

COPY

# ALFA-LAVAL

THERMAL

\*\*\* PACK-LIST \*\*\*

PAGE: 1

Pack date: 89375

Date: 890811 Order no: U192022

Cust.no.: 43317

MO no : 802309

Our ref: ANDERS HELANDER

Your order: 04171.92697

Delivery-address:

Your ref: I.POMMEE

ALFA-LAVAL INDUSTRIE GMBH

WILHELM BERGNERSTR. 1

Your date: 890713

D2056 GLINDE/B.HAMBURG

WEST GERMANY

Terms of delivery:

Shipping marks:

FRC LUND

ALFA-LAVAL

HAMBURG

04171.92697

Sent for your account:

U19202200

BY LORRY

Kolli no: 1....

Package type: BUR.....

Net weight: 26.80.....kg

Gross weight: 30.70.....kg

Length: 365 cm

Width: 100 cm

Height: 235 cm

Vol: ..... cbm

LINE	ARTICLE	DESCRIPTION	ORDERED QUANT	PACKED QUANT
1	10	H10 FMC PLATE HEAT EXCHANGER	1	
		MANUFACTURING NO: 30100-97182		
		Consisting:		
1	20	H10 FMC FX01 FIXED ITEMS	1	
1	30	H10 FMC SC01 SUPPORTING COLUMN LC<=3000	1	
1	40	H10 FMC BA04 BARS L=3000	1	
1	50	H10 FMC TB04 TIGHTENING BOLT L=2850 M39	1	
1	60	H10 FMC NF02 NAMEPLATE GERMAN	1	
1	70	H10 FMC CN03 REDUCING PIPE 101.6/76 CN03 LOCATION: S1 S3 S4 T1 T4	5	
1	80	H10 FMC BC01 BLIND CONNECTION BC01 LOCATION: S2 T2 T3	3	
1	95	H10 CH12 CH. PLATE 316 0.8 EPDM	243	

Postal address  
ALFA-LAVAL THERMAL AB  
Box 74  
S-221 00 LUND, Sweden

Address of consignment  
Nöbbelövs Mossaväg  
Lund

Telephone  
Nat. 46 - 10 65 00  
Int. + 46 46 - 10 65 00

Telex  
33324  
althe s

Telegrams  
Alfathern  
Lund

Bank account  
689-4638

Please effect payment via SWIFT through  
SKANDINAVISKA ENSKILDA BANKEN  
Malmö-Sweden  
a/c 5524-10 08 307  
SWIFT address: FSSSEESM



THERMAL

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Date: 890811

Order no: U192022

MO no : 802309

LINE	ARTICLE	DESCRIPTION	ORDERED QUANT	PACKED QUANT
1 100	H10 FMC CC01	CONNECTIONPLATE	2	
1 110	H10 FMC CO01	BLINDCORNER	4	
	CO01	LOCATION:A11 A14 A22 A23		
1 120	H10 FMC CO02	THROUGH PASSAGE	2	
	CO02	LOCATION:A12 A24		
1 130	H10 FMC CO04	SINGLECORNER 76	1	
	CO04	LOCATION:A13		
1 140	H10 FMC CO06	DOUBLECORNER 76	1	
	CO06	LOCATION:A21		
1 150	H10 FMC FI03	NIPPLE DIN NW80	8	
1 160	H10 FMC MI02	SPANNER M39	1	
1 170	H10 FMC MI14	NUT M39	1	
1 180	H10 FMC YP14	PACKING CRATE LC=3000	1	
1 190	ZI02	INSTR.MANUAL GERMAN	4	
1 200	ZC02	FACT.PRESS.TEST CERT + LIST OF MTRL	1	
1 210	H10 FMC MI90	PROTECTING TUBE M39	1	



Sektion nr. 1 /AA-----

Medien	->OBSTSAEFTE	=>HEISSWASSER
Durchflussmenge	30000 L/H	35000 L/H
Temp. Programm	87 zu 95 C	100 zu 93.9 C
Druckabfall	0.2 BAR	0.18 BAR
Flüssigkeitsinhalt	26.1 l	29.0 l
Lage der Anschlüsse		
Eintritt	A12 P	S4
Austritt	S1	S3
Material in Anschlüssen	SIS 2349	SIS 2349
Plattenmaterial	AISI 316	
Dicke	0.8 mm	
Fläche	Blankgeglüht.	
Dichtungsmaterial	EP-gummi	
Wärmeaustauschfläche	11.70 m²	
Schaltung	1*9	
	-----	
	1*10	

