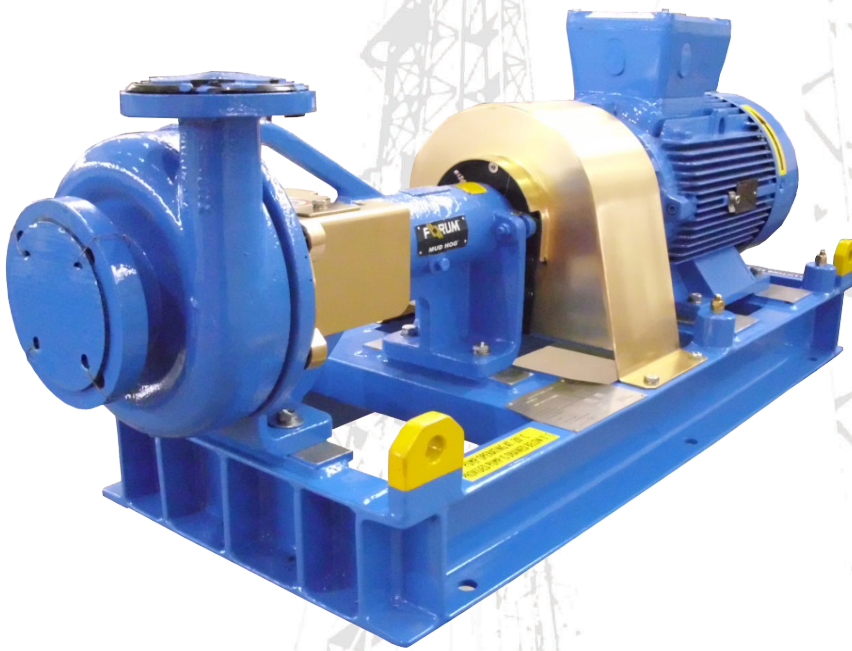


CENTRIFUGAL PUMPS

High Efficiency Results

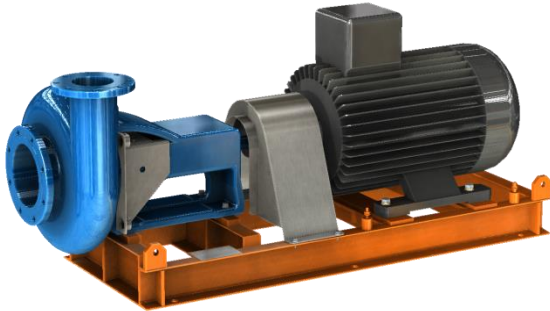


Rev: 00.00 2015/04

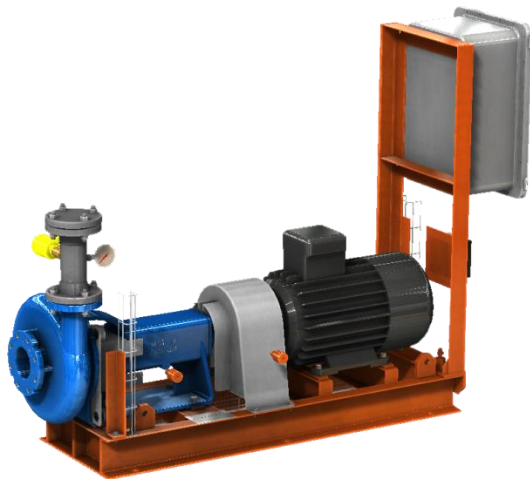
Mi SWACO
A Schlumberger Company

Equipment Data Sheet: CENTRIFUGAL PUMPS

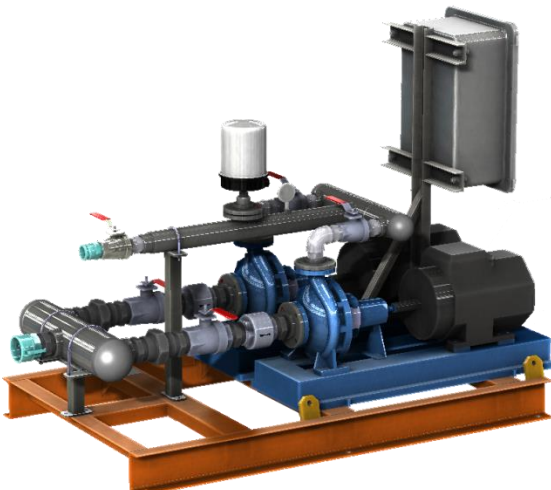
M-I Swaco Centrifugal Pumps are pumps used to transport fluids by the conversion of rotational kinetic energy to the hydrodynamic energy of the fluid flow. The rotational energy comes from an electric motor (different power available for different pump sizes). The fluid enters into the pump impeller near to the rotating axis and is accelerated by the impeller, flowing radially outward into the casing from where it then exits.



