

PURCHASER'S DATA (Not Loher part)

A. Site conditions					
1	Ambient temperature, minimum:	1	°C	3	Atmospheric condition: Humid & highly corrosive
	maximum:	39.8	°C	4	Altitude: < 1000 m
	design:	40	°C	5	Location:
2	Relative humidity:	93	%	6	
B. Technical particulars					
1	Motor tag no.:	117-PM-805			
2	Driven equipment name:	Screen changer hydraulic oil pump motor			
3	Voltage:	415 V ±6%	16	Hazardous area classification:	
4	Phase:	Three	17	Gas group: IIC	
5	Frequency:	50 Hz ±3%	18	Type of explosion protection: EX-d, IIC, T4	
6	Fault level:	50 kA	19	Type of ingress protection: IP 55	
7	Method of starting:	DOL	20	Color shade: RAL-7031	
8	Winding connection:	Delta	21	Thermistors:	☐ Required ☒ Not required
9	No. of terminals:	6	22	RTD:	☐ Required ☒ Not required
10	Cable size:	3C x 35 mm ²	23	BTD:	☐ Required ☒ Not required
11	Cable type:	PVC Insulated Al Armoured cable	24	RTD/BTD monitoring device:	☐ Required ☒ Not required
12	Temperature rise:	80 K		Make:	
13	Cooling:	fan		Applicable specification: EIL spec. 6-51-0032	
14	Insulation class:	155/130 F	25		
15	(with temp rise limited to B)		26		

DRIVEN EQUIPMENT MANUFACTURER'S DATA (Not Loher part)

1	Suggested motor rating:	18.5	kW	9	Torque required, starting:	34.92	mkg
2	Manufacturer:	Sumitomo Precision Products Co.Ltd			maximum:	8.71	mkg
3	BkW at full load:	13.4	kW	10	GD ² of eqpt., including flywheel:	0.00933	kgm ²
4	kW at end of curve:	13.4	kW		excluding flywheel:	0.0029	kgm ²
5	Speed:	1500	RPM	11	Thrust, up:	NA	kg
6	Rotation viewed from coupling end:	CW			down:	NA	kg
7	Driven equipment:	Pump		12	Starting condition:	Not required	
8	Coupling type:	Chain Coupling					

MOTOR MANUFACTURER'S DATA

1	Rating:	18.5	kW	16	Efficiency at, 75% voltage:	90.9	%
2	Manufacturer:	Loher GmbH			100% voltage:	90.9	%
3	No. of poles:	4		17	Power factor at, starting:	0.57	
4	Frame designation:	180M			100% load:	0.84	
5	Full load speed:	1470	RPM	18	Moment of Inertia, Jmot:	0.13	kgm ²
6	Mounting:	IMB3		19	NDE bearing type & no.:	6311/C3	
7	Full load torque (FLT):	120.2	Nm	20	DE bearing type & no.:	6311/C3	
8	Starting torque:	285	% of FLT	21	Type of lubrication:	Regreasing	
9	Break down or pull out torque:	275	%	22	Weight of motor:	190	kg
10	Full load current (FLC):	33.5	A	23	Thermistors, quantity:	N.A	no.
11	Starting current at 100% voltage:	600	% of FLC		make:	N.A	type: N.A
12	Rotation viewed from coupling end:	CCW		24	RTD, quantity:	N.A	no.
13	Starting time at, 75% voltage:	<=1.5	sec.		make:	N.A	type: N.A
	100% voltage:	<=1	sec.	25	BTD, quantity:	N.A	no.
14	Locked rotor withstand time (cold/hot) at,				make:	N.A	type: N.A
	75% voltage:	42/21	sec.	26	Shaft voltage:	<0.25	V
	100% voltage:	26/13	sec.	27	Critical speed	4500	RPM
15	Space heater - voltage & power:	N.A		28	Canopy for outdoor motors:	N.A	
						☐ Required ☒ Not required	

1. Starting time calculations shall be based on operating conditions specified on Material Requisition eg. open valve condition/ closed valve condition, at no load/full load, as applicable.

