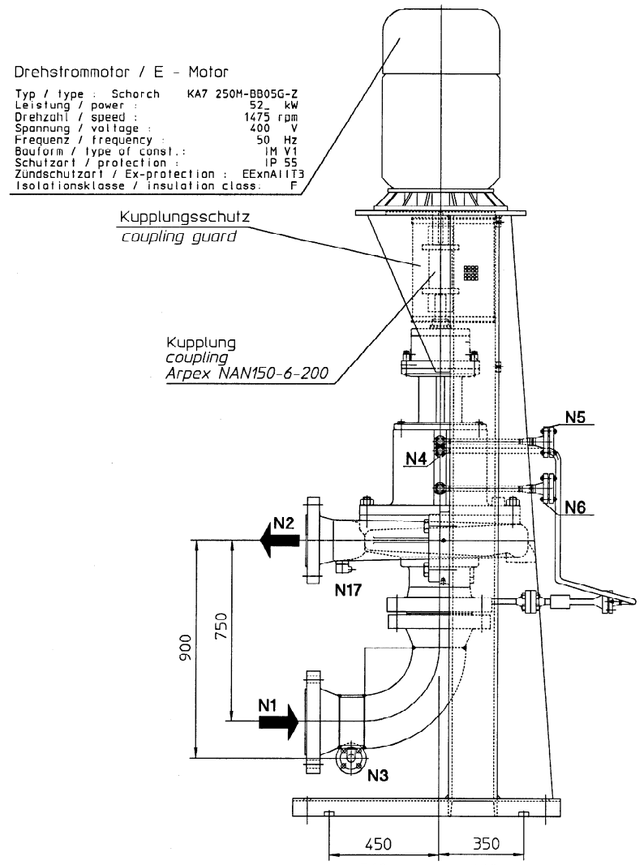
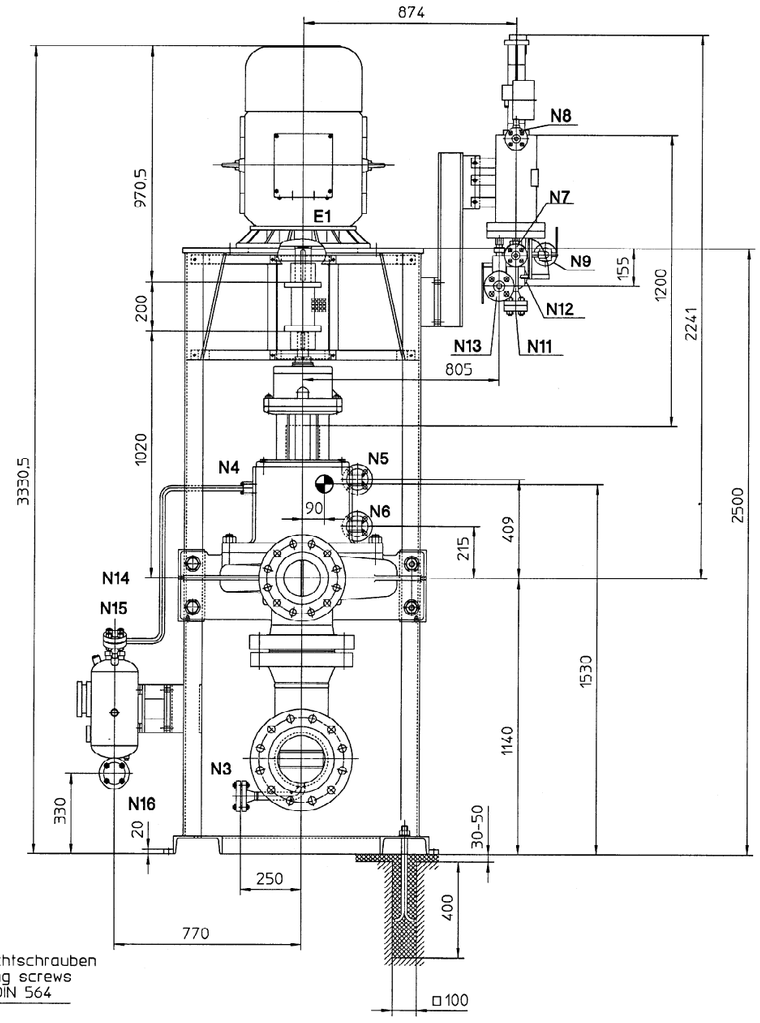
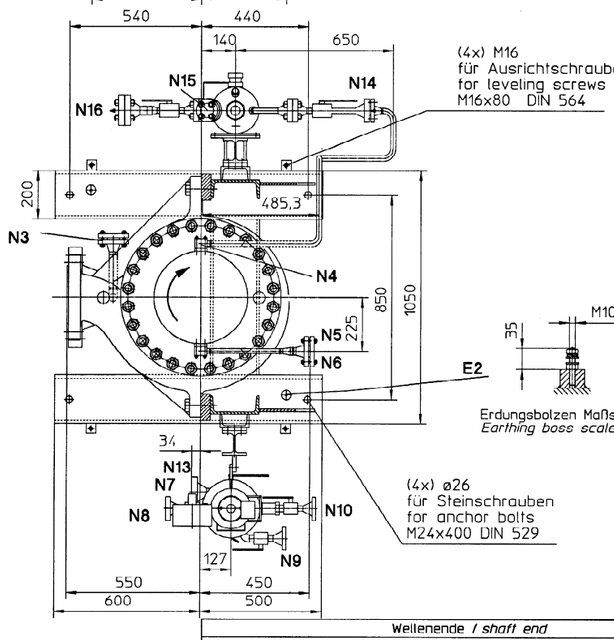



