

Industrial and Municipal Process Equipment Packages

Develop

process solutions partnerships to find efficiencies on new or existing process.

Design

- machines for solids recovery, liquid clarification, and minimize water consumption.

Deliver

- project specific solutions for better economic, and environmental process performance.



Doc# PERFOBASK-1703-R01

MANUFACTURE

DRYCAKE's technical department is able to develop all the required design activities from feasibility to as-built. Process Validation can be validated using our lab or on-site pilot services.

Our equipment is manufactured in high quality Stainless Steel, and is fully customizable according to project requirements and needs.

The production team is composed by assemblers and certified welders, experts in TIG (Tungsten Inert Gas) welding, a process of arc welding with consumable electrode (Tungsten), under protection of inert gas. After the welding processes, the Stainless Steel is passivated by our operators.

Quality control during the entire design process guarantees the compliance with Customer's technical requirements, good manufacturing practices and compliance with UL and CSA, ASMI, ANSI Standards and certifications.

All equipment is subject to 3rd party witnessed factory acceptance test prior to shipment.

OPERATION

The **PERFOBASK** offers the waste water filtration, the transport and the compaction, which allows an important reduction in weight and volume of filtered waste (up to 50% less). The aperture can be circular holes (2 to 6 mm) or wedge wire from 0.5 to 2 mm.

The machine can be installed inclined into a **concrete channel (DSS-C Serie)** or in a **stainless steel tank (DSS-T Serie)** to receive the waste waters from a fix pipe. The **vertical configuration (DSS-V Serie)** is the variant developed for vertical installation.

The screening basket retains solids as the liquid passes them. The solids clog the holes and cause a rise in the level of the effluent causing a differential between the level of the upstream and downstream. Generally, a sensor, detects the increase in absolute or differential water level, provides the auger start signal. As the auger rotates, brushes fixed on the lower part of the auger clean the screening profile. The auger then transports the screenings to the compaction area. Compaction is achieved by reducing the auger pitch. The compacted solids exit the screen out the discharge chute.

**PERFOBASK
IN CHANNEL
DSS-C**



**PERFOBASK
VERTICAL
DSS-V**



**PERFOBASK
IN TANK
DSS-T**



FEATURES

- ✓ Automatic Operation
- ✓ Screening, Washing & compaction in one compact unit
- ✓ Fully customizable to customer needs
- ✓ No submerged mechanical components
- ✓ Manufactured in Stainless Steel AISI 304 and 316(L)
- ✓ Welding pickled and passivated
- ✓ Easy removable covers for hygienic inspection
- ✓ Odour-containing covers
- ✓ Bagging System
- ✓ Winterization
- ✓ Low and easy maintenance

**PERFOBASK IN TANK DSS-T
WITH OVERFLOW SIDE BOX
MANUAL SCREEN**



**PERFOBASK
IN CHANNEL
DSS-C**



**PERFOBASK
VERTICAL
DSS-V**



**PERFOBASK
IN TANK
DSS-T**

MANUFACTURING QUALITY

COMPACTION ZONE WITH SAFETY SWITCH



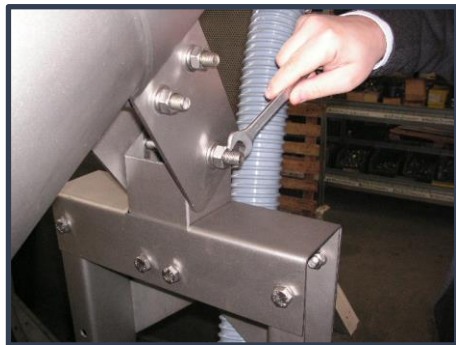
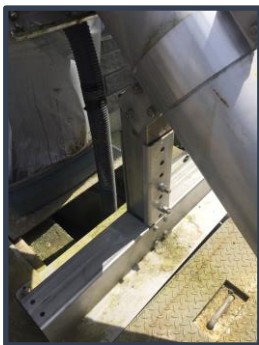
- 1 Pressate Return Liquid Hose
- 2 Hinged Access Cover with Safety Microswitch
- 3 Compaction Zone Washing System



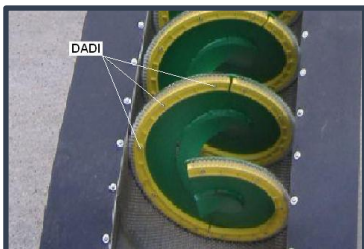
CENTRALIZED WASHING SYSTEM

Single point water inlet for all solenoid valves with local isolating ball valves.

