

Equipment Specification

ORIGINAL

Item Qty Description

DECANTER CENTRIFUGE ALFA LAVAL P2-500

1 1 Alfa Laval decanter centrifuge; Model P2-500
Solid bowl, scroll discharge type of Open type design.
Bowl Length -- 2035 mm.
Bowl Diameter -- 480 mm.
Beach Angle -- 6°.
Solid Discharge radius -- 131.7 mm.

Designed for operation at up to 100°C.

Operating Bowl Speed: 3650 rpm (3574 x G)
Bowl Shell: Duplex (A L 111 2329-83)
Solids outlet: 360° Discharge and ribs.
(Solids outlet radius -- 131.7 mm)
Liquid outlet radius: 134 mm.
Solids Discharge Inserts: Tungsten Carbide saddle
Conveyor and Flights: AISI 316 (A L 111 2349)
Conveyor flight: 152 mm pitch -- helical; single lead.
Inlet type: Esberg
Conveyor protection: Sintered Tungsten Carbide Tiles (Brazed) and Hard
Surfacing --TM42
Conveyor bearing
lubrication: Grease lubricated
Greasing System: Automatic greasing of main bearings.
Flanges/Connections: ANSI
Frame and Casing: Box beam profile with integral casing. Casing with
CIP manifold and hinged on left hand side.
Solids Collector: Not Applicable
Casing Wear Liner: AISI 316 replaceable liner
Gaskets and 'O' rings: EPDM
Complementary spares: 1 Intermediate Service Kit (EPDM)
Centrifuge Signs,
language: English

Gearbox and Pinion Configuration

2 1 Gear box . Direct Drive type - epicyclic construction.
Maximum torque -- 8.0 kNm
Ratio -- 1:100.

Back Drive: VFD Motor -- rating 15 kW.
Non Ex Proof.
Maximum differential : 17.9 rpm at 8.0 kNm.
29.0 rpm at 4.9 kNm.

Cabinet: Module 2 Panel.
IP54 -- Painted Steel

Electrical and Control System

- 3 1 Differential Control System.
DD Gearbox Back Drive Panel.

Type of Controller: Control Panel with DCC and Alfa Laval Operator
Display Screen.
Cabinet: Module 1 Panel.
IP54 -- Painted Steel

Additional Controls

- 4 1 PT100 Temperature Sensors for main bearings

- 5 1 Vibration switch

Enclosure: Non Explosion proof

- 6 1 Cover Switch

Enclosure: Non Explosion proof

- 7 1 DCC Analogue Module.
Incorporated in Back Drive Panel - Module 1.

- 8 1 DCC PT100 Module for main bearing monitoring.
Incorporated in Back Drive Panel - Module 1

- 9 1 DCC Vibration Module for VLM.
Incorporated in Back Drive Panel - Module 1.

- 10 1 Automatic Greasing System Switch Gear.
Included in Module 2 Panel.

Main Drive Motor

- 11 1 Main electric Drive Motor ...

Main Drive Motor Starter

- 12 1 VFD Starter Panel for Main Drive Motor.

