2034001501-(XG-MPL01)-E105717506-01
DAF FLOAT TRANSFER PUMPS - DATA SHEET
19-J-060 A/B

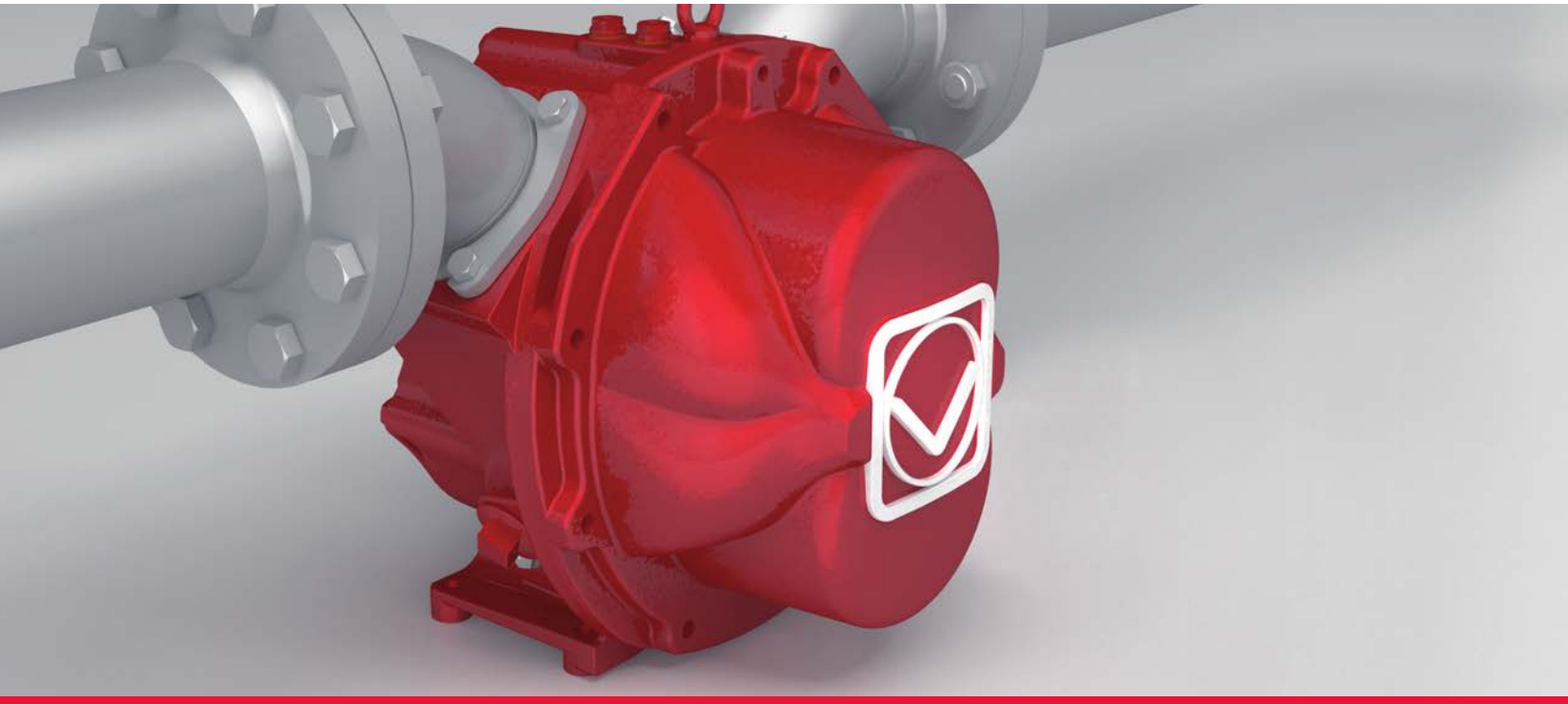
VOGELSANG
ENGINEERED TO WORK

HIGH PERFORMANCE PUMPS DESIGNED FOR TOUGH APPLICATIONS

IQ Series Pumps

The next generation Rotary Lobe Pump.

