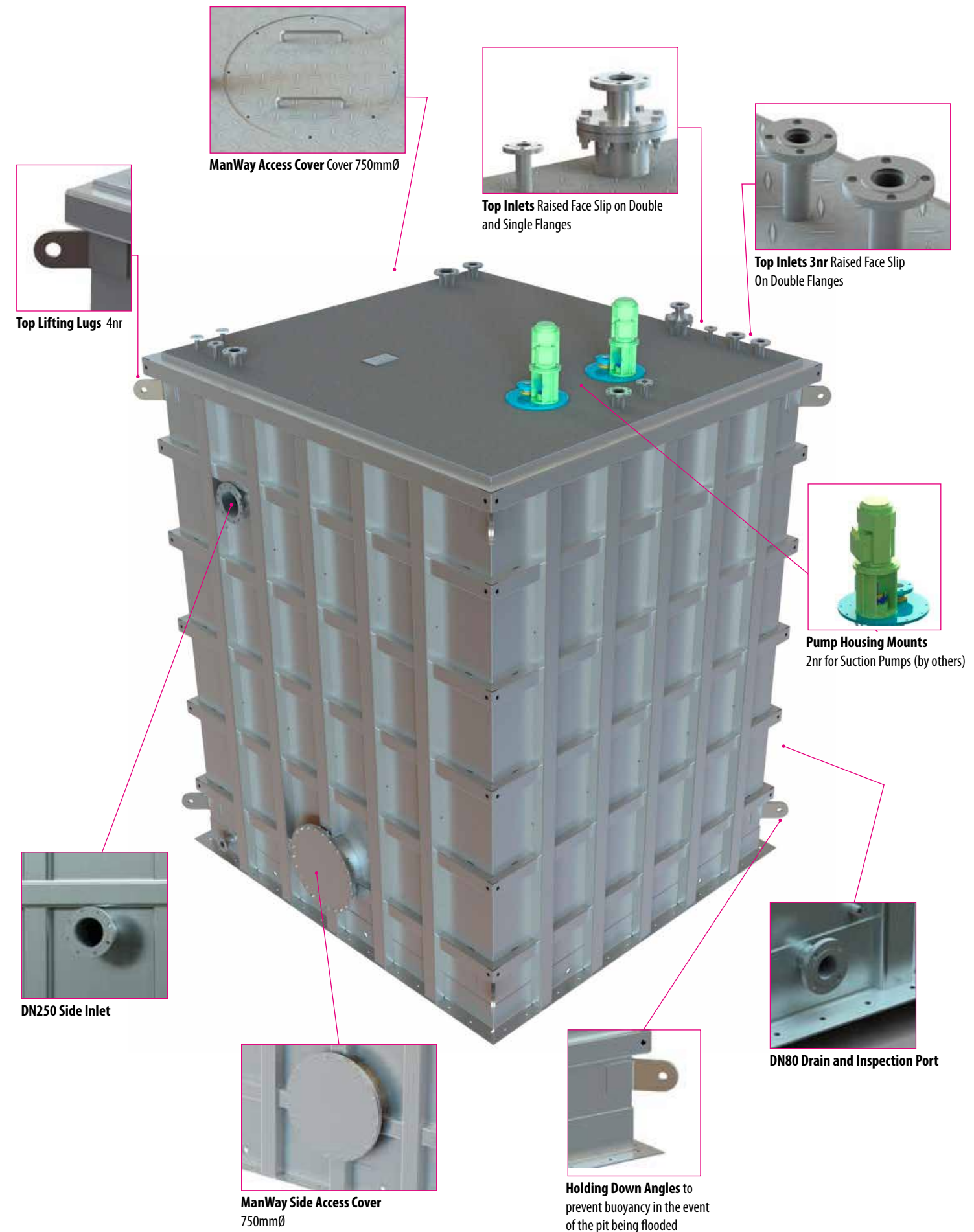
- BioPharma



Pump Housing Mounts
2nr for Suction Pumps
(typically by others)



Height	Width	Length	Weight	Volume
5715mm	4512mm	4812mm	13,150kg	104,000 L
225in	178in	189in	29,000lb	27,473 Gallon



