

-A5-
SCHEDULE A

Sheet: 1 of 6
Rev.: 1
Date: 8.11.83.
DCS 1551 REVISION 1

TABLE A1
DETAILS OF MOTORS AND DRIVEN MACHINES

PROJECT - Tutuka - Dust Handling Plant								
1	DRIVEN MACHINE	CC 1-8	CC 9/12/14	CC 10/15	BE 13	BE 11/16	BE 11/15/13	
2	PLANT REFERENCE	ESCOM	OPT 11687	BMSA 36/206				
3	NUMBER OF SIMILAR MACHINES	Per Boiler	8	3	2	1	2	3
4	MAX. POWER REQUIRED BY LOAD	kW	1.1/2.0	2.8/5.1	2.3/8.8	12.7	12.7/25.6	2.8
5	INERTIA OF DRIVEN MACHINE	kg m ²	51.3	60	57	1006	1006	1006
6	STARTING TIME (IF CRITICAL)	s	-	-	-	-	-	-
7	SPEED OF MOTOR	r/min	1420	970/1460	1460/2920	1460	720/1460	1420
8	DRIVEN MACHINE, ROTATION (FROM D.E.)		2,7	3,5/5,2	3,5/6,9	17	17/34	2,5
9	MOTOR RATING CLASS (P OR Q SEE CLAUSE 8)	P	P	P	P	P	P	P
10	TYPE OF MOTOR ENCLOSURE	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
11	PAINT FINISH	Escom Spec						
12	NUMBER OF STARTS PER HOUR REQUIRED	Cont. op.						
13	AXIAL THRUST IMPOSED ON MOTOR BEARINGS BY DRIVEN MACHINE	MPa	Nil					
14	MOUNTING CONFIGURATION	HORIZONTAL/VERTICAL	Horizontal			Vertical		
15	BASE PLATE REQUIRED WITH MOTOR	YES/NO	NO	NO	NO	NO	NO	NO
16	CABLE SIZE	mm ²						
17	Method of starting.	DOL.	DOL.	DOL.	Star/Delta.	Star/Delta.	DOL.	

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DCS 1551 REVISION 1

SCHEDULE B TO BE COMPLETED BY MOTOR MANUFACTURER)

PROJECT

- Power Station Tutuka/Dust Handling Plant
- ESCOM - OPT 11687 LURGI: SRR 1235

BUHLER-MIAG: 36/206

1	MOTOR REFERENCE	ESCOM SUPPLIER		M 1-8	M 9, 12, 14	M 10, 15	M 13	M 17, 16	MS 11, 13, 16 Service Drive 11/13 & 16
2	DRIVEN AUXILIARY			CC 1-8	CC 9/14 & 12	CC 10 & 15	BE 13	BE 11 & 16	
3	NUMBER OF SIMILAR MACHINES (PER PLANT UNIT)			8	3	2	1	2	3
4	RATED VOLTAGE	V		380	380	380	380	380	380
5	FULL LOAD CURRENT	A		7,4	14,7/16,5	13/25	31	44/61	7,8
6	STARTING CURRENT (DIRECT-ON-LINE)	A		40,7	86/105	75/155	186	264/396	37
7	STARTING TIME (COUPLED TO LOAD, DIRECT-ON-LINE)	s		1,85	1,8/2	2/2,2	2,2/	1,6/2	1,85
8	MOTOR DUTY (CONTINUOUS/START UP/STANDARD BY)			Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
9	LOCKED ROTOR POWER FACTOR	PF		0,75	0,7/0,65	0,7/0,65	0,7	0,55/0,65	0,75
10	MOTOR GUARANTEES								
(i)	Rated Power	kW		3	5/7,5	5,6/11	7,5	16/32	3,2
(ii)	Rating Class to Specification (P or Q)			P	P	P	P	P	P
(iii)	Power Factor at Full Load	PF		0,85	0,66/0,85	0,85/0,94	0,89	0,67/0,90	0,81
(iv)	Efficiency at Full Load	%		79	85,5/86,5	89,5/89	89,5	86,5/90,5	79
(v)	Slip at Full Load	%		5,3	3/2,6	2,6/2,6	2,6	4/2,6	5,3
(vi)	Starting Torque at Rated Voltage	%		205	220/255	270/230	270	190/290	200
11	MOTOR MANUFACTURER			Bauer	Bauer	Bauer	Bauer	Bauer	Bauer
12	FRAME SIZE			D2A	D5A	D6A	D6A	D8A	D1A
13	SPEED	r/min		1420	970/1460	1460/2920	1460	720/1460	1420
14	ENCLOSURE (TO IEC 34S)			IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
15	WEIGHT	kg		48	195	220	210	400	36
16	HORIZONTAL OR VERTICAL SHAFT	H/V		H	H	H	V	V	V
17	NOISE LEVEL			80/82 dB(A)	80/82 dB(A)	80/82 dB(A)	80/82 dB(A)	80/82 dB(A)	80/82 dB(A)
(f)	Originating sound power level at 3 m dist.								
(g)	A-weighted sound power level								