## Übergabepunkte (nur extern)
## *Terminal points (external conn. only)*

| ID REF. | ANSCHLÜSSE *Connection* | |
|---|---|---|
| N1 | Pumpen Saugflansch *Pump suction flange* | 8" ANSI B16.5 600lbs RF |
| N2 | Pumpen Druckflansch *Pump discharge flange* | 6" ANSI B16.5 600lbs RF |
| N3 | Entleerungsflansch *Drain conn. flange* | 1" ANSI B16.5 600lbs RF |
| N5 | Entlüftung *vent connection* | 1" ANSI B16.5 600lbs RF |
| N6 | Entspannungs-Anschluß *Pessure relief connection* | 1" ANSI B16.5 600lbs RF |
| N9 | Kühlwasser Ein *Cooling water in* | 1/2" ANSI B16.5 300lbs RF |
| N10 | Kühlwasser Aus *Cooling water out* | 1/2" ANSI B16.5 300lbs RF |
| N11 | Entleerung *Drain* | 1/2" ANSI B16.5 600lbs RF |
| N13 | Füllanschluß *Filling connection* | 1" ANSI B16.5 600lbs RF |
| N15 | Entlüftung zu Fackel *Vent to flare* | 1/2" ANSI B16.5 600lbs RF |
| N16 | Entleerung zu Fackel *Drain to flare* | 1" ANSI B16.5 600lbs RF |
| E1 | Hauptklemmenkasten Motor *Motor main term. box* | (2x) M63x1,5 |
| E2 | Erdungsbolzen *Unit earthing conn.* | (2x) M10 diagonal |

## Übergabepunkte (nur intern)
## *Terminal points (internal conn. only)*

| ID REF. | ANSCHLÜSSE *Connection* | |
|---|---|---|
| N4 | Von der Dichtungsleckagekammer *From seal leakage chamber* | Chrom Nickel Stahl *Stainless steel* |
| N7 | Zur GLRD *To mechanical seal* | 1/2" ANSI B16.5 600lbs RF |
| N8 | Von GLRD *From mechanincal seal* | 1/2" ANSI B16.5 600lbs RF |
| N12 | Prozessmedium (Pilotleitung) *Process medium (Pilot Line)* | 1/2" ANSI B16.5 600lbs RF |
| N14 | Zu Leckage Behälter *To leakage pot* | 1/2" ANSI B16.5 600lbs RF |
| N17 | Pilotleitung zum Kolbentransmitter *Pilot line to pressure transmitter* | Chrom Nickel Stahl *Stainless steel* |