DN250 Side Inlet

ManWay Side Access Cover
750mmØ

Holding Down Angles to
prevent buoyancy in the event
of the pit being flooded

DN80 Drain and Inspection Port



Pulse Jet Drier Filter Tank

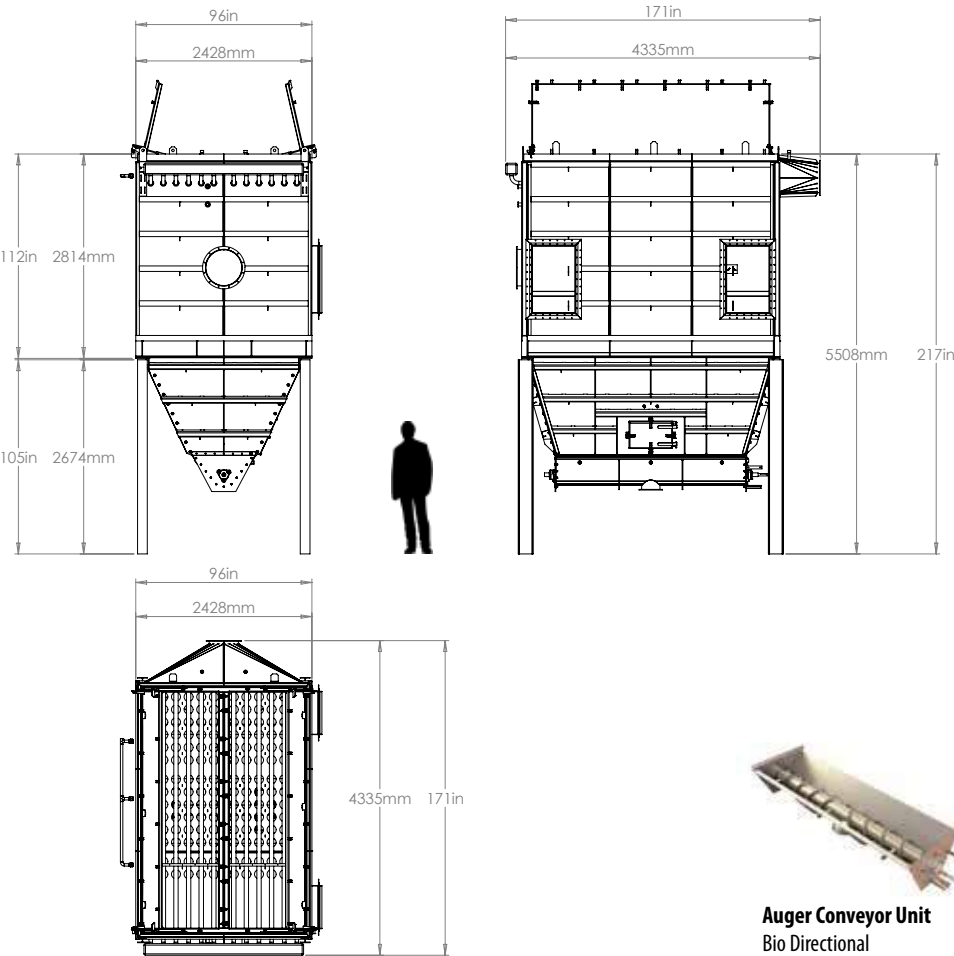
Kent Stainless manufactured this Pulse Jet Drier Filter for a municipal wastewater treatment project in 2018.

Installed adjacent to a sewage sludge drier, it was designed to filter the drier’s air exhaust. It incorporates 2 Explosion Relief Hatches, Hinged Access Covers and a Back Pulse Filter Cleaning Auger to empty filter dust.

The overall height needed for the tank, hopper and leg supports is 4335mm long x 2428mm wide x 5508mm high (171in x 96in x 217in). The tank is made from 5mm thick Duplex stainless steel and was fitted to the lower hopper and to the beam support legs mechanically on site.