ADJUSTABLE PIVOTING SUPPORT



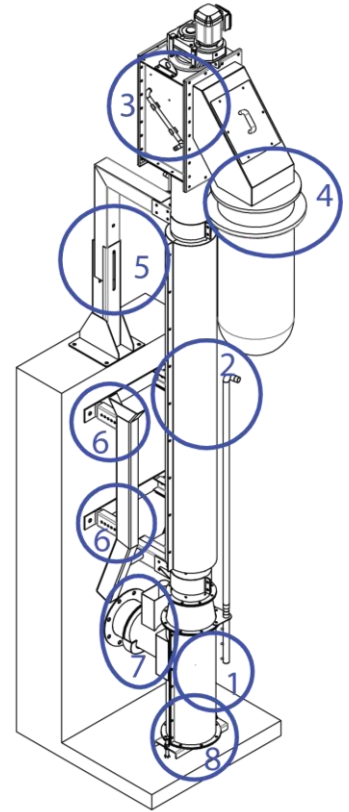
EASY BRUSH REPLACEMENT



VERTICAL CUSTOM DESIGN

EASY TO INSTAL, EASY TO MAINTAIN

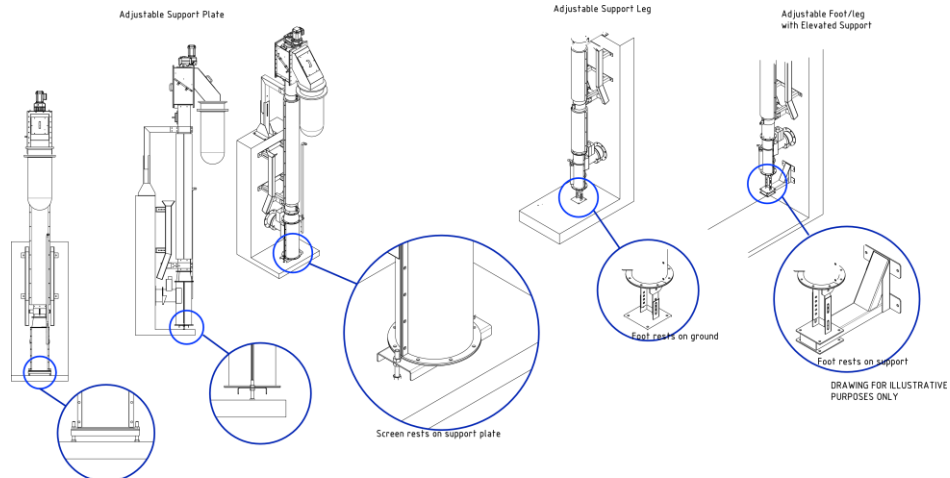
1. Screening Basket
2. Transport Zone Shafted Screw
3. Compaction Zone
4. Discharge Chute w/ endless bagger
5. Adjustable Ground Support
6. Guide rail w/ adjustable wall support
7. Quick Direct Connect Inlet
8. Adjustable Bottom Support



QUICK DIRECT CONNECT INLET



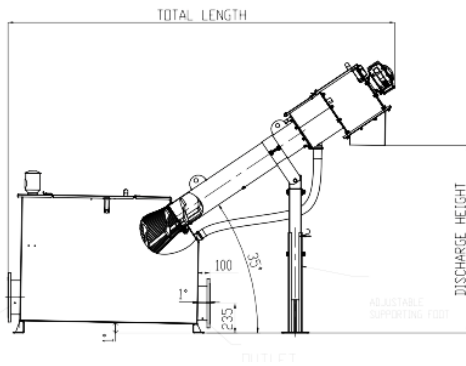
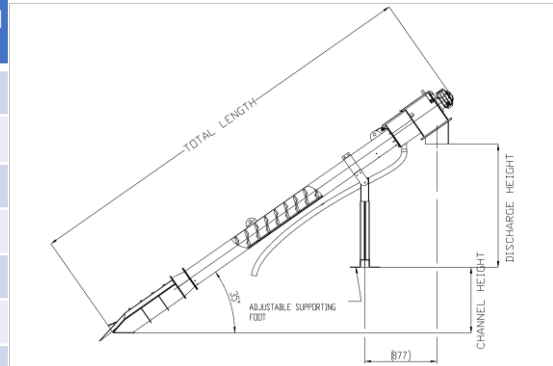
BOTTOM SUPPORT OPTION



COMMON DESIGN EXAMPLES. ACTUAL SUPPORT STRUCTURE DESIGN IS BASED ON LAYOUT REQUIREMENTS.

