	PURCHASER NAME	MAN TURBO
	JOB NO.	312410
	JOB CODE	KOSBOOST

Revision 04	25.03.2005	HP	Drawing Updated	Revision no.							
Revision 03	18.03.2005	SD	Drawing Updated	Revision 05	3	01.07.2005	Signature				
Revision 01	03.03.2005	TD					Signature				
	28.01.2005	MR					Revision				
Designed by	M.Wójcicki	12.2004	Material	Description					Formal		
Drawn by	M.Wójcicki	12.2004	ADC. PARTS LIST	OIL RESERVOIR				K1			
Checked by	D.Łukasz	12.2004	Weight kg								
Approved by	T.Gójszka	12.05.04	-2200	KOSBOOST					Sheet No.	1/2	
Scale	1:1		Status	Drawing No.	Revision				Language		
			-	RF-10/0249-04/10.00	05				EN		

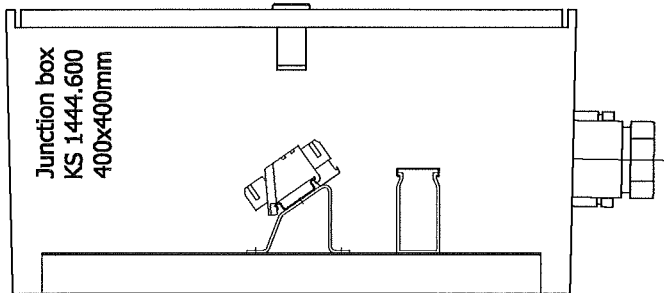
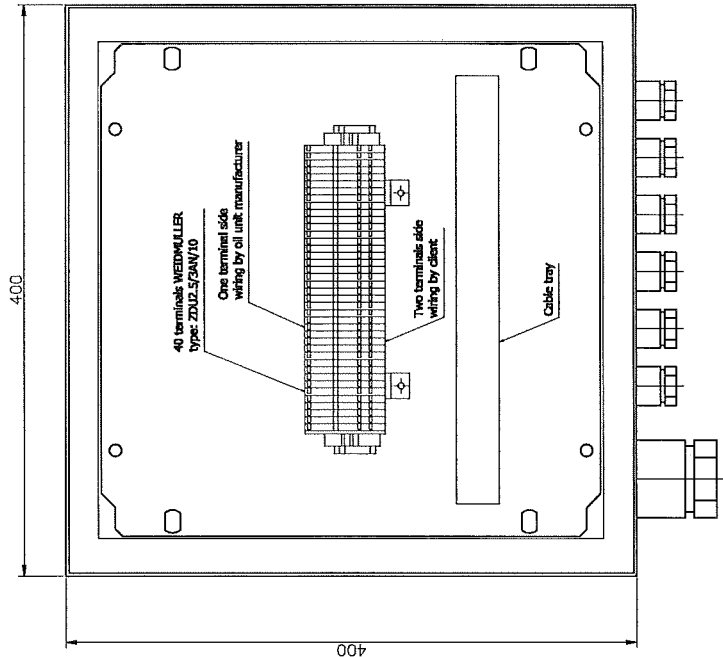
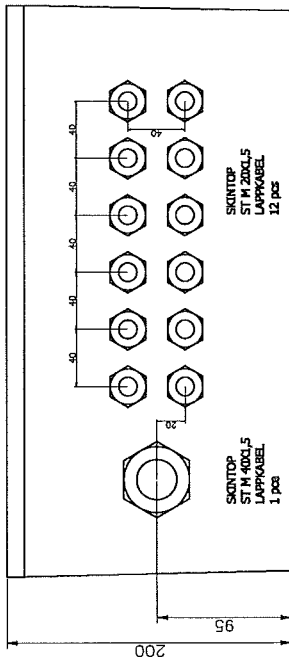
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Description					Concerning to drawing No.			Status		Page / s	
OIL RESERVOIR ZBIORNIK OLEJU OIL UNIT KOSBOOST					RW-10/0249-04/10.00			-		1 / 5	
This document contains proprietary information. It is not permitted to copy and make this document available to a third party without consent of ROCKFIN Sp. z o.o. company.											
		Name		Date	Sign.	ROCKFIN Sp. z o.o. Nowy Tuchom 10 80-209 Chwaszczyno POLAND					
Prepared by		M. Wójcicki		31.12.2004							
Checked by		D. Mroczka		31.12.2004							
Approved by		T. Gajewski		31.12.2004							
Rev. No	Rev. qty	Date	Sign.	Remarks	Rev. No	Rev. qty	Date	Sign.	Remarks		
01	-	31.01.2005	MW	Parts List Updated	04	4	11.07.05	AŁ	Add item 96, 97, 98		
02	-	03.03.2005	ZD	Parts List Updated							
03	4	25.03.2005	MP	Parts List Updated							
Item	Qty.	Description		Element Type Drawing No. or Norm No.		Producer		Technical data Remarks		Unit [kg]	Rev.
1.	1	SHEET #10 BLACHA #10		2500 x 2500		ACC. DWG SHEET 2		Material: S 235 JR		410	
2.	1	SHEET #8 BLACHA #8		2500 x 1027		ACC. DWG SHEET 2		Material: S 235 JR		161	
3.	1	SHEET #8 BLACHA #8		2500 x 1027		ACC. DWG SHEET 2		Material: S 235 JR		161	
4.	1	SHEET #8 BLACHA #8		2468 x 990		ACC. DWG SHEET 2		Material: S 235 JR		153	
5.	1	SHEET #8 BLACHA #8		2468 x 990		ACC. DWG SHEET 2		Material: S 235 JR		153	
6.	1	SHEET #8 BLACHA #8		2468 x 2468		WITHOUT DWG		Material: S 235 JR		382	
7.	1	SHEET #8 BLACHA #8		1868 x 795		ACC. DWG SHEET 2		Material: S 235 JR		91	
8.	1	SHEET #8 BLACHA #8		1894 x 290		ACC. DWG SHEET 2		Material: S 235 JR		32	
9.	1	SHEET #8 BLACHA #8		190 x 260		ACC. DWG SHEET 2		Material: S 235 JR		2,5	
10.	1	SHEET #8 BLACHA #8		90 x 60		ACC. DWG SHEET 2		Material: S 235 JR		0,3	
11.	2	SHEET #8 BLACHA #8		112 x 2468		ACC. DWG SHEET 2		Material: S 235 JR		14	
12.	2	SHEET #8 BLACHA #8		96 x 815		WITHOUT DWG		Material: S 235 JR		5,0	
13.	1	SHEET #8 BLACHA #8		96 x 822		WITHOUT DWG		Material: S 235 JR		5,0	
14.	2	SHEET #8 BLACHA #8		82 x 815		WITHOUT DWG		Material: S 235 JR		4,2	
15.	1	SHEET #8 BLACHA #8		82 x 822		WITHOUT DWG		Material: S 235 JR		4,2	
16.											03
17.	4	SHEET #30 BLACHA #30		50 x 800		WITHOUT DWG		Material: S 235 JR		9,5	