Sektion nr. 2 /AB-----

Medien	->OBSTSAEFTE	=>OBSTSAEFTE
Durchflussmenge	30000 L/H	30000 L/H
Temp. Programm	12 zu 87 C	95 zu 20 C
Druckabfall	1.4 BAR	1.4 BAR
Flüssigkeitsinhalt	261.0 l	261.0 l
Lage der Anschlüsse		
Eintritt	A21 V	A13
Austritt	A12 P	A24 P
Material in Anschlüssen	SIS 2349	SIS 2349
Plattenmaterial	AISI 316	
Dicke	0.8 mm	
Fläche	Blankgeglüht	
Dichtungsmaterial	EP-gummi	
Wärmeaustauschfläche	116.35 m²	
Schaltung	9*10	
	-----	
	9*10	

Sektion nr. 3 /AC-----

Medien	->OBSTSAEFTE	=>KUEHLWASSER
Durchflussmenge	30000 L/H	35000 L/H
Temp. Programm	23 zu 15 C	11 zu 17.2 C
Druckabfall	BAR	BAR
Flüssigkeitsinhalt	58.0 l	60.9 l
Lage der Anschlüsse		
Eintritt	A24 P	T1
Austritt	T4	A21
Material in Anschlüssen	SIS 2349	SIS 2349
Plattenmaterial	AISI 316	
Dicke	0.8 mm	
Fläche	Blankgeglüht	
Dichtungsmaterial	EP-gummi	
Wärmeaustauschfläche	26.00 m²	
Schaltung	2*10	
	-----	
	1*10+1*11	

Platte nr.	Plattenkode nr.	Löcher in der Platte				Flussrichtung auf der Packungsseite der Platte
		oben links	unten links	unten rechts	oben rechts	

Sektion nr.	1 /AA	S	1	2	3	4	
1	360717-8386B	<--	0		==>	=<=	--
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4	360717-8303A		0	0	0	0	n.u.
5	360717-8303B		0	0	0	0	n.o.
6	360717-8303A		0	0	0	0	n.u.
7	360717-8303B		0	0	0	0	n.o.
8	360717-8303A		0	0	0	0	n.u.
9	360717-8303B		0	0	0	0	n.o.
10	360717-8303A		0	0	0	0	n.u.
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13	360717-8303B		0	0	0	0	n.o.
14	360717-8303A		0	0	0	0	n.u.
15	360717-8303B		0	0	0	0	n.o.
16	360717-8303A		0	0	0	0	n.u.
17	360717-8303B		0	0	0	0	n.o.
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21	360717-8348B			0			--

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4	360717-8303A		0	0	0	0	n.o.
5	360717-8303B		0	0	0	0	n.u.
6	360717-8303A		0	0	0	0	n.o.
7	360717-8303B		0	0	0	0	n.u.
8	360717-8303A		0	0	0	0	n.o.
9	360717-8303B		0	0	0	0	n.u.
10	360717-8303A		0	0	0	0	n.o.
11	360717-8303B		0	0	0	0	n.u.
12	360717-8303A		0	0	0	0	n.o.
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22	360717-8310A		0		0---<---0		n.u.
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55	360717-8303B	0	0	0	0	n.u.
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57	360717-8303B	0	0	0	0	n.u.
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67	360717-8303B	0	0	0	0	n.o.
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69	360717-8303B	0	0	0	0	n.o.
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79	360717-8303B	0	0	0	0	n.o.
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83	360717-8303B	0--->--0		0	0	n.u.
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93	360717-8303B	0	0	0	0	n.u.
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160	360717-8306A	0	0	0==<====		n. u.
161	360717-8304B	---<---	0	0		n. o.
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163	360717-8303B	0--->---	0	0	0	n. u.
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A2 ->V

