

OPERATING INSTRUCTIONS

Series
Design

T, TS, D, E, EO, EOS, EOA
SG, SGT, FG



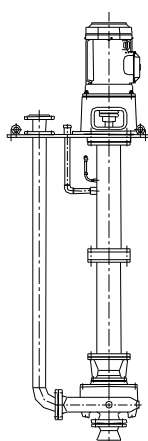
Type T 81-200 SG4 LB4B

Factory serial No T 216389 -90

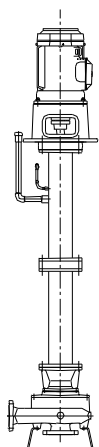
Centrifugal vertical pump for
wet-pit installation

Operating- and installation
instructions

SG



FG



ATTENTION



These operating instructions contain important information and safety instructions. We request you to take due note of these operating instructions and hand them, before installation and commissioning, to the personnel responsible for the pump. Otherwise our guaranty for the machine would be invalid if claims should arise.

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Saug- und Druckstutzen

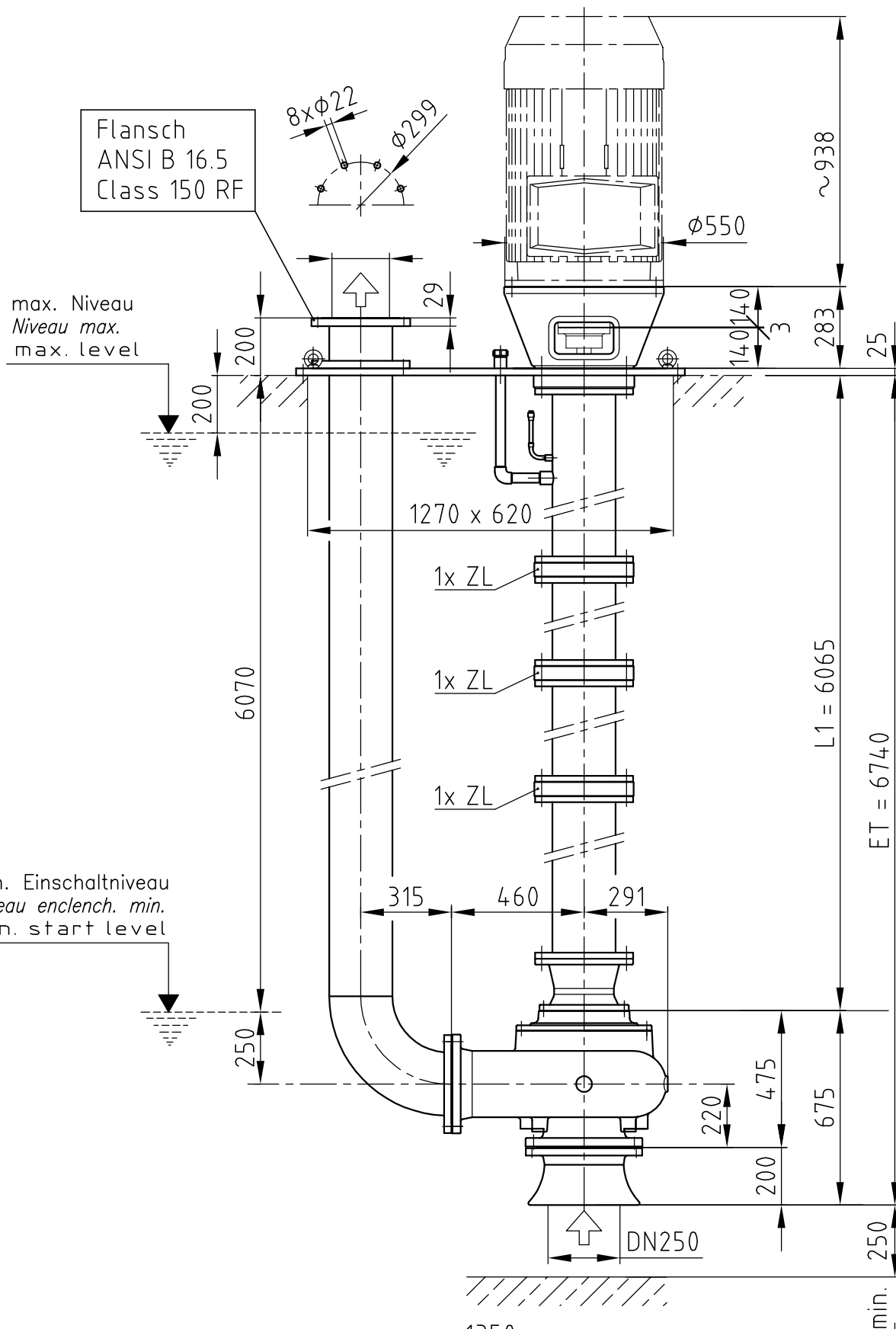
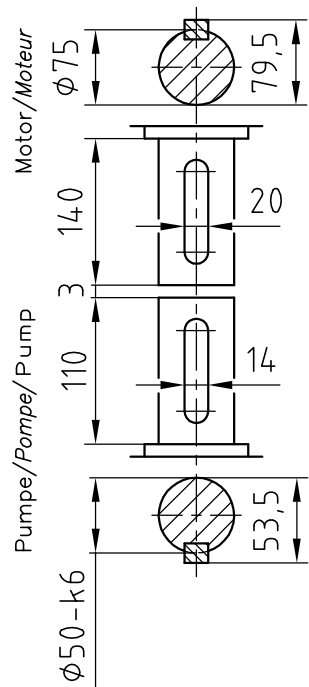
Brides d'aspiration et de refoulement