Standard Centrifugal Pump



Single Pump With Control Panel



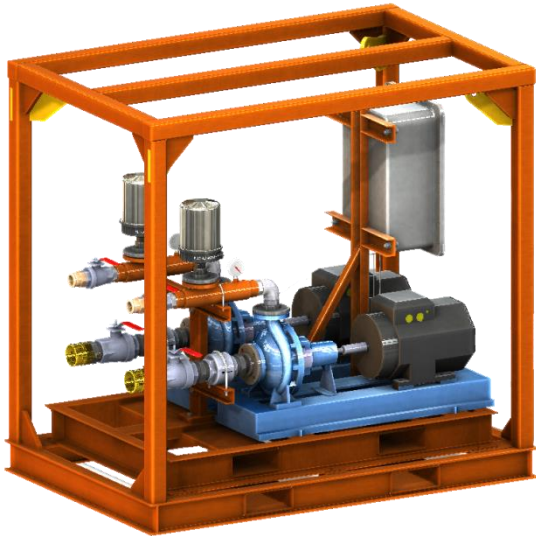
Double Pump With Control Panel

Dimensions

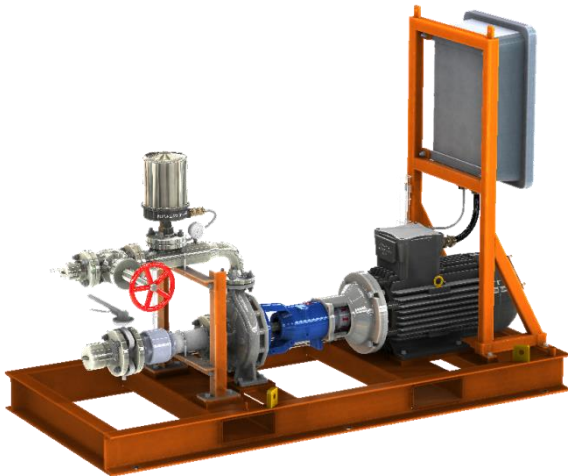
Overall Dimensions & Weight		
	Min.	Max.
Weight	209 Kg	1300 Kg
Length	725 mm	2200 mm
Height	460 mm	1880 mm
Width	480 mm	1300 mm

Physical Data

Pump Sizes	Suction x Discharge x Impeller	
Min.	1" x 1.5" x 11"	
Max.	8" x 6" x 14"	
Main nozzles		
Inlet	Flange ANSI 150#	
Outlet	Flange ANSI 150#	
Motorization		
Min. Available Power	3 kW	
Max. Available Power	90 kW	
Frequency	50/60 Hz	
Available Brands		
Motorization	Marelli Motori, ABB, CEMP.	
Pump	Forum SPD Mud Hog, National Oilwell, Robuschi Pump.	
Coupling	KTR Rotex, AB Trasmissioni, Chiaravalli.	
Flow Switch (CPA09&28)	Riels	
Materials		
Guard Atex Cert.	Stainless Steel	
Guard CE Cert.	Carbon Steel	



Double Pump in Crash Frame



Semi-Automatic Pump with Control Panel



Centrifugal Pump Save Spacer

Certifications

Marking	
CE or ATEX Zone 1	
Environmental conditions	
Temperature Range	-20°C ÷ 40°C
Operating Temperature	0°C ÷ 40°C
Process fluid temperature	90°C ÷ 105°C

Noise emissions

Measured A weighted Sound Power Level	Lw (1 pW)	100 dBA
Calculated A weighted Emission Sound Pressure Level (1 m)	Lp (20 mPa)	84.5 dBA

Benefits

- **Semi-open impeller design**

It ensures an efficient increase in the kinetic energy of the fluid as it passes through the front vanes. All the impellers have similar and strategically back vanes that not only reduce the wear of the stuffing box cover but also boost the mechanical seal's life limiting the flow of contaminants into the sealing area.

- **Cast Iron casing and wear pad nuts**

It allows an easy access to all the parts, making the maintenance and quality control of the Pump fast and affordable.

- **Labyrinth seals**

It reduces bearing contamination and shaft wear.