Document Name				Document No.		Rev. No.	Language
PARTS LIST				WE-10/0249-04/10.00		04	EN+PL
Description				Concerning to drawing No.		Status	Page / s
OIL RESERVOIR ZBIORNIK OLEJU OIL UNIT KOSBOOST				RW-10/0249-04/10.00		-	2 / 5
				This document contains proprietary information. It is not permitted to copy and make this document available to a third party without consent of ROCKFIN Sp. z o.o. company.			
Item	Qty.	Description	Element Type Drawing No. or Norm No.	Producer	Technical data Remarks	Unit [kg]	Rev.
18.	2	SHEET # 30 BLACHA # 30	50 x 550	WITHOUT DWG	Material: S 235 JR	7,0	03
19.	2	SHEET # 30 BLACHA # 30	50 x 400	WITHOUT DWG	Material: S 235 JR	4,7	
20.	2	SHEET # 30 BLACHA # 30	50 x 600	WITHOUT DWG	Material: S 235 JR	7,0	
21.	2	SHEET # 30 BLACHA # 30	50 x 500	WITHOUT DWG	Material: S 235 JR	5,9	
22.	4	SHEET # 15 BLACHA # 15	100 x 150	ACC. DWG SHEET 1	Material: S 235 JR	1,6	
23.	1	SHEET # 3 BLACHA # 3	300 x 318	ACC. DWG SHEET 2	Material: S 235 JR	2,3	
24.	1	CHANNEL U100 CEOWNIK C100	L= 1226 DIN 1026, EN 10279	ACC. DWG SHEET 2	Material: S 235 JR	13	
25.	1	CHANNEL U100 CEOWNIK C100	L= 2468 DIN 1026, EN 10279	ACC. DWG SHEET 2	Material: S 235 JR	26	
26.	1	CHANNEL U100 CEOWNIK C100	L= 1612 DIN 1026, EN 10279	ACC. DWG SHEET 2	Material: S 235 JR	17	
27.	1	CHANNEL U100 CEOWNIK C100	L= 850 DIN 1026, EN 10279	ACC. DWG SHEET 2	Material: S 235 JR	9,0	
28.							02
29.							02
30.	~0,7 m	PIPE DN25 RURA DN25	ø33,7 x 2,6 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	1,7	03
31.	4	EQUAL ANGLE 50 KĄTOWNIK 50	50 x 50 x 5 L= 50 DIN 1028, EN 10056	ACC. DWG SHEET 2	Material: S 235 JR	0,2	
32.	2	CHANNEL U100 CEOWNIK C100	L= 450 DIN 1026, EN 10279	WITHOUT DWG	Material: S 235 JR	4,8	
33.	2	EQUAL ANGLE 80 KĄTOWNIK 80	80 x 80 x 8 L= 350 DIN 1028, EN 10056	WITHOUT DWG	Material: S 235 JR	3,4	
34.	6	EQUAL ANGLE 30 KĄTOWNIK 30	30 x 30 x 3 L= 20 DIN 1028, EN 10056	WITHOUT DWG	Material: S 235 JR	0,03	
35.	2	EQUAL ANGLE 50 KĄTOWNIK 50	50 x 50 x 5 L= 900 DIN 1028, EN 10056	WITHOUT DWG	Material: S 235 JR	3,6	02
41.	2	COUNTER-FLANGE DN100 PRZECIWKOŁNIERZ DN100	Ø220 x 32	ACC. DWG SHEET 2	Material: P 235 GH	7,4	
42.	2	EARTHING BOSS KRÓCIEC UZIEMIENIA	Ø40 x 30	ACC. DWG SHEET 2	Material: S 235 JR	0,3	

Document Name				Document No.		Rev. No.	Language	
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OIL RESERVOIR ZBIORNIK OLEJU OIL UNIT KOSBOOST				RW-10/0249-04/10.00		-	3 / 5	
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Item	Qty.	Description	Element Type Drawing No. or Norm No.	Producer	Technical data Remarks	Unit [kg]	Rev.	
43.	1	SOCKET KRÓCIEC	B R3/4" DIN 86103	ACC. DWG SHEET 2	Material: S 235 JR	0,12		
51.	1	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN200 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	11		
52.								
53.	5	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN100 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	4,6		
54.	10	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN80 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	3,7		
55.	3	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN50 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	2,5		
56.	3	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN25 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	1,1		
57.	7	WELDING NECK FLANGE KOŁNIERZ OKR. SZYJKOWY	DN20 / PN16 / C DIN 2633	ACC. DIN	Material: P 235 GH	1,0		
61.	0,25 m	PIPE DN200 RURA DN200	ø219,1 x 5,9 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	11	04	
62.								
63.	1,0 m	PIPE DN100 RURA DN100	ø114,3 x 3,6 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	9,8		
64.	5,5 m	PIPE DN80 RURA DN80	ø88,9x3,2 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	6,8		
65.	1,7 m	PIPE DN50 RURA DN50	ø60,3 x 2,9 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	4,1		
66.	0,13 m	PIPE DN25 RURA DN25	ø33,7 x 2,6 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	0,4		
67.	0,2 m	PIPE DN20 RURA DN20	ø26,9 x 2,3 DIN 2448 PN-80/H-74219	ACC. DIN	Material: P 235 GH	1,2		

Document Name			Document No.		Rev. No.	Language	
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Item	Qty.	Description	Element Type Drawing No. or Norm No.	Producer	Technical data Remarks	Unit [kg]	Rev.
72.	3	ELBOW DN80 KOLANKO DN80	90-3-88,9x3,2 DIN 2605	ACC. DIN	Material: P 235 GH	1,3	
73.	3	ELBOW DN25 KOLANKO DN25	90-3-33,7x2,6 DIN 2605	ACC. DIN	Material: P 235 GH	0,15	
74.	3	ELBOW DN20 KOLANKO DN20	90-3-26,9x2,3 DIN 2605	ACC. DIN	Material: P 235 GH	0,1	02
76.	2	TEE DN100-80 TRÓJNIK DN100-80	114,3 x3,6 – 88,9x3,2 DIN 2615	ACC. DIN	Material: P 235 GH	2,6	
81.	1	SHEET # 5 BLACHA # 5	Ø260	WITHOUT DWG	Material: S 235 JR	2,0	
82.	5	SHEET # 5 BLACHA # 5	Ø125	WITHOUT DWG	Material: S 235 JR	0,5	
83.	2	SHEET # 5 BLACHA # 5	Ø95	WITHOUT DWG	Material: S 235 JR	0,3	
84.	6	SHEET # 5 BLACHA # 5	15 x 120	WITHOUT DWG	Material: S 235 JR	0,07	
85.	21	SHEET # 5 BLACHA # 5	15 x 90	WITHOUT DWG	Material: S 235 JR	0,05	
86.	4	SHEET # 8 BLACHA # 8	72 x 85	ACC. DWG SHEET 2	Material: S 235 JR	0,4	
87.	1	SHEET # 5 BLACHA # 5	120 x 120	ACC. DWG SHEET 2	Material: S 235 JR	0,6	
88.	4	SHEET # 8 BLACHA # 8	100 x 300	ACC. DWG SHEET 2	Material: S 235 JR	3	02
91.	1	SHEET # 10 BLACHA # 10	600 x 600	ACC. DWG	Material: S 235 JR	28	
92.	1	SHEET # 15 BLACHA # 15	650 x 800	ACC. DWG	Material: S 235 JR	66	03
93.	1	SHEET # 15 BLACHA # 15	500 x 800	ACC. DWG	Material: S 235 JR	47	
94.	2	BAR Ø12 PRĘT Ø12	L= 300	ACC. DWG	Material: S 235 JR	0,3	
95.	4	SHEET # 20 BLACHA # 20	50 x 50	ACC. DWG	Material: S 235 JR	0,4	
96.	1	RUN-OFF PLATE PŁYTA WYBIEGOWA	680 x 342	ACC. DWG	Material: S 235 JR	16	04

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Item	Qty.	Description	Element Type Drawing No. or Norm No.		Producer	Technical data Remarks		Unit [kg]	Rev.
97.	1	BAFFLE PRZEGRODA	355 x 610 x 6		ACC. DWG	Material: S 235 JR		10	04
98.	1	BAFFLE PRZEGRODA	880 x 900 x 6		ACC. DWG	Material: S 235 JR		35	04
						TOTAL WEIGHT: MASA CAŁKOWITA:		2.190 kg	



AIR LIQUIDE TM				
N° D'AFFAIRE JOB NUMBER	FMT FMT	GROUP GROUP	N° NBR	REV REV
KOSICE 50-3023-01	A4	612	???	??

MAN TURBO		PURCHASER NAME	MAN TURBO
		JOB NO.	312410
		JOB CODE	KOSB00ST

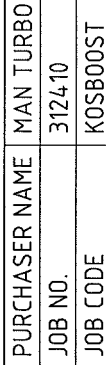
Revision no.	Revision qty	Date	Signature	Remarks	Designed by	M. Cirzon	02.2005	Signature	Material	Description	Format
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Revision no.	Revision qty	Date	Signature	Remarks	Checked by	M. Cirzon	02.2005	Signature	Weight kg	JUNCTION BOX	Sheet No.
Revision no.	Revision qty	Date	Signature	Remarks	Approved by	D. Mroczka	02.2005	Signature	~ 9,0	OVERALL VIEW	1/1
Revision no.	Revision qty	Date	Signature	Remarks	Scale	T. Gajewski	02.2005	Signature	Status	Drawing No.	Revision
Revision no.	Revision qty	Date	Signature	Remarks	1:3,5			Signature	For approval	RG-10/0249-04/30.00	00
Revision no.	Revision qty	Date	Signature	Remarks				Signature			EN

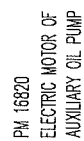


ROCKFIN
NOWY TUCHOM 10
80-209 CHWASZCZYN
POLAND




N° D'AFFAIRE JOB NUMBER	FMT FMT	GROUPE GROUP	N° NBR	REV REV
KOSICE 50-3023-01	A4	612	???	??

