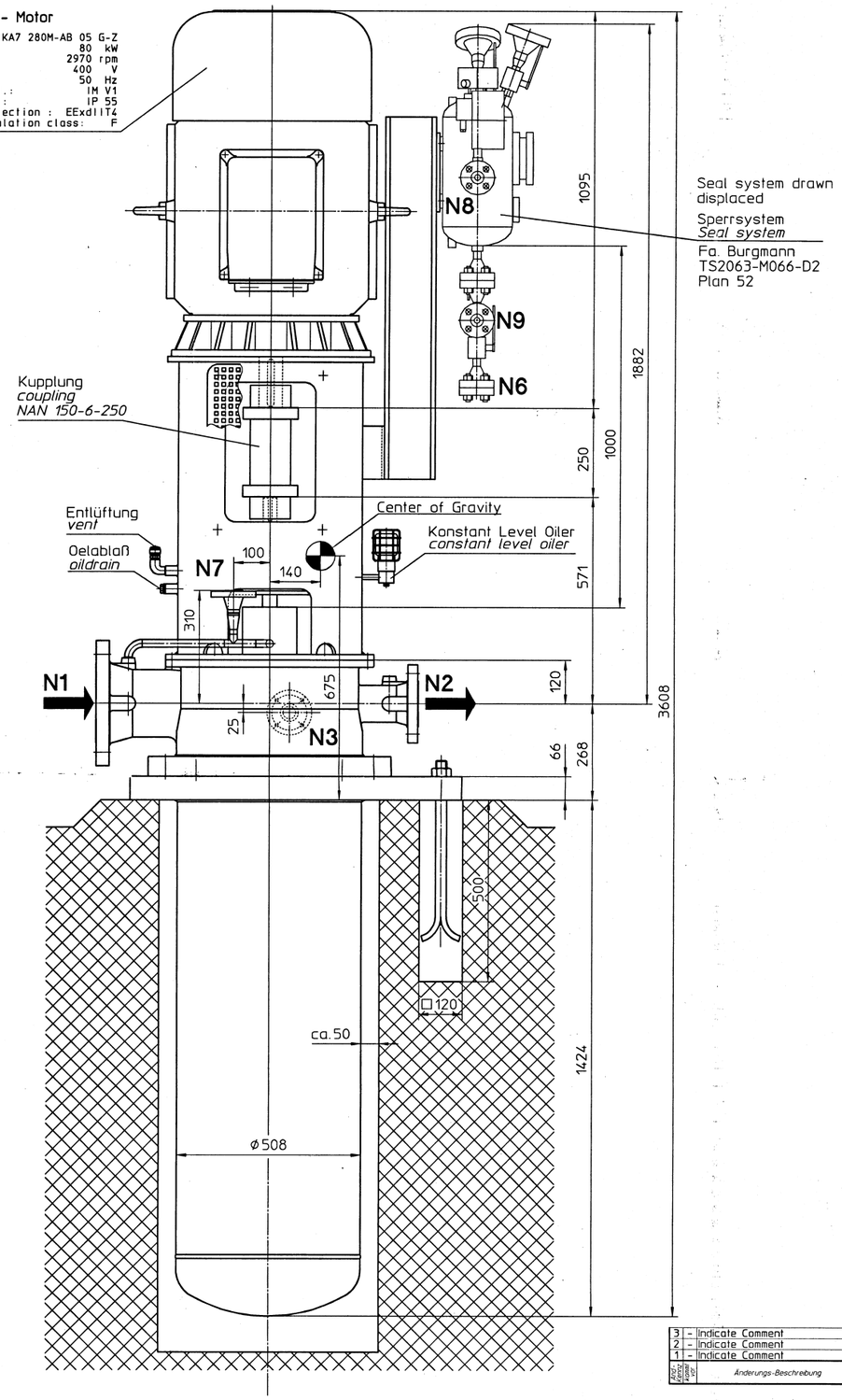
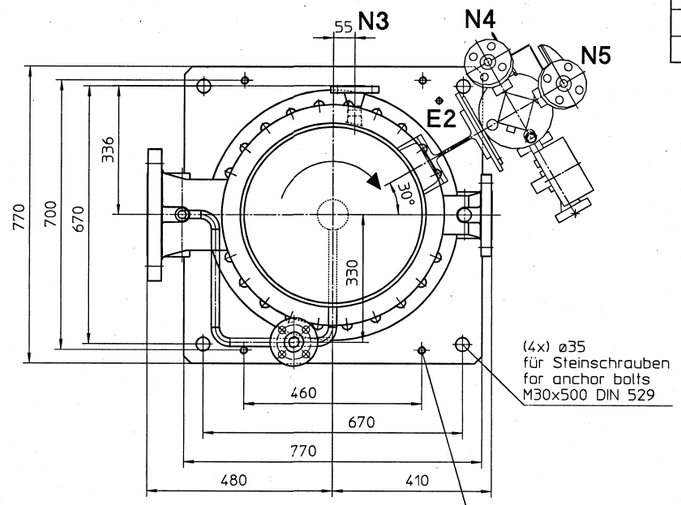
Drehstrommotor / E - Motor