<==

Sektion nr. 3 /AC

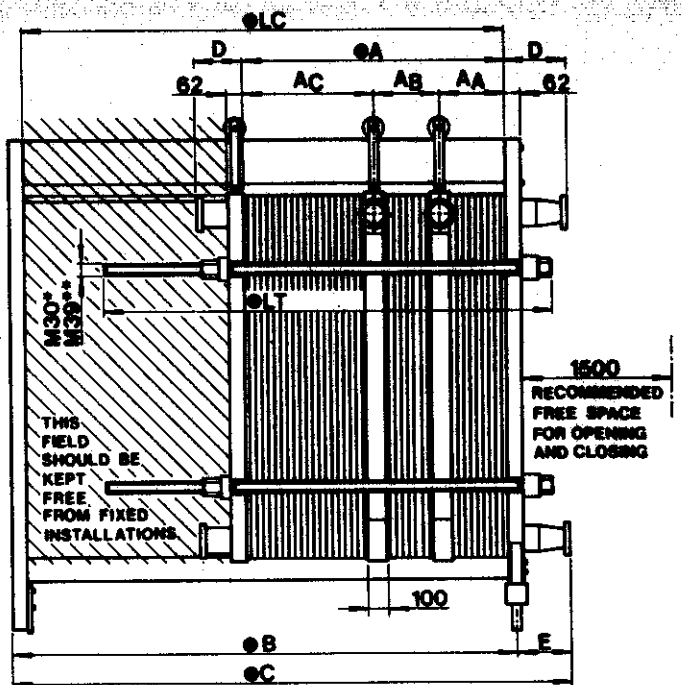
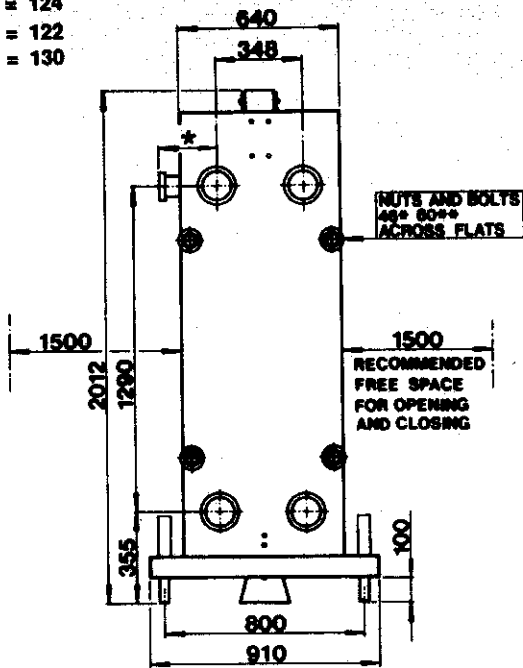
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5	360717-8303A	0	0	0	0	n. u.
6	360717-8303B	0	0	0	0	n. o.
7	360717-8303A	0	0	0	0	n. u.
8	360717-8303B	0	0	0	0	n. o.
9	360717-8303A	0	0	0	0	n. u.
10	360717-8303B	0	0	0	0	n. o.
11	360717-8303A	0	0	0	0	n. u.
12	360717-8303B	0	0	0	0	n. o.
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14	360717-8303B	0	0	0	0	n. o.
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17	360717-8303A	0	0	0	0	n. u.
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19	360717-8303A	0	0	0	0	n. u.
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21	360717-8311A		0	0--<---		n. u.
22	360717-8310B	0==>==0		0		n. u.
23	360717-8303A	0	0	0--->---	0	n. o.
24	360717-8303B	0	0	0	0	n. u.
25	360717-8303A	0	0	0	0	n. o.
26	360717-8303B	0	0	0	0	n. u.
27	360717-8303A	0	0	0	0	n. o.
28	360717-8303B	0	0	0	0	n. u.
29	360717-8303A	0	0	0	0	n. o.
30	360717-8303B	0	0	0	0	n. u.
31	360717-8303A	0	0	0	0	n. o.
32	360717-8303B	0	0	0	0	n. u.
33	360717-8303A	0	0	0	0	n. o.
34	360717-8303B	0	0	0	0	n. u.



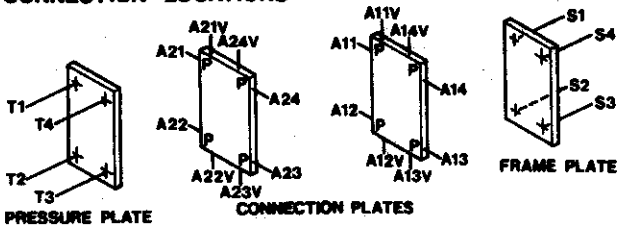
Ed. 2

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37	360717-8303A	0	0	0	0	n.o.
38	360717-8303B	0	0	0	0	n.u.
39	360717-8303A	0	0	0	0	n.o.
40	360717-8303B	0	0	0	0	n.u.
41	360717-8309A	0	0	----->	0	n.o.
42	360717-8311B	0==>==			0	n.u.
43	360717-8344A	0			0	--
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T		1	2	3	4	