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Document Name					Document No.			Rev. No.		Language	
PARTS LIST					WE-10/0249-04/30.00			00		EN	
Description					Concerning to drawing No.			Status		Page / s	
LUBE OIL UNIT 312410 KOSBOOST JUNCTION BOX & WIRING					RG-10/0249-04/30.00 SE-10/0249-04/30.00			FOR APPROVAL		1 / 1	
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		Name		Date	Sign.		ROCKFIN Sp. z o.o. Nowy Tuchom 10 80-209 Chwaszczyno POLAND				
Prepared by		M. Cirzon		21.02.2005	MC						
Checked by		D. Mroczka		22.02.2005	DM						
Approved by		T. Gajewski		22.02.2005	TG						
Rev. No.	Rev. qty	Date	Sign.	Remarks		Rev. No.	Rev. qty	Date	Sign.	Remarks	
Item	Qty.	Description		Element Type Drawing No. or Norm No.		Producer		Technical data Remarks		Unit [kg]	Rev.
99.1	1	Plastic junction box including mounting plate		KS 1444.600		RITTAL		Colour: RAL 7032 Dimensions: 400x400x200			
99.2	40	Terminal including 3 spring clips.		ZDU 2.5/3AN/10 Nr 16 2696 0000		Weidmuller		Equal to WAGO			
99.3	2	End plate for terminals item 99.2		ZAP/TW2 Nr 16 0877 0000		Weidmuller					
99.4	2	End blockade		EW 35 Nr 03 8356 0000		Weidmuller					
99.5	0,3 mb	Mounting strip		TS 35							
99.6	2	Bracket for mounting strip TS 35 with thread hole M5		TSTW (M5) Nr 01 7810 0000		Weidmuller					
99.7	0,3 mb	Perforated cable tray 25x40 (GxW)		KOPD 25x40 Nr 120-308000		ERGOM					
99.8	21	Plastic cable gland silver-grey M20x1,5		ST-M 20x1,5 Nr 5311 1020		LappKabel		Cable glands for junction box and for instruments.			
99.9	3	Plug for cable gland for 8 mm.		DIX-DV 8x14 Nr 53110 0008		LappKabel					
99.10	1	Plastic cable gland silver-grey M40x1,5		ST-M 40x1,5 Nr 5311 1050		LappKabel					
99.11	30 mb	2-wire cable with screen 2x1,5mm ²		OLFLEX 110 CH Nr 0035 067		LappKabel		Cables for instruments.			
99.12	5,0 mb	2x2-wire cable with screen for each pair 2x2x1mm ²		UNITRONIC Li2YCY PiMF Nr 0034 070		LappKabel		Cables for Start/Stop Switches			
99.13											
99.14											

	HOOK UP'S (P+I)	KENNWORT/ CODE KOSBOOST
	OIL UNIT SIZE 400	AUFTRAG-NR / ORDER-NO 312410
		PSP-ELEMENT 312411.10.8802


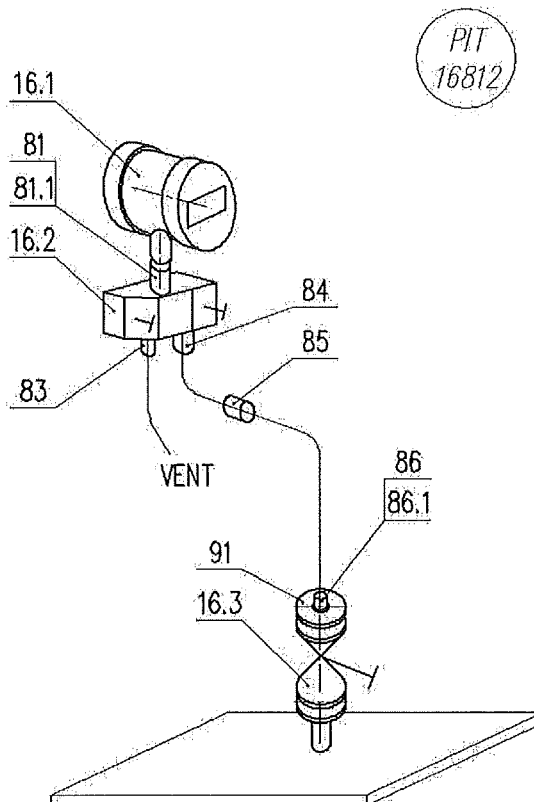
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N° D'AFFAIRE JOB NUMBER	FMT FMT	GROUPE GROUP	N° NBR	Rev Rev
KOSICE 50-3023-01	A4	612	???	??

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TAG-NO	Designation	Name of instrument	Page No	Rev
PIT 16812	Oil reservoir	Pressure Indicator Transmitter	2	
PI 16823	Main oil pump discharge	Pressure Gauge	3	
PI 16824	Auxiliary oil pump discharge	Pressure Gauge	4	
PCV 16873	Oil exceeding line	Pressure Control Valve	5	02
PDIT 16846	Oil filter	Pressure Differential Indicator Transmitter	6	01
PIT 16855	Simulation line	Pressure Indicator Transmitter	7	
PIT 16854	Oil filter downstream	Pressure Indicator Transmitter	8	

02	8	08.07.05	AŁ	Hook-Ups updated					
01	2	22.02.05	DM	Hook-Ups updated					
Rev. No	Rev. qty	Date	Sign.	Remarks	Rev. No	Rev. qty	Date	Sign.	Remarks
Prepared by D. Mroczka					Checked by S. Wojsław				
ROCKFIN NOWY TUCHOM 10 80-209 CHWASZCZYNO POLAND					Document name		Document No.		Revision No
					HOOK UP'S (P+I)		SP-10/0249-04/00.00		02
					Description		Status		Date
					OIL UNIT KOSBOOST		Final		20.01.2005
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MAN TURBO	Pressure Indicator Transmitter	TAG No.: PIT 16812
	Designation: Oil reservoir	



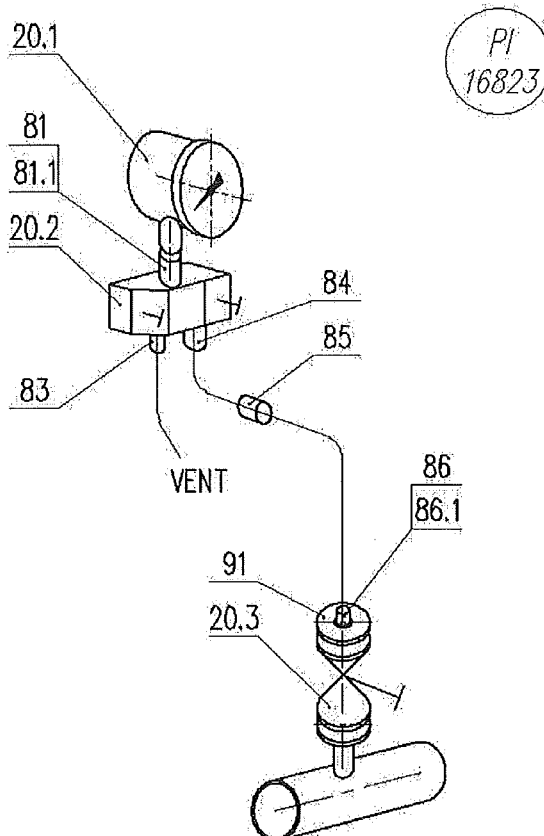
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	16.1	Pressure Indicator Transmitter		ABB 264GS...
		1	16.2	2- valve manifold	1.4401 (316L)	Schneider N342.44.483.21
		1	16.3	Shut-off valve Ball valve	ext. CS / int. SS	Omal L515F605
		1	81	Adapter 1/2 NPT-G 1/2	1.4401 (316L)	Schneider S007.45.200.07
		1	81.1	Sealing washer	Copper	Schneider S006.03.003
		1	83	Male connector $\varnothing 12 - 1/4$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		1	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		1	85	Union $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		1	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for pressure transmitter – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

ROCKFIN NOWY TUCHOM 10 80-209 CHWASZCZYNO POLAND	Document name	Document No.	Revision No	Language
	HOOK UP'S	SP-10/0249-04/00.00	02	EN
	Description	Status	Date	Page No
	OIL UNIT KOSBOOST	For approval	20.01.2005	2 of 8

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MAN TURBO	Pressure Gauge	TAG No.:
	Designation: Main oil pump discharge	PI 16823