Industry | Mining | Biogas | Agriculture | Wastewater

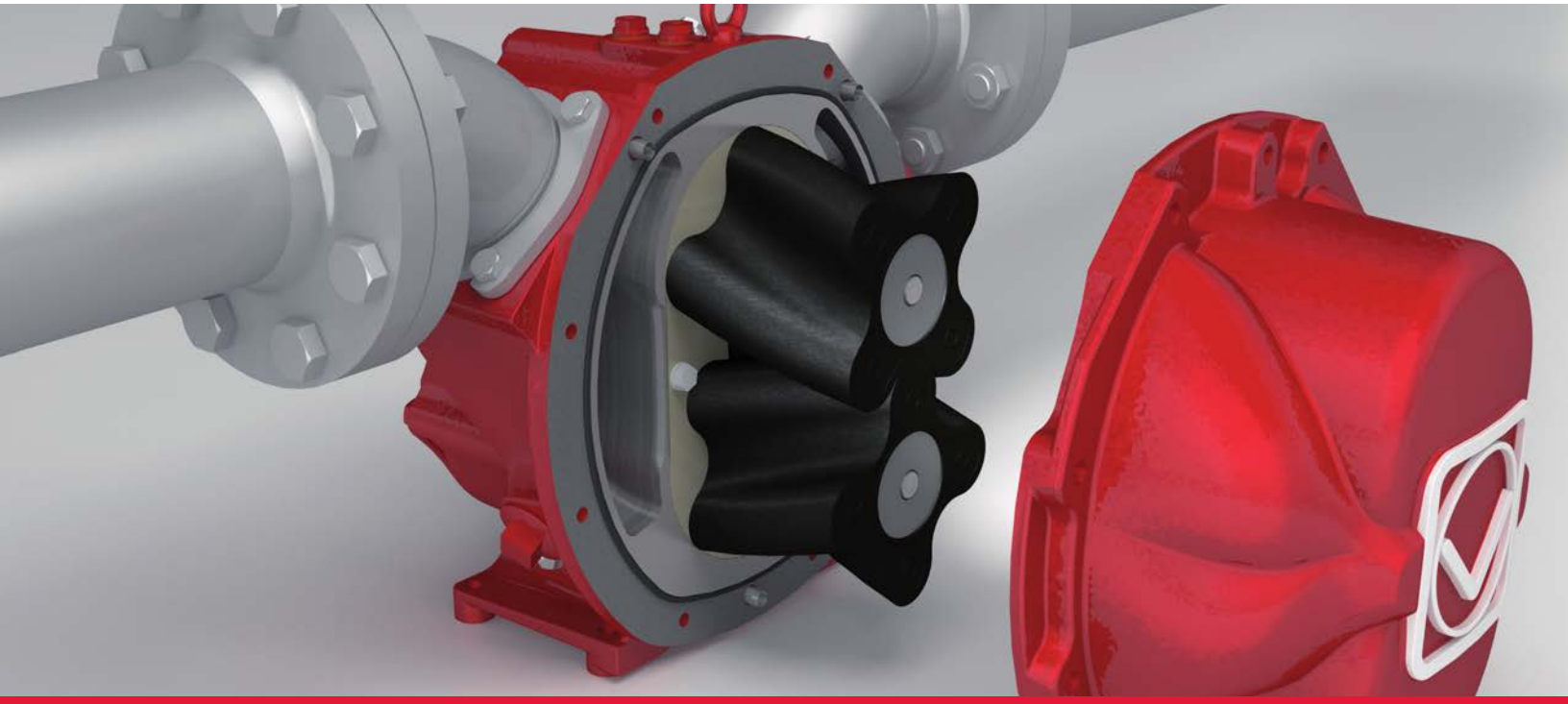


ROBUST, RESILIENT, RELIABLE!

The next generation Rotary Lobe Pump!

The latest in Vogelsang innovation. Due to the nature of our rotary lobe pump, our exclusive lobe design, most types of viscous liquids can be pumped throughout your system with ease as compared to progressing cavity, centrifugal and other rotary lobe pumps. Our products are built to pump thick and abrasive liquid with no pulsation. Vogelsang pumps offer quick and easy access to the wet end for inline repair without disturbing connected piping.