KOBELCO  **KOBE STEEL, LTD.**
Machinery & Engineering
Company

Yaskawa Siemens
automation & drives

2. All unfilled data shall be filled by contractor/ vendor.

Rev.2 / PMOD52 / 21.12.2010 / Motor-no.3400653 / 8874493 150

0	30.12.2009	ISSUED WITH PR(M/s KOBE STEEL)	JDM	VKJ	AKS
A	13.07.2009	ISSUED WITH MR	SMK	VKJ	AKS
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

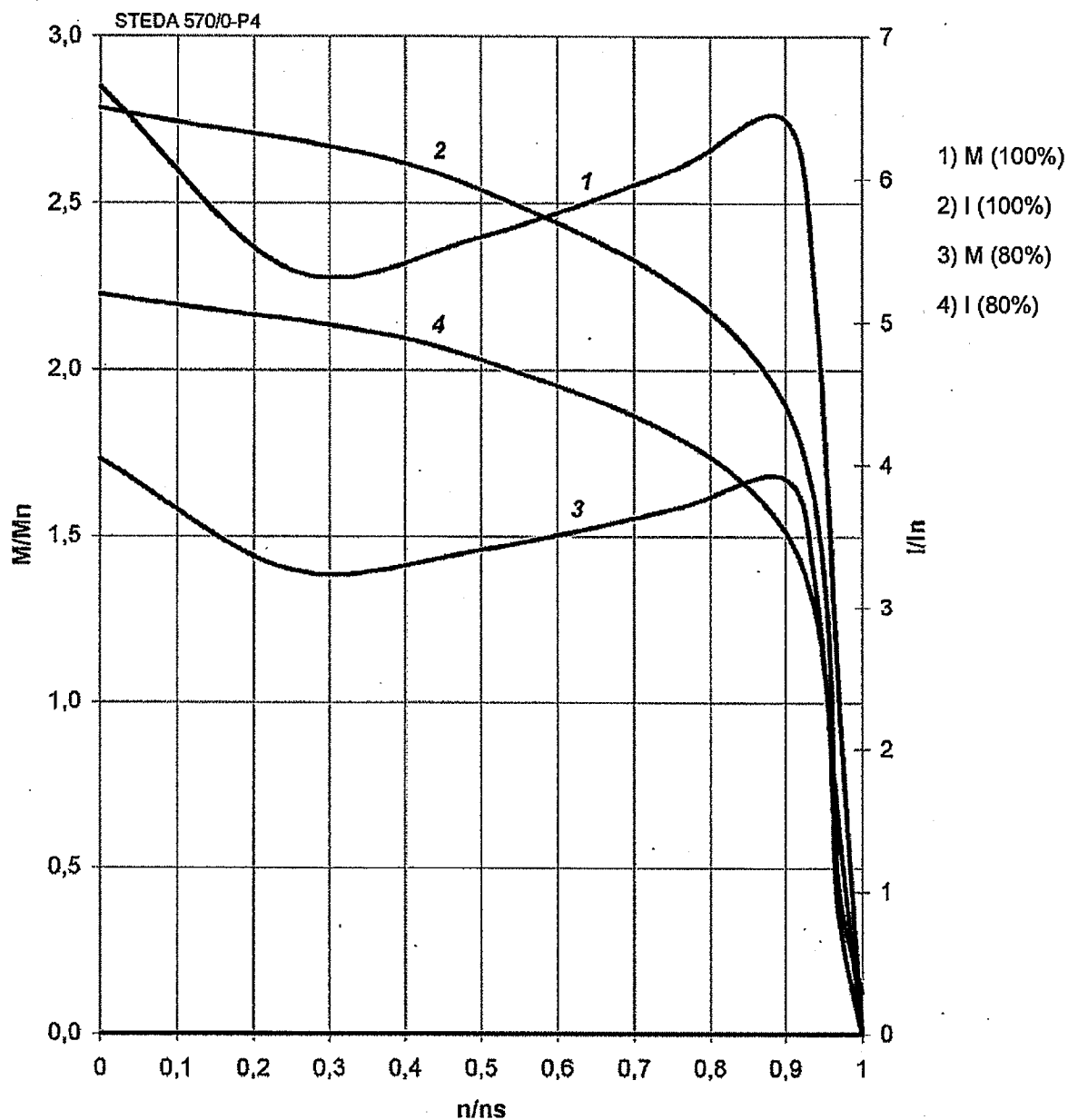
P.5-2

LOHER			Datenblatt data sheet			
Kunde Customer			Hersteller Manufacturer Loher GmbH			
Motor Typ Motor type DNGW-180MB-04A			Meßflächen -Schalldruckpegel LpA in db(A) nach DIN 45 635		Leerlauf No load	
IEC-Baugröße IEC-Size 180M		Polzahl Number of poles 4	Average sound pressure level LpA acc. DIN 45 635		Last Load 63+3	
Bauform Mounting design IM B3		Schutzart Type of enclosure IP 55	Drehrichtung (von AS gesehen) Direction of rotation (viewed from DE) links ccw			
Ex-Schutzart Ex-Protective system II 2 G Ex de IIC T4			Lager AS/BS Bearing DE/NDE 6311/C3 6311/C3			
Betriebsart Duty type S1		Einschaltung Starting direkt d.o.l	Schmiermittel Lubricant Shell Alvania RL3			
Umgebungstemperatur Ambient temperature KT -20/+40 °C			Schmierart Type of lubrication Nachschmierung Regreasing			
Wärmeklasse Thermal classification 155 (F)		Ausnutzung Temp. rise 130 (B)	Nachschmierfrist Relubrication term 11000 h	Menge Quantity 17 g		
Therm. Wicklungsschutz Therm. winding protection N.A. N.A.			Massblatt Nr.: Outline dimension drawing No. MLD18-0023-M11			