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PROJECT Power Station Tutuka - Dust Handling Plant ESCOM: OPT 11687 / Lurgi: SRR 1235 / BMSA: 36/206

18	MOUNTING	Foot/Flange	Flange	Flange	Flange	Flange	Flange
19	WINDING INSULATION CLASS (TO IEC 35)		F	F	F	F	F
20	STANDARD CONNECTION FOR RATED VOLTAGE	Star/Delta	Star Cage M. Direct.	Star/Star Cage M. Direct.	Star/Star Cage M. Direct.	Delta Cage M. Direct	Delta Cage M. Direct
21	ROTOR TYPE (ROUND; CAGE; ETC)						
22	ROTATION (UNI. OR BI DIRECTIONAL)						
23	SEALINGS						
(i)	DRIVE END CONSTRUCTION (SLEEVE/BALL ETC)		Ba11 6207 Grease	Ba11 6309 Grease	Ba11 6309 Grease	Ba11 6311 Grease	Ba11 6207 Grease
(ii)	NON DRIVE END CONSTRUCTION		(S)	(S)	(S)	(S)	(S)
(iii)	MAKE AND NUMBER THrust CONSTRUCTION MAKE AND NUMBER		Ba11 6307 N/A	Ba11 6309 N/A	Ba11 6310 N/A	Ba11 6310 52213	Ba11 6312 52213
(iv)	LUBRICATION (GREASE; OIL RING; ETC)		Grease	Grease	Grease	Grease	Grease
(v)	RECOMMENDED LUBRICANT						
(vi)	MAXIMUM PERMISSIBLE TEMPERATURE	°C	140	140	140	140	140
(vii)	MAXIMUM PERMISSIBLE TEMPERATURE COOLING WATER REQUIRED	°C	-	-	-	-	-
(viii)	IS OIL PUMP INCLUDED	YES/NO	-	-	-	-	-
24	SHAFT DIAMETER	mm	N/A	N/A	N/A	N/A	N/A
25	HEIGHT OF SHAFT CENTRE LINE	mm	N/A	N/A	N/A	N/A	N/A
26	MAX PERMISSIBLE TIME ENERGISED WITH LOCKED ROTOR	Secs	15	18/15	15/5	15	20/15

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SCHEDULE A

TABLE A1

DETAILS OF MOTORS AND DRIVEN MACHINES

PROJECT - Tutuka - Dust Handling Plant									
1	DRIVEN MACHINE		Motorised D/Flap valve						
2	PLANT REFERENCE	ESCOM SUPPLIER	OPT 11687 BMSA 36/206						
3	NUMBER OF SIMILAR MACHINES Per Boiler		20						
4	MAX. POWER REQUIRED BY LOAD		kW	0,36					
5	INERTIA OF DRIVEN MACHINE		kg m ²	Negligible					
6	STARTING TIME (IF CRITICAL)		s	-					
7	SPEED OF MOTOR		r/min	4 pole					
8	DRIVEN MACHINE, ROTATION (FROM D.E.)		-						
9	MOTOR RATING CLASS (FOR Q SEE CLAUSE 8)		P						
10	TYPE OF MOTOR ENCLOSURE		IP 55						
11	PAINT FINISH		Escom spec.						
12	NUMBER OF STARTS PER HOUR REQUIRED		Cont'n.						
13	AXIAL THRUST IMPOSED ON MOTOR BEARINGS BY DRIVEN MACHINE		MPa	M11					
14	MOUNTING CONFIGURATION		HORIZONTAL/VERTICAL	Horiz.					
15	BASE PLATE REQUIRED WITH MOTOR		YES/NO	No					
16	CABLE SIZE		mm ²	By others					