IQ 112 Series Rotary Lobe Pump



The IQ Rotary Lobe Pump Product Line.

The IQ is the latest addition to the Vogelsang line of Rotary Lobe Pump models. It does everything that our industry leading VX design will but has a one-piece housing that is incredibly easy to work on. The all new IQ design works well in applications requiring a positive displacement pump in the 200gpm range.

All Vogelsang pumps can run dry without damage, self prime and run in forward or reverse. Vogelsang pumps are great for suction lift applications up to 25'. The IQ features our standard 4 wing HiFlo Lobe design, the pump delivers pulsation free pumping action making it ideal for many applications.

What makes the IQ a great advance in pump design is the simplified wet-end. We've eliminated 50% of the spare parts compared to traditional rotary lobe pumps. This translates into real savings when looking at overall operational costs.

How the Rotary Lobe Pump Works

Two intermeshed lobes are affixed each to gear driven shaft. The shafts rotate in opposite directions. The rotating motion of the lobes creates an expanding cavity on the suction side. This allows fluid to enter and fill the suction side of the pump. The rotors carry the fluid around the housing to the discharge side where it is expelled out of the pump by the closing cavity.

Hard solids are passed through the pump within the cavities between the lobe and outer housing. The Vogelsang pump can pass most any solid that can fit in the cavity. The IQ can pass a non-compressible solid size up to .75".

IT'S ALL ABOUT THE LOBES

Pulsation Free, High Abrasives & Low Shear

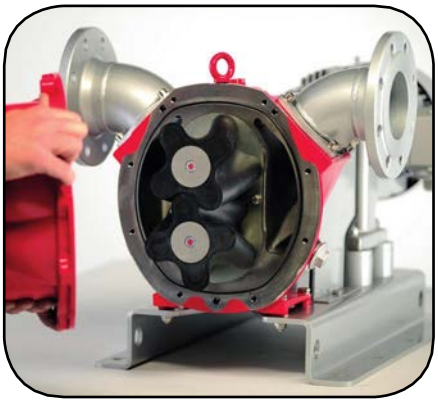
The state of the art in positive displacement pumps. The HiFlo Lobe has increased capacity compared with former lobe designs while eliminating pulsation. The convoluted design of the HiFlo Lobe provides a large cavity that's perfect for harsh and abrasive fluids. This design also makes it possible to achieve a required pressure at a slower rpm which results in less damage to lobes and minimal wear to the rest of the pump.

The gentle pumping action of the HiFlo Lobe is also friendly to shear sensitive liquids. This also applies to applications where large amounts of entrained air is present in the liquid.

Vogelsang offers four wing lobes in the IQ series. There are several elastomer options for maximum chemical compatibility, abrasiveness and temperature requirements.

50% less wet end parts compared to traditional rotary lobe pumps! Maintenance is performed in place without disturbing connected piping.

The front cover is easily removed by and comes off in one piece. There is no need to remove the pump from the assembly or disturb any connected piping.