VFD Rating: 45 kW
Cabinet: Module 3 Panel.
IP54 -- Painted Steel

Guards

- 13 1 Gear box Guard

Material: GRP

- 14 1 V-Belt cover

Material: Mild Steel - painted

Special Tools and Lifting Equipment, priced separately

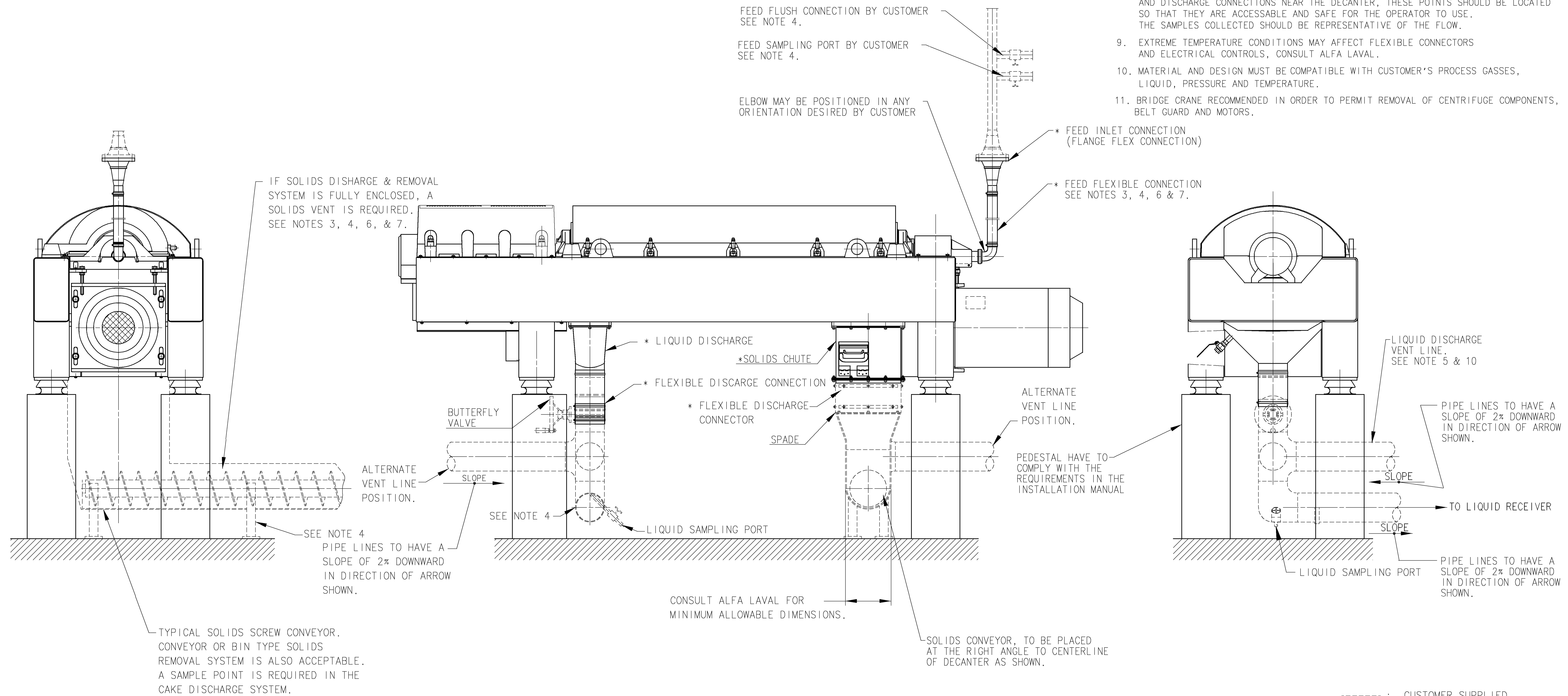
- 15 1 Special tools for maintenance of NX decanter centrifuge.

Tools for unit with gear 8.0 kNm DD
box type :

- 16 1 Lifting tool for bowl
Lifting Tool for unit with 3.5 / 6.0 kNm
gear box type:
- 17 1 Cabinet for special tools
- 18 1 Lifting tool for Conveyor
- 19 1 Universal Tool
- 20 1 Lifting strap for decanter assembly
- 21 1 Outlet Funnel for Liquid Discharge.
- 22 1 Adaptor for Solids Discharge
- Spare Parts**
- 24 1 Spare Parts for 2 years operation, priced separately
- Documentation**
- 25 1 Two sets of Manuals. Priced Separately
Language: English
Certificates, Test reports, Inspections, priced separately
- 26 1 Motor Test Report
- 27 1 Material Certificate
- 28 1 Test Certificate
- Packing for Shipment**
- 29 1 Seaworthy Wooden Case, priced separately

NOTES:

- SEE DIMENSION DRAWING FOR MOUNTING DIMENSIONS AND CONNECTING PIPE AND FLANGE SIZES.
- PIPE SIZES SHOWN ARE FOR REFERENCE ONLY, CONSULT ALFA LAVAL FOR SPECIFIC APPLICATION.
- ONLY SAMPLE TAPS PROVIDED BY ALFA LAVAL MAY BE DIRECTLY BOLTED TO THE CASING FLANGES. SEE NOTE 4 FOR CUSTOMER SUPPLIED HOPPERS.
- CUSTOMER SUPPLIED DISCHARGE HOPPERS AND PIPES MUST NOT BE ATTACHED DIRECTLY TO CASING FLANGES, HOPPERS OR PIPES SHOULD BE SUPPORTED BY BUILDING STRUCTURE AND CONNECTED TO CASING FLANGES BY FLEXIBLE BOOTS AS SHOWN. FLEXIBLE BOOTS MUST NOT IMPOSE LOAD ON CASING FLANGES AND MUST ACCOMMODATE HORIZONTAL AND VERTICAL MOVEMENT.
- VENTING REQUIREMENTS VARY WITH ACTUAL BOWL SPEED. THE VENTING REQUIREMENT FOR THE MACHINE IS 680 CFM (1160 m³/hr). THE MANIFOLD DIAMETER SHOULD BE $D_m = D_v \sqrt{N}$. WHERE D_m = MANIFOLD DIAMETER, D_v = INDIVIDUAL DIAMETER AND N = NUMBER OF CENTRIFUGES CONNECTED TO A MANIFOLD. VENTS SHOULD SLOPE DOWN TO THE CHUTE.
- FAN ASSISTED VENTING IS RECOMMENDED IN ALL CASES. DAMPERS SHOULD BE PLACED IN THE LINE TO CONTROL THE FLOW.
- WHERE THE LIQUID AND SOLIDS CASING OUTLETS ARE REQUIRED BY THE CUSTOMER TO BE BOLTED TO HIS RECEIVING SYSTEM, FLEXIBLE CONNECTORS MUST BE INSTALLED.
- IT IS RECOMMENDED THAT SAMPLING POINTS BE PROVIDED BY THE USER IN THE FEED AND DISCHARGE CONNECTIONS NEAR THE DECANter, THESE POINTS SHOULD BE LOCATED SO THAT THEY ARE ACCESSABLE AND SAFE FOR THE OPERATOR TO USE. THE SAMPLES COLLECTED SHOULD BE REPRESENTATIVE OF THE FLOW.
- EXTREME TEMPERATURE CONDITIONS MAY AFFECT FLEXIBLE CONNECTORS AND ELECTRICAL CONTROLS, CONSULT ALFA LAVAL.
- MATERIAL AND DESIGN MUST BE COMPATIBLE WITH CUSTOMER'S PROCESS GASSES, LIQUID, PRESSURE AND TEMPERATURE.
- BRIDGE CRANE RECOMMENDED IN ORDER TO PERMIT REMOVAL OF CENTRIFUGE COMPONENTS, BELT GUARD AND MOTORS.