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Rev.: 0
Date: 11.7.83

DCS 1551 REVISION 1

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DCS 1551 REVISION 1

SCHEDULE B (TO BE COMPLETED BY MOTOR MANUFACTURER)

PROJECT

Power Station Tutuka / Dust Handling Plant
ESCOM: OPT 11687 / LURGI: SRR 1235 / BÜHLER-MIAG: 36/206

1	MOTOR REFERENCE	ESCOM						
		SUPPLIER	M 1-4.9 / M 5-8.10	M 5-8.12 / M 1-4.14	M 5-8.15			
2	DRIVEN AUXILIARY		Double flap valve					
3	NUMBER OF SIMILAR MACHINES (PER PLANT UNIT)		20					
4	RATED VOLTAGE		380					
5	FULL LOAD CURRENT		1,65					
6	STARTING CURRENT (DIRECT-ON-LINE)		5,77					
7	STARTING TIME (COUPLED TO LOAD, DIRECT-ON-LINE)		1					
8	MOTOR DUTY (CONTINUOUS/START UP/STAND BY)		Continuous					
9	LOCKED ROTOR POWER FACTOR		0,87					
10	MOTOR GUARANTEES							
	(i) Rated Power	kW	0,55					
	(ii) Rating Class to Specification	(P or Q)	P					
	(iii) Power Factor at Full Load	pu	0,75					
	(iv) Efficiency at Full Load	%	69					
	(v) Slip at Full Load	%	13,6					
	(vi) Starting Torque at Rated Voltage	%	160					
11	MOTOR MANUFACTURER							
12	FRAME SIZE		80					
13	SPEED		1340					
14	ENCLOSURE (TO IEC 34-5)		IP 55					
15	WEIGHT		10					
16	HORIZONTAL OR VERTICAL SHAFT		H					
17	NOISE LEVEL							
	(i) Outdoor sound power level	at 3 m dist.	82-85 dBA					
	(ii) 'A' weighted sound power level							