Applications

- Fresh water
- Sea water
- Drilling mud and pill

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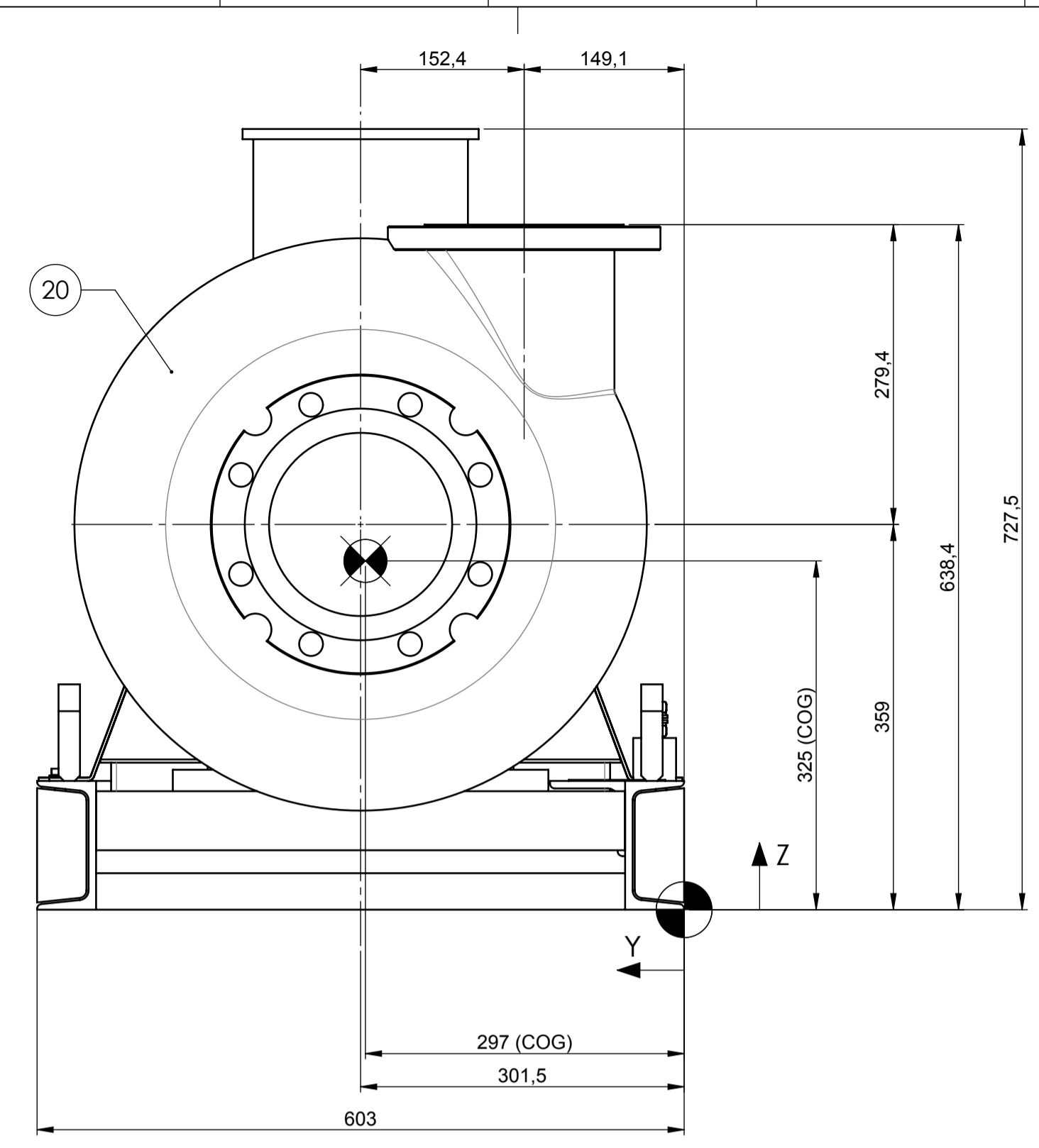
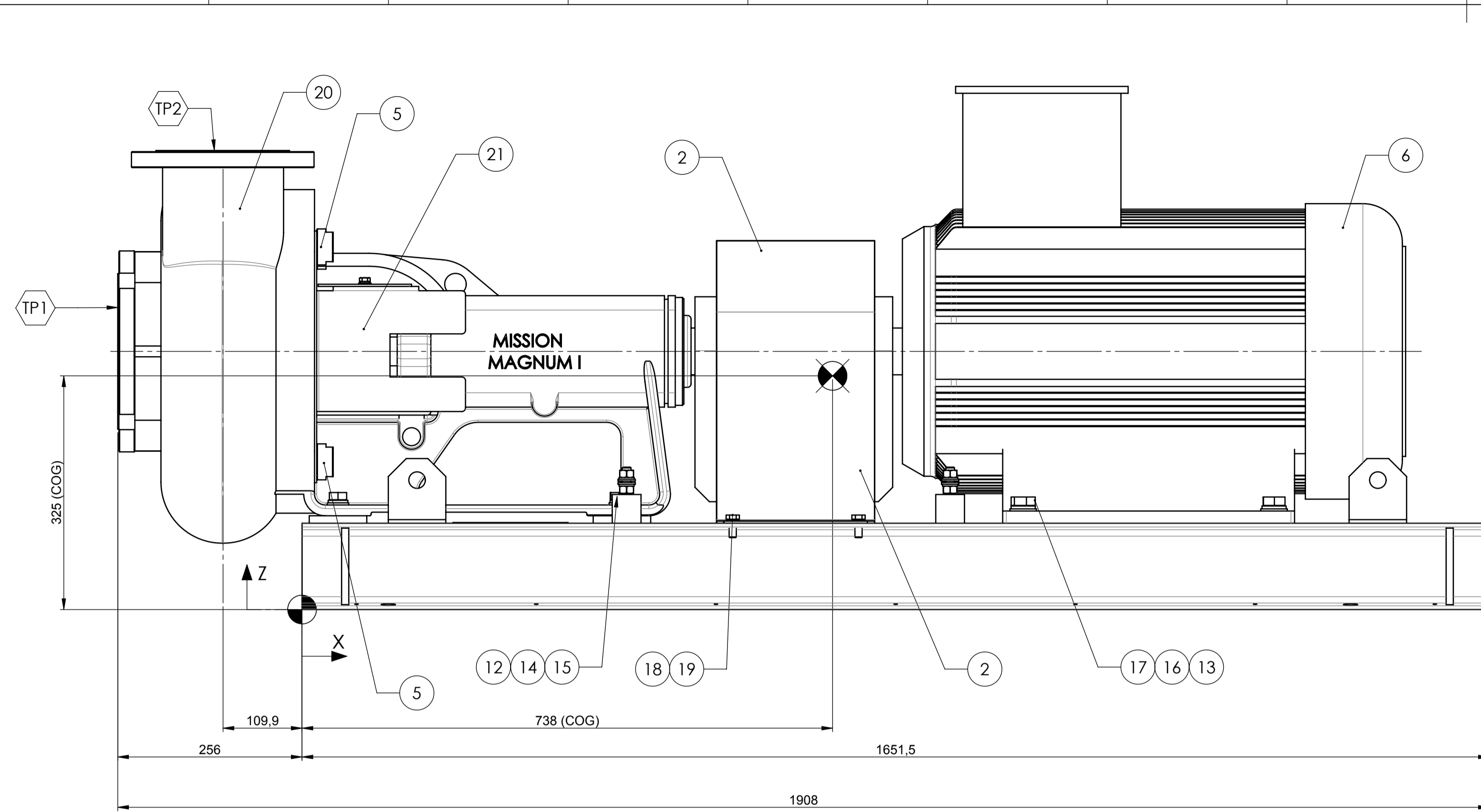
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