INDUSTRIES

- BioPharma
- Food & Beverage
- Pharmaceutical
- Wastewater
- Municipal Wastewater



Height	Width	Length	Weight
5508mm	2428mm	4335mm	8,000kg
217in	96in	171in	17,600lb



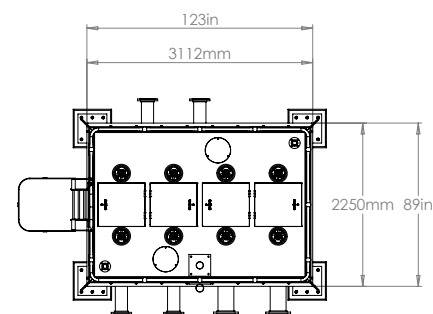
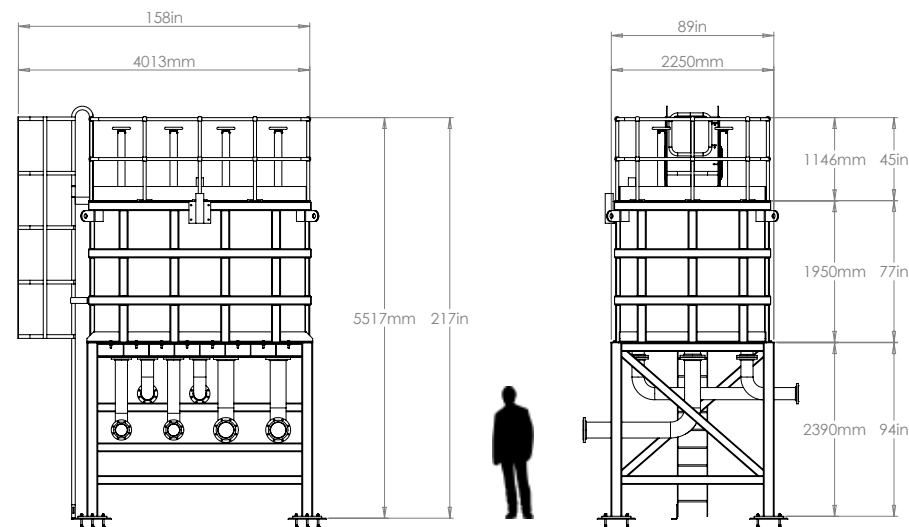
Splitter Box Flow Control Tank

Kent Stainless manufactured this Splitter Box Tank for a Pharmaceutical Wastewater Treatment Plant in a Pharmaceutical Factory in 2016.

This tank receives the wastewater from the process waste Tank seen earlier in this brochure. It contained 8 adjustable weir gates to control the flow.

The tank measures 3112mm long x 2250mm wide x 1950mm high (123in x 89in x 77in) and weighs 5,700kg empty. The sump is made from 6mm thick grade 316L stainless steel and has a 2,600 litre working capacity (686 US Gallons).

The overall footprint including stand and handrails is 3112mm long x 2250mm wide x 5517mm high (123in x 89in x 217in).



**Outlets - Raised face
Slip On Flanges - 6nr**



**Adjustable Weirs with
non floor stands and
hand wheels - 8nr**

INDUSTRIES

- BioPharma
- Food & Beverage
- Pharmaceutical
- Wastewater

Height	Width	Length	Weight	Volume
1950mm	2250mm	3112mm	5,700 kg	2,600 L
77in	89in	123in	12,566 lb	686 Gallon