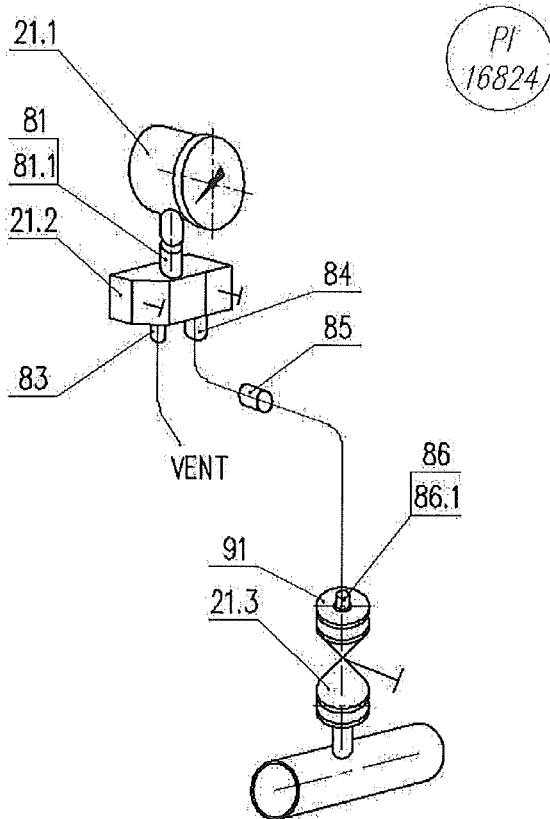
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	20.1	Pressure Gauge		WIKA 233.30.E...
		1	20.2	2- valve manifold	1.4401 (316L)	Schneider N342.44.483.21
		1	20.3	Shut-off valve Ball valve	ext. CS / int. SS	Omal L515F605
		1	81	Adapter 1/2 NPT-G 1/2	1.4401 (316L)	Schneider S007.45.200.07
		1	81.1	Sealing washer	Copper	Schneider S006.03.003
		1	83	Male connector $\varnothing 12 - 1/4$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		1	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		1	85	Union $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		1	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for pressure gauge – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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MAN TURBO	Pressure Gauge	TAG No.:
	Designation: Auxiliary oil pump discharge	PI 16824



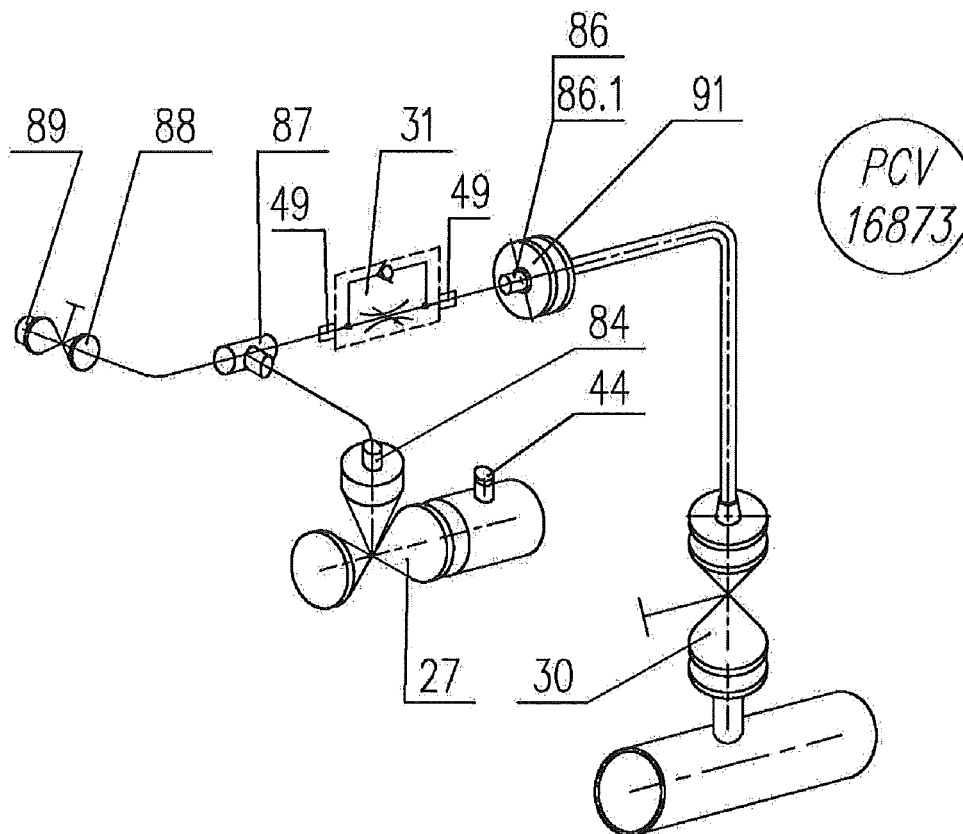
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	21.1	Pressure Gauge		WIKA 233.30.E...
		1	21.2	2- valve manifold	1.4401 (316L)	Schneider N342.44.483.21
		1	21.3	Shut-off valve Ball valve	ext. CS / int. SS	Omal L515F605
		1	81	Adapter 1/2 NPT-G 1/2	1.4401 (316L)	Schneider S007.45.200.07
		1	81.1	Sealing washer	Copper	Schneider S006.03.003
		1	83	Male connector $\varnothing 12 - 1/4$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		1	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		1	85	Union $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		1	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for pressure gauge – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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MAN TURBO	Pressure Control Valve	TAG No.:
	Designation: Oil exceeding line	PCV 16873



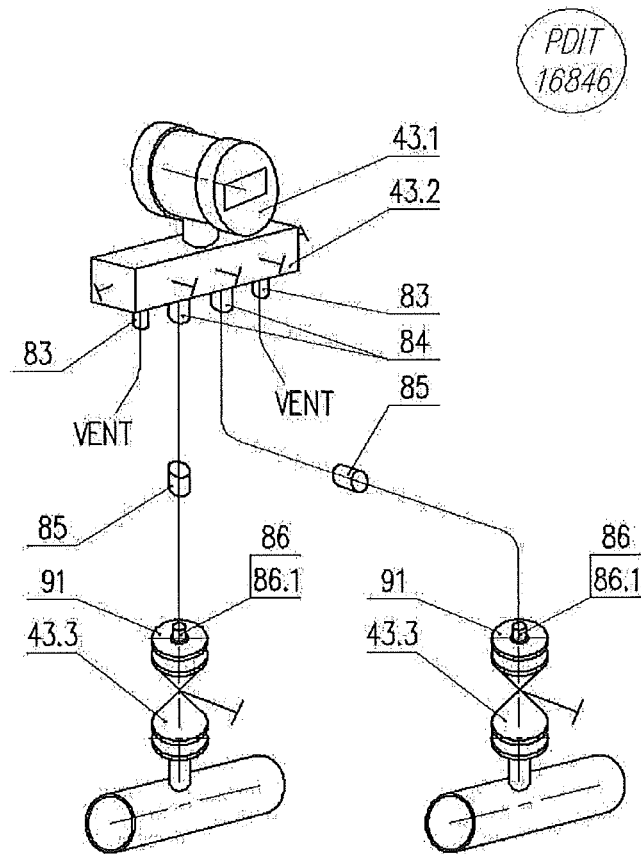
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
	02	1	27	Pressure Control Valve	ext. CS / int. SS	Masonellan 526, 2", ANSI 150
		1	30	Shut-off valve Ball valve	ext. SS / int. SS	Omal L415X605
	02					
		1	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
	02	1	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
	02	1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	87	Tee connector $\varnothing 12 - \varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-3
		1	88	Needle valve $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-1-RS12MM
		1	89	Plug	1.4401 (316L)	Swagelok SS-12MOP
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00
	02					
	02	1	31	Flow control valve	1.4401 (316L)	Zentgraf NDRV-DN10-3/8"NPT-4A
	02	1	44	Blanking plug G1/2"	Zinc plated	Parker VSTI R1/2ED A3C
	02	2	49	Male stud connector $\varnothing 12 - 3/8$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-6

- Note:**
- Technical parameters for pressure control valve – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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MAN TURBO	Pressure Indicator Differential Transmitter	TAG No.:
	Designation: Oil filter	PDIT 16846