Therm. Lagerschutz Therm. bearing protection N.A. N.A.			Lage des Klemmenkastens Location of terminal box oben on top			
Bemessungsleistung Rated output 18,5 kW			Klemmenzahl Number of terminals 6			
Bemessungsspannung Rated voltage 415 V			Kabeleinführungsgew. Cable entry thread 1xM40x1,5			
Schaltung Connection D			Gewicht ca Net weight approx. 190 kg			
Frequenz Frequency 50 Hz c/s		Drehzahl Speed 1470 1/min rpm	Sonstige Daten und Bemerkungen: Additional data and remarks:			
Bemessungsstrom Rated current (CR) 33,5 A						
Anlaufstrom Starting current 600 %						
Leistungsfaktor (cos φ) Power factor	4/4 0,84	3/4 0,79				1/2 0,68
Wirkungsgrad (%) Efficiency	4/4 90,9	3/4 90,9				1/2 88,9
Bemessungsmoment (M _N) Rated torque 120,2 Nm						
Anzugsmoment Starting torque M _A / M _N = 285 %						
Kippmoment Break-down torque M _K / M _N = 275 %						
Läuferklasse Rotor class DS5						
Trägheitsmoment Moment of inertia 0,13 kgm²						
Drehmomentkurve-Nr. Torque characteristic-No. ---			Rev.2 / PMOD52 / 06.08.2010 ITEM-NO. 117-PM- 805 Motor-Nr./Motor-No. 3400653 PTB 09 ATEX 1044X AB/EP-Nr. 8874493-150			
Tag; Date	Name; Name	Toleranzen nach/ Tolerances acc. to DIN EN 60 034-1		Nr. No. DBL 50889		
Bearb.; Design.	14.07.10	PM OD 51				
Gepr.; Checked	14.07.10	PM OD 50				

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Strom-Drehmoment-Kennlinie Current-Torque-Curve

P. 5-3



M/Mn = Starting torque/Rated torque
I/In = Starting current/Rated current
n/ns = Full load speed/Synchronous speed