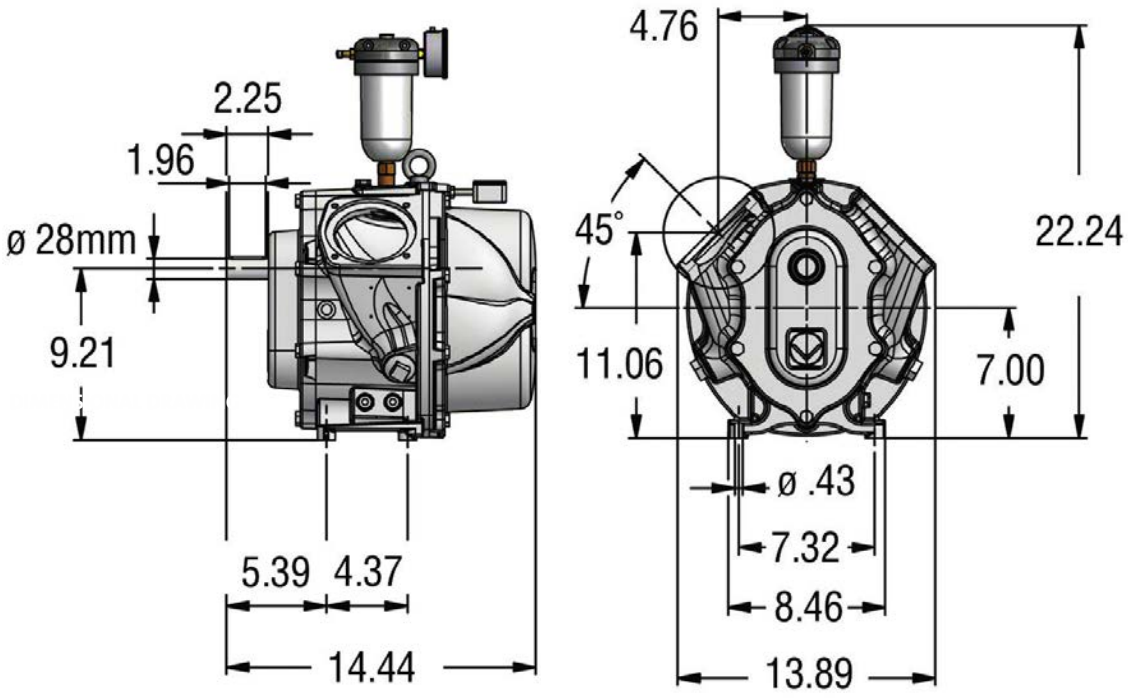
After the cover is removed, the entire wet end of the pump is exposed and can easily be serviced.

With access like this, maintaining your rotary lobe pump has never been easier!

QUICK & EASY INLINE MAINTENANCE

IQ Pump Series Performance Specifications:

Model	Capacity gpm	m3/h	Displacement gal/100rev	l/100rev	Max. Solids in	mm	Flange Size in	mm	Max Pressure Q: psi	bar	Max. Speed rpm 1/min
IQ112-81	242	55	27	102	.75	20	4	100	116	8	900
IQ112-114	343	78	38	144	.75	20	4	100	72	5	900



EXAMPLE APPLICATIONS

Wastewater

Vogelsang pumps are widely specified for common wastewater applications. Typical applications include: Primary & Secondary Sludge, Digested & Thickened Sludge, WAS, RAS & TWAS, Sludge Transfer, Dewatering, Scum & Septage.

Our pumps are specified because they are built to handle thick sludge that contains grit, abrasives and debris often found in wastewater sludges.

Our pumps provide an even, pulsation-free flow of liquid which makes them ideal for transferring sludge and feeding dewatering equipment such as Belt Press, Centrifuge and Screw Presses.

In DAFT applications we provide a slower operating pump that can handle excessive air through the pump, along with other floatable debris such as hair and rags.

Industry

A majority of industrial clients use Vogelsang pumps for transfer, or process pumps throughout their plants. Our small & compact design provides a pump that can be installed in a variety of ways such as in-line, belt drive, hydraulic and even cart mounted. Processes requiring pumping liquids such as ceramics, bentonite, oils, chemical wastes, molasses, paraffin, paints, and even wines & juices use Vogelsang pumps due to their high quality and smooth pumping action.

Vogelsang's unique pump designs can be provided in several materials to match the customers application to get them the best possible life from the pump in the specific application. Materials such as Cast Iron, 316 Stainless, Duplex Stainless, Super Duplex Stainless can be chosen to suit your requirements.

Biogas

Vogelsang offers pumping configurations specifically suited for biogas applications. Our pumps are popular in biogas for many of the same reasons they are successful in wastewater - such as digester and dewatering feed.

In biogas, we offer array-style piping arrangements where we can perform digester feed and recirculation for several digesters using a single pump assembly.

Our pumps feed and recirculate disgesters with the ability to pass gas from the fluid without causing damage to the pump. Since our pumps can run dry for short periods of time, we can continue pumping without burning up costly materials. Our easy to maintain pump design keeps your plant up and running with minimal downtime.

Food Processing

The unique geometry of the Vogelsang rotary lobe pump design ensures a gentle pumping action that will not damage your products. Typical food products include handling tomatoes, potatoes, juice, grapes or pastes.