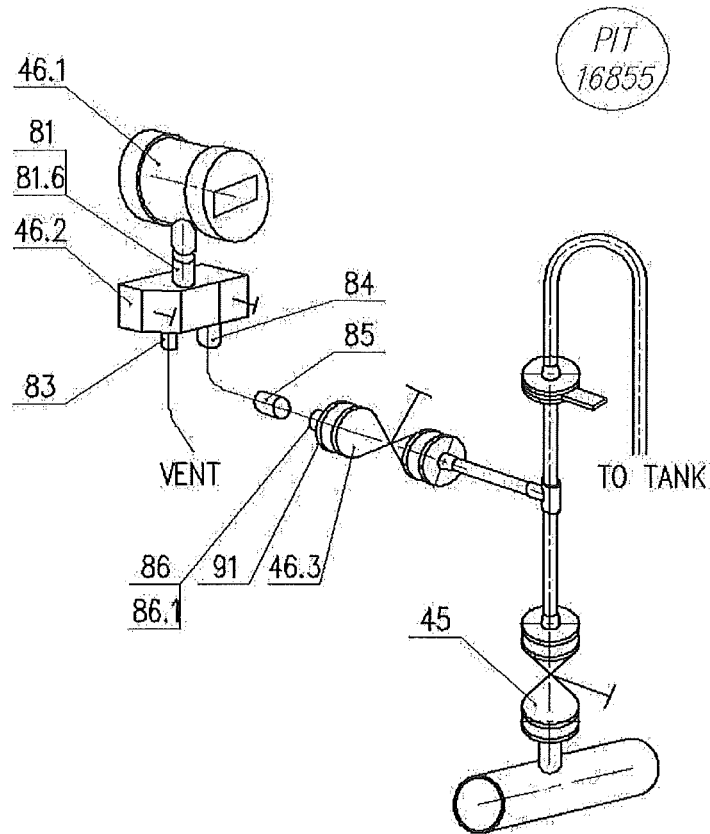
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	43.1	Differential Pressure Indicator Transmitter		ABB 264DS...
	01	1	43.2	5- valve manifold	1.4401 (316L)	Schneider N542.48.480.01
		2	43.3	Shut-off valve Ball valve	ext. SS / int. SS	Omal L415X605
		2	83	Male connector $\varnothing 12 - 1/4$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		2	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		2	85	Union $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		2	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		2	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		2	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for differential pressure transmitter – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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MAN TURBO	Pressure Indicator Transmitter	TAG No.: PIT 16855
	Designation: Simulation line	



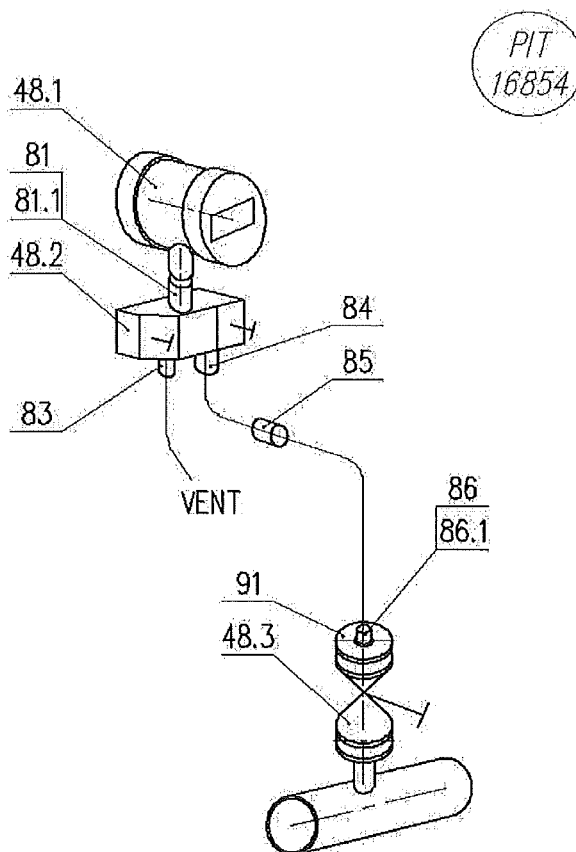
MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	45	Shut-off valve Ball valve	ext. SS / int. SS	Omal L415X605
		1	46.1	Pressure Indicator Transmitter		ABB 264GS...
		1	46.2	2- valve manifold	1.4401 (316L)	Schneider N342.44.483.21
		1	46.3	Shut-off valve Ball valve	ext. SS / int. SS	Omal L415X605
		1	81	Adapter 1/2 NPT-G 1/2	1.4401 (316L)	Schneider S007.45.200.07
		1	81.1	Sealing washer	Copper	Schneider S006.03.003
		1	83	Male connector $\varnothing 12 - 1/4$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		1	84	Male connector $\varnothing 12 - 1/2$ NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		1	85	Union $\varnothing 12 - \varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		1	86	Male connector $\varnothing 12 - G 1/2$	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for pressure transmitter – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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MAN TURBO	Pressure Indicator Transmitter	TAG No.:
	Designation: Oil filter downstream	PIT 16854



MESC No.	Rev	Qty	Item No.	Description	Materials	Type
		1	48.1	Pressure Indicator Transmitter		ABB 264GS...
		1	48.2	2- valve manifold	1.4401 (316L)	Schneider N342.44.483.21
		1	48.3	Shut-off valve Ball valve	ext. SS / int. SS	Omal L415X605
		1	81	Adapter 1/2 NPT-G 1/2	1.4401 (316L)	Schneider S007.45.200.07
		1	81.1	Sealing washer	Copper	Schneider S006.03.003
		1	83	Male connector $\varnothing 12$ - 1/4 NPT	1.4401 (316L)	Swagelok SS-12MO-1-4
		1	84	Male connector $\varnothing 12$ - 1/2 NPT	1.4401 (316L)	Swagelok SS-12MO-1-8
		1	85	Union $\varnothing 12$ - $\varnothing 12$	1.4401 (316L)	Swagelok SS-12MO-6
		1	86	Male connector $\varnothing 12$ - G 1/2	1.4401 (316L)	Swagelok SS-12MO-1-8RS
		1	86.1	Seal gasket	Metal / NBR	Swagelok S-8-RS-2B
		1	91	Flange DIN 2527 DN20/PN16/G1/2	1.4401 (316L)	Rockfin RW-01/0249-04/04.00

- Note:**
- Technical parameters for pressure transmitter – see instrument data sheet IDS-10/0249-04/00.00
 - Union item 85 will be used if necessary or if tube length exceeds 3 m
 - Items No according to part list WE-10/0249-04/00.00

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LIST OF INSTRUMENTS									
TAG-NO	Designation	Name of instrument	Manufacturer	Type	Range	Adjusted to	Ex-class	Remarks	Rev.
FO 16824	Auxiliary oil pump discharge	Orifice	ROCKFIN	MTM Standard		ø 2 mm	-		
FO 16842	Oil cooler bleed	Orifice	ROCKFIN	MTM Standard		ø 2 mm	-		
FO 16849	Oil filter bleed	Orifice	ROCKFIN	MTM Standard		ø 2 mm	-		
FO 16852	Oil filter bleed	Orifice	ROCKFIN	MTM Standard		ø 2 mm	-		
FO 16846	Oil filter equalization line	Orifice	BOLL FILTER	BOLL Standard		ø 3 mm	-	Built-in filter housing	
FX 16855	Oil filter downstream	Orifice	ROCKFIN	MTM Standard		ø 2 mm	-		
LIT 16812	Oil reservoir	Level Indicator Transmitter	KÜBLER	BMG...	L=600 mm		None		
PIT 16812	Oil reservoir	Pressure Indicator Transmitter	ABB	Series 2600T Model 264 GS...	-60...+60 mbar	-15...+15 mbar	None		
TE 16812	Oil reservoir	Resistance Thermometer	ABB	Series TSET Model V10515...	-30...+350°C		None		
TIT 16812	Oil reservoir	Temperature Transmitter	ABB	Series TH 202 Model V11523...		0...100°C	None		
TC 16810	Oil heater	Temperature Controller	RONI	EMF-1	0...70°C		None		
TS 16810	Oil heater	Temperature Switch	RONI	EM 5/U	50...300°C	80°C	None		
PI 16832	Main oil pump discharge	Pressure Gauge	WIKA	233.30.E...	0...10 bar		None		
PI 16824	Auxiliary oil pump discharge	Pressure Gauge	WIKA	233.30.E...	0...10 bar		None		
Z 16842	Oil pumps discharge	Pressure Safety Valve	LESER	4415.7394	up to 40 bar	8 bar	-		
PCV 16873	Oil exceeding line	Pressure Control Valve	DRESSER	526, 2", ANSI 150	2,1...5,25 bar	2,5 bar	-		02
-	Water inlet to cooler	Thermal Safety Valve	LESER	4335.8764	up to 40 bar	10 bar	-		
TI 16632	Water outlet from cooler	Thermometer	WIKA	S5500...	0...100°C		-		