Bemerkung

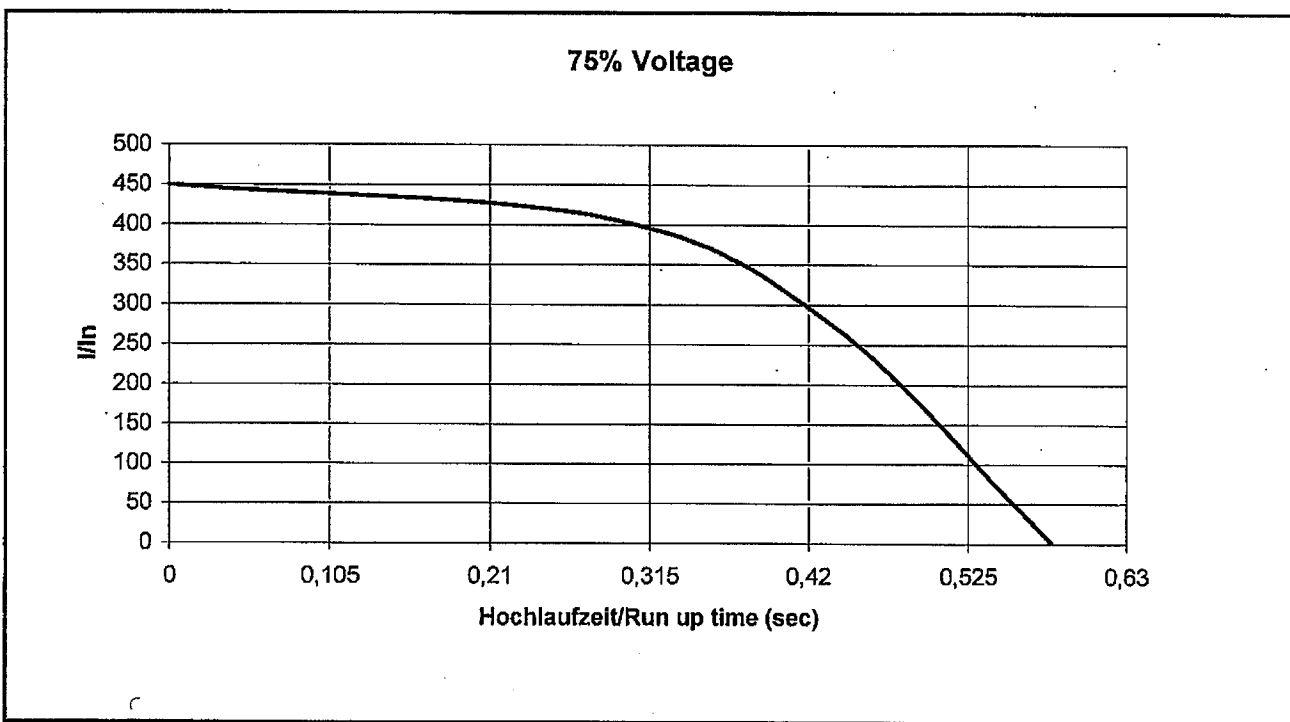