Suction and delivery flange

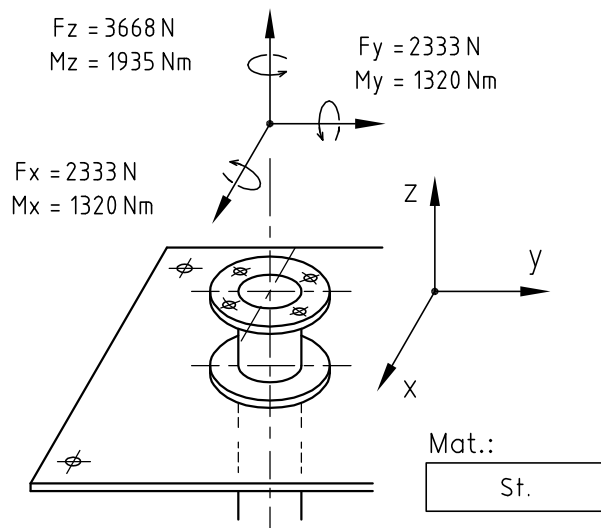
PN 10
DIN 2501

Typ: T 81-200 SG4 LB4B

EGGER



Zulässige Flanschbelastungen
Forces admissibles sur la bride
Permissible flange forces



Gewichte/ Poids / Weight

kg

Pumpe mit Kupplung
Pompe avec accouplement
Pump with coupling

1452

Flüssigkeitsvorlage
Réserve de liquide
Liquid reservoir

169

Motor
Moteur

--

Gesamt
Total

1621

Kupplung/Accouplement/Coupling

Fabrikat

Fabrication

Manufacturer

Typ

Flender N-Eupex

B-180

Motor/Moteur

Kennwort-Code Hydroambiente

Masse-Dim. (mm)

Fabrikat

Fabrication

Manufacturer

Typ

280S

Drehzahl

1483

Vitesse

tr/min

Speed

RPM

Leistung

75

Puissance

kW

Power

Masstab

Echelle

Scale

1:20

Ang.(Masse unverbindlich)
Offre (Dim. non définitives)
Offer (Preliminary dim.)

Auftr.(Masse verbindlich)
Com. (Dim. définitives)
Order (Final dim.)

T216389-90

Dat. 12.12.2013

Gezeichnet

Dessiné

Drawn

M. Schori/J.Ma

Geprüft

Contrôlé

Checked

P.Bolli

Gesehen

Vu

Approved

Pumpen- und
Maschinenfabrik

EGGER

Fabrique de pompes
et de machines

Emile Egger & Cie SA
Cressier/NE (Suisse)
www.eggerpumps.com

Mannheim (DE)
Lyon (FR)
Graz (AT)

London (GB)
S.Sebastian (ES)
Hilversum (NL)

Milano (IT)
Bruxelles (BE)
Stenungsund (SE)

S-18787-13

Type:

TV 81-200

EGGER

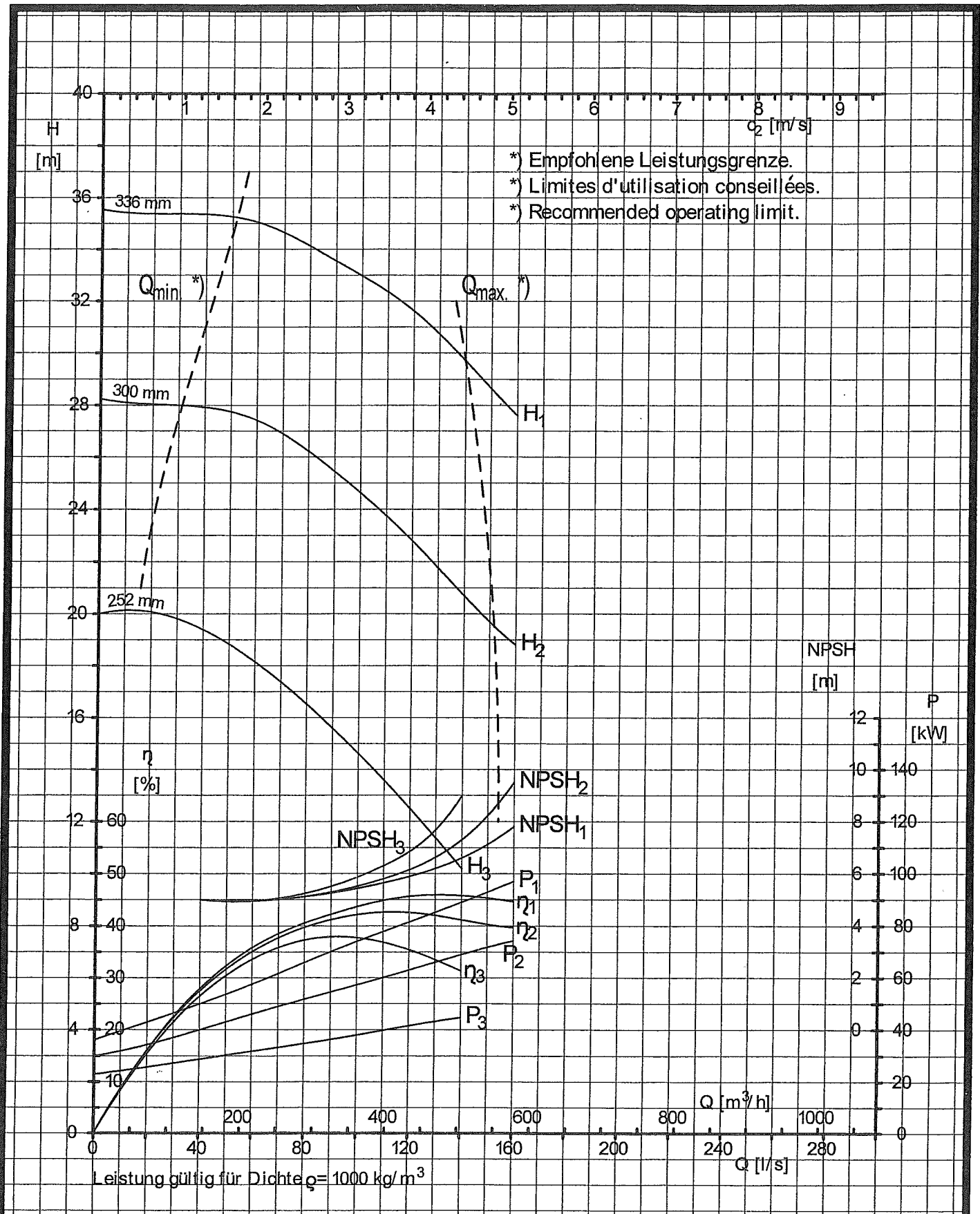
Drehzahl n=

1480 1/min =

24.67 1/s

Ref.-Nr.:

Kennwort:



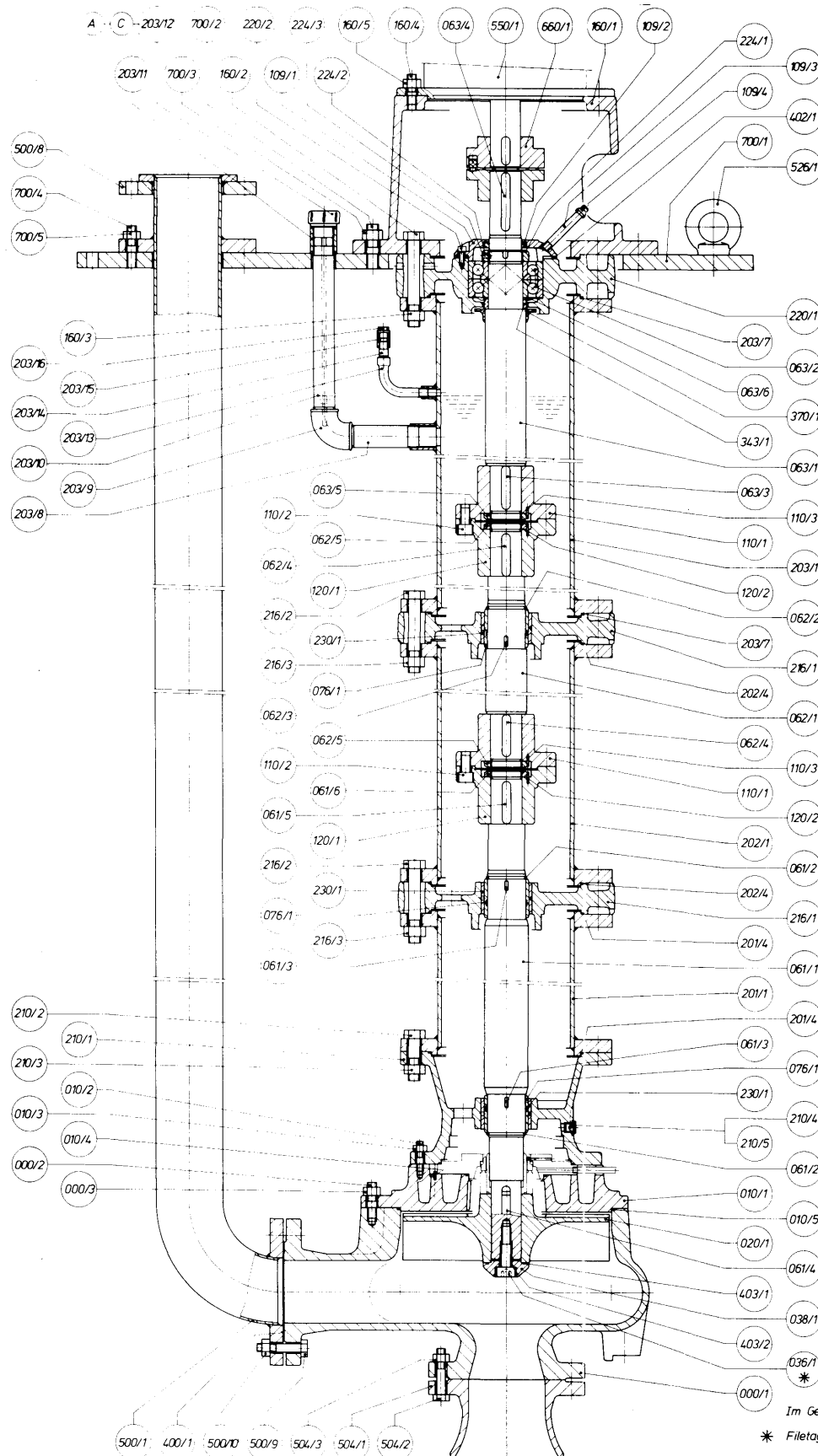
Laufraddurchmesser		Gehäuse-Zeichng-Nr.	000.00.0820-01	Datum	16.03.2010
Laufrad-Zeichng-Nr.	020.11.0804-01	Prüfprotokoll-Nr.	(CT 10366 A-1)	Bearb.	<i>[Signature]</i>
Schaufelzahl	8	Abdrehwinkel	0°		