\*SMS = 124  
 IDF = 122  
 DIN = 130



CONNECTION LOCATIONS

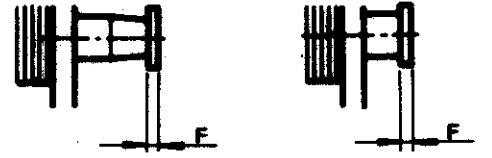


LOCATION	MEDIA	CONN TYPE

● WHEN THIS DRAWING IS USED AS DESIGN DRAWING, PLEASE FIND DIMENSIONS ON DATA PRINT  
 ALL DIMENSIONS IN MILLIMETERS

CONNECTION TYPES

- 1. CONNECTION OF STAINLESS STEEL Ø101.6 - 76 WITH UNION OR CLAMP.
- 2. CONNECTION OF STAINLESS STEEL Ø101.6 WITH UNION OR CLAMP.



WITH OR WITHOUT THERMOMETER POCKET.

NOTE! Ø76MM CONNECTIONS IN THE CONNECTING PLATE

STANDARD	Ø101.6 - 76MM			Ø101.6MM		
	D	E	F	*D	E	F
SMS	210	179	24	221	190	35
IDF	208	177	22	208	177	22
DIN	216	185	30	210	187	32
CLAMP	208	177	22	208	177	22

\* 85MM SHORTER WITHOUT THERMOMETER POCKET

QUOTATION NO.  
 ORDER NO.  
 ITEM NO.  
 CALCULATION NO.  
 PREPARED      CHECKED      APPROVED

**H10 - FMC**

**ALFA-LAVAL**  
 T2-E      DATE 8803  
 32200-0132



MEASUREMENTS

PHE TYPE	H10-FMC	DATE	890906
DRAW. NO.	32200-0132	ORDER NO.	U192022
MANUF. NO.	30100-97182	TO NO.	802309
EO =	0.		
EOD =	0.		

			A	C/C
SECTION 1	0.80/SS	19. * 5.90+ 2. * 5.90	123.9	173.9
CONNECTING PLATE			100.0	
SECTION 2	0.80/SS	180. * 5.90+ 2. * 5.90	1073.8	1173.8
CONNECTING PLATE			100.0	
SECTION 3	0.80/SS	41. * 5.90+ 2. * 5.90	253.7	303.7
TOTAL			1651.4	

NO. OF PLATES 246. (N =246.)

CALCULATED LENGTHS

CARRYING BAR  $370. + A + 1.60N + EO (5.90 + 1.60) = 2415.$   
TIGHTENING BOLT  $340. + A + 1.60N + EOD(5.90 + 1.60) = 2385.$   
THREAD  $200. + 1.60N + EOD(5.90 + 1.60) = 594.$

ACTUAL LENGTHS

LC = 3000. (324. PL/2112. MM)  
LT = 2850. (308. PL/2017. MM)  
G = 1850.

B = 3090.  
C = 3280.

NET WEIGHT = 2600.0 KG  
LIQUID VOLUME = 700.0 L

NOTES

\*\*C/PHE5 T5A PC3 890906 12.35

1

.....1.....2.....3.....4.....5.....6.....7.....:

UN H10-FMC 1 N 30100-97182 32200-01322 890906  
 CU TEUTEBURGER MINERALBRUNNEN BIELEFELD 89.1315.1431  
 AG /GLINDE 04171.92697  
 SU /T5-A U192022 802309  
 CO 3 4 1 2  
 CO P2 1P  
 CO 3 4  
 CO 2 P1 4P 3  
 SM 3160.8EPD1\*9/1\*10  
 ME OBSTSAEFTE 30000 L/H 87 95 C 0.2 BAR SIS 2349  
 ME HEISSWASSER 35000 L/H 100 93.9 0.18  
 SM 9\*10//  
 ME OBSTSAEFTE 30000 L/H 12 87 1.4  
 ME OBSTSAEFTE 30000 L/H 95 20 1.4  
 ME OBSTSAEFTE 2\*10/1\*10+1\*11  
 ME OBSTSAEFTE 30000 L/H 23 15  
 ME KUEHLWASSER 35000 L/H 11 17.2  
 PC 10 BAR DIN NW80  
 ME OBSTSAEFTE A21V->A12P->S1->A13->A24P->T4  
 RE HEISSWASSER S4->S3  
 RE KUEHLWASSER T1->A21  
 IO PAVEL N D 2 2 2