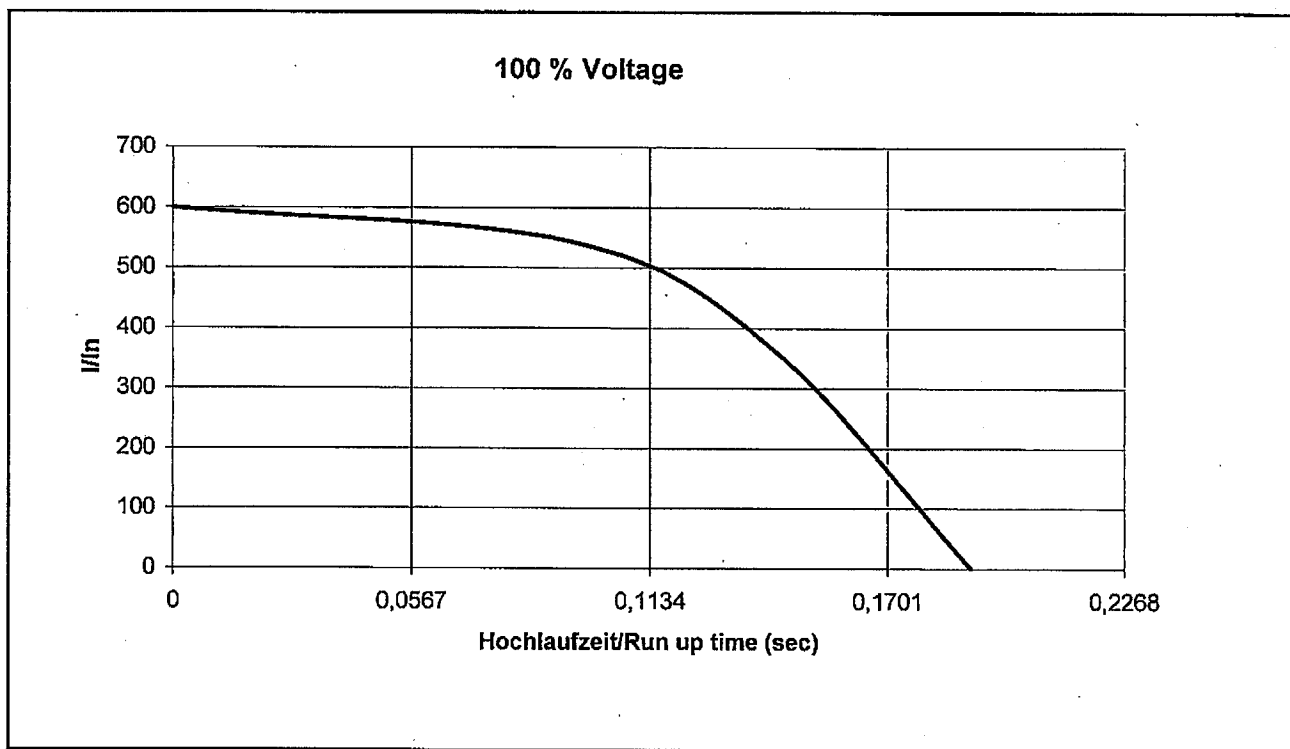
Remark