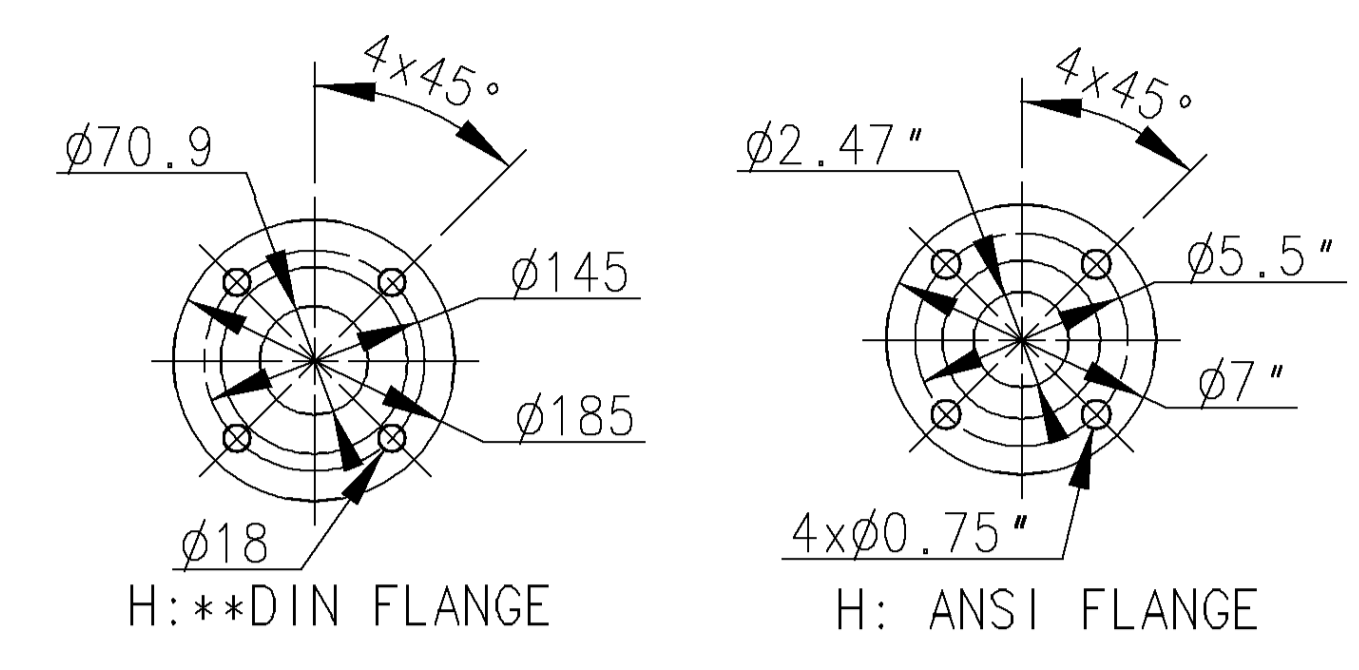
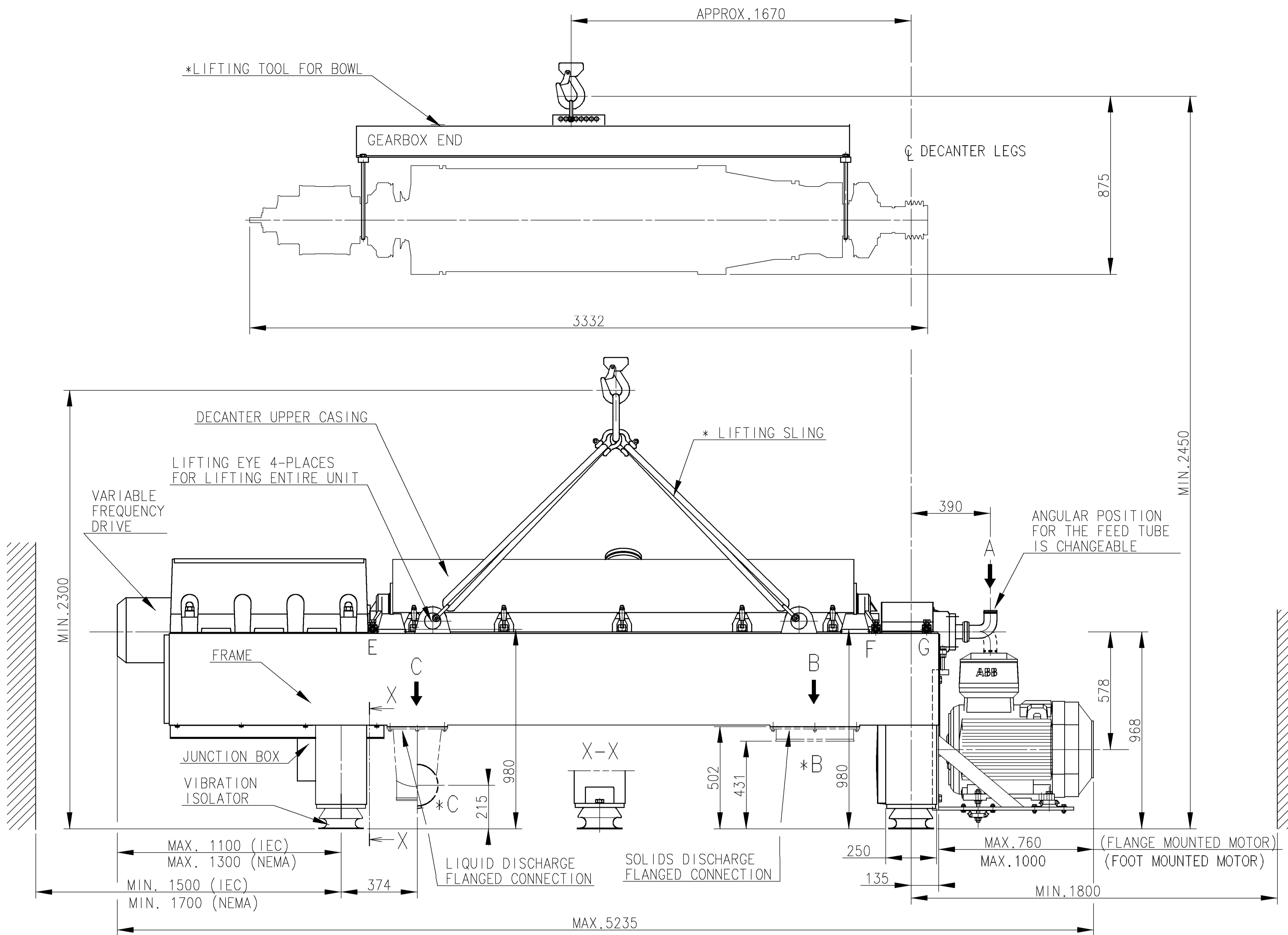