Typ / type :	Schorch KA7 280M-AB 05 G-Z	
Leistung / power :	80	kW
Drehzahl / speed :	2970	rpm
Spannung / voltage :	400	V
Frequenz / frequency :	50	Hz
Bauform / type of const.:	IM V1	
Schutzart / protection :	IP 55	
Zündschutzart / Ex-protection :	EExdIIT4	
Isolationsklasse / insulation class:	F	





Übergabepunkte (nur intern) *Terminal points (internal conn. only)*		
ID REF.	ANSCHLÜSSE *Connection*	
N8	von GLRD *From mechanical seal*	1/2" ANSI B16.5 300lbs RF
N9	zur GLRD *To mechanical seal*	1/2" ANSI B16.5 300lbs RF

Übergabepunkte (nur extern) *Terminal points (external conn. only)*		
ID REF.	ANSCHLÜSSE *Connection*	
N1	Pumpen Saugflansch *Pump suction flange*	6" ANSI B16.5 300lbs RF
N2	Pumpen Druckflansch *Pump discharge flange*	3" ANSI B16.5 300lbs RF
N3	Entleerungsflansch *Drain conn. flange*	1" ANSI B16.5 300lbs RF
N4	Füllanschluß *Filling Connection*	1" ANSI B16.5 600lbs RF
N5	zur Fackel *To Flare*	1" ANSI B16.5 600lbs RF
N6	Entleerung *Drain*	1/2" ANSI B16.5 600lbs RF
N7	Entlüftung *Vent*	1" ANSI B16.5 300lbs RF
E1	Hauptklemmenkasten Motor *Motor main term. box*	?
E2	Erdungsbolzen *Unit earthing conn.*	(?x) M10 diagonal

R ☐ Review for process conformity only
A ☒ No comments / work may proceed
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F ☐ Comments noted; review and confirm revisions per PAR / Work may proceed subject to incorporation of comments indicated
X ☐ Review and resubmit / work may not proceed
N ☐ Noted: not subject to Linde / Nargan review

Permission to proceed does not constitute acceptance or approval of design details, calculations, analysis, test methods or materials developed or selected by the supplier and does not relieve supplier from full compliance with specifications and contractual obligations.

Linde Process Engineering and Contracting Division — Nargan Company
Date: 10.6.02 — Dept.: APP — Signature: Ritter
Date: — Dept.: — Signature:

04	17.04.02	Forth issue	Bech	Bech	Bech	Bech	
03	31.01.02	Third issue	Reckm.	Reckm.			
02	23.10.01	Second issue	Bruns	Reckm.			
01	09.08.01	First issue	Mischk.	Reckm.			
STATUS	ISSUE	DATE	DESCRIPTION	PRE. BY	CHK. BY	APP. BY	PROJ. ENGR.

DRAWING TITLE: General Arrangement Drawing for Propylene Pump 10-P-9171 A/B

OWNER DWG. NO.: 10-VD-A1-RE-010-009-L — P.O. NO.: 2PB 444
LINDE DWG. NO.: MZA 50064 — OWNER JOB CODE / PROJ. NO.: MPCOL / 7107904, MPCRE / 7057904
LINDE JOB CODE / PROJ. NO.: MARUN / 3110 1044
OWNER: NATIONAL PETROCHEMICAL COMPANY, MARUN PETROCHEMICAL COMPANY
PROJECT: C2+ RECOVERY AND GAS CRACKING PLANTS
CONTRACTOR: Linde Engineering and Contracting Division — Energy Industries Engineering and Design — Nargan Company

Ok RC 10.6.02 (Peter R. Colitzer)

Gewichte / *Weight*	
Pumpe / *Pump*	1300 kg
Kupplung / *Coupling*	10 kg
Motor / *Motor*	600 kg
Sperrsystem / *Seal system*	100 kg
Gesamtgewicht/*Total weight*	2010 kg

Kunde *Customer*	Linde AG für Marun, Iran
RP Auftr. Nr. / *RP order No.*	Bau Nr. / *Tag No.*
181936 B	10-P-9171 B
181936 A	10-P-9171 A

Zeichnungsliste / *List of drawings*		
Zirkulation *Circulation*	Plan 13	700 431 273 .3
Sperrleitung *Flushing line*	Plan 52	700 431 276 .2
Sperrsystem *Seal system*		700 431 0268 .2
Gleitringdichtung *Mechanical seal*		701 431 0257 .2
Schnittzeichnung Pumpe *Cross sectional pump*		701 431 0256 .0