- B.2 -

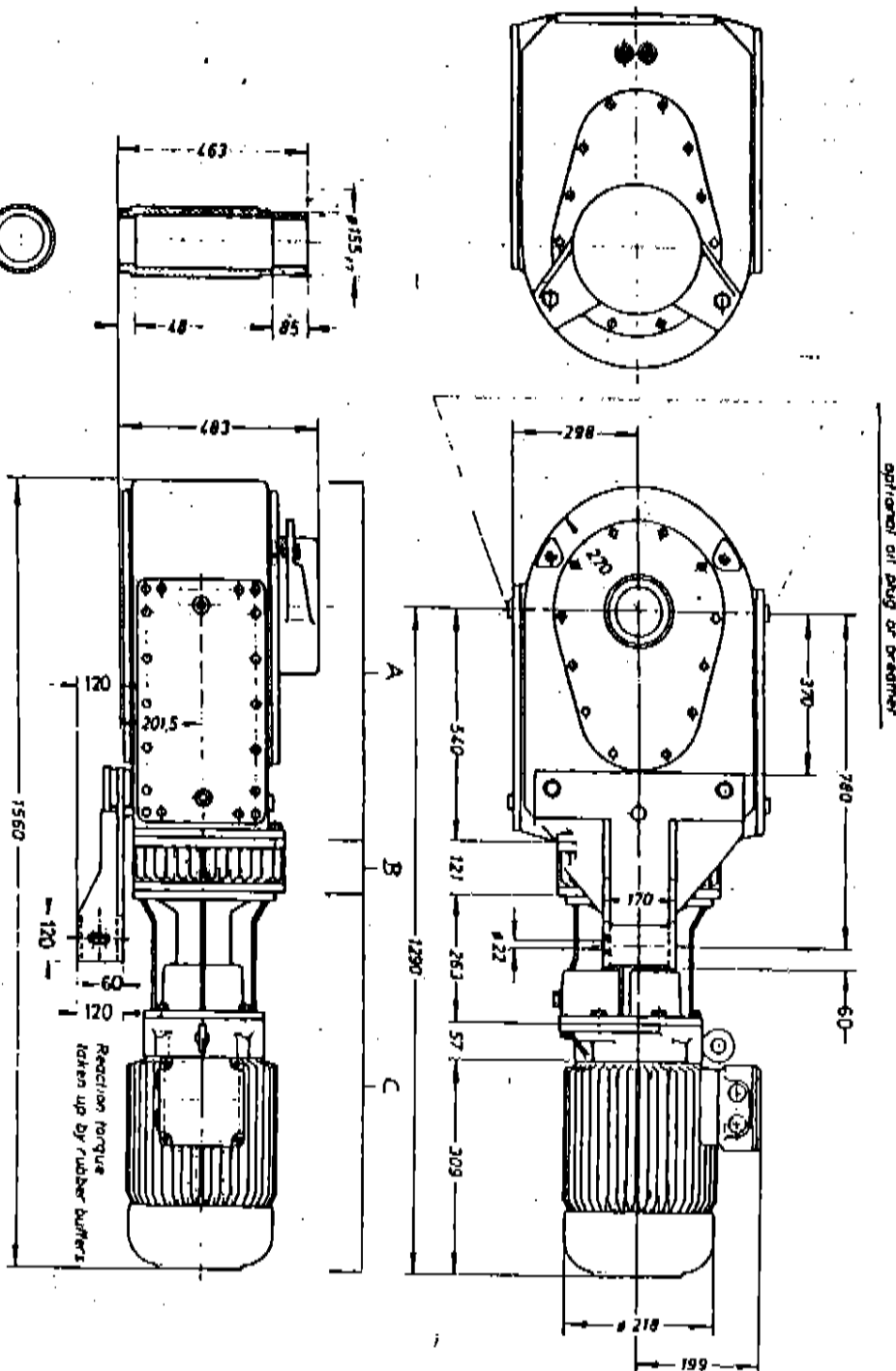
DCS ISSI REVISION 1

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Rev.: 0
Date: 11.11.13

PROJECT		Power Station Tutuka - Dust Handling Plant ESCOM: OPT 11687/ Lungi: SRR 1235 / BMSA: 36/206					
18	MOUNTING	Foot/Flange	Flange				
19	WINDING/INSULATION CLASS (TO IEC 85)		F				
20	STANDARD CONNECTION FOR RATED VOLTAGE	Std/Delta	Star Cage M				
21	ROTOR TYPE (WOUND: CAGE: ETC)						
22	ROTATION (UNID. OR BI DIRECTIONAL)						
23	BEARINGS						
	(i) DRIVE/END CONSTRUCTION (SLEEVE/BALL ETC)		6205 Ball				
	MAKE AND NUMBER		SKF				
	(ii) NON DRIVE END CONSTRUCTION		6204 Ball				
	MAKE AND NUMBER		SKF				
	(iii) THRUST CONSTRUCTION		N/A				
	MAKE AND NUMBER						
	(iv) LUBRICATION (GREASE: OIL RING: ETC)		Grease Shell A1	3			
	RECOMMENDED LUBRICANT	°C					
	MAXIMUM PERMISSIBLE TEMPERATURE	140					
	COOLING WATER REQUIRED	l/min					
	(vi) IS OIL PUMP INCLUDED	YES/NO	NO				
24	SHAFT DIAMETER	mm	-				
25	HEIGHT OF SHAFT CENTRE LINE	mm	-				
26	MAX PERMISSIBLE TIME ENERGISED WITH LOCKED ROTOR	Secs	+ 15 S				

Suppl.: T.R.	Name	Date	Revisions:
Checked	Drawn: R.L.	01-02-84	Supervised by: Signed: Date: Supersedes No.: Signed: Date:

Norm Sheet: UKZ-10030
Sheet: 100



Parts list and sectional drawing
C E76 - D2A 5 BL I
A E81 - SCFG 17
B ZWD

Achtung!
Donnerstag
08. SEP. 1984
Produktion
Lagerbestand

Mounting position M1 - 11/B
Direction of rotation
anti clockwise when facing
Stator cover
CC1-8 Boiler 1/3/5
Boiler 2/1/6

