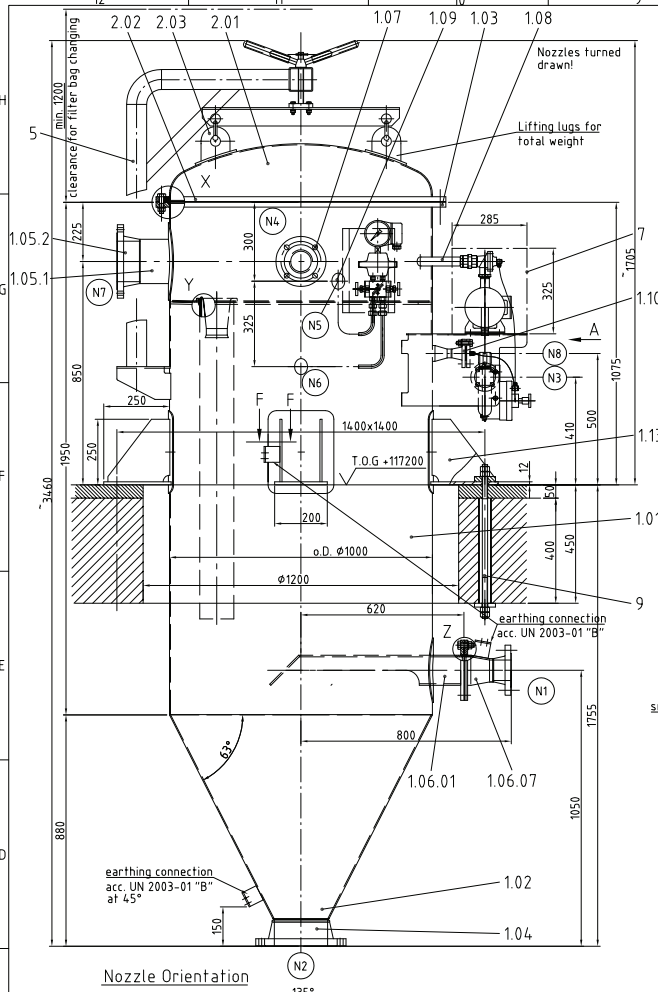
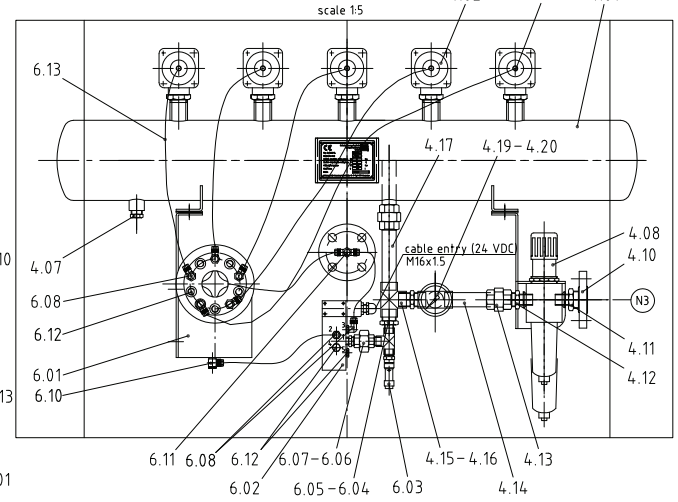


View A

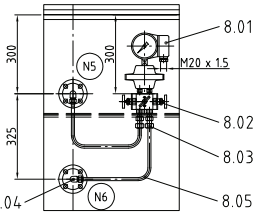
scale 1:5



Name plate bracket for tank

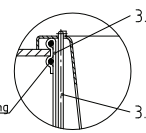
scale 1:2

View C



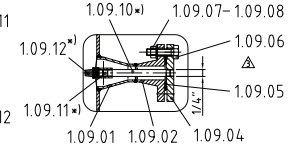
Detail Y

scale 1:2

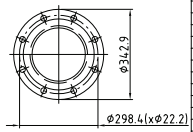


Section B-B (N5/N6/N8)