Emile EGGER & Co. AG Route de Neuchâtel 36 2088 Cressier / NE Phone: +41 (0)32 758 71 11 Fax : +41 (0)32 757 22 90 E-Mail: info@eggerpumps.com		Ficha técnica T 81-200 SG4 LB4B		EGGER Bombas TURO Ibérica,S.L. Pol. Ind. Bidebitarte - PºDonosti,82 20115 Astigarraga (Guipuzcoa) Tel. 943 336 500 Fax. 943 333 211 E-Mail: info.iberica@eggerpumps.com	
Offer no. Order no. Serial no./quantity Delivery date		OIT 16.340 - Rev. 8 PIT 2733 T216389 - T216390		Data sheet to pos.no.	
Customer HIDROAMBIENTE, S.A. Person/Dept. ALBERTO ETXABE Address BILBAO		Date / Our ref.: 11.12.13 Customer order C7013 Project / Installation KAVEH - IN348 Item No. 1 -TURO - 1450 rpm - GG/HG 15.3			
1 Duty points		Test values referring to			
2 Liquid Water + Shell		Min. Nominal Max. Water			
3 Type ----- Capacity m³/h		250			
4 Solids Suction static geod. m		----			
5 Particle Ø max. mm Suction pressure bar		----			
6 Gas content Volume % Discharge static geod. m		----			
7 pH-value at Tw 7 Discharge pressure bar		----			
8 Working temp. = Tw °C Atmosphere Differential head m		34			
9 Specific gravity kg/dm³ 1 NPSH_A (installation) m		----			
10 Kinematic viscosity at Tw mm²/s 1 NPSH_R 3% (pump) m		----			
11 Vapour pressure at Tw bar Nominal speed rpm		1485			
12 Max. temperature °C Nominal efficiency %		38			
13 Altitude of installation ASL ----- Absorbed power kW		60,9			
15 Pump designation T 81-200 SG4 LB4B Impeller type VORTEX z = 6					
16 Design VERTICAL Characteristic curve no. CT 10366 A					
17 Arrangement drawing no. S-18787-13 Max. free Ø passage through pump mm 200					
18 Sectional drawing no. 971.12.0000-00 Closed valve pressure m 34,5					
19 Additional drawings no. Minimum flow m³/h 147					
20 Suction-flange Nominal diamet./pressure 250 PN 10 Impeller Ø designed mm 336					
21 Dimensions DIN 2501 min. / max. mm 252 336					
22 Face DIN 2526 FORM D(RF) Additional absorbed power kW 1,96					
23 Discharge-flange Nominal diamet./pressure 200 PN 10 Recommended motor power kW 75					
24 Dimensions DIN 2501 Casing working pressure at 20°C max. bar					
25 Face DIN 2526 FORM D(RF) Casing test pressure at 20°C max. bar					
26 Ex protection acc. Dir 94/9/EG Liquid temp. min./max. °C 80					
27 Bearing / Lubrication Max. design speed rpm 1500					
28 Pump upper bearing Ball bearing lubricated by grease Sound pressure level (A) pump/-incl.motor dB 75					
29 lower bearing bearing bush lubricated by water + glycol					
31 Motor Direction of rotation seen from drive-end clockwise right					
33 Pump materials Pump dimensions					
34 DIN / EN Pit cover mm 1350*800					
35 Casing GG 25 Installation depth ETo (without suction pipe) mm 6540					
36 Casing cover GG 20 + Suction pipe length e + 200					
37 Impeller HG 15.3 Total installation depth ET mm = 6740					
38 no / no Starting level from bottom of pit cover mm 6070					
39 Wear plate no Shaft length L1 + Hydraulic. with suction pipe L2 mm 3 / 6065					
40 Sealed shaft St. 50K					
41 Intermediate pipe St Shaft sealing MECHANICAL SEAL					
42 Discharge pipe St Sectional drawing no. 984.01.0004-02					
43 Pit cover St Arrangement G1					
44 Bellmouth witho. suction pipe GG 20 Manufacturer prim./second. BURMANNG					
45 Shaft sleeve mech.seal 1.4436 Type a. size prim./second. MG1					
46 shaft sleeve UL/ZL 1.4436 Material code prim./second. Q1Q1PGG					
47 Journal bearing UL/ZL Bz-G-22 Quench flow/pressure bar ---					
48 Elastomers NBR Flush flow/pressure m3/h ---					
49 Paint Specification According to Egger standard R-842-1 + R-842-4					
50 Colour above / submerged RAL5015 blue					
51 Coupling					
52 Make / Type FLENDER N - Eupeux B-180 DBSE mm 14301 bored p.s. mm 50					
53 Specialities Explosion proof bored m.s. mm 75					
54 Motor					
55 Make / Type WEG W22 4P 280 S/M Design V1 Frame 280S					
56 Execution Explosion proof ----- Protection class IP 55					
57 Rating kW 75 Tension V 400 Frequency Hz 50 Speed rpm 1485					
58 Starting Nom. Current A 136					
59 Specialities Protective cover ----- Thermal protection					
61 Remarks concerning technical data sheet: see next page					

TURO-Schachtpumpe
Pompe-TURO-immersée
TURO-shaft driven pump

Baureihe T Bauform SG
Série T Constr. SG
Series T Design

TURO®



grosser Schachtdeckel
grand couvercle d. fosse
large pit-cover

2-7 Zwischenlager
2-7 palier intermédiaire
2-7 intermediate bearing

LB 3/4/5

A Einfüllschraube
Vis de remplissage
Filling Plug
B Entleerungsschraube
Vis de vidange
Drain Plug
C Kontrollschraube
Vis de contrôle
Control Plug