**Non Rising Floor Stands
and Hand Wheels - 8nr**



**Kick Plate All Round plus
handrail**



Hinged Access Covers 600mm - 4nr



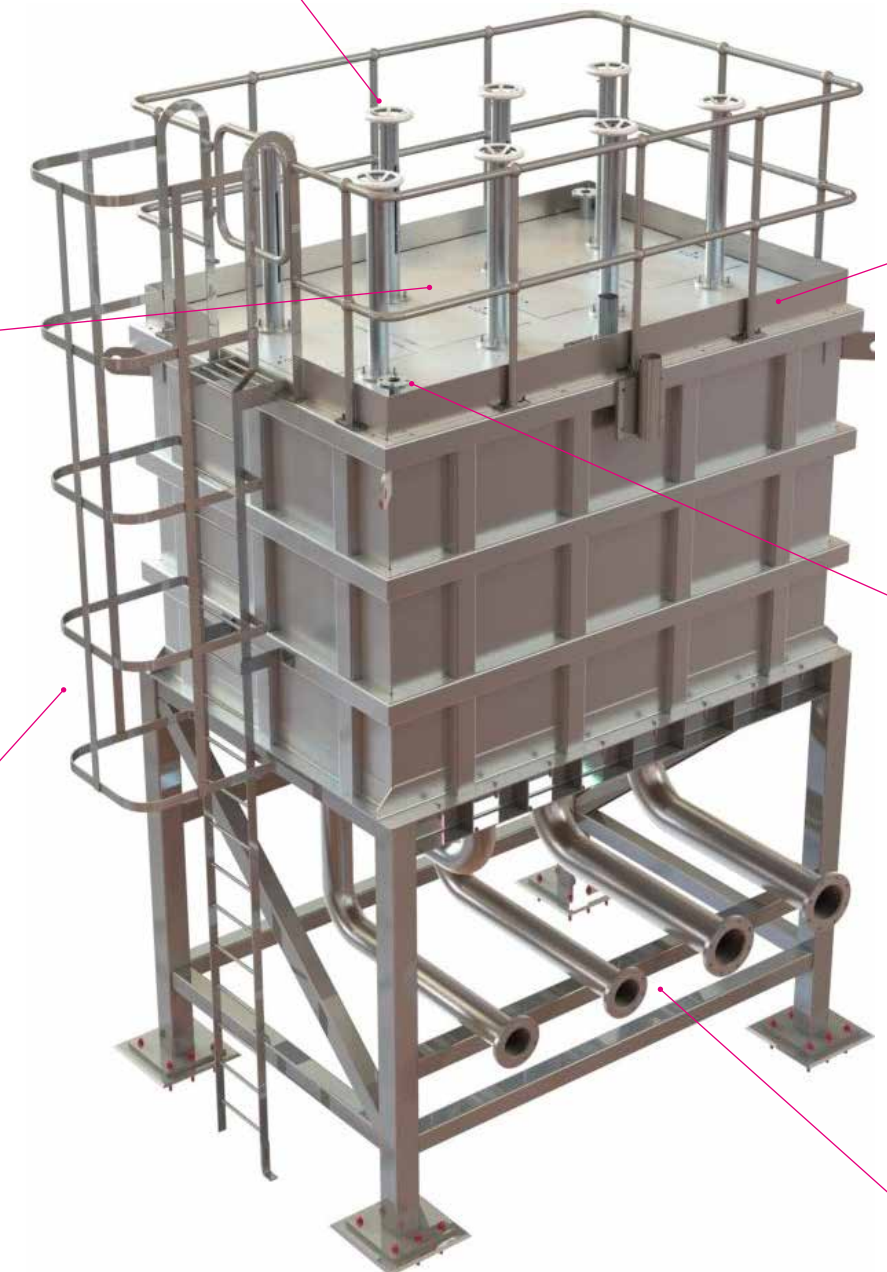
**Inlets - Raised face
Slip On Flanges - 2nr**



**Ladder with Safety Cage
& Spring Loaded Gate**



**Inlets - Raised face
Slip On Flanges - 6nr**



Zoned Process Waste Tank

This small process waste tank was made by Kent Stainless in 2019. We manufactured a single contained tank—but the double containment was created by the client on site in a secondary concrete sump.

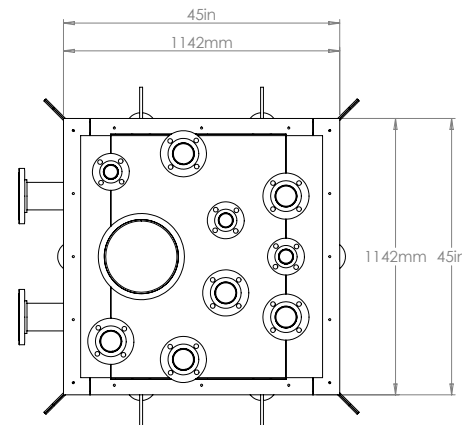
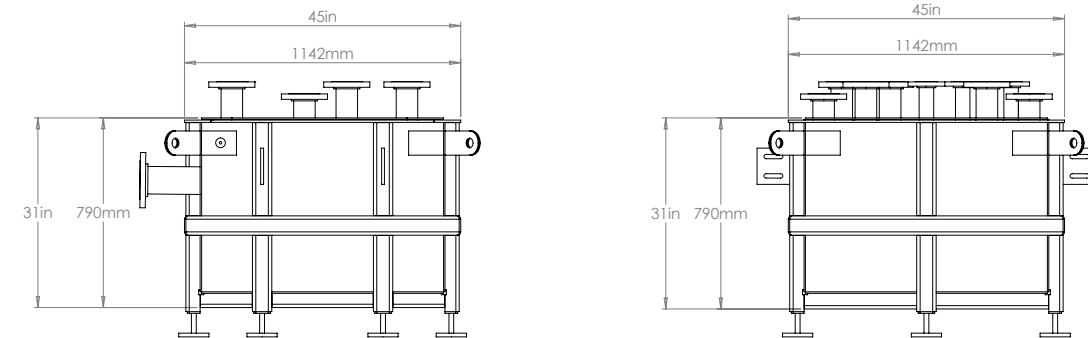
This was designed to take waste from a 20m long (65ft) channel or trench drain in addition to run off from a machine nearby. 27 units like this were supplied to the project ranging from 650 L (171 US Gallon) to 2000 L (530 US Gallon).