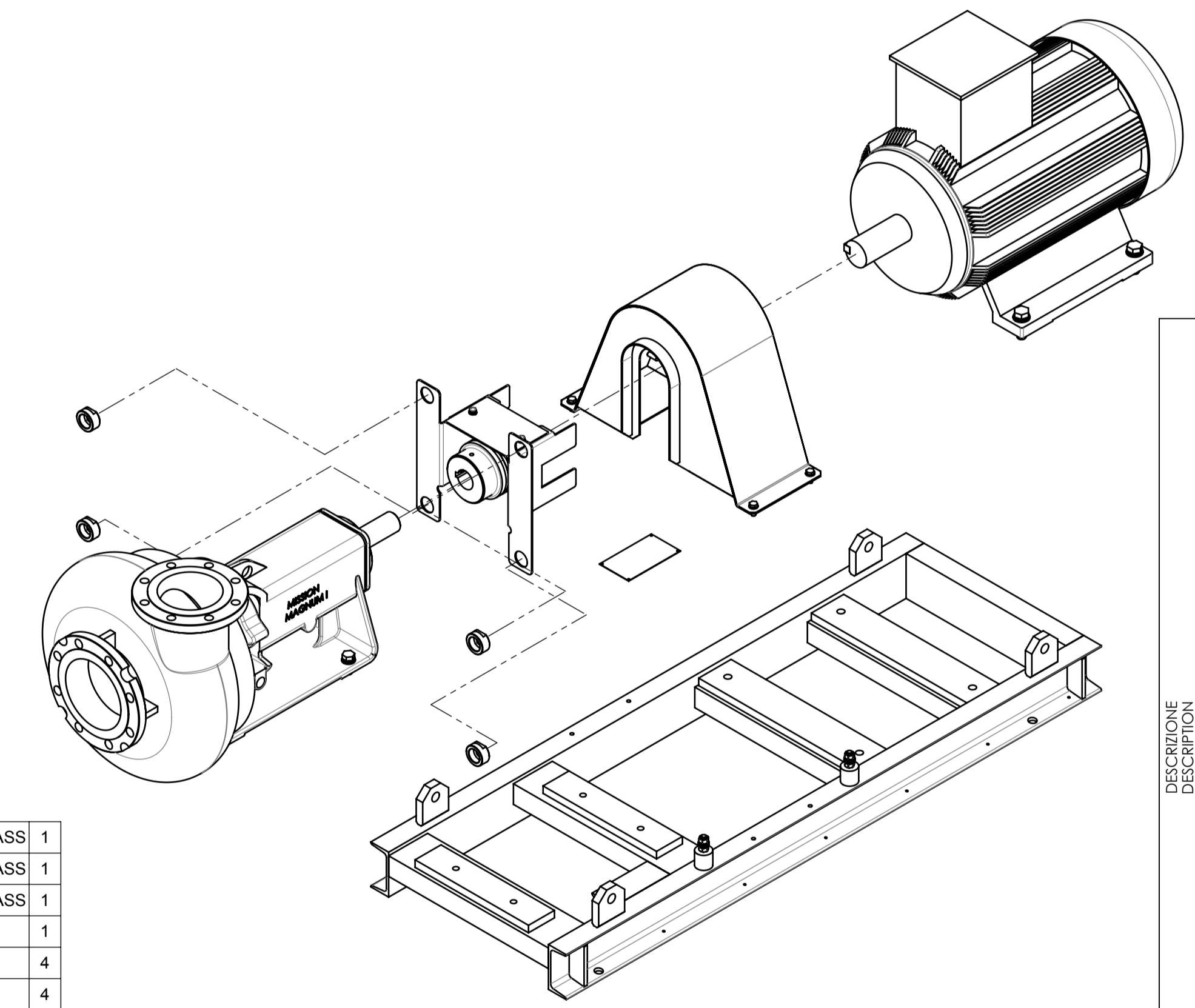
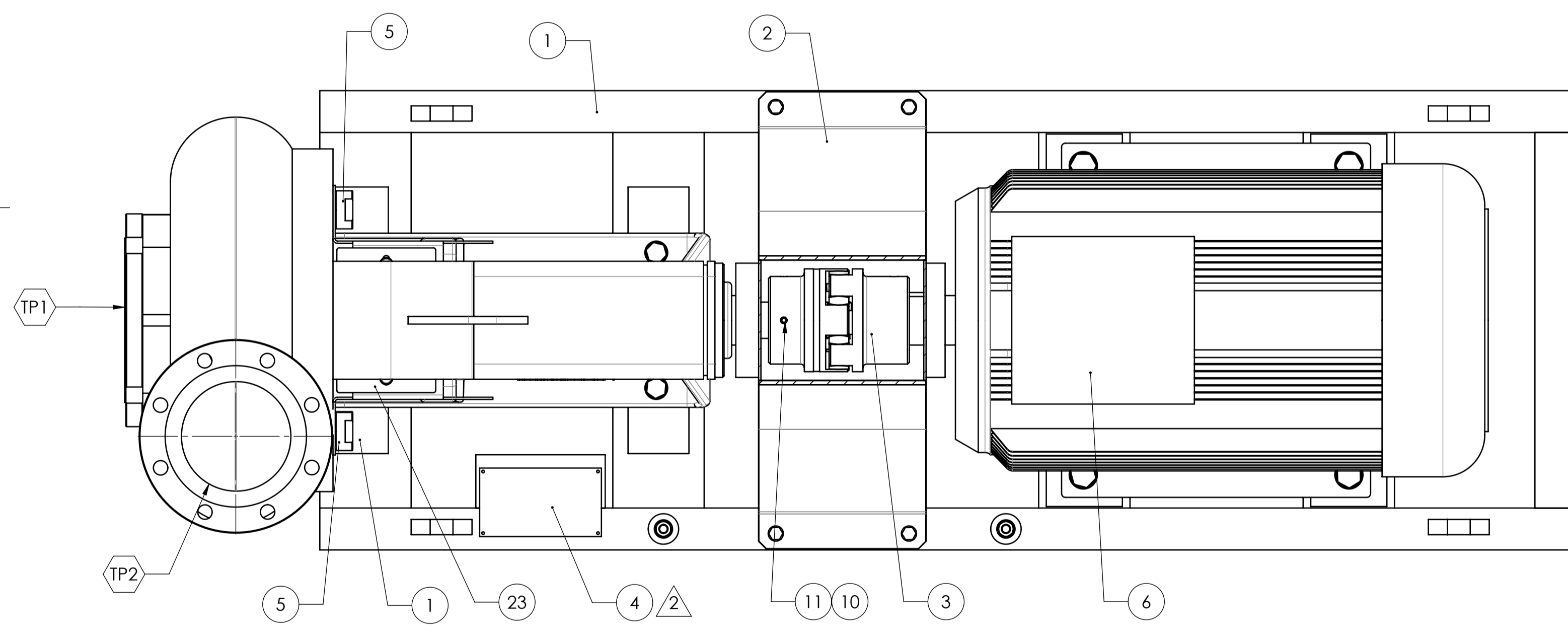
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PARAMETRI DI MASSIMA COPPIA SERRAGGIO VITI TORQUE WRENCH SETTING (INDICATIVE PARAMETERS)