R ☐ Review for process conformity only
A ☒ No comments / work may proceed
P ☐ Comments noted / revise and resubmit / work may proceed subject to incorporation of comments indicated
F ☐ Comments noted / revise and confirm revision per FAX / Work may proceed subject to incorporation of comments indicated
X ☐ Revise and resubmit / work may not proceed
N ☐ Noted / not subject to on-shore / off-shore 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 acceptance with specifications and contractual obligations.

Process Engineering and Contracting — Date: 04/1/02 — Rev.: — Signature:
BEKO — Date: — Dest.: — Signature:
MARUN PETROCHEMICAL COMPANY

04/1/02 — Gustav-R. Geilzer

| STATUS | ISSUE | DATE | DESCRIPTION | PREP. BY | CHK. BY | APP. BY | PROJ. ENGR. |
|---|---|---|---|---|---|---|---|
| | 06 | 04.11.02 | Seventh issue | Hamm | Wöhl | | |
| | 05 | 23.09.02 | Sixth issue | Hamm | Wöhl | | |
| | 04 | 12.08.02 | Fifth issue | Mache | Hamm | | |
| | 03 | 27.06.02 | Fourth issue | Mache | Hamm | | |
| | 02 | 23.02.02 | Third issue | Mache | Hamm | | |
| | 01 | 19.12.01 | Second issue | Mache | Hamm | | |
| | 00 | 18.08.01 | First issue | Mache | Hamm | | |

DRAWING TITLE: GENERAL ARRANGEMENT DRAWING FOR COLD TRAIN CONDENSATE PUMP II 10-P-3372 A/B

OWNER DWG. NO.: 10-VD-A1-RE-009-086-L — P.O. NO.: 2PB 448
LINDE DWG. NO.: MZA 50113 — OWNER JOB CODE / PROJ. NO.: MPCOL / 7107904, MPCPE / 7107904
LINDE JOB CODE / PROJ. NO.: MARUN / 3110 1044

OWNER: NATIONAL PETROCHEMICAL COMPANY, MARUN PETROCHEMICAL COMPANY

PROJECT: C2+ RECOVERY AND GAS CRACKING PLANTS

CONTRACTOR: Linde — LINDE ENGINEERING AND CONTRACTING DIVISION — Energy Industries' Engineering and Design — MARUN COMPANY

## Gewichte / *Weight*

| | |
|---|---|
| Pumpe / *Pump* | 795 kg |
| Grundplatte / *Baseplate* | 398,5 kg |
| Kupplung / *Coupling* | 5,5 kg |
| Motor / *Motor* | 450 kg |
| Sperrsystem / *Seal system* | 58 kg |
| Leckagebeh. / *Leakage pot* | 40 kg |
| Gesamtgewicht/*Total weight* | 1747 kg |

| | |
|---|---|
| Kunde *Customer* | Linde AG für Marun, Iran |
| RP Auftr. Nr. / *RP order No.* | Bau Nr. / *Tag No.* |
| 181944 B | 10-P-3372 B |
| 181944 A | 10-P-3372 A |

## Zeichnungsliste / *List of drawings*

| | | |
|---|---|---|
| P+JD *Pressure transmitter* | | 700 474 0020 .3 |
| Leckageleitung *Leakage line* | | 700 474 0007 .2 |
| Sperrleitung *Flushiing line* | Plan 53 | 700 474 0006 .2 |
| Leckagebehälter *Lekage pot* | | 700 474 0004 .2 |
| Gleitringdichtung *Mechanical seal* | | 701 474 0001 .2 |
| Schnittzeichnung Pumpe *Cross sectional pump* | | 701 474 0002 .1 |