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TCV 16845	Cooler by-pass line	Thermostatic Control Valve	AMOT	2 1/2 BRDC....		43°C	-		
PDIT 16846	Oil filter	Pressure Differential Indicator Transmitter	ABB	Series 2600T Model 264 DS...	-1,6... 1,6 bar	0... 1,6 bar	None		
PIT 16855	Simulation line	Pressure Indicator Transmitter	ABB	Series 2600T Model 264 GS...	0... 30 bar	0... 4,0 bar	None		
TE 16854	Oil filter downstream	Resistance Thermometer	ABB	Series TSET Model V10515...	-30... +350°C		None		
TIT 16854	Oil filter downstream	Temperature Indicator Transmitter	ABB	Series TH 202 Model V11523...		0... 100°C	None		
PIT 16854	Oil filter downstream	Pressure Indicator Transmitter	ABB	Series 2600T Model 264 GS...	0... 30 bar	0... 4,0 bar	None		
HSH/L 16070	Start / Stop switch	Auxiliary oil pump	STAHL	8040/1250.001 IP66			EEx dem IIC T6, IP66		01
HSH/L 16803	Start / Stop switch	Oil mist separator fan	STAHL	8040/1250.001 IP66			EEx dem IIC T6, IP66		01

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MAN TURBO	Level Indicator Transmitter	TAG No.:
	Designation: Oil reservoir	LIT 16812

Manufacturer		KÜBLER	Rev
Order code		BMG-20/16/C-AL/TP43A/VK10-M600-V60-MRA-ZVS250	
Model	BMG	Bypass – Level indicator with level sensor	
Design process connection	20/16/C	Acc to DIN 2633: DN20, PN16, form C	
Electrical connection for level sensor	AL	Aluminium terminal box 75x89mm	
Level transmitter	TP43A	2-wire level transmitter type PRelevel 5343A (4...20mA)	
Resolution	VK10	Resolution 10 mm	
Distance between process connection	M 600	600 mm	
Material of chamber	V	Stainless steel	
Diameter of chamber	60	ø60,0 mm	
Magnetic roller indicator	MRA	Aluminium profile with plastic rollers and switch-rail profile	
Float designs	ZVS250	Stainless steel float length L=250 mm	
Approvals for explosion atmosphere	-	Non-explosion protected	
Certificates		EN10204 / DIN 5004-3.1.B	
Explosion protection for transmitter		Non-explosion protected	
Terminal box protection		IP 65	
Allowed ambient temperature		-30°C...+120°C	
Allowed medium temperature		-40°C...+200°C	
Allowable medium pressure		-1... 16 bar	
Accuracy		5 mm	
Repeatability		+/- 2 mm	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Pressure Indicator Transmitter	TAG No.:
	Designation: Oil reservoir	PIT 16812

Manufacturer		ABB	Rev
Order code		264GS.C.J.P.8.B.1-L1.C6.H3 Series 2600 T	
Model	264GS	Gauge Pressure Transmitter	
Sensor range / min span	C	-60 mbar...60 mbar / 2 mbar	
Diaphragm material / Fill fluid	J	Ceramic / No filling	
Process connection / material	P	G 1/2" external acc to DIN EN837-1 / Stainless steel AISI 316L	
Gasket	8	Perbunan (NBR)	
Electrical connection / Housing material	B	M20x1,5 / Aluminium alloy (Barrel version)	
Output signal	1	Hart digital communication and 4...20 mA	
Approvals for explosion atmosphere		Non-explosion protected	
Indication	L1	Digital LCD integral display (indicated in mbar)	
Mounting bracket		Not applicable	
Calibration certificate	C6	Certificate of compliance EN10204 2.1 and 4-point calibration	
Material traceability	H3	Inspection certificate EN10204 3.1B of process wetted parts	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Allowed medium temperature		-50°C...+121°C	
Allowable medium pressure		0 bar(a)...10 bar(g)	
Accuracy		0,075 %	
Power supply		10,5 VDC...42 VDC	
Adjusting range (calibration)		-15 mbar ... + 15 mbar	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). 2-way valve manifold: Schneider

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MAN TURBO	Resistance Thermometer	TAG No.:
	Designation: Oil reservoir	TE 16812

Manufacturer		ABB	Rev
Order code		V10515-2.9.3.1.2.F.0	
Model	V10515	Series: TSET (Sensy Temp ET R) Resistance thermometer for installation in a thermowell	
Measuring insert diameter	2	ø 6 mm	
Connection thread	9	G 1/2" male	
Insertion length	3	U = 200 mm	
Connection head type / Material	1	BUZ / Painted aluminium	
Measuring insert	2	1 x PT100, 3-wire, Non-explosion protected	
Error limit	F	Class A (from -30 ⁰ C... +350 ⁰ C) acc to IEC 60751	
Head mounted transmitter	0	Without	
Cable entry		M20 x 1,5	
Housing protection		IP 66 (NEMA 4 X)	
Extension tube length / Material		L =150 mm / 1.4571 (AISI 316Ti)	
Thermowell code / Manufacturer		SD600G-1-GE-TD-E-232-1Z / WIKA	
Model	SD600G	Bar stock acc DIN 43772	
Material	1	1.4571 (AISI 316Ti)	
Process connection	GE	G 3/4" male	
Instrument connection	TD	G 1/2" female	
Bore size	E	ø 7 mm	
Insertion length	232	U ₁ = 232 mm	
Thermowell certificate	1	Inspection certificate 3.1B	
Additional options	Z	Without	

Remarks:

1). SS Tag label made and fixed by oil unit manufacturer

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MAN TURBO	Temperature Indicator Transmitter	TAG No.:
	Designation: Oil reservoir	TIT 16812

Manufacturer		ABB	Rev
Order code		V11523-1.D.A.1.2.K.1 Series: TH 202	
Model	V11523	Field mounted transmitter	
Approvals for explosion atmosphere	1	Non-explosion protected	
Indication	D	Digital indicator LCD (indicated in °C)	
Housing material	A	Painted aluminium RAL 9002	
Cable entry	1	M20 x 1,5 (2 pieces)	
Mounting bracket	2	Carbon steel zinc plated for wall mounting	
Programming	K	Acc to customer parameter definition	
Certificates	1	2-point calibration certificate	
Output signal		Hart digital communication and 4...20 mA	
Kind of wiring		2-wire	
Influence of power supply		< 0,05 % / 10 V	
Measuring error of LCD indicator		+/- 0,1%	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Power supply		10,5 VDC...32 VDC	
Adjusting range (calibration)		0°C...+100°C	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). Transmitter will be mounted locally (in measuring place)

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MAN TURBO	Pressure Gauge	TAG No.:
	Designation: Main oil pump discharge	PI 16823

Manufacturer		WIKA	Rev
Order code		233.30-E-B-BI-GD-UZHZCZZ-1ZZZ	
Model	233	Bourdon tube pressure gauge with stainless steel (1.4571) measuring system and case filing (glycerine 99,7%)	
Safety pattern	30	Solid baffle wall designed in compliance with EN 837-1	
Nominal size	E	ø 100 mm	
Units	B	°C	
Measuring range	BI	0 bar(g)...10 bar(g)	
Process connection	GD	G 1/2" B (male)	
Connection position	U	Lower mount	
Mounting flange bracket	Z	Without	
Window	H	Laminated safety glass	
Restrictor	Z	Without	
Dial / Pointer	C	Standard: White / Black	
Drag pointer / Special designs	ZZ	Without / Without	
Certificate	1	Inspection Certificate 3.1B for wetted parts material	
Additional options	ZZZ	Without	
Housing protection		IP 65 acc to EN60528 / IEC 529	
Allowed ambient temperature		-20°C...+60°C	
Allowed medium temperature		Max: +100°C	
Allowable medium pressure		1,3 x full scale value	
Accuracy		Class 1.0	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer 2). 2-way valve manifold: Schneider			

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MAN TURBO	Pressure Gauge	TAG No.:
	Designation: Auxiliary oil pump discharge	PI 16824

Manufacturer		WIKA	Rev
Order code		233.30-E-B-BI-GD-UZHGCZZ-1ZZZ	
Model	233	Bourdon tube pressure gauge with stainless steel (1.4571) measuring system and case filling (glycerine 99,7%)	
Safety pattern	30	Solid baffle wall designed in compliance with EN 837-1	
Nominal size	E	ø 100 mm	
Units	B	°C	
Measuring range	BI	0 bar(g)...10 bar(g)	
Process connection	GD	G 1/2" B (male)	
Connection position	U	Lower mount	
Mounting flange bracket	Z	Without	
Window	H	Laminated safety glass	
Restrictor	Z	Without	
Dial / Pointer	C	Standard: White / Black	
Drag pointer / Special designs	ZZ	Without / Without	
Certificate	1	Inspection Certificate 3.1B for wetted parts material	
Additional options	ZZZ	Without	
Housing protection		IP 65 acc to EN60528 / IEC 529	
Allowed ambient temperature		-20°C...+60°C	
Allowed medium temperature		Max: +100°C	
Allowable medium pressure		1,3 x full scale value	
Accuracy		Class 1.0	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer 2). 2-way valve manifold: Schneider			