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Item	Article No.	Name/Designation	Material
INSTALLATION DRAWING			
SC2-500			
Title		Alfa Laval	
		Alfa Laval Copenhagen A/S SØBORG DENMARK	
First angle projection	Surface roughness	Scale	Dept. Date
	$R_{a\mu m}$	1:10	060425
		Formt. Drawn	Apr. Model
		ADA	JOD N
Document No.			61241386

Rev. No.	Date	Modified By	Appr.
3	071214	JLG	JOD

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APPROXIMATE WEIGHTS:

TOTAL WEIGHT OF EMPTY DECANTER	4800kg/ 9920lbs
ROTATING ASSY INCL. PILLOW BLOCKS	1250kg/ 2770lbs
CPL.FRAME ASSY EXCL. MAIN MOTOR AND ROT. ASSY..	3000kg/ 6650lbs
MAIN MOTOR	600kg/ 1320lbs
UPPER CASING	130kg/ 290lbs
GEAR BOX	150kg/ 330lbs
MIN.CRANE CAPACITY FOR LIFTING OF ROTATING ASSY:1800kg/ 3970lbs	

LOADING DATA:

DECANTER

1. MAX. STATIC LOAD

A- VERTICAL 50000 N

B- HORIZONTAL..... 0 N

2. MAX. DYNAMIC LOAD AT RUN DOWN (ADD TO STATIC LOAD)

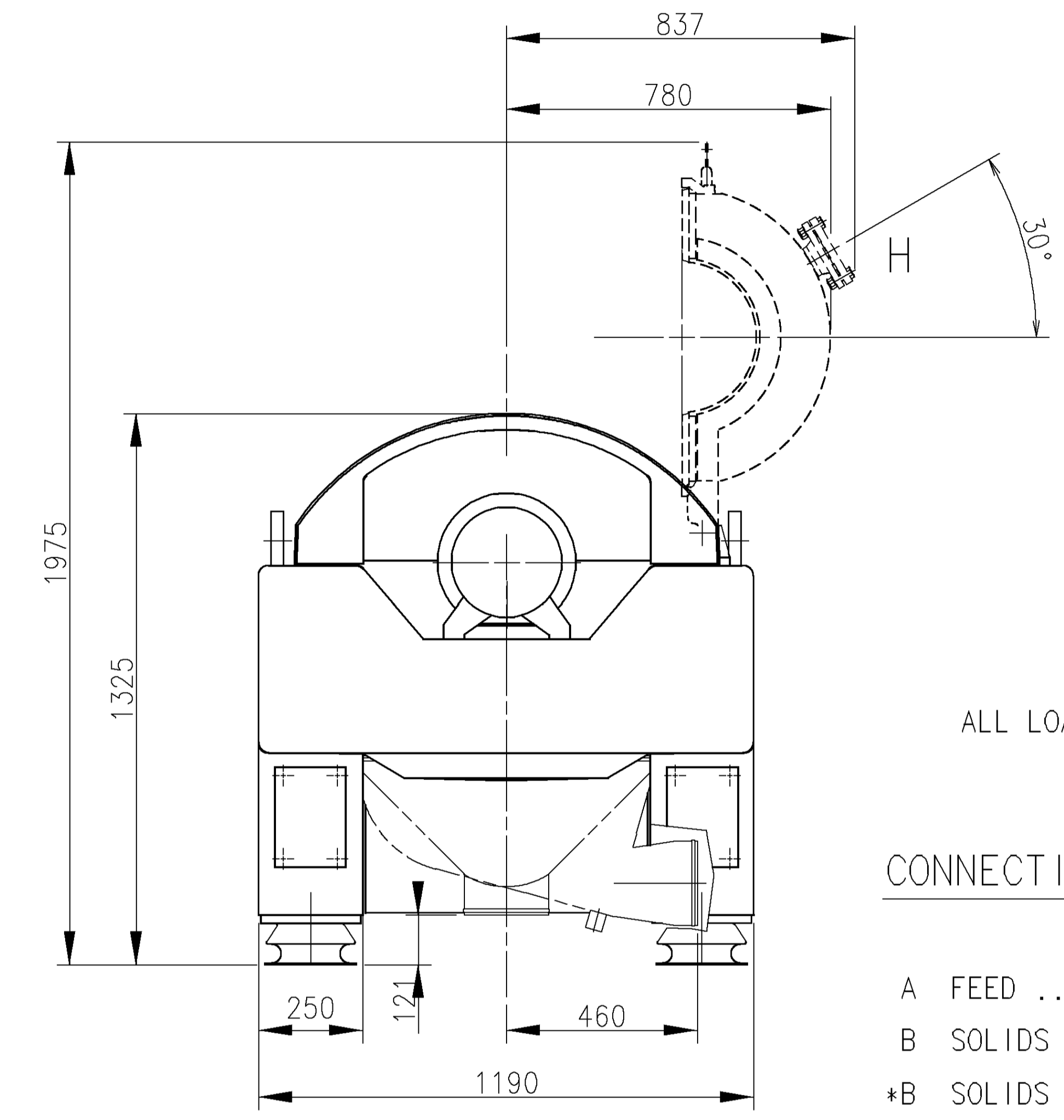
A- VERTICAL ± 29400 N

B- HORIZONTAL..... ± 7800 N

3. MAX. DYNAMIC LOAD AT OPERATING SPEED

A- VERTICAL 2000 N

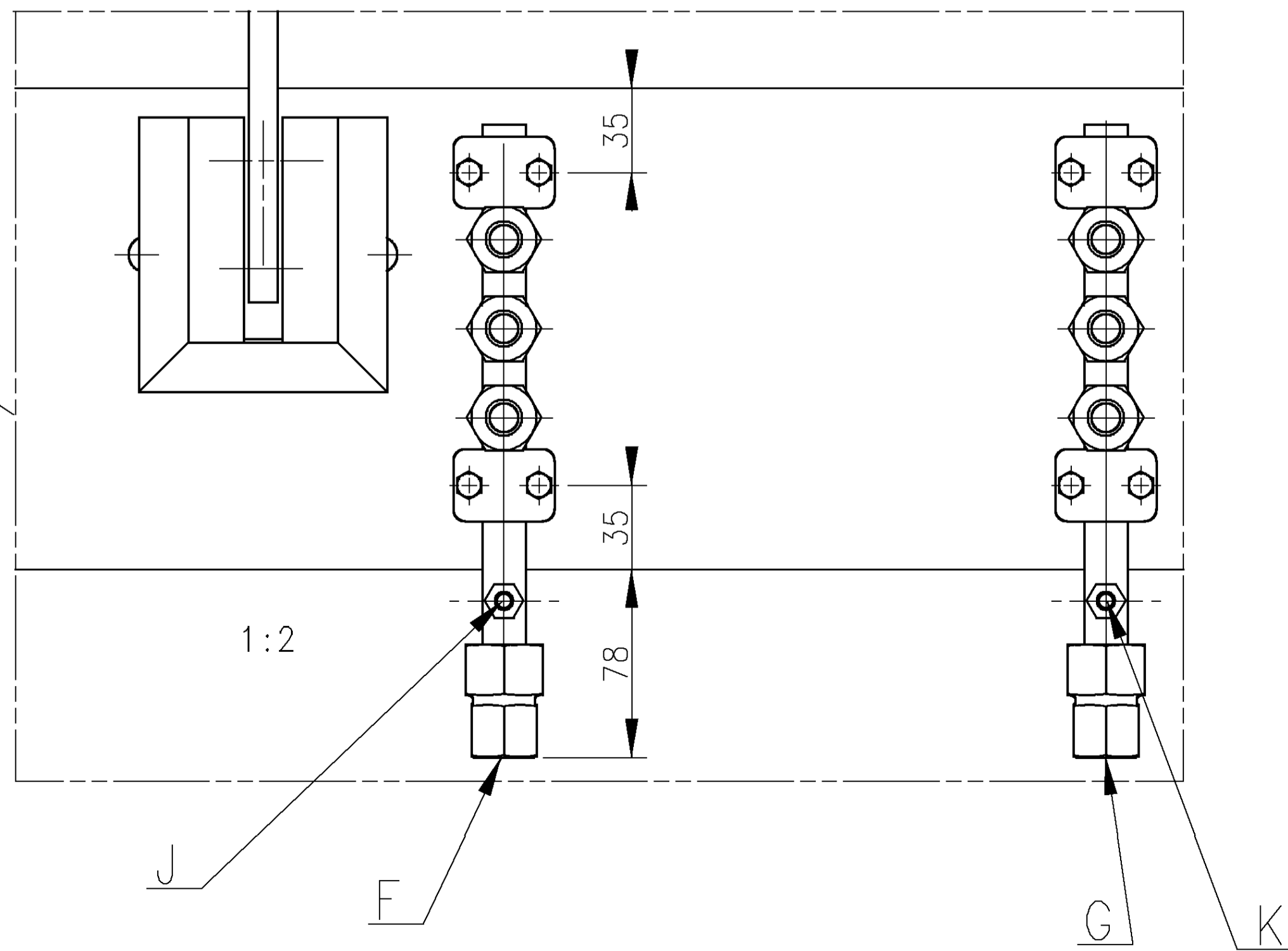
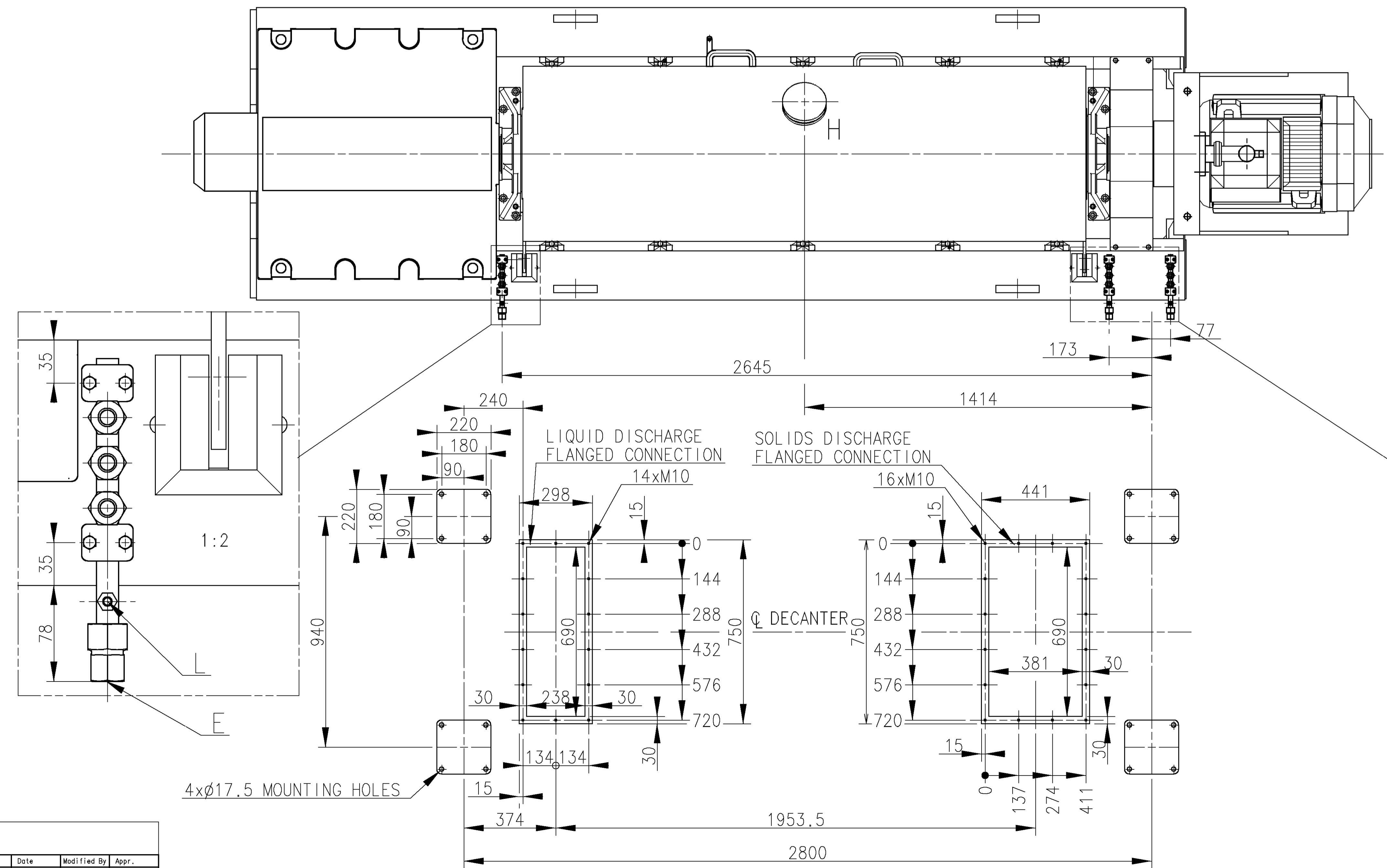
B- HORIZONTAL..... 2000 N