## Allgemeine Angaben / *General Remarks*

Pumpen sind keine Fixpunkte im Rohrleitungssystem.
Rohrleitungen spannungsfrei anschließen. Das gerade Stück der Saugleitung vor der Pumpe soll mindestens 5xDN = xxxx 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 = xxxx mm. In shorter 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 |
| Transport des Aggregats *Transport of unit* | mit Traverse *with beam* | X | ohne Traverse *without beam* | X |

RUHRPUMPEN — Ruhrpumpen GmbH Witten/Germany

| | | | |
|---|---|---|---|
| Project No. | 181944 A/B | Year | 2002 |
| Typ | SVN8 6x21 V | Design No. | 10-P-3372 A/B |
| Liquid | C2 Minus Hydrocarbons | | |
| Density | 500 kg/m³ | T -78 °C | Visc. 0,107 mPas |
| Capacity | 350 m3/h | Total Head | 68 m |
| Speed | 1475 min-1 | Power Input | 45,0 kW |
| NPSH req. | 2,2 m | Suc. Pressure | 28,79 barg |
| Hydr.Test | 72 barg | Dis. Pressure | 33,12 barg |
| Weight of Unit | 1747 kg | | |

CE

SCALE 1:12

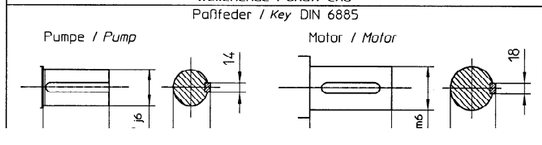
## Flanschabmessungen / *flange dimensions*

| Flanschanschlußmaße *flange dimensions* 600 lbs / ANSI B16.5 RF | Nennweite *size* DN | Flansch *flange* ø | Lochkreis *boltcircle* ø | Bohrung *bolt hole* ø | Anzahl *No. of holes* | Flschdicke *flange thickness* | Dichtleiste RF ø | Dichtleiste *Höhe height* |
|---|---|---|---|---|---|---|---|---|
| Druckstutzen *discharge* | 6" | 356 | 292,1 | 28,4 | 12 | 55 | 215,9 | 6,4 |
| Saugstutzen *suction* | 8" | 430 | 349,3 | 31,8 | 12 | 62 | 269,7 | 6,4 |

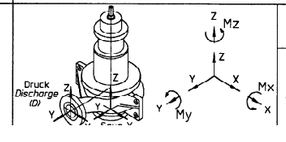
Grundplatte mit Beton ausgegossen.
*Baseplate grout with concrete.*

## Wellenende / *shaft end*

Paßfeder / *Key* DIN 6885




## Kräfte und Momente / *Forces and moments*




| | Saugstutzen S *Suction branch S* DN 8" | Druckstutzen D *Discharge branch D* DN 6" | | Saugstutzen S *Suction branch S* DN 8" | Druckstutzen D *Discharge branch D* DN 6" |
|---|---|---|---|---|---|
| max. zul. Kräfte *max. admissible forces* | Fx 7560 | Fx 4980 | max. zul. Momente *max. admissible momente* | Mx 7060 | Mx 4600 |
| | Fy 6220 | Fy 6220 | | My 3520 | My 2360 |
| | Fz 9780 | Fz 4100 | | Mz 5160 | Mz 3520 |

Für diese Unterlage behalten wir uns alle Rechte vor. Ohne unsere vorherige Zustimmung darf diese Unterlage weder vervielfältigt noch Dritten zugänglich gemacht noch in anderer Weise verwertet werden. Zuwiderhandlungen verpflichten zu Schadenersatz und sind strafbar.

SVN8 6x21 V

| | Datum | Name |
|---|---|---|
| Bearb | 2001/08/18 | wachmann |
| Gepr | 2002/10/29 | hamm |
| Freige | 2002/10/29 | hamm |
| Status | 2002/10/29 | freigegeben |

Benennung: GA-Drawing