MODEL & DIMENSION

35°-45° installation IN CHANNEL	Channel Height		Ideal Width		Total Length /w gear motor		Discharge Height from channel bottom	
	mm	in	mm	in	mm	in	mm	in
MODEL								
DSS-C 200	800	32	250	10	5,360	211	2,300	91
DSS-C 300	800	32	350	14	5,355	211	2,300	91
DSS-C 400	800	32	460	18	5,410	213	2,320	92
DSS-C 500	800	32	560	22	5,420	214	2,325	92
DSS-C 600	800	32	660	26	5,825	230	2,350	93
DSS-C 700	1,000	40	760	30	6,165	243	2,550	101



35°-45° installation IN TANK	Inlet		Outlet		Total Length /w gear motor		Discharge Height	
	mm	in	mm	in	mm	in	mm	in
MODEL								
DSS-T 200	100	4	150	6	5,360	211	2,300	91
DSS-T 300	150	6	200	8	5,355	211	2,300	91
DSS-T 400	200	8	250	10	5,410	213	2,320	92
DSS-T 500	250	10	300	12	5,420	214	2,325	92
DSS-T 600	300	12	400	16	5,825	230	2,350	93
DSS-T 700	350	14	500	20	6,165	243	2,550	101

PERFOBASK CAPACITY *	DSS 200		DSS 300		DSS 400		DSS 500		DSS 600		DSS 700	
	m3/h	GPM	m3/h	GPM	m3/h	GPM	m3/h	GPM	m3/h	GPM	m3/h	GPM
Type of meshes and spacing												
0,25mm Wedge Wire	20	88	35	154	55	242	120	528	200	880	290	1,276
0,50mm Wedge Wire	45	198	60	264	5	22	190	836	275	1,210	370	1,628
1mm Wedge Wire	75	330	90	396	120	528	265	1,166	360	1,584	530	2,332
2mm Wedge Wire	85	374	105	462	150	660	310	1,364	415	1,826	670	2,948
2mm Perforated Holes	50	220	60	264	85	374	180	792	250	1100	370	1628
3mm Perforated Holes	100	440	125	550	180	792	320	1,408	465	2,046	740	3,256
5mm Perforated Holes	140	616	162	713	268	1,179	396	1,742	590	2,596	950	4,180
6mm Perforated Holes	160	704	198	871	300	1,320	453	1,994	600	2,640	980	4,312
8mm Perforated Holes	180	792	220	968	350	1,540	480	2,113	650	2,860	1,000	4,400

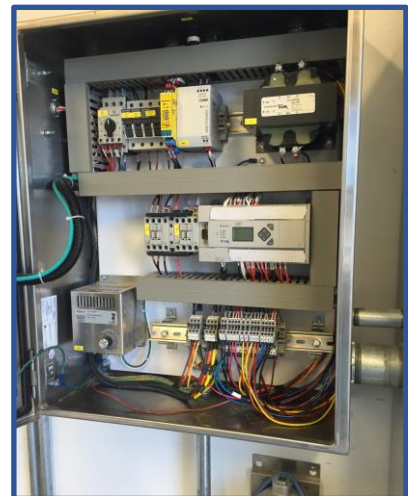
*Capacities are for 35° degree installation with standard length screening basket
Contact **DRYCAKE** for capacity at different perforations.