scale 1:5 *) only for raw gas nozzle N6

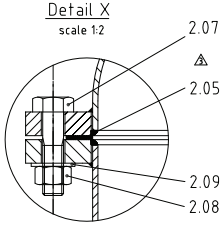


Nozzle flange N2



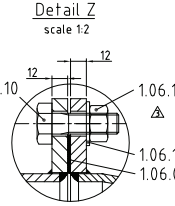
Detail X

scale 1:2



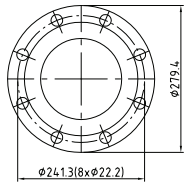
Detail Z

scale 1:2



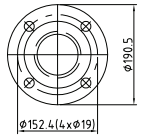
Nozzle flange N7

scale 1:5



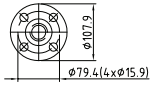
Nozzle flange N1/N4

scale 1:5



Nozzle flange N3/N5/N6/N8

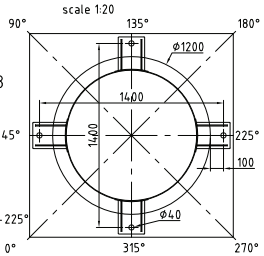
scale 1:5



Nozzle Orientation

Foundation loads

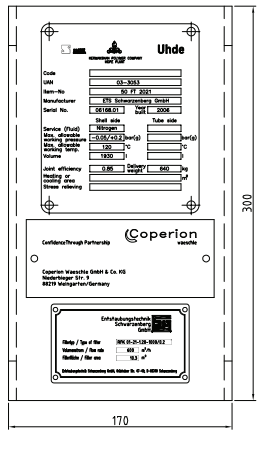
scale 1:20



Max. support forces	F (kN)
vertical	+ 47
	– 35
horizontal	14/14

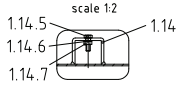
Name plate bracket for filter

scale 1:2



Section F-F

scale 1:2



Pos.	Qty	Description	Dimensions/Standard	Material	Mat. test report
9	4	Anchor bolt, complete	C22 M20 x 585	acc. UN 8281-02 P.4	-
8.05	2	Pipe	ø12 x 1.0	1.4571	-
8.04	2	Male stud elbow	1/4"	1.4571	-
8.03	1	Coupling	1/2"	1.4571	-
8.02	1	Three way manifold Fa. WIKA	1/2"	1.4571	-
8.01	1	Differential pressure gage with contact Fa. WIKA	NG100 – 0...40 mbar	Type 732.51 with 831.22	-
7	1	Cover	285 x 325 x 1150	Alu	-
6.13	8	Tube	6 x 8	PA	-
6.12	7	Plug	G1/4"	brass, nickel plated	-
6.11	1	Tee tube union	1/4"	brass, nickel plated	-
6.10	6	Elbow tube union	1/8"	brass, nickel plated	-
6.08	7	Elbow tube union	1/4"	brass, nickel-plated	-
6.07	1	Reducing nipple	3/8" x G1/4"	1.4401	-
6.06	1	Union	3/8"	1.4401	-
6.05	1	Tee	3/4"	1.4401	-
6.04	1	Reducing nipple	3/4" x 3/8"	1.4401	-
6.03	1	Safety valve Fa. Zöbiltz	DN8 – 7.2 bar – G3/8"	brass, nickel plated	-
6.02	1	Solenoid valve Fa. Herion	G1/4" – 2..8bar – 24 V DC	Alu 97105.09.2086.00.500	EEx ia IIC T4
6.01	1	Pneumatic controller Fa. Buschjost	for 10 valves	cast iron	-
5	1	Davit		CS, hot-dip galvanized	-
4.20	1	Pressure gauge Fa. WIKA	NG 63 – 1/4" – 10 bar	1.4571	-
4.19	1	Hexagon bushing	3/4" x 1/4"	1.4401	-
4.17	1	Pipe	3/4"	A 312 Gr. TP304L	-
4.16	1	Hexagon nipple	3/4"	1.4401	-
4.15	2	Tee	3/4"	1.4401	-
4.14	1	Pipe	3/4"	A 312 Gr. TP304L	-
4.13	2	Union	3/4"	1.4401	-
4.12	1	Reducing nipple	3/4" x 1/2"	1.4401	-
4.11	1	Reducing nipple	1" x 1/2"	1.4401	-
4.10	1	Threaded flange	1" ANSI B16.5 150 lbs	A 182 Gr. F304L	3.1B
4.08	1	Filter/regulator Fa. Norgren	1/2" – 10 bar – 5 µm	zinc cast	-
4.07	1	Plug	1/2"	1.4401	-
4.06	1	Set of nozzle lances	ø33.4 x 3.4	A 249 Gr.304L	3.1B
4.05	5	Union	1" (f/f)	1.4401	-
4.02	5	Diaphragm valve Fa. ASCO/Buschjost/Mecair	1"	Alu / NBR	-
4.01	1	Purge tank ø152.4	welded part	Gr. 304L	-
3.12	21	Supporting basket with injector	ø122 x 1220	Gr. 304L	-