DIAM. VITE SCREW DIAM.	COPPIA SERRAGGIO VITI (Nm) TORQUE WRENCH SETTING	
	Cl. 8.8	Cl. 10.9
M10	90	113
M12	144	180
M14	225	281
M16	309	387
M20	439	549
M22	597	747
M24	759	949
M27	1110	1388
M30	1508	1885



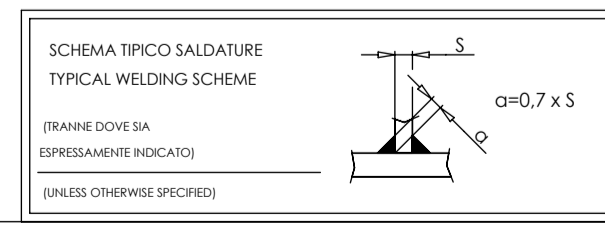
LEGENDA / LEGEND

	DATUM
	CENTER OF GRAVITY

23	CPA_22_001_04	PIASTRA COLLEGAMENTO CARTER	PROTECTION COVER LINKING PLATE	OTTONE / BRASS	1
22	CPA_22_001_03	PROTEZIONE POMPA SX	RIGHT PROTECTION PUMP	OTTONE / BRASS	1
21	CPA_22_001_02	PROTEZIONE POMPA SX	LEFT PROTECTION PUMP	OTTONE / BRASS	1
20		POMPA CENTRIFUGA MISSION MAGNUM 6x5x14 - IMP 13" 1/2	CENTRIFUGAL PUMP MISSION MAGNUM 6x5x14 - IMP 13" 1/2		1
19		VITE TESTA ESAGONALE GR. C - TOTALMENTE FIL. - ISO 4018 - M10x25	HEXAGON HEAD SCREW GR. C - TOTALLY THREADED - ISO 4018 - M10x25	A2-70	4
18		ROSETTA PIANA ISO 7089-10-140 HV	PLAIN WASHER ISO 7089-10-140 HV	A2-70	4
17		VITE TESTA ESAGONALE GR. C - TOTALMETE FIL. - ISO 4018 - M20x60	HEXAGON HEAD SCREW GR. C - TOTALLY THREADED - ISO 4018 - M20x60	A2-70	4
16		ROSETTA PIANA ISO 7089-20-140 HV	FLAT WASHER ISO 7089-20-140 HV	A2-70	4
15		VITE TESTA ESAGONALE GR. C - TOTALMETE FIL. - ISO 4018 - M16x40	HEXAGON HEAD SCREW GR. C - TOTALLY THREADED - ISO 4018 - M16x40	A2-70	4
14		ROSETTA PIANA ISO 7089-16-140 HV	FLAT WASHER ISO 7089-16-140 HV	A2-70	4
13		ROSETTA ELASTICA UNI 1751 A - M20	ELASTIC WASHER UNI 1751 A - M20	A2-70	4
12		ROSETTA ELASTICA UNI 1751 A - M16	ELASTIC WASHER UNI 1751 A - M16	A2-70	4
11		GRANO-UNI5927 M10x30 INOX	SCREW - UNI5927 M10x30 INOX	A2-70	2
10		GRANO-UNI5927 M10x20 INOX	UNI5927 M10x20 INOX	A2-70	1
9		VITE T.E. M8x15 ISO 4018	SCREW M8x15 ISO 4018	A2-70	2
8		ROSETTA ELASTICA UNI 1751-A M8	WASHER UNI 1751-A M8	A2-70	2
7		ROSETTA UNI 6592 M8	WASHER UNI 6592 M8	A2-70	2
6		MOTORE MARELLI 55 kW 250_M4_B3	MARELLI MOTOR 55 kW 250_M4_B3		1
5	CPA_06_001	BOCCOLA FISSAGGIO CARTER	COVER CLAMPING BUSHING	OTTONE / BRASS	4
4	CPA_05_001	TARGHETTA IDENTIFICATIVA EQUIPMENT	EQUIPMENT NAME PLATE	AISI 316	1
3	00A32C010.205	GIUNTO ROTEX 65 - St (ATEX) D 65	ROTEX COUPLING 65 - St (ATEX) D 65		1
2	CPA_17_001_02	CARTER PROTEZIONE GIUNTO PER MOTORE	PROTECTION CARTER FOR ENGINE JOINT	OTTONE / BRASS	1
1	CPA_17_001_01	TELAIO SUPPORTO POMPA	PUMP SKID	S235JR	1
POS	DISEGNO	DESCRIZIONE	DESCRIPTION	MAT.	Q.t.