Wellendichtung
siehe Zusatzzeichnung
Garniture d'étanchéité d'arbre
voir dessin complémentaire
Shaft seal
see complementary drawing

Im Gewinde gesichert mit
* Filetage assuré avec "Loctite 242"
Thread locked with

Dat. 08.11.1988

EGGER

Emile Egger & Cie SA
Cressier/NE (Suisse)

Emile Egger & Co. GmbH
Mannheim (Deutschland)

Egger-Turo Pumps (UK) Ltd
London (GB)

971.12.0000-00

Pos.	Gegenstand	Pièce	Particolare	Item
000/1	Gehäuse	carcasse	corpo	casing
010/1	Gehäusedeckel	couvercle de carcasse	coperchio del corpo	casing cover
010/5	O-Ring	O-ring	O-ring	O-ring
020/1	Lauftrad	roue	girante	impeller
036/1	Laufadschraube	vis d'arrêt de la roue	vite bloccaggio girante	impeller screw
038/1	Laufadscheibe	rondelle d'arrêt da la roue	rondella della girante	impeller washer
061/1	untere Welle	arbre inférieur	albero inferiore	bottom shaft
061/2	Sprengring	bague de butée	anello seeger	snap ring
061/3/4/5	Passfeder	clavette	chiavetta	key
061/6	Wellenmutter	écrou arbre	ghiera	shaft nut
062/1	Zwischenwelle	arbre intermédiaire	albero intermedio	intermediate shaft
062/2	Sprengring	bague de butée	anello seeger	snap ring
062/3/4	Passfeder	clavette	chiavetta	key
062/5	Wellenmutter	écrou arbre	ghiera	shaft nut
063/1	obere Welle	arbre supérieur	albero superiore	top shaft
063/2	Wälzlager	roulement à billes	cuscinetto a sfere	ball bearing
063/3/4	Passfeder	clavette	chiavetta	key
063/5	Wellenmutter	écrou arbre	ghiera	shaft nut
063/6	Nilosring	bague nilos	anello nilos	nilos-ring
076/1	Wellenschutzhülse	douille de protection de l'arbre	camicia d'albero	shaft sleeve
109/1	Lagerdeckel	couvercle de palier	coperchio del supporto	bearing cover
109/2	Simmerring	joint simmer	anello simmer	radial shaft seal
110/1	Starrkupplung-Antrieb	demi-accouplement rigide côté moteur	semigiunto rigido lato motore	muff coupling motor side
120/1	Starrkupplung-Abtrieb	demi-accouplement rigide côté pompe	semigiunto rigido lato pompa	muff coupling pump side
160/1	Motorsupport	support moteur	sopporto motore	motor support
201/4	O-Ring	O-ring	O-ring	O-ring
202/4	O-Ring	O-ring	O-ring	O-ring
203/7	O-Ring	O-ring	O-ring	O-ring
210/1	Lagerkörper	support de palier	sopporto cuscinetti	bearing housing
216/1	Lagergehäuse Z.L.	support de palier	sopporto cuscinetti	bearing housing
220/1	Lagergehäuse A.L.	support de palier	sopporto cuscinetti	bearing housing
224/1	Wellenmutter A.L.	écrou arbre	ghiera	shaft nut
230/1	Lagerbuchse	coussinet	cuscinetto a boccia	bearing bush
370/1	Spritzring	déflexeur	deflettore	deflector
400/1	Dichtung	joint	guarnizione	gasket
402/1	Dichtung	joint	guarnizione	gasket
403/1	Dichtung	joint	guarnizione	gasket
403/2	Dichtung	joint	guarnizione	gasket
504/1	Einlauftrichter	entonnoir	campana	bellmouth
660/1	Kupplung	accouplement	giunto	coupling
	Bei Bestellung von Ersatzteilen muss ausser der Ersatzteilnummer unbedingt die auf dem Typenschild eingeschlagene Fabrikations-Nummer angegeben werden.	En cas de commande de pièces de rechange, indiquer le no. de référence de chaque pièce figurant sur la coupe, ainsi que le no. de fabrication inscrit sur la plaquette signalétique de la pompe.	Per ordinare dei pezzi di ricambio, specificare il numero riportato sul disegno in sezione ed il numero di matricola indicato sulla targhetta della pompa.	When ordering spare parts, please state part number given on cross sectional drawing and serial number as stamped on the pump name plate.