ALL LOADS ARE EVENLY DISTRIBUTED ON THE VIBRATION ISOLATORS

CONNECTIONS:

	DIMENSION / TYPE
A FEED	ø63.5 (2 1/2")HOSE CONNECTION
B SOLIDS OUTLET	RECTANGULAR FLANGE
*B SOLIDS OUTLET FUNNEL.....	690 x 381
C LIQUID OUTLET	RECTANGULAR FLANGE
*C LIQUID OUTLET FUNNEL	ø 203.2 (8") HOSE CONNECTION
E PURGE GAS INLET	1/2" FEMALE
F PURGE GAS INLET	1/2" FEMALE
G PURGE GAS INLET	1/2" FEMALE
H CASING VENT	FLANGE ANSI 2 1/2" 150lbs
* H CASING VENT	FLANGE DIN 2633 DN65 PN16
J PRESURE GAUGE	ø6 FEMALE LOCK RING
K PRESURE GAUGE	ø6 FEMALE LOCK RING
L PRESURE GAUGE	ø6 FEMALE LOCK RING



- NOTES:**
- 1- ALL CONNECTIONS MUST BE FLEXIBLE.
 - 2- FOR PROPER VENTING OF DISCHARGE HOPPERS REFER TO THE INSTALLATION DRAWING. IMPROPER VENTING CAN LEAD TO LEAKAGE PROBLEMS.
 - 3- CUSTOMER IS RESPONSIBLE FOR ANCHORING.
 - 4- FOR FURTHER INFORMATION, SEE INSTALLATION DATA MANUAL AND INSTALLATION DRAWING
- * OPTIONAL EQUIPMENT

Item	Article No.	Name/Designation	Material
Title			
DIMENSIONED DRAWING			
P2-500E			
Alfa Laval			
Alfa Laval Copenhagen A/S			
SØBORG DENMARK			
Scale	1:10	Dept.	060316
Surface	RA 4µm	Drawn	JOD
Projection	AO	Model	N
Design Code	61241344		

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