TERMINATION POINT SCHEDULE

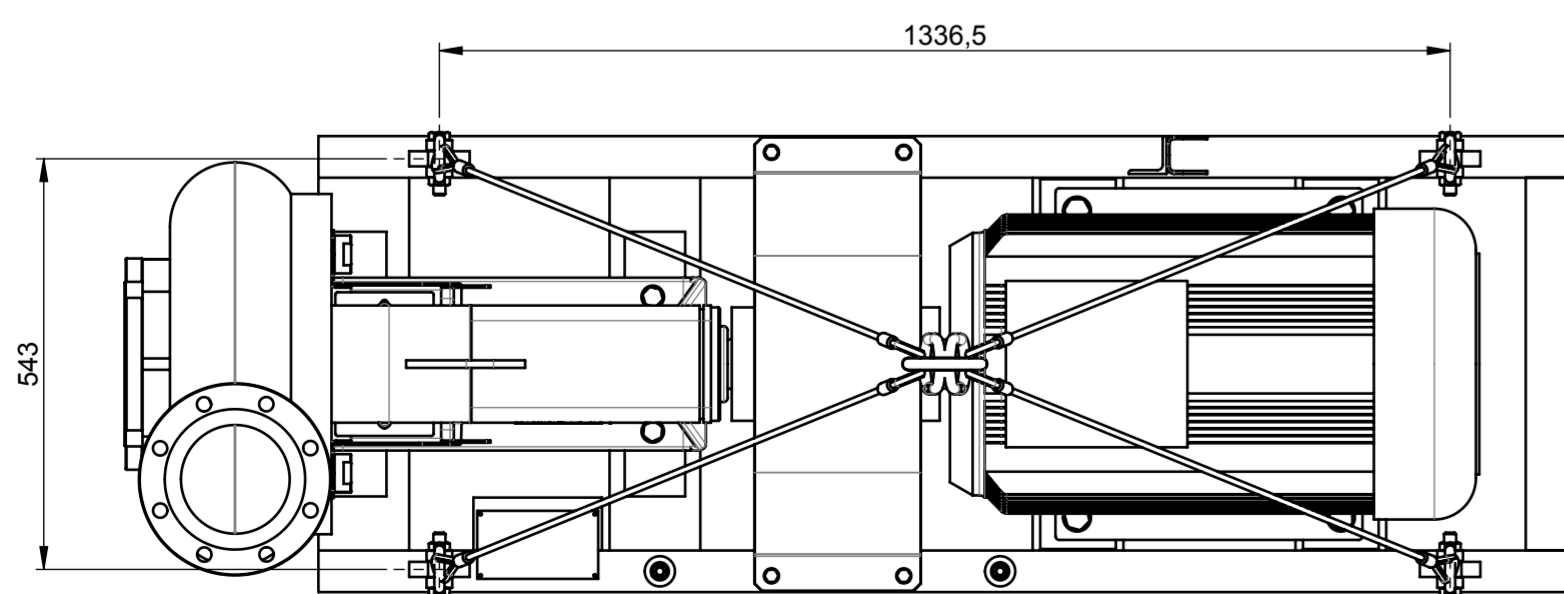
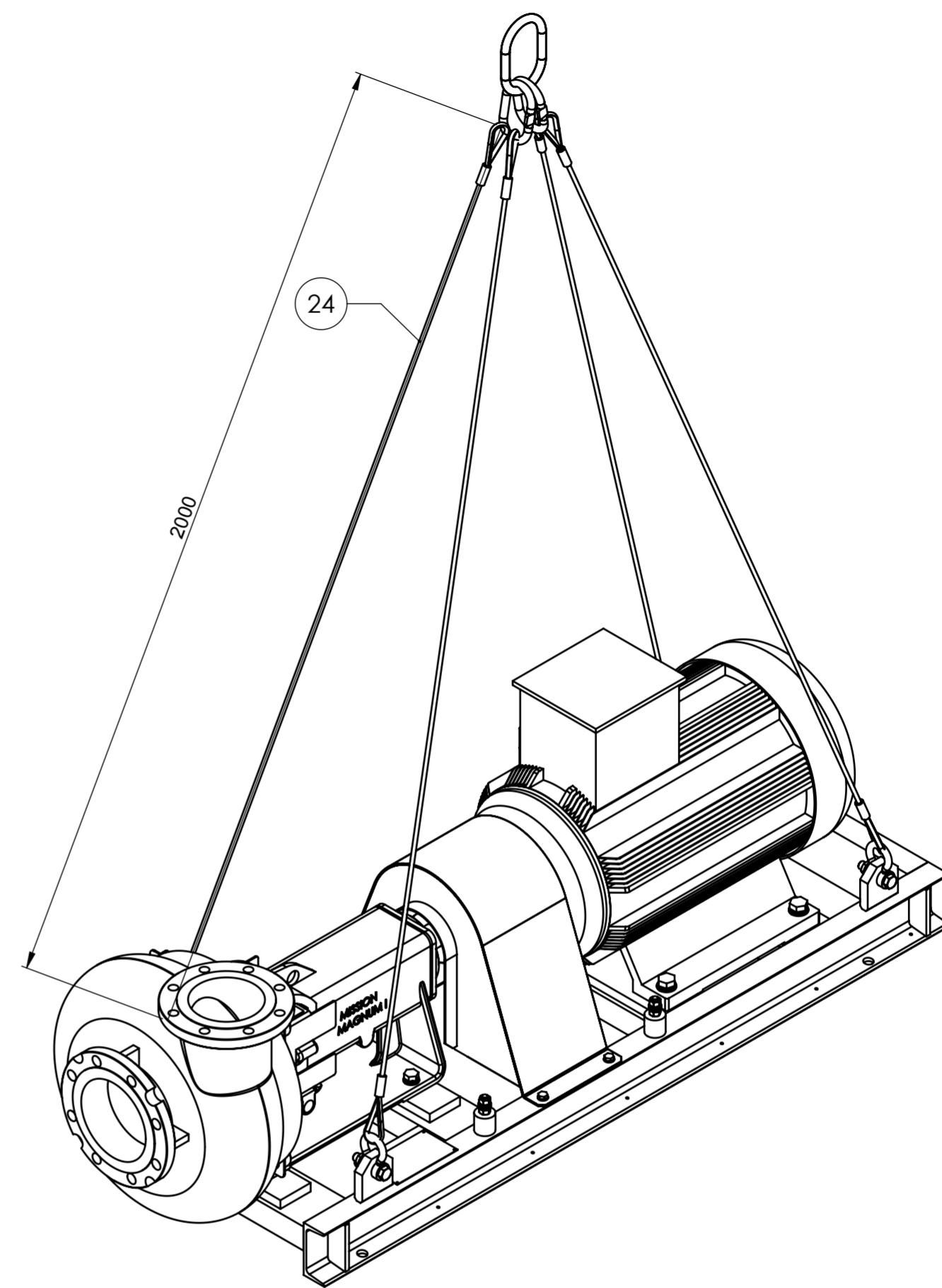
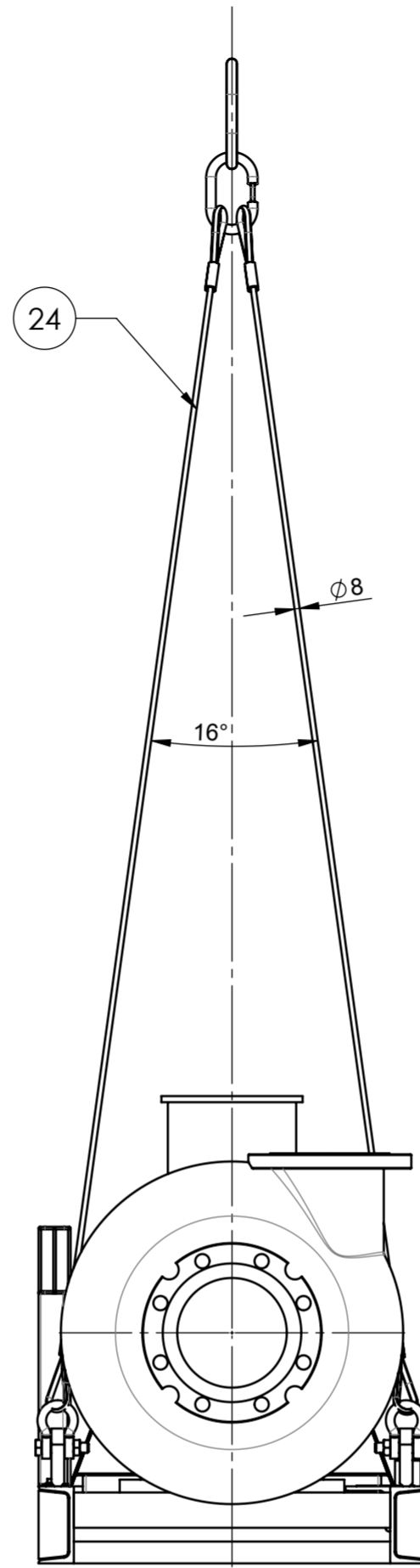