3.11	21	Filter bag	ø130 x 1220	PPS needle felt, 550 g/m²	-
3.08	4	Washer	A10.5 DIN 125–A2		-
3.06	4	Hexagon nut	M10 DIN 934 – A2		-
3.02	1	Support for nozzle lances	4.0 x 114 x 875	A 240 Gr.304L	3.1B
3.01	1	Filter bottom	ø970 x 4.0	A 240 Gr. 304L	3.1B
2.09	40	Washer	A5/8 ANSI B18.22.1	SS	-
2.08	40	Hexagon nut	5/8–11 ANSI B18.2.1	A 194 Gr.B	-
2.07	40	Hexagon bolt	5/8–11 x 2.1/2" ANSI B18.2.1	A 193 Gr.B8	-
2.05	1	Gasket	ø1040/ø1000 x 3	PTFE, reinforced with glas fibre	-
2.03	2	Lifting lug	B1 acc. UN 2000-07 P.1	A 240 Gr. 304L	
2.02	1	Shell flange	ø1102/ø1002 x 18	A 240 Gr. 304L	3.1B
2.01	1	Torispherical	ø1000 x 4.0	A 240 Gr. 304L	3.1B
1.16	1	Name plate bracket	6.0 x 320 x 274	A 240 Gr. 304L	3.1B
1.14.7	4	Hexagon nut	M8 DIN 934 – A4		-
1.14.6	4	Toothed lock washer	A8.4 DIN 6797 – A2		-
1.14.5	4	Hexagon bolt	M8 x 25 DIN 933 – A2		-
1.14	5	Earthing connection	acc. UN 2003-01		
1.13	4	Supporting bracket	NGA- DIN 28083	A 240 Gr. 304L	3.1B
1.10	1	Nitrogen nozzle	NPS 1"		-
1.09.12	1	Filter	1/4"	Stainless steel	-
1.09.11	1	Coupling	1/4"	A 312 Gr. TP304L	-
1.09.10	1	Pipe	1/4"	A 312 Gr.TP 304L	-
1.09.08	4	Washer	A1/2 ANSI B18.22.1	SS	-
1.09.07	4	Hexagon nut	1/2–13 ANSI B18.2.2	A 194 Gr. B	-
1.09.06	4	Hexagon bolt	1/2–13 x 2" ANSI B18.2.1	A 193 Gr. B8	-
1.09.05	1	Gasket	ø65/ø33 x 3	PTFE, reinforced w. glass fibre	-
1.09.04	1	Blind flange	1" ANSI B16.5 150lbs	A 182 Gr. F304L	3.1B
1.09.02	1	Welding neck flange	1" ANSI B16.5 150lbs	A 182 Gr. F304L	3.1B
1.09.01	1	Reducing pipe	ø60.3x3.9/33.4x3.4	A 312 Gr. TP304L	3.1B
1.09	2	Differential pressure measuring nozzle	NPS 1"		
1.08	1	Set of nozzle pipes	ø33.4 x 4.5	A 312 Gr. TP304L	3.1B
1.07.2	1	Welding neck flange	3" ANSI B16.5 150 lbs	A 182 Gr. F304L	3.1B
1.07.1	1	Reducing pipe	ø114.3x6.0/88.9x5.5	A 312 Gr. TP304L	3.1B
1.07	1	Nozzle	NPS 3"		
1.06.12	8	Washer	A5/8 ANSI B18.22.1	SS	-
1.06.11	8	Hexagon nut	5/8–11 ANSI B18.2.2	A 194 Gr. B	-
1.06.10	8	Hexagon bolt	5/8–11 x 2" ANSI B18.2.1	A 193 Gr. B8	-
1.06.07	1	Reducing pipe	ø114.3x6.0/ø88.9x5.5	A 312 Gr. TP304L	3.1B
1.06.05	1	Gasket	ø173/ø114 x 3	PTFE, reinforced with glas fibre	-
1.06.01	1	Nozzle pipe	ø114.3 x 6.0	A 312 Gr. TP304L	3.1B
1.06	1	Raw gas nozzle	NPS (4") 3"		
1.05.2	1	Welding neck flange	6" ANSI B16.5 150 lbs	A 182, Gr. F304L	3.1B
1.05.1	1	Nozzle pipe	ø168.3 x 7.1	A 312 Gr. TP304L	3.1B
1.05	1	Clean gas nozzle	NPS 6"		
1.03	1	Welding neck flange	8" ANSI B16.5 150 lbs	A 182 Gr. F304L	3.1B
1.02	1	Shell flange	ø1102/ø1002 x 18	A 240 Gr. 304L	3.1B
1.01	1	Conical shell	ø1000/ø219.1 x 4.0	A 240 Gr. 304L	3.1B
1.01	1	Cylindrical shell	ø1000 x 4.0	A 240 Gr. 304L	3.1B