Allgemeine Angaben / *General Remarks*

Pumpen sind keine Fixpunkte im Rohrleitungssystem.
Rohrleitungen spannungsfrei anschließen. Das gerade Stück der Saugleitung vor der Pumpe soll mindestens 5xDN = 750 mm sein . Bei kürzeren Längen Einlaufrichter und für die erste Inbetriebnahme vorübergehend ein Schutzsieb einbauen. Ausführung mit Ruhrpumpen absprechen.
Pumps are not fixing points in the piping system.
Pipes and accounterments shall be connected without stresses. The straight section of the suction line in front of the pump shall be 5xDN = 750 mm. In sharter sections a inlet rectifiers and for the initial starting temporarilly a protective screen shall be installed.
Design agreed upon with Ruhrpumpen.

Alle Anschlüsse am Spiralgehäuse für Entleerung und Zirkulation sind geflanscht.
All volute casing connections for drain and circulation are flanged-design

Drehrichtung der Pumpe (vom Antrieb aus gesehen). *Direction of rotation of pump (viewed from driver to the pump)* — CW

Flanschabmessungen / *flange dimensions*

Flanschanschlußmaße *flange dimensions* 300 lbs / ANSI B16.5 RF	Nennweite *size* DN	Flansch *flange* ø	Lochkreis *bollcircle* ø	Bohrung *bolt hole* ø	Anzahl *No. of holes*	Flschdicke *flange thickness*	Dichtleiste RF ø	Dichtleiste *Höhe height*
Druckstutzen *discharge*	3"	215	168,1	22	8	29	127,0	1,6
Saugstutzen *suction*	6"	345	269,7	22	12	37	215,9	1,6

	Datum	Name	Benennung
VLT 3x9x7	Bearb. 2001/08/06	wischmann	Arrangement Drawing
Lag.: 030	Gepr. 2002/04/17	bech	
	Freige. 2002/04/17	bech	
	Status 2002/04/17	freigegeben	

RUHRPUMPEN — Zeichnungs-Nr. 7004310264 .1 — Format 3 — Blatt 1 — Blätter
Änd.-Mitteilg.-Nr. — Datum — Name — geprüft — Urspr. Neu — Ers.für: — Ers.durch:

3	- Indicate Comment	17.04.02	Bech	17.04.02	Bech	17.04.02	Bech
2	- Indicate Comment	31.01.02	Reckm.	31.01.02	Reckm.	31.01.02	Reckm.
1	- Indicate Comment	28.Nov.01	Bruns	28.Nov.01	Reckm.	28.Nov.01	Reckm.
Ausf. Kennz. Index	Änderungs-Beschreibung	Datum	Name geändert	Datum	Name geprüft	Datum	Name freigegeben

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Linde Process Engineering and Contracting Division — Nargan Company
Date: — Dept.: — Signature:
Date: — Dept.: — Signature:

RUHRPUMPEN — Ruhrpumpen GmbH Witten/Germany

Project No.	181936 A/B	Year	2002
Typ	VLT 3x9x7	Design No.	10-P-9171 A/B
Liquid	Propylene		
Density	522 kg/m3	T 15,39 °C	Visc. 0,095 mPas
Capacity	84 m3/h	Total Head	420 m
Speed	2970 min-1	Power Input	70 kW
NPSH req	1,5 m	Suc. Pressure	8,12 barg
Hydr.Test	60 barg	Dis. Pressure	29,62 barg
Weight of Unit	2010 kg		

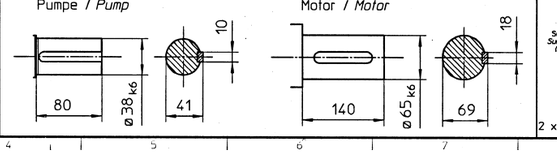
CE

SCALE 1:7,5

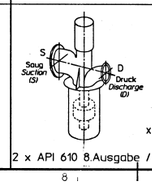
Grundplatte mit Beton ausgegossen.
Baseplate grout with concrete.

Wellenende / *shaft end*

Paßfeder / *Key* DIN 6885



Kräfte und Momente / *Forces and moments*



2 x API 610 8.Ausgabe / *2 x API 610 8.Edition*

	Saugstutzen S *Suction branch S* DN 6"	Druckstutzen D *Discharge branch D* DN 3"		Saugstutzen S *Suction branch S* DN 6"	Druckstutzen D *Discharge branch D* DN 3"
max. zul. Kräfte *max. admissible forces* N	Fx 4980	Fx 2140	max. zul. Momente *max. admissible moments* Nm	Mx 4600	Mx 1900
	Fy 6220	Fy 2660		My 2360	My 940
	Fz 4100	Fz 1780		Mz 3520	Mz 1440
	Fr 8960	Fr 3860		Mr 6260	Mr 2560