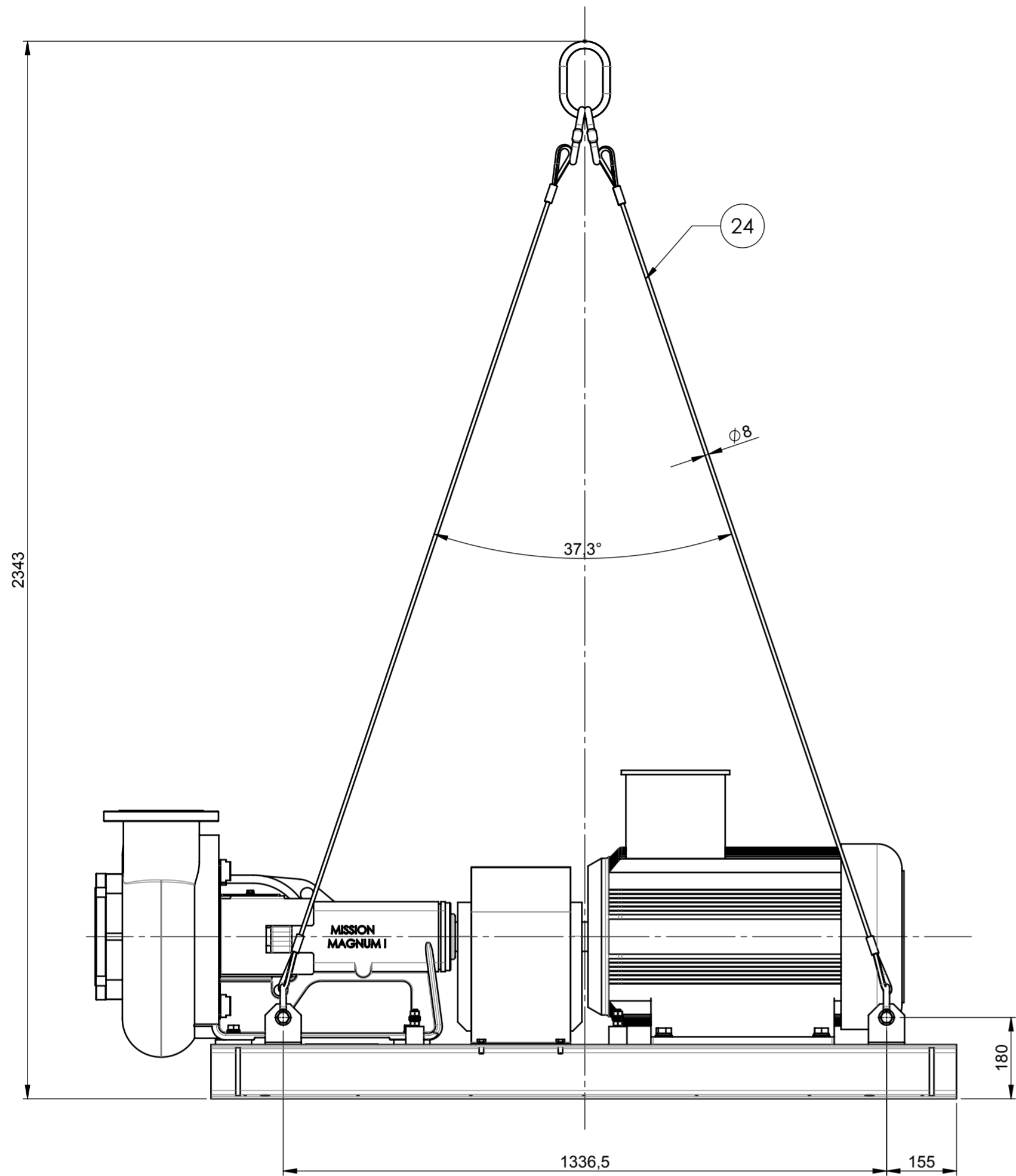
ITEM	DESCRIPTION	FACING	RATING	INCH	x	y	z
TP1	PUMP SUCTION	RF	150#	6"	-256	301,5	359
TP2	PUMP DELIVERY	RF	150#	5"	-110	149	638,4