Nozzle symbol Stutzen-Bez.	Description Benennung	NPS inch	Rating psi	Standard ANSI Norm	Flange type Flansch-typ	Flange facing Dicht-fläche	Pipe dimension at welding edge Rohrabmessungen an Schweißkanten
N8	Controller vent gas	1"	150	B16.5	WN	RF	ø60.3x3.9/33.4x3.4
N7	Clean gas outlet NT–203046	6"	150	B16.5	WN	RF	ø168.3 x 7.1
N6	Difference pressure PDI 20324	1"	150	B16.5	WN	RF	ø60.3x3.9/33.4x3.4
N5	Difference pressure PDI 20324	1"	150	B16.5	WN	RF	ø60.3x3.9/33.4x3.4
N4	PSV–connection 50PSV–20302	3"	150	B16.5	WN	RF	ø88.9x5.5
N3	Utility gas supply connection	1"	150	B16.5	thread.	RF	–
N2	Product outlet nozzle PEP01–203096	8"	150	B16.5	WN	RF	ø219.1 x 4.0
N1	Raw gas entry PEP01–203039	(4")3"	150	B16.5	WN	RF	ø114.3/ø88.9 x 4.0

Design acc. to: Manufacturer Standard, UVV

Ausführung nach:			
Pressure chamber *) / Druckraum *)		Shell	Inspection by: Coperion,UHDE,Client Abnahme durch:
Design pressure gauge: / Zulässiger Betriebsüberdruck	bar	-0.05/+0.2	Supervisor of manuf. by: Fertigungskontrolle durch:
Design temperature: / Zulässige Betriebstemperatur:	°C	120	Coperion,UHDE
Corrosion allowance / Abnutzungszuschlag	mm	–	Weight to be supplied: / Liefergewicht: 640 kg
Other additional allowances / Sonstige Zuschläge	mm	–	Operating weight: / Betriebsgewicht: 660 kg
Joint efficiency / Schweißfaktor		0.85	Weight at retest: / Gew. b. Wied.–Prüfung: kg
Nominal volume / Nennvolumen	l	1930	Bundle weight: / Bündelgewicht: kg
Initial test pressure gauge: / Prüfüberdruck erstmalig:	bar	0.2	Total heat exch. surf.: / Gesamtnutzaustauschfläche: m^2
with –water/air vertical/horizontal / mit –Wasser/Luft stehend/liegend			Mfr's Serial No.: / Hersteller–Nr.: 06168.01
Operating pressure gauge / Arbeitsüberdruck	bar	0.05	Year of manufacture: / Herstelljahr: 2006
Operating temperature / Arbeitstemperatur	°C	80	Seismic Factor: acc. UBC97 ZONE 4
Retest pressure gauge / Prüfüberdruck Wiederholungsprüfung	bar	–	
with water/air at top in oper. position / mit Wasser/Luft im Kopf in Betriebslage			
Process fluid / Stoff		Nitrogen with HDPE–powder and stabilizer	
Density / Dichte	kg/m^3	1258/950/450	*) Data for shell side, tube side, jacket, etc.
H2partial pressure abs. / H2–Partialdruck	bar		*) Angaben für Mantelseite, Rohrseite, Doppelmantel usw.