Vogelsang pumps are commonly chosen for food applications such as Transfer, Centrifuge Feed or Thickening, Waste and Mash & Peel. Each application has its challenges but the overall factors for specifying Vogelsang are: low shearing, zero pulsation, high solids handling lobe design provides unmatched quality to our process.

We also have the ability to pump both forward and reverse so a single pump can be used for multiple purposes without a dedicated pump or complicated valve structure.

Mining

Our pumps have been widely chosen for handling abrasive slurries, pumping silica suspensions up to 85% solid by weight. Transferring tailings including particles up to 5mm in diameter, our pumps help recover waste materials that are used to mine metals such as gold, platinum, vanadium, nickel, coal, copper, kaolin, trona and uranium.

Our pumps are maintained inline without removing connected piping. Removing a few bolts allows replacement of wear parts in under an hour. The advantages include reduced manpower and low cost spare parts.

Vogelsang Pumps also have applications in various tailings, natural kaolin, acid slurry, platinum waste, ammonia metavanadate slurry , thickener underflow, flocculent, and dewatering to me more specific.

Oil & Gas

Our pumps have been designed for use in a variety of oil-related pump applications and are able to pump a wide range of viscous liquids that contain heavy abrasives and solids, or refined clean materials..

Typical applications for Vogelsang pumps including Barge Loading, Drilling Fluids, Tank Cleaning, Transfer, Centrifuge Feed, Offloading, Tanks Stripping. In addition Vogelsang is chosen by many OEM Environmental Cleanup Equipment manufacturers for Skimming, Side Collectors, Transfer and Offloading.

Vogelsang pumps are widely specified due to their small size, high capacity and ability to handle tough operating conditions.

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ENGINEERED TO WORK

Our company

Innovation and progress have been hallmarks of Vogelsang for over 80 years and have made us a leading designer and manufacturer of pumping, solids handling and process products. Time and time again we have achieved significant milestones of innovation and product development. Today, we manufacture some of the most innovative and reliable products for municipalities, industry and agriculture.

Our products are proudly made and assembled in Ravenna, Ohio, USA.

Our product range

We offer solutions for the following areas:

- Industry & Processing
- Wastewater treatment
- Biogas
- Railway wastewater disposal
- Agriculture

We offer a broad range of products:

- Rotary lobe pumps
- Grinding technology
- Distributors
- Spreading technology
- Supply and disposal systems
- Complete solutions

We also offer customized solutions for your specialized applications.

How to reach us

Vogelsang is present worldwide. Visit us online for more information about our company and wide range of services:

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Specification Sheet (1/2)

VOGELSANG

PROCESS CONDITIONS			
Customer Number	101037	Abrasion	Medium
Customer Name	Environmental Treatment Systems	Abrasiveness (1-10)	not Provided
Project	Special 110 GPM Pump as 11783200 line 3.0	Suction Condition	0.0 ft. flooded
Quote Number	11945601	Requested Capacity	110 gpm
Quote Position Number	1	Discharge Pressure	40.0 psi
Number of Pumps	1	Discharge Head	92 ft
Pumping Temperature	100 °F	Inlet Pressure	0.0 psi
Viscosity	not Provided	Differential Pressure	40.0 psi
Density	not Provided	Actual Capacity	109.9 gpm
Specific Gravity	not Provided	Motor HP Reserve %	10%
Liquid PH	7	Rated Power	5.2 BHP
Chloride Content	not Provided	Pump Speed	370 RPM
% Solids	not Provided	Rated Volumetric Efficiency %	78.30%
Solid Size		Starting Torque	838 in.lbs.
NPSH-Available	31.14 ft.	Running Torque	885 in.lbs.
NPSH-Required	6.56 ft.	Tag Number 1	Not Specified
Medium	Sludge, No specifics		