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MAN TURBO	Pressure Safety Valve	TAG No.:
	Designation: Oil pumps discharge	Z 16824

Manufacturer		LESER	Rev
Order code		4415.7394	
Model	441	Full lift safety valve up to 40 bar spring loaded	
Valve body material	5	Nodular Cast iron GGG 40.3 (0.7043)	
Nominal diameter	.739	DN32	
Lifting device	4	Gastight lifting device type H4	
Set pressure		8 bar(g)	
Kind of loaded		Spring	
Norm of flange		DIN 2501	
Inlet		DN32, PN40, Form C	
Outlet		DN50, PN16, Form C	
Valve body material		Nodular Cast iron GGG 40.3 (0.7043)	
Trim material		Stainless Steel (seat: 1.4404, disc: 1.4122, spindle: 1.4021)	
Bonnet open or closed		Closed	
Coefficient of discharge		$\alpha_d = 0,40$	
Allowable accumulation (overpressure)		Max 10 %	
Reseat difference (blowdown)		Max 8 %	
Required area		659,69 mm ²	
Selected area		660,52 mm ²	
Max required flow / Max possible flow		700 l/min (36960 kg/h) / 778,75 l/min (41118,03 kg/h)	
Valve dimensions		a = 110 mm, b = 115 mm, h = 331 mm	
Valve weight		12 kg	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Pressure Control Valve	TAG No.:
	Designation: Oil exceeding line	PCV 16873

Manufacturer		DRESSER MASONEILAN	Rev
Order code		526, 2", ANSI 150, RF, Actuator size 5	02
Valve type	526		02
Valve body material		WCC steel	
Size		2 Inch	
End connection		150 RF	
Characteristic		Linear	
Trim material		416 Stainless Steel	
Actuator	10900		02
Actuator type		Spring diaphragm	
Actuator size		5	
Branch range		2,1...5,25 barg (30...75 psig)	
On power failure		Close	
Valve weight		Approx. 29,5 kg	

SERVICE & SIZING	Aux. pump	Aux + Main Pump	Main Pump	
Liquid Name	Turbine Oil ISO VG46			
Liquid Flow rate (l/min)	165	705	145	
Inlet Pressure (bar g)	5,0	6,5	5,0	
Outlet Pressure (bar g)	0,2	0,5	0,1	
Pressure Drop (bar)	4,8	6,0	4,9	
Specific Gravity (kg / dm ³)	0,88	0,88	0,88	
Temperature (deg C)	20	20	20	
Viscosity (cPo)	1	1	1	
Calculated Cv	4,917	18,79	4,294	
Inlet velocity (m/s)	1,4	5,8	1,2	
Calculated sound level (dBA)	77,4	85,6	76,2	
Nominal Cv	36	36	36	

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MAN TURBO	Thermal Safety Valve	TAG No.:
	Designation: Water inlet to cooler	*****

Manufacturer		LESER	Rev
Order code		4335.8764	
Model	433	Safety relief valve up to 40 bar spring loaded	
Valve body material	5	Nodular Cast iron GGG 40.3 (0.7043)	
Nominal diameter	.876	DN20	
Lifting device	4	Gastight lifting device type H4	
Set pressure		10 bar(g)	
Kind of loaded		Spring	
Norm of flange		DIN 2501	
Inlet		DN20, PN40, Form C	
Outlet		DN20, PN40, Form C	
Valve body material		Nodular Cast iron GGG 40.3 (0.7043)	
Trim material		Stainless Steel (seat: 1.4404, disc: 1.4122, spindle: 1.4021)	
Bonnet open or closed		Closed	
Coefficient of discharge		$\alpha_{dF} = 0,19$	
Allowable accumulation (overpressure)		Max 10 %	
Reseat difference (blowdown)		Max 8 %	
Required area		Not applicable	
Selected area		254,47 mm ²	
Max required flow / Max possible flow		Not applicable / 151,34 l/min (9062,46 kg/h)	
Valve dimensions		a = 95 mm, b = 95 mm, h = 215 mm	
Valve weight		6 kg	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Thermometer	TAG No.:
	Designation: Water outlet from cooler	TI 16632

Manufacturer		WIKA	Rev
Order code		S5500-4-C1E-GD-B100H1-1ZZ	
Location of steam	S 5500	Nominal size 100mm, adjustable stem and dial	
Design of connection	4	Compression fitting, sliding on stem	
Units	C	°C	
Measuring range	1E	0 °C ... 100 °C	
Process connection	GD	G 1/2" B (male)	
Stem diameter	B	6 mm	
Stem length	100	100 mm	
Window	H	Laminated safety glass	
Damping	1	Liquid damping	
Certificate	1	Inspection Certificate 3.1B	
Electric alarm contact	Z	Without	
Additional options	Z	Without	
Housing protection		IP 56 acc to EN 60529 / IEC 529	
Dial / Pointer		Standard: White / Black	
Accuracy		Class 1.0 per DIN EN 13190	
Thermowell type		SD600G-1-GE-TD-E-082-1Z (see next page)	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Temperature Control Valve	TAG No.:
	Designation: Cooler by-pass line	TCV 16845

Manufacturer		AMOT	Rev
Order code		2 1/2 BRDC 110 07-00-AA	
Valve nominal bore	2 1/2	DN65 (2 1/2")	
Valve type	BR	Internally Sensed Design with manual override function	
Housing material	D	Ductile Iron BS 2789 Grade 420/12	
Port connection	C	Flanged PN16 acc to DIN 2633	
Control temperature	110	43°C	
Element code	07	2433X Standard with manual override	
Leakhole size	0	None	
Leakhole quantity	0	None	
Special requirements	AA	None	
Rated range		38°C... 47°C	
Installation position		Any orientation	
Maximum operating pressure		10 bar(g)	
Control temperature tolerances		+2 °C	
Seals material		Nitrile	
Valve weight		24 kg	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Pressure Differential Indicator Transmitter	TAG No.:
	Designation: Oil filter	PDIT 16846

Manufacturer		ABB	Rev
Order code		264DS-H.S.S.Q.2.B1-V2.L1.C6.H3 Series 2600 T	
Model	264DS	Differential Pressure Transmitter	
Sensor range / Min span	H	-1,6 bar... 1,6 bar / 0,016 bar	
Use code	S	Standard code	
Diaphragm material / Fill fluid	S	AISI 316L / Silicone oil	
Process connection / Material	Q	Verical connection 1/4" NPT / Stainless steel AISI 316L	
Gasket	2	PTFE	
Electrical connection / Housing material	B	M20x1,5 / Aluminium alloy (Barrel version)	
Output signal	1	Hart digital communication and 4...20 mA	
Drain and vent valve	V2	On flange side top	
Approvals for explosion atmosphere		Non-explosion protected	
Indication	L1	Digital LCD integral display (indicated in bar)	
Mounting bracket		Not applicable	
Calibration certificate	C6	Certificate of compliance EN10204 2.1 and 4-point calibration	
Material traceability	H3	Inspection certificate EN10204 3.1B of process wetted parts	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Allowed medium temperature		-40°C...+121°C	
Allowable medium pressure		0,00067 bar(a)...210 bar(g)	
Accuracy		0,075 %	
Power supply		10,5 VDC...42 VDC	
Adjusting range (calibration)		0 bar ... +1,6 bar	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). 5-way valve manifold: Schneider

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MAN TURBO	Pressure Indicator Transmitter	TAG No.:
	Designation: Simulation line	PIT 16855

Manufacturer		ABB	Rev
Order code		264GS.U.K.P.N.B.1-L1.C6.H3 Series 2600 T	
Model	264GS	Gauge Pressure Transmitter	
Sensor range / Min span	U	0 bar(a)... 30 bar(g) / 0,3 bar	
Diaphragm material / Fill fluid	K	Hastelloy C276 / Silicone oil	
Process connection / Material	P	G 1/2" external acc to DIN EN837-1 / Stainless steel AISI 316L	
Gasket	N	Without	
Electrical connection / Housing material	B	M20x1,5 / Aluminium alloy (Barrel version)	
Output signal	1	Hart digital communication and 4...20 mA	
Approvals for explosion atmosphere		Non-explosion protected	
Indication	L1	Digital LCD integral display (indicated in bar)	
Mounting bracket		Not applicable (transmitter mounted directly to manifold)	
Calibration certificate	C6	Certificate of compliance EN10204 2.1 and 4-point calibration	
Material traceability	H3	Inspection certificate EN10204 3.1B of process wetted parts	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Allowed medium temperature		-50°C...+121°C	
Allowable medium pressure		0 bar(a)...60 bar(g)	
Accuracy		0,075 %	
Power supply		10,5 VDC...42 VDC	
Adjusting range (calibration)		0 bar ... 4 bar	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). 2-way valve manifold: Schneider