CONTROLS & INSTRUMENTATION

DRYCAKE MICROLOGIX CONTROL PANEL

- ✓ Enclosure: NEMA 4X Stainless Steel Lockable
- ✓ Control power transformer
- ✓ Motor Starter with overload and thermal protection
 - Transport Screw Motor
- ✓ PLC: Allen Bradley Micrologix 1400 or equal
- ✓ HMI: Panelview C400
- ✓ Elapsed run time meters
 - Transport Screw
- ✓ Pushbuttons
 - E-Stop (Mushroom - manual reset)
 - Alarm reset
- ✓ Pilot Lights
 - Power On
 - Screen Running
 - Overload Shutdown
- ✓ High Water Level Alarm
- ✓ Embossed nameplates

Additional pushbuttons for components are present when supplied without local control station or on client request



CONTROLS & INSTRUMENTATION

DRYCAKE LOGO CONTROL PANEL

- ✓ Enclosure: NEMA 4X Stainless Steel or NEMA 4 FRP Lockable
- ✓ Control power transformer
- ✓ Motor Starter with overload and thermal protection
 - Transport Screw Motor
- ✓ PLC: Siemens Logo
- ✓ Elapsed run time meters
 - Transport Screw
- ✓ On-Auto-Off Selector Switches:
 - Transport Screw:
 - Compaction Washwater
 - Screen Zone Washwater
- ✓ Pushbuttons
 - E-Stop (Mushroom - manual reset)
 - Alarm reset
- ✓ Pilot Lights
 - Power On
 - Transport Screw Running
 - Overload Shutdown
- ✓ High Water Level Alarm
- ✓ Embossed nameplates

Additional pushbuttons for components are present when supplied without local control station or on client request



CONTROLS & INSTRUMENTATION

SCREEN - LOCAL CONTROL STATION

- ✓ Enclosure: NEMA 7 Cast Aluminum Bolted Pushbuttons
- E-Stop (Mushroom - manual reset)
- MAN/OFF/AUTO Screen
- FOR/OFF/REV Screen

Additional pushbuttons for components are present when supplied on client request



INSTRUMENTATION

DSS-C: HydroRanger Ultrasonic (or client preference)

- ✓ Ultrasonic level sensor with analog input to PLC

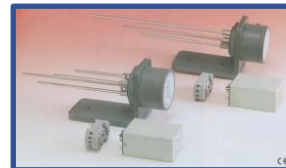
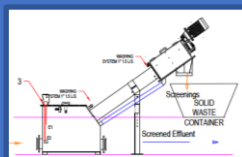


DSS-C: Float Flygt ENM 10

- ✓ Mercury free float



DSS-T: Conductivity Level Switch



EQUIPMENT RANGE

Mechanical Dewatering

- Decanter Centrifuge
- High Speed Centrifuge
- Gravity Belt Press Thickener
- Belt Press
- Scrudrain: Screw Thickener
- Screw Press
- DRAIMAD Dewatering bag skid

Thermal Systems

- Sludge Dryers
- Evaporators

Screening

- Multi-Rake Bar Screens
- Perforated Plate Screens
- Internally Fed Drum Screens

Grit and FOG Removal Systems

Solid Waste

- Material Sorting & Screening

Polymer Preparation

- Dry & Liquid polymer systems

Materials Handling Systems

- Shaftless Screw Conveyors
- Belt Conveyors
- Live Bottoms
- Silos
- Sorting Lines
- Shredders

Pumping

- PC Pumps

APPLICATION FIELD

By PROCESS

- Aggregates conveying
- Biomass drying
- Biomass gasification wastewater treatment
- Biosolids reduction
- Biosolids stabilization (Class A)
- BOD reduction
- Cogeneration
- Dewatering:
 - Aerobic sludge
 - Anaerobic sludge
 - Lime & Alum sludge
 - Mixed industry sludge
 - WAS sludge
- Evaporation
- Enzymatic Inactivation
- Fish processing
- Flour enhancement
- Head works
- Heat treatment
- Kelp processing
- Bulk materials Handling
- Leachate treatment
- Oil separation
- Paper sludge de-inking
- Plastics separation
- Pump station screening
- Pulp Recovery

By INDUSTRY

- Airports
- Biomass gasification
- Cement factory
- Dairy Industry
- Die Casting Industry
- Flour Mill
- Landfill
- Municipal WWTP
- Paint Factories
- Petro-chemical refinery
- Pulp & Paper industry
- Potato plant
- Rendering plant
- Slaughtering plant
- Tar Sands
- Quarries