POSITIVE DISPLACEMENT PUMP INFORMATION			
Pump Part Number	IQ112-114H4	Buffer Chamber Fluid	Oil
Pump Model	IQ112-114	Mechanical Seal Type	Cartridge
Material of Construction	Grey Cast Iron	Mechanical Seal Single/Double	Single Mechanical Seal
Cover Type		Seal Carrier Material	Mild Steel
Housing Segment Material	0.6025 (Grey Cast Iron)	Material Block Ring 1	304 Stainless Steel (1.4301)
Housing Segment Coating	None *Motor housing only available in Cast Iron*	Material Block Ring 2	None
Housing Segment Form	Injection S (I)	Material Mechanical Seal 1	Duronit
Radial Wear Plates	N/A	Material Mechanical Seal 2	None
Direction of Flow	Bi-Directional	Thrust Washer Material	Mild Steel
Rotary Lobe Material	NBR	Strain Bolt Material	Galvanized
Rotary Lobe Coating		Pump Shaft Top	Motor Shaft Long
Rotary Lobe Form	HiFlo®	Pump Shaft Bottom	Motor Shaft Short
Rotary Lobe # of Wings	4	Pump Length	16.7 inch
O-Ring Material	NBR	Pump Width	13.9 inch
Lip Seal Material	HNBR	Pump Weight	80 lbs
Wear Plate Material	High Wear Resistant Special Steel	Pump Shaft Diameter	45 mm
Wear Plate Coating	Galvanized	Pump Shaft Diameter (Flange)	28 mm
Oil Bottle	Standard Pressurized Oil Bottle	Pump Shaft Length	2.4 inch
Drain Hose	No	Maximum Shaft Deflection	0.0088 inch

PERFORMANCE DATA					
	Pump	20 Hz	58 Hz	80 Hz	
Pump Speed	370	128	370	510	RPM
Flow Rate (new)	110	18.1	109.9	163.1	gpm
Flow Rate (used)	45.6	-47.3	45.6	99.3	gpm
Starting Torque	838	838	838	838	in.lbs.
Running Torque	885	867	885	904	in.lbs.
Running Power	5.2	1.8	5.2	7.3	BHP
Efficiency (Volume)	78.3	37.4	78.3	84.2	%
Efficiency (Total)	49.4	24.1	49.3	52	%
Dynamic Pressure Reduction	0.57	0.07	0.57	1.09	psi
NPSH-r	6.56	6.56	6.56	7.89	ft

Specification Sheet (1/2)