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Denominazione Macchina / Machine Name POMPA CENTRIFUGA CENTRIFUGAL PUMP	Disegnato / Drawn AutoTech
Gruppo di riferimento / Unit of reference	Data / Date 09/08/2012
Descrizione / Description ASSEMBLEO POMPA CENTRIFUGA 6"x5"x14"-IMP 13"1/2 CENTRIFUGAL PUMP ASS'Y 6"x5"x14"-IMP 13"1/2	Peso / Weight Kg: 754,0
Compl. di riferimento Ref. Ass'y	Approvato/Approved V.B.
Scale: 1:5 A1	Data / date 08/11/2012
Disegno N° / Drawing N° CPA_21_001	Revisione / rev. 02
N° Codice / Code N°	Foglio / Sheet 1 / 2

DATA DATE	DESCRIZIONE DESCRIPTION
07/08/2012	NUOVO DISEGNO / NEW DRAWING
30/08/2012	R.D.M.457/12 MODIFICATA PROTEZIONE / MODIFY PROTECTION
07/11/2012	R.D.M. 651/12 MODIFICATE DESCR. DISTINIA / DESCR. LIST MODIFY



DESCRIZIONE / DESCRIPTION
01/09/08/2012
11/30/08/2012
22/07/11/2012
3
4
5

POS	DISEGNO	DESCRIZIONE	DESCRIPTION	Qt	DATA DATE	MODIFICHE REVISION
34		VITE T.E. M8x15 ISO 4018	SCREW M8x15 ISO 4018	2	01/09/08/2012	
33		ROSETTA ELASTICA UNI 1751-A M8	WASHER UNI 1751-A M8	2	11/30/08/2012	
32		ROSETTA UNI 6592 M8	WASHER UNI 6592 M8	2	22/07/11/2012	
24	CPA_03_001	SISTEMA DI SOLLEVAMENTO SINGOLO	SYSTEM LIFTING SINGLE	1		

QUOTE SENZA INDICAZIONE DI TOLLERANZA : GRADO DI PRECISIONE MEDIO UNI EN ISO 22768 - m UNLESS OTHERWISE SPECIFIED ON THE DIMENSIONS THE ALLOWED DEGREE OF PRECISION MUST BE AS UNI EN ISO 22768 - m , MEDIUM PRECISION		MISWACO MANTOVANI VICENTINI S.R.L. Via Bellaria, 228 BERRA (FE) Italy Tel +39 0532 831010 Fax +39 0532 831650 e-mail info.italy@miswaco.com	Denominazione Macchina / Machine Name POMPA CENTRIFUGA CENTRIFUGAL PUMP	Disegnato / Drawn AutoTech
DA FROM 0.5 3 6 30 120 400 1000 2000 OLTRE ABOVE 4000 FINO A TO 3 6 30 120 400 1000 2000 4000 ± 0.1 0.1 0.2 0.3 0.5 0.8 1.2 2			Gruppo di riferimento / Unit of reference Compl. di riferimento Ref. Ass.y	Descrizione / Description ASSIEME POMPA CENTRIFUGA 6"x5"x14"-IMP 13"1/2 CENTRIFUGAL PUMP ASS'Y 6"x5"x14"-IMP 13"1/2
ANGOLI ANGLES DA FROM - 10 50 120 OLTRE ABOVE 400 FINO A TO 10 50 120 400 ± 1° 30' 20' 10' 0.5'		Scala: 1:10 A2 N° Codice / Code N° Materiale / Material Trattamento / Treatment	Disegno N° / Drawing N° CPA_21_001	Peso / Weight. Kg: 754.0
			Foglio / Sheet 2 / 2	Approvato/Approved V.B. Data / date 08/11/2012 Revisione / rev. 02