Type
D2A 6HZ CF07-117/309X ZWD
P_N = 3 kW, n_n = 2.7 rpm, M = 10600 Nm
3x 230V 50 Hz

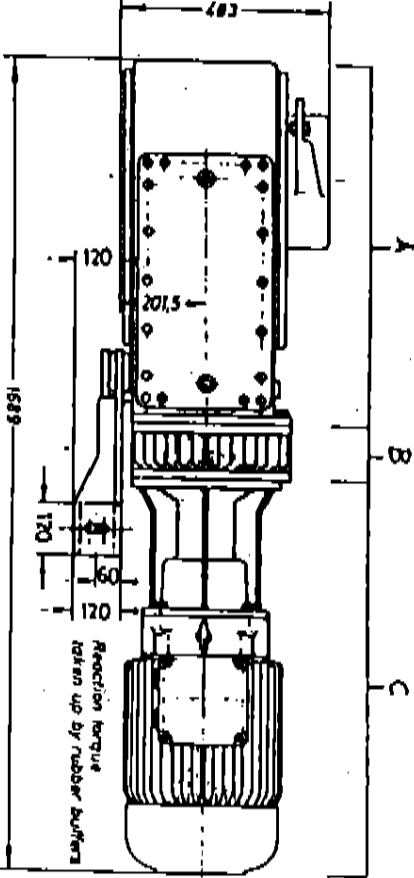
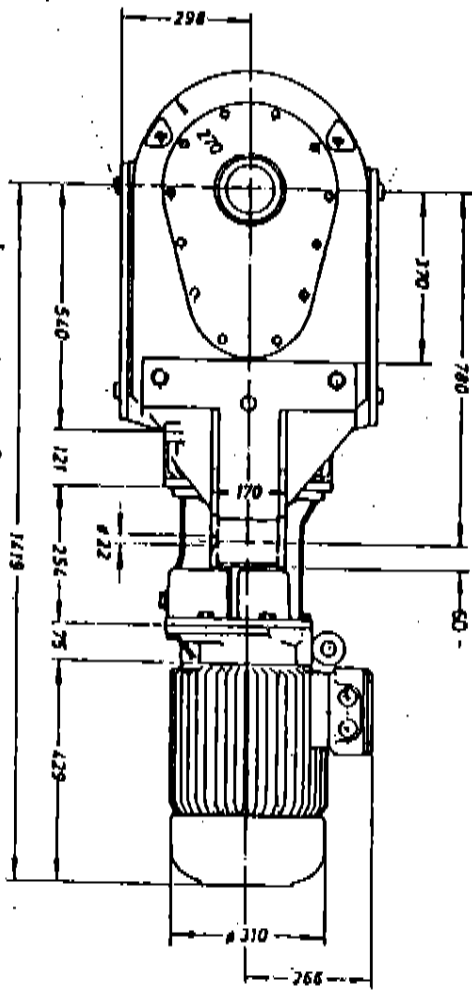
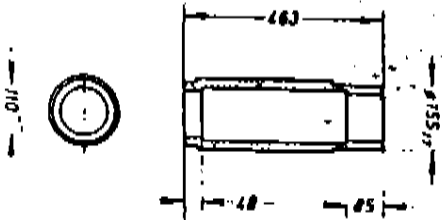
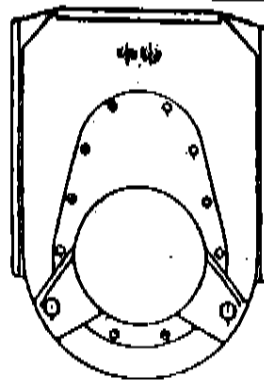
Three-Phase Spiral Bevel Multi Mounting Geared Motor

Item CC 1-8
Item V3228/2-A3
Eberhard Bauer O-73 Eschwege-Niederrhein



Supervisor's Name		Date	
Reviewed by:	R.L.	01-02-84	
Supervised by:	Signed:	Date:	Supervisor's Signature
Checked:			

Norm Sheet:
UKZ-10030



operation of plug or bracket -

Parts list and sectional drawing

Mounting position H2 - II/B
Direction of rotation :
clockwise when facing
flange cover
CC 9-12 Boiler 1/3/5
CC 14 Boiler 2/4/6