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MAN TURBO	Resistance Thermometer	TAG No.:
	Designation: Oil filter downstream	TE 16854

Manufacturer		ABB	Rev
Order code		V10515-2.9.2.1.2.F.0 Series: TSET (Sensy Temp ET R)	01
Model	V10515	Resistance thermometer for installation in a thermowell	
Measuring insert diameter	2	ø 6 mm	
Connection thread	9	G 1/2" male	
Insertion length	2	U = 140 mm	01
Connection head type / Material	1	BUZ / Painted aluminium	
Measuring insert	2	1 x PT100, 3-wire, Non-explosion protected	
Error limit	F	Class A (from -30°C...+350°C) acc to IEC 60751	
Head mounted transmitter	0	Without	
Cable entry		M20 x 1,5	
Housing protection		IP 66 (NEMA 4 X)	
Extension tube length / Material		L =150 mm / 1.4571 (AISI 316Ti)	
Thermowell code / Manufacturer		SD600G-1-GE-TD-E-142-1Z / WIKA	
Model	SD600G	Bar stock acc DIN 43772	
Material	1	1.4571 (AISI 316Ti)	
Process connection	GE	G 3/4" male	
Instrument connection	TD	G 1/2" female	
Bore size	E	ø 7 mm	
Insertion length	142	U ₁ = 142 mm	
Thermowell certificate	1	Inspection certificate 3.1B	
Additional option	Z	Without	
Remarks: 1). SS Tag label made and fixed by oil unit manufacturer			

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MAN TURBO	Temperature Indicator Transmitter	TAG No.:
	Designation: Oil filter downstream	TIT 16854

Manufacturer		ABB	Rev
Order code		V11523-1.D.A.1.2.K.1 Series: TH 202	
Model	V11523	Field mounted transmitter	
Approvals for explosion atmosphere	1	Non-explosion protected	
Indication	D	Digital indicator LCD (indicated in °C)	
Housing material	A	Painted aluminium RAL 9002	
Cable entry	1	M20 x 1,5 (2 pieces)	
Mounting bracket	2	Carbon steel zinc plated for wall mounting	
Programming	K	Acc to customer parameter definition	
Certificates	1	2-point calibration certificate	
Output signal		Hart digital communication and 4...20 mA	
Kind of wiring		2-wire	
Influence of power supply		< 0,05 % / 10 V	
Measuring error of LCD indicator		+/- 0,1%	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Power supply		10,5 VDC...32 VDC	
Adjusting range (calibration)		0°C...+100°C	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). Transmitter will be mounted locally (in measuring place)

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MAN TURBO	Pressure Indicator Transmitter	TAG No.:
	Designation: Oil filter downstream	PIT 16854

Manufacturer		ABB	Rev
Order code		264GS.U.K.P.N.B.1-L1.C6.H3 Series 2600 T	
Model	264GS	Gauge Pressure Transmitter	
Sensor range / Min span	U	0 bar(a)... 30 bar(g) / 0,3 bar	
Diaphragm material / Fill fluid	K	Hastelloy C276 / Silicone oil	
Process connection / Material	P	G 1/2" external acc to DIN EN837-1 / Stainless steel AISI 316L	
Gasket	N	Without	
Electrical connection / Housing material	B	M20x1,5 / Aluminium alloy (Barrel version)	
Output signal	1	Hart digital communication and 4...20 mA	
Approvals for explosion atmosphere		Non-explosion protected	
Indication	L1	Digital LCD integral display (indicated in bar)	
Mounting bracket		Not applicable (transmitter mounted directly to manifold)	
Calibration certificate	C6	Certificate of compliance EN10204 2.1 and 4-point calibration	
Material traceability	H3	Inspection certificate EN10204 3.1B of process wetted parts	
Housing protection		IP 67 acc to EN60528 or 4X acc to NEMA	
Allowed ambient temperature		-20°C...+70°C	
Allowed medium temperature		-50°C...+121°C	
Allowable medium pressure		0 bar(a)...60 bar(g)	
Accuracy		0,075 %	
Power supply		10,5 VDC...42 VDC	
Adjusting range (calibration)		0 bar ... 4 bar	

Remarks:

- 1). SS Tag label made and fixed by oil unit manufacturer
- 2). 2-way valve manifold: Schneider

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MAN TURBO	Oil Reservoir	TAG No.: B16800

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	ROCKFIN			
Total volume	4.800	litres		
First filling	4.300	litres	h= 815 mm*	
Max oil level	3.800	litres	h= 730 mm*	
Min oil level	3.230	litres	h= 635 mm*	
Suction loss level	1.520	litres	h= 356 mm*	
Retention time	8,5	min		
Dimensions	2500x2500x1000	mm		
Weight	2.200	kg		
Material	Carbon Steel			

* - measured from the top of base plate

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MAN TURBO	Oil Heater	TAG No.: W 16810

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	RONI			
Type	NE-FP-16-2-400D-230			
Heating output	16	kW		
Specific area load	2,0	W/cm ²		
Input voltage	400	V		
Frequency	50	Hz		
Nominal current	23,1	A		
Controller	0...+70	°C		
Temp. limiter	+80	°C		
Type of enclosure	IP55			
Type of EX protection	None			
Tubes material	Stainless steel 1.4541			
Flange material	Stainless steel 1.4541			
Terminal box material	Steel painted RAL 7032			

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MAN TURBO	Oil Mist Separator & Electric Motor of Oil Mist Separator	TAG No.: F11802 V 16803 VM 16803

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	DMS GmbH			
Type	GW 22 008 T / 45-1001			
Max. intake volume	75	Nm ³ /h		
Max operating temperature	70	°C		
Operating pressure	pressure-free			
Pressure loss	20...30	mbar		
Separating element type	NSW 270-1000			
Ventilator type	2BH1 400-7AH06			
Motor type / Manufacturer	Three-phase AC motor / Siemens			
Motor rated power	0,7	kW		
Motor rated voltage / Frequency	230 / 400 V, 50Hz			
Motor speed	2750	rpm		
Degree of protection	IP55			
Type of EX protection	None			

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MAN TURBO	Auxiliary Oil Pump	TAG No.: P16820

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	LEISTRITZ			
Design	Immersed pump			
Type	L3MF 70/182 IFOKT-G			
Cold start oil temperature	20	°C		
Max operating temperature	70	°C		
Design temperature	100	°C		
Flow rate	575*...554**	l/min	* at cold start ** at max operating temp.	
Inlet pressure	atm.	bar(g)		
Nominal delivery pressure	5...6	bar(g)		
Max operating pressure	8	bar(g)	Set point of safety valve	
Speed	1450	rpm		
Operating oil viscosity	290*...17**	cSt	* at oil 20°C ** at oil 70°C	
Pump rated power input	10,9*...7,4**	kW	* at cold start and nominal pressure ** at max operating temp and nominal pressure	
Max power input	13,0	kW	at cold start and max operating pressure	
NPSH pump	5,0*...3,4**	mWc	* at cold start ** at max operating pressure	

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MAN TURBO	E-motors for Auxiliary Oil Pump	TAG No.: PM 16820

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	WEG MOTORS			
Design	IEC 180M			
Type	IEC 180M			
Rated input	18,5	kW		
Rated speed	1450	min ⁻¹		
Voltage	400/690	V		
Frequency	50	Hz		
Connection	Δ / Y			
Full load current	34,5	A		
Type of enclosure	IP55			
Type of protection	None			
Isolation class	F / B			
Direction of rotation seen from motor fan	Clockwise			
Machine to be driven	Screw oil pump			

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MAN TURBO	Oil Filter	TAG No.: F16849 F16852

Description	Data or parameters	Unit	Remarks	Rev
Manufacturer	BOLL FILTER			
Design	AD Merkblatt			
Type	BFD 180.580			
Filter element	Fibreglass / SS			
Filter mesh (nominal)	10	µm		
Flow rate (design data)	390	l/min		
Pressure loss in clean condition	0,22	bar	at oil 45°C	
Max. allowable pressure loss in clean condition	0,3	bar	at oil 45°C	
Operating pressure	~ 3,0	bar(g)		
Operating temperature	45	°C		
Contents	2 x 13	litres		
Rated pressure	8,0	bar(g)		
Rated temperature	100	°C		
Test pressure with water	11,5	bar(g)		

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