The tank measures 1142mm long x 1142mm wide x 790 high (45in x 45in x 31in). The sump is made from 6mm thick grade 316L stainless steel and has a 1000 litre capacity.

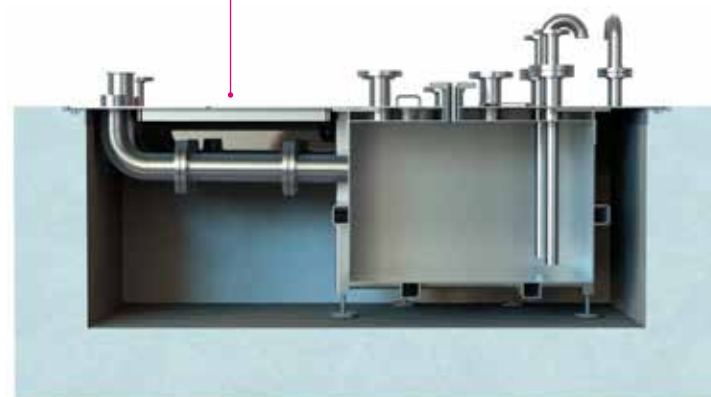
The tank has side lugs fully welded which then can mechanically fix onto side lugs of the angle frame which is installed first.

INDUSTRIES

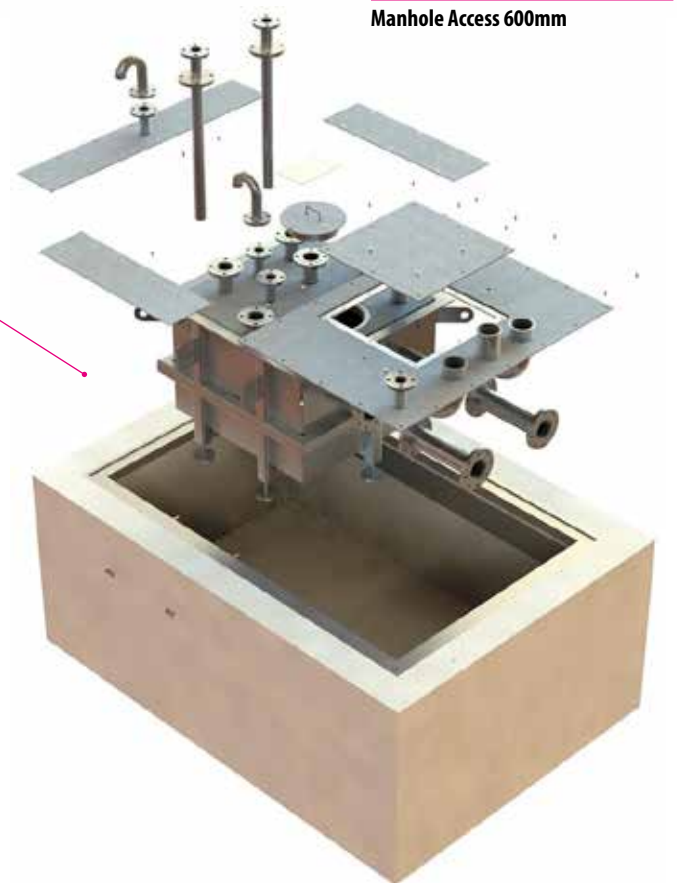
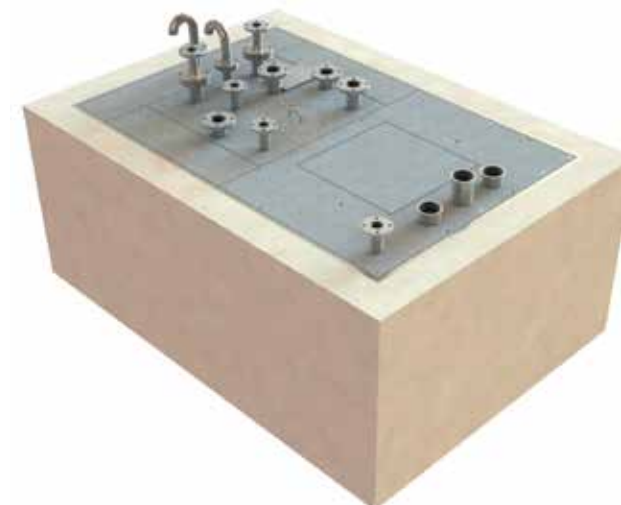
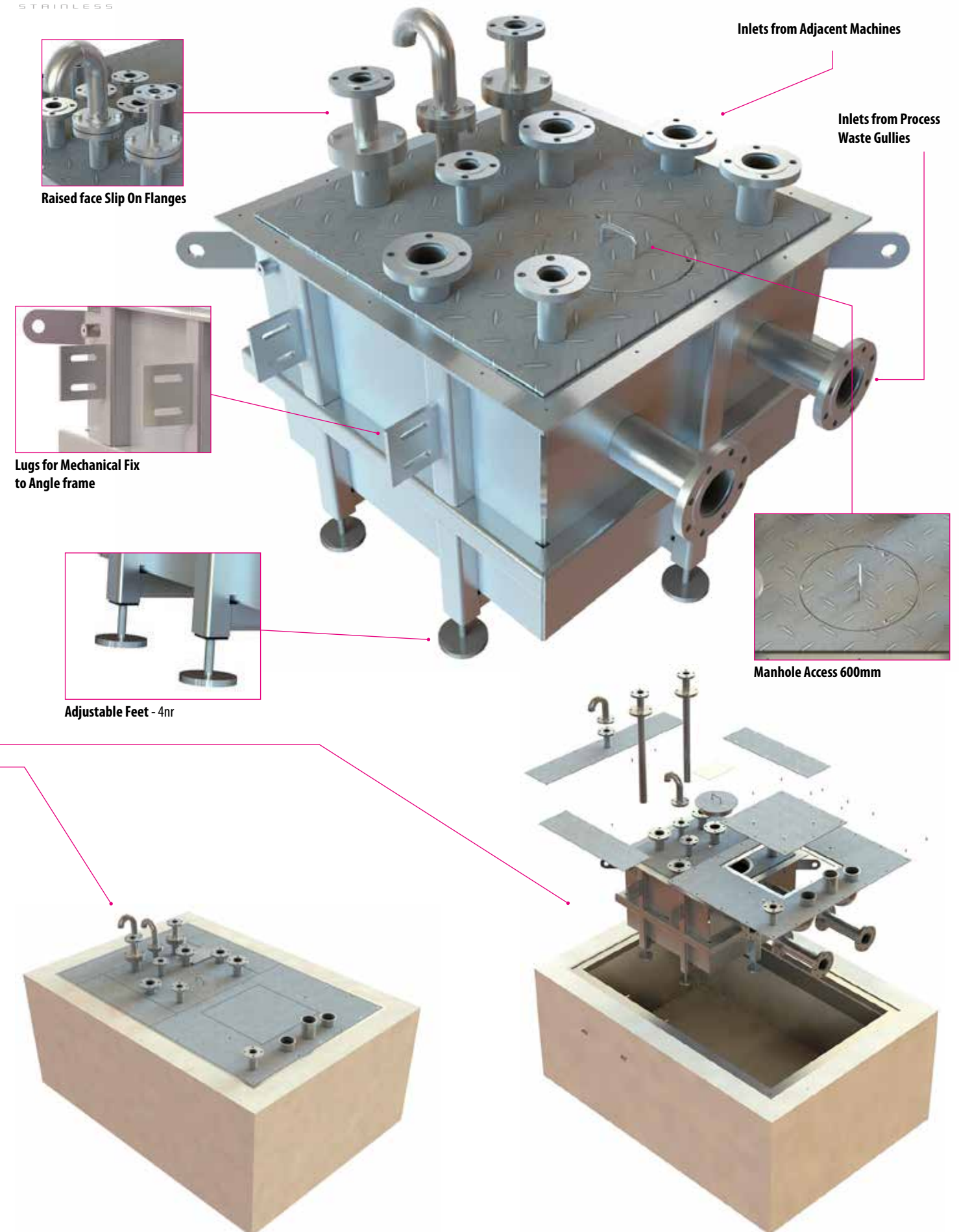
- BioPharma
- Food & Beverage
- Pharmaceutical