Mounting position HT - II/8
Direction of rotation
Cnt clockwise when facing
Stume cover
CC 9-12 Boiler 2/2/6
CC 16 Boiler 1/3/5



Achtung!
Bitte nicht rauchen
0 8 SEP 1993
01:00:00
Seite 1 von 1

Type
D05A 66.64 HZ CF617-117/129 ZWD
P. = 5/7.5 kW. A. = 3.5/5.2 rpm. M. = 13600/13700 Nm
Three-Phase Spiral Bevel Multi Mounting C

Three-

ADVICE

Eberhard Bauer D-73 Esslingen Neckar

ored Motor

11391844

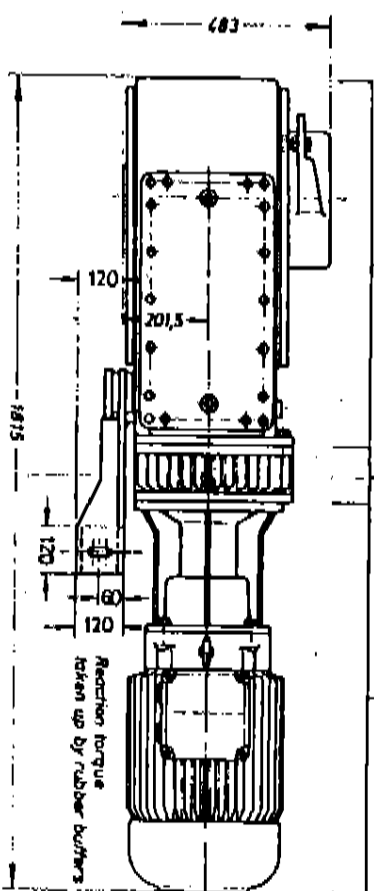
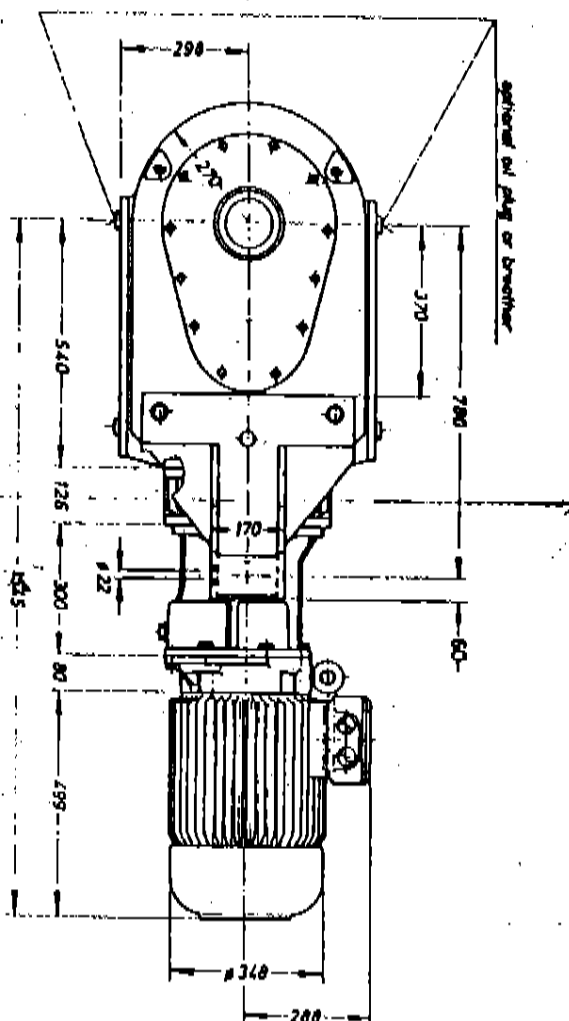
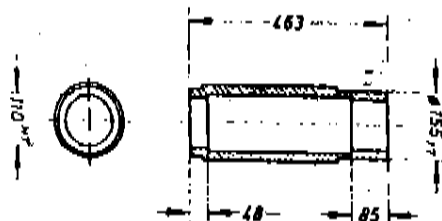
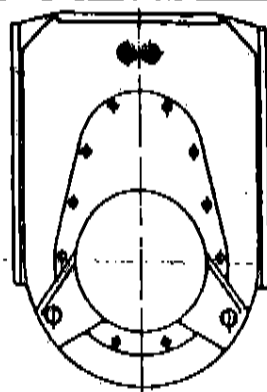
PARTS MANUAL