General notes:

Allgemeine Angaben:			
Insulation / Dämmung	Shell side: hot /cold / Mantelseite: warm / kalt	mm	Tube side: hot / cold / Rohrseite: warm / kalt mm
Spare parts / Reserveteile	bolts and nuts: / Schrauben und Muttern:	10 %	gaskets: / Dichtungen: – sets / Satz
Tolerances according to: / Toleranzen nach:			UN 2000–02 P.1
Flanschachsen tachtiel.	Holes shall straddle both natural–centerlines.		
Leckage test of reinforcing plate welds: at / Dichtheitsprüfung, Verstärkungsblech–Schweißnähte mit		0.5	bar by applying soap bubble test. bar und Schaumbildner.
Test holes open / closed with: / Prüflöcher offen / verschließen mit:			plastic plug R1/8"
Bolt threads of outside flange connections to be coated with MoS2–paste. / Schraubengewinde für äußere Flanschverbindungen mit MoS2–Paste einstreichen.			
Flange faces and machined surfaces to be protected with: / Dichtflächen und maschinell bearbeitete Flächen schützen mit:			
Open nozzles to be closed for transportation with: / Offene Stutzen für den Versand verschließen mit:			Steel cover + rubber gasket + 4 bolts
Transportation in: / Versand:	4 parts/teilig	Part weights: / Teilgewicht:	– kg

as built

5					Hot–dip galvanized acc. EN ISO 1461		
1, 2, 4.01 (outside)						Blast cleaning with Garnet	
1, 2, 4.01, 4.06						SANDX Pickling bath concentrate	SANDX Passivating medium
Part / Teil	Derusting / Entrosten	Paint quality and mfr. / Qual. u. Herst.	Pre–treatment / Vorbehandlung	Type / Art	Pickling solution / Beizmittel	Post treatment / Nachbehandlung
Painting / Anstrich			Protection / Schutzüberzug		Pickling / Beizen	

Surface treatment

Oberflächenbehandlung

Dwg. No. / Zeichn.–Nr.	Description / Benennung	Dwg. No. / Zeichn.–Nr.	Description / Benennung
Reference documents/belong to drawing / Zugehörige Unterlagen/gehört zur Zeichnung:			

OWNER :

NATIONAL PETROCHEMICAL COMPANY
KERMANSHAH POLYMER COMPANY
HDPE COMPLEX IN KERMANSHAH
(300,000 T/Y)

CONTRACTORS: **Uhde** SAZEH CONSULTANTS

UHDE check stamp: / UHDE Prüfvermerk:

Revision					
	04	as built			
	03	Material bolts and nuts changed			
	02	Revised as per UHDE comments			
	01	Revised as per UHDE comments			
	00	First issue			

Scale: / Maßstab:	Drawn / Gezeichnet	Checked / Geprüft	Welding checked / Schweißtechn. geprüft	Design check / Berechnung gepr.
1:10	Date / Datum 20.04.06	21.04.06		
	Name / Name Schaarschmidt	Böhlmann		

UAN 03–3053 KERMAPOL | TON | Quantity / Anzahl 1

Item No. / Positions–Nr. 50 FT 2021 | 22F001

Engineered by: / Planungsbüro: UHDE GMBH | Order No.: / Bestell–Nr.: 34046379

Equipment designation: / Apparatebezeichnung: Nitrogen Recycling Filter Arrangment Drawing | Client / Kunde: KRPC

Type of drawing / Art der Zeichnung | Client Dwg. No.: / Kunde Zeichn. Nr.: 50–VD–00–REQ–MP–0010–073

Manufacturer: / Hersteller: ETS Schwarzenberg GmbH | Job No.: 4100322.0 | Rev.: / Kom.–Nr.: | Dwg. No.: 4100322.0.408.6066.1 | 04 / Zeichn.–Nr.:

Rev.	Description / Änderung/Revision	Tag/Date	Name
04	as built	26.09.06	Schaar.
03	Material for bolts and nuts changed	15.08.06	Schaar.
02	Revised as per UHDE comments	12.06.06	Seider
01	Revised as per UHDE comments	02.06.06	Schaar
Rev.	Änderung/Revision	Tag/Date	Name
	Ersatz fuer:		
gez.	19.04.06 Schaar	Ersetzt durch:	
gepr	20.04.06 Böhlmann	Entst. aus:	
freig.		Teile Nr.:	

coperion wasserle

Coperion Waesche GmbH & Co. KG
Niederbieger Strasse 9
88250 Weingarten / Germany

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Klassif. Code | Project–No. / Projekt–Nr.: 4100322.0.408.6066.1.04 | Doc–Class Count No. / Dok–Art Zähl–Nr. | Size / Fmt. | Index / Index

Maßstab/Scale 1:10 | Benennung/Designation: Arrangement Drawing Nitrogen Recycling Filter RFK 01–21–1.20–1000 / 0.2 | Blatt/Sheet: 1 von/of: 1 | Format/Size A1

AutoCAD Mechanical