Mechanically fixed chequer plate round tank conceals secondary concrete containment



Height	Width	Length	Weight	Volume
790mm	1142mm	1142mm	1,000kg	1,000 L
31in	45in	45in	2,200lb	232 US Gallon



Round Bio Waste Collection Tank

Kent Stainless manufactured this Bio Waste Tank for a Biopharmaceutical factory construction project in 2017.

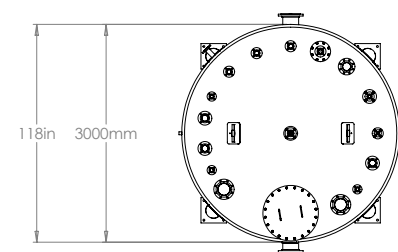
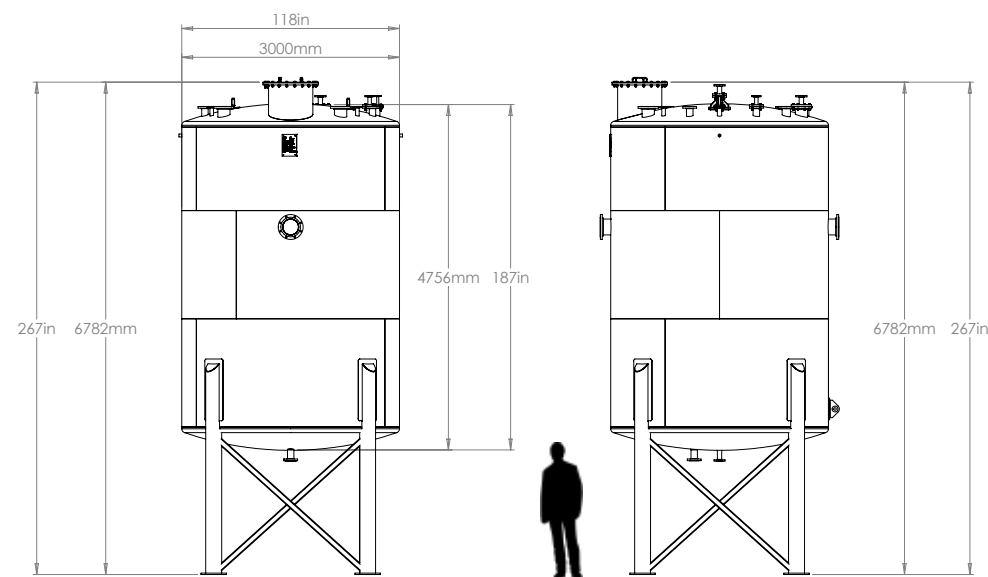
The use of bio waste necessitated a round design. The Bio Reactor nearby fed waste into this collection tank. The tank was pressurised to take a low pressure of 300 millibar. It includes it's own CIP system.

The tank measures 3000mm (118in) diameter x 6782mm high (267in) fully mounted (tank body being 4756mm (187in) high. The sump is made from 6mm thick grade 316L stainless steel.

It has a 20,000 litre working capacity (5,283 US Gallons) in a full tank volume of 30,000 L (7,900 US Gallon).

INDUSTRIES

- BioPharma
- Food & Beverage
- Pharmaceutical



Spray ball 1200mm
inside tank

Internal Dip Pipe - 2nr

Filter Basket over bottom
outlets - 1nr

Raised Face Slip On Flange Outlet
- 2nr, 1 with Vortex Breaker

Curved Tank
Base

Height	Dia	Weight	Volume
6782mm	3000mm	3,640kg	20,000
267in	118in	8,000 lb	5,283 Gallon



Raised Face Slip On Flanges - 16nr



600mm Diameter Manhole
Access - 1nr



Side Outlets at 20,000
litre water level - 2nr



Lifting Lugs - top & side





NOTES

NOTES



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