BÖHLER-MILNÖ

Design: T.R.	Name	Date	Revision:
Drawn: R.L.	01-02-87	Supervised by: Signed: Date: Supersedes for: Signed: Date:	
Checked:			

Norm Sheet: **UKZ-10030**



Parts list and section drawings

Achtung!
 Dreuen Shall vom
 02. SEP. 1993
 und der 1. September
 1993 ist der 1. September



Mounting position H1 - J1/8
Direction of rotation :
anti clockwise when facing
Stator cover
CC 10 Boiler 2 1/2 /5
CC 15 Boiler 1 1/3 /5



Mounting position M2 - II/8
Direction of rotation :
clockwise when facing
Stüwe cover
CC M0 Boiler 1/3/5
CC M5 Boiler 2/4/6

Type:
DP6A428VCFGT-117/699ZWD
 $P_2 = 5.6/11 \text{ kW}$, $n_2 = 4.5/6.9 \text{ rpm}$, $M_2 = 15200/15200 \text{ Nm}$

Three-Phase Spiral Bevel Multi Mounting Geared Motor

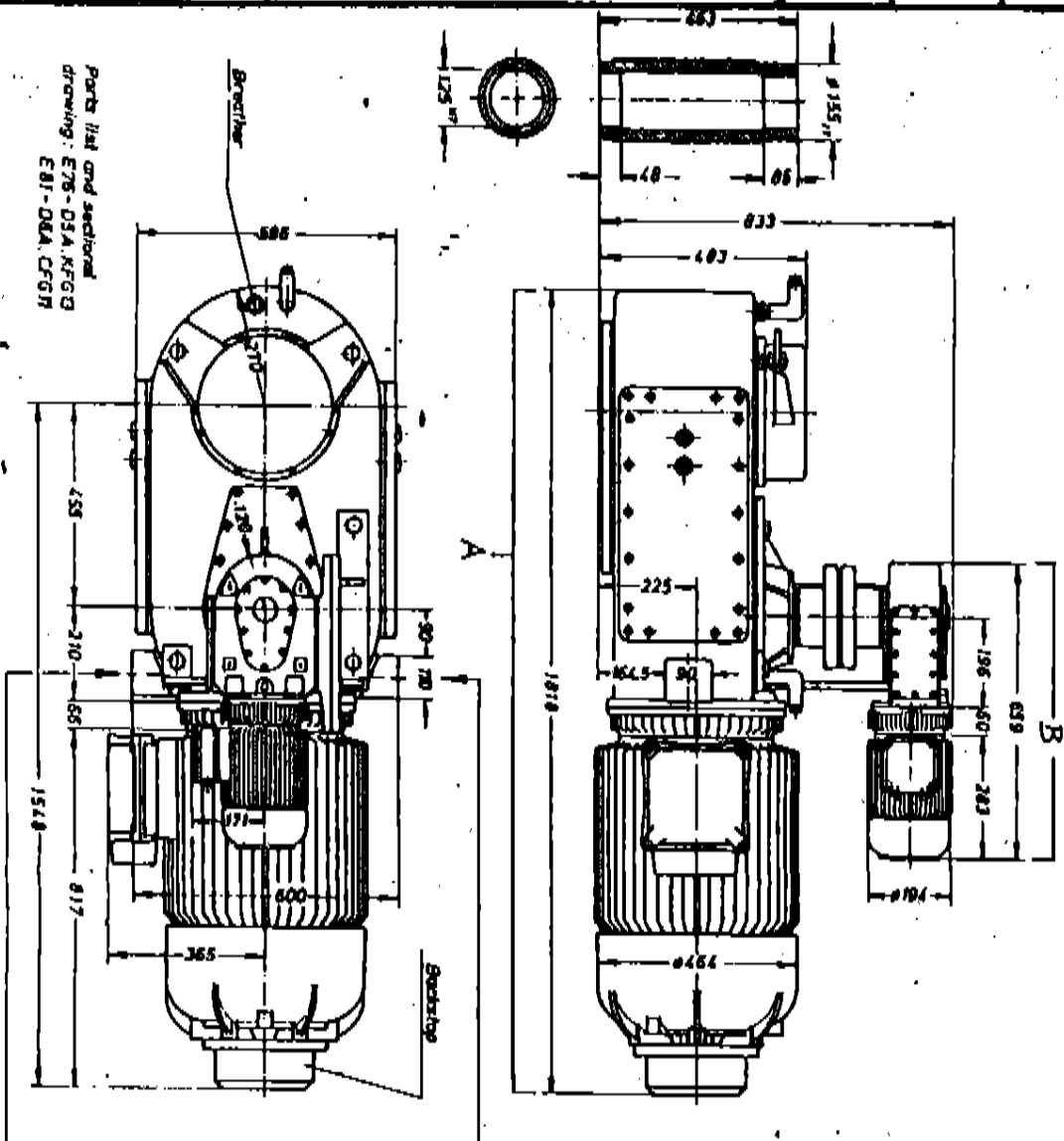
Item	CC 00 15
ZN	V3226/1 "A3
Produced	1:10
Scale	5.9.83
Age	74
BAUER Eberhard Bauer D-73 Esslingen-Neckar	