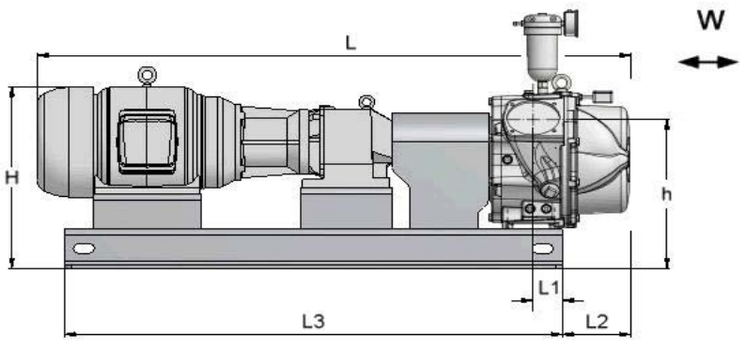
VOGELSANG

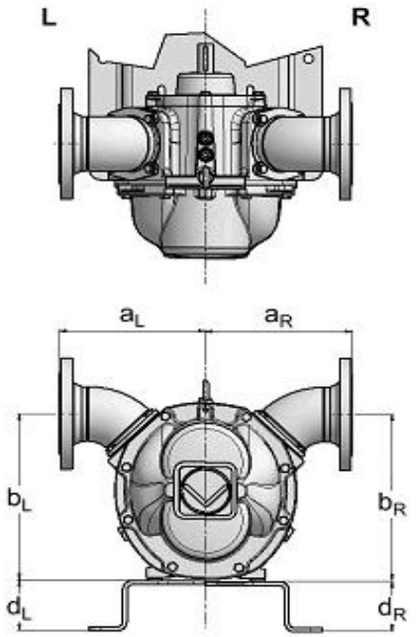
MOTOR INFORMATION			
Manufacturer	Baldor Electric Company	Voltage	460 V
Vendor Part Number	CECP83770T-4	Amperage	9.5 A
Motor Material		Inverter Rating	Inverter Duty
General Purpose TEFC	No	Rating (Amb. + Duty)	40C AMB-CONT
Class I Div I	No *Groups A, B, C & D*	Nominal Efficiency %	91.7
Class I Div II	Yes *Temp Code T3C*	Phase	3
IEEE841 Compliant	Yes	Power Factor	81
Mounting	C-Face Footed	Frequency	60 Hz
Enclosure	TEFC	NEMA Design	B
Frame Size	213TC	Service Factor	1.15
Conduit Box Mounting	F1	Shaft Diameter	1.375 inch
Poles	4	Shaft Length	3.375 inch
Insulation Class	F	Overall Length	20.23 inch
HP	7.5 HP	Width (- Conduit)	9.37 inch
RPM	1765 RPM	Weight	178 lbs
GEARBOX INFORMATION			
Manufacturer	NORD Gear Corp.	Frame Size	210TC
Vendor Part Number	SK672.1-210TCK-4.61	Shaft Diameter	1.375
Gearbox Material	Aluminum Alloy	Shaft Length	2.75
Gear Ratio	4.61	Overall Length	16.39
COUPLING INFORMATION			
Coupling Manufacturer	TB Woods	Coupling Flange Drive	6S138
Coupling Sleeve	6HS	Coupling Flange Pump	6S28MM
FLANGE CONFIGURATION			
Flange Size	4.0 inch	Right Flange Type	Mild Steel Galv., 45° (Facing Right)
Left Flange Part Number	IBS3105	Right Flange Material	Hot Dipped Galvanized Steel
Left Flange Type	Mild Steel Galv., 45° (Facing Left)	Marathon Flange Part Number	N/A
Left Flange Material	Hot Dipped Galvanized Steel	Marathon Flange Material	N/A
Right Flange Part Number	IBS3105	Marathon Flange Configuration	N/A
WARRANTY INFORMATION			
Warranty Type	Limited Industrial Warranty		

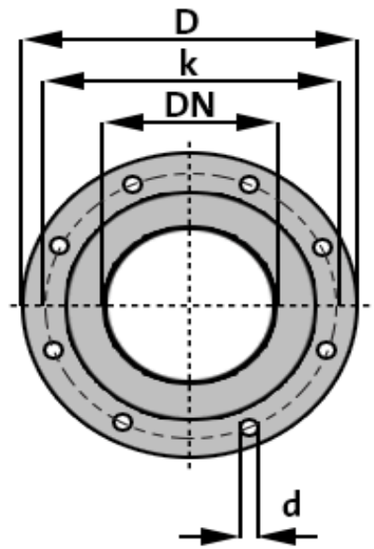
Work Space minimum:
W = 20.63 inch required, 32.44 inch recommended

Recommended Anchor Bolts:
Bolt Size: 5/8" Thread UNC / Length min.2.25"

Raised-Face Flange Data Inches	
Norm	ANSI (ASA) B 16.5 "
DN	4 "
D	9 "
k	7.5 "
d	0.75 "
Hole number	8 "







	inches
L	50.81
H	21.68
L 1	2.50
L 2	6.42
L 3	55.12
L 4	0.00
L 5	0.00
h	15.79
u	22.05
v	20.08
x	7.87
y	9.84
y2	0.00
y3	0.00
z	0.71

Scale: NTS
dimensions shown in inches
dimensional changes reserved
general tolerances acc to ANSI Std.
created with CAPSlogik

Connector left L	
a_L	12.52
b_L	13.48
c_L	0.00
d_L	4.72
45° Bend Left	

Connector right R	
a_R	12.52
b_R	13.48
c_R	0.00
d_R	4.72
45° Bend Right	

Vogelsang Data	
Customer	Environmental Treatment Systems
Quote ID	11945601
Sales Order No	
Position No	1

Pump Type	IQ112-114
Motor	USEM0133
Drive Type	In-Line with TC Gearbox + TC Motor
Guard Type	Coupling Guard, Galvanized
Base Plate	US.GBO.006.TV2.0082
Total Weight	623 lbs

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www.vogelsangusa.com

Date	10/29/2021	© copyright

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Flowrate / Speed at Constant Pressure
IQ112-114

Project: Special 110 GPM Pump as
Quote No.: 11945601
NPSH-R: 6.56 ft.