PARTS MANUAL



ВОНЛЕР-МЛНД

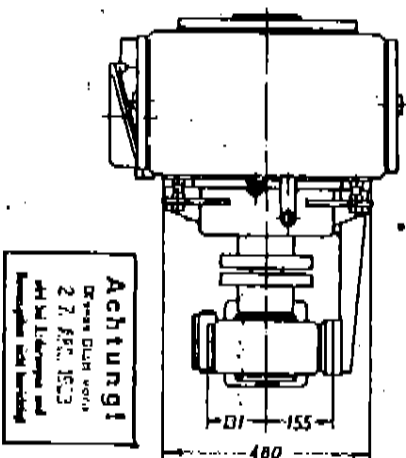
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	R.L.	01-02-84
Rep: T.R.	Name:	Date:
Supervised by: Signed: Date: Supervisor for: Signed: Date:		
Norm Sheet: UKZ-10030 Sheet: 103		



Ex-Stock

Mounting position H3-1/8
Direction of rotation:
clockwise when facing
stator cover
BE 11 Boiler 2/4/5
ZE 16 Boiler 1/3/5

Mounting position H3-1/8
Direction of rotation:
anti clockwise when facing
stator cover
BE 11 Boiler 1/3/5
ZE 16 Boiler 2/4/5



Three-Phase Spiral Bevel Multi Mounting Geared Motor	
Item: 21.2.83	Item: BE 11 u. 16
Quantity: 1	Quantity: 2
Manufacturer: BAWLER	Manufacturer: BAWLER
Model: D-71 Eubogen-Motor	Model: V3229/2-A3
Reference: 10102-13-8	Reference: 10102-13-8

PARTS MANUAL



Depot: T.R.	Name	Date	Revision
Checked:	R.L.	01-02-84	
Drawn:			
Superseded by:	Signed:	Date:	Superseded for:
Signed: Date:			

Norm Sheet: UKZ-10030

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Type: High drive
D64.KFG.17-117/498
- servo drive
D14.CFG.1-135/283

Parts list and sectional drawing: E75-D64.KFG.17
E81-D64.CFG.1

$P_1 = 15 \text{ kW}$ $n_1 = 17 \text{ rpm}$ $M_1 = 8400 \text{ Nm}$
 $P_2 = 2.2 \text{ kW}$ $n_2 = 508 \text{ rpm}$ $M_2 = 280 \text{ Nm}$

Dimensions: 125, 1619, 186, 60, 283, 164, 99C, 57, 58, 135, 68, 67, 225, 57, 171, 600, 280, 172, 210, 455, 1048, 90, 120, 365, 120.

Labels: A, B, Breather, Backstop.

Reaction torque taken up by rubber buffers

Mounting position H3-T/B
Direction of rotation:
clockwise when facing
sliding cone
B E T3 Bolter 1/2/5
Bolter 2/1/1

Achtung!
Obese BSE von
2.2 kW (E3)
mit 14 kg Leertrommel und
Trommel mit Bolter!