ITEM-NO. 117-PM- 805

Motor Typ Motor type	DNGW-180MB-04A	Bemessungsleistung Rated output	18,5 kW	EP-Nr. EP-No.	100018612
Bemessungsspannung Rated voltage	415 V	Bemessungsstrom Rated current (CR)	33,5 A	Motor-Nr. Motor-No.	3400653
Drehzahl Speed	1470 1/min rpm	Leistungsfaktor Power factor	0,84		
Frequenz Frequency	50 Hz c/s	Polzahl Number of poles	4	Bemessungsmoment Rated torque	120,2 Nm
	Tag; Date	Name; Name	Toleranzen nach/Tolerances acc. to DIN EN 60 034-1		Nr. No. SDK 16534
Bearb.; Designed	14.07.10	PM OD 51			
Gepr.; Checked	14.07.10	PM OD 50			

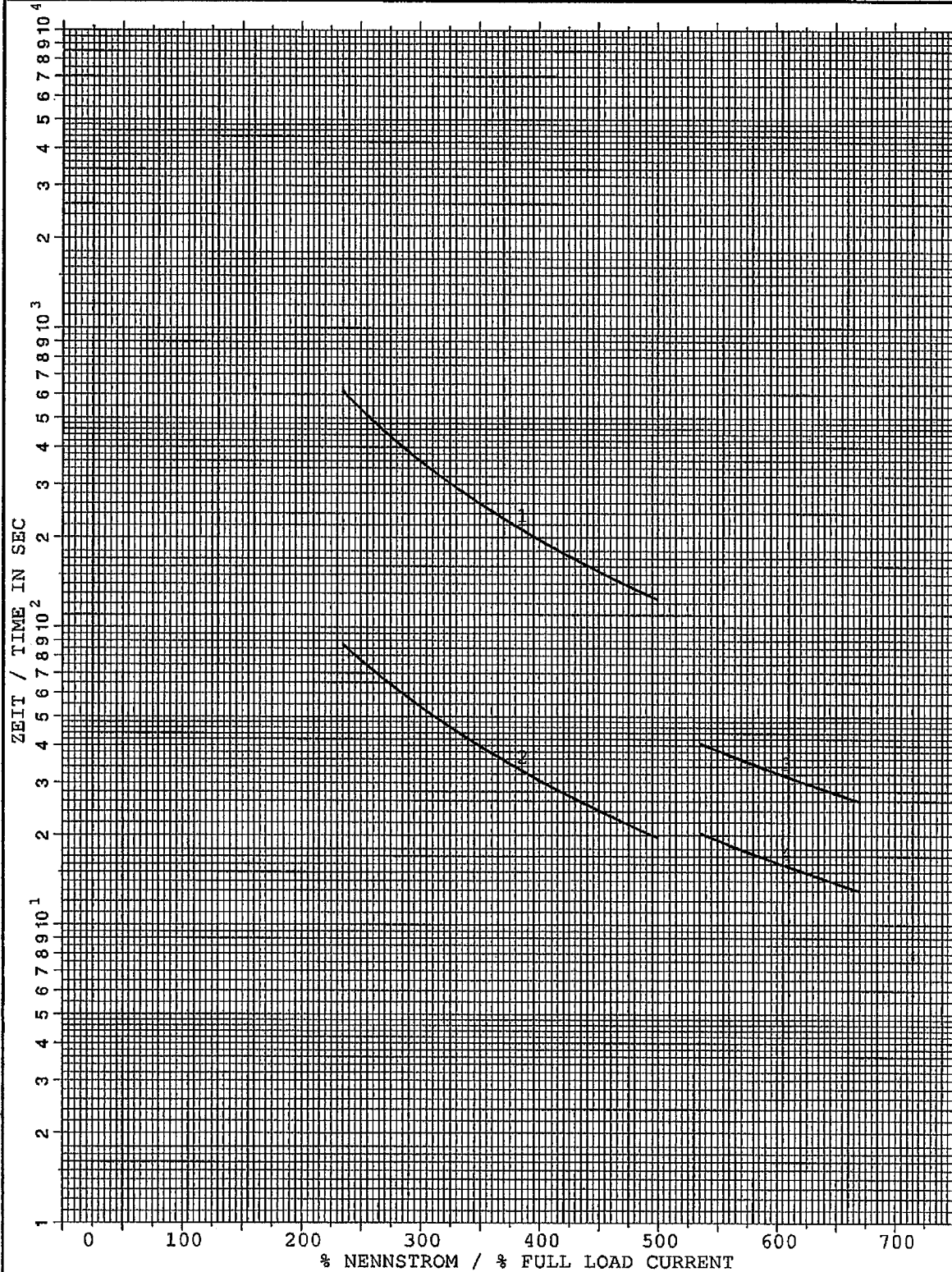
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Strom-Anlaufzeit-Kennlinie Starting Current vs. Starting Time



			Name
			Date
Änderung / Change	Bemerkung Remark	117-PM-805	
	Motor Typ Motor type	DNGW-180MB-04A	
	Bemessungsspannung rated voltage	415 V	
	Drehzahl Speed	1470 1/min rpm	
	Frequenz Frequency	50 HZ	
Buchstabe Letter	Tag; Date	Name; Name	Toleranzen nach/ Tolerances acc. to DIN IEC 38 - DIN EN 60 034-1
	Bearb.; Designed	MOOM153	
	Gepr.; checked	MOOM150	
			Nr. No.
			SAK 8874493_150

	Thermische Grenzkennlinie Thermal limit curve IEEE Std. 620	Nr. 73049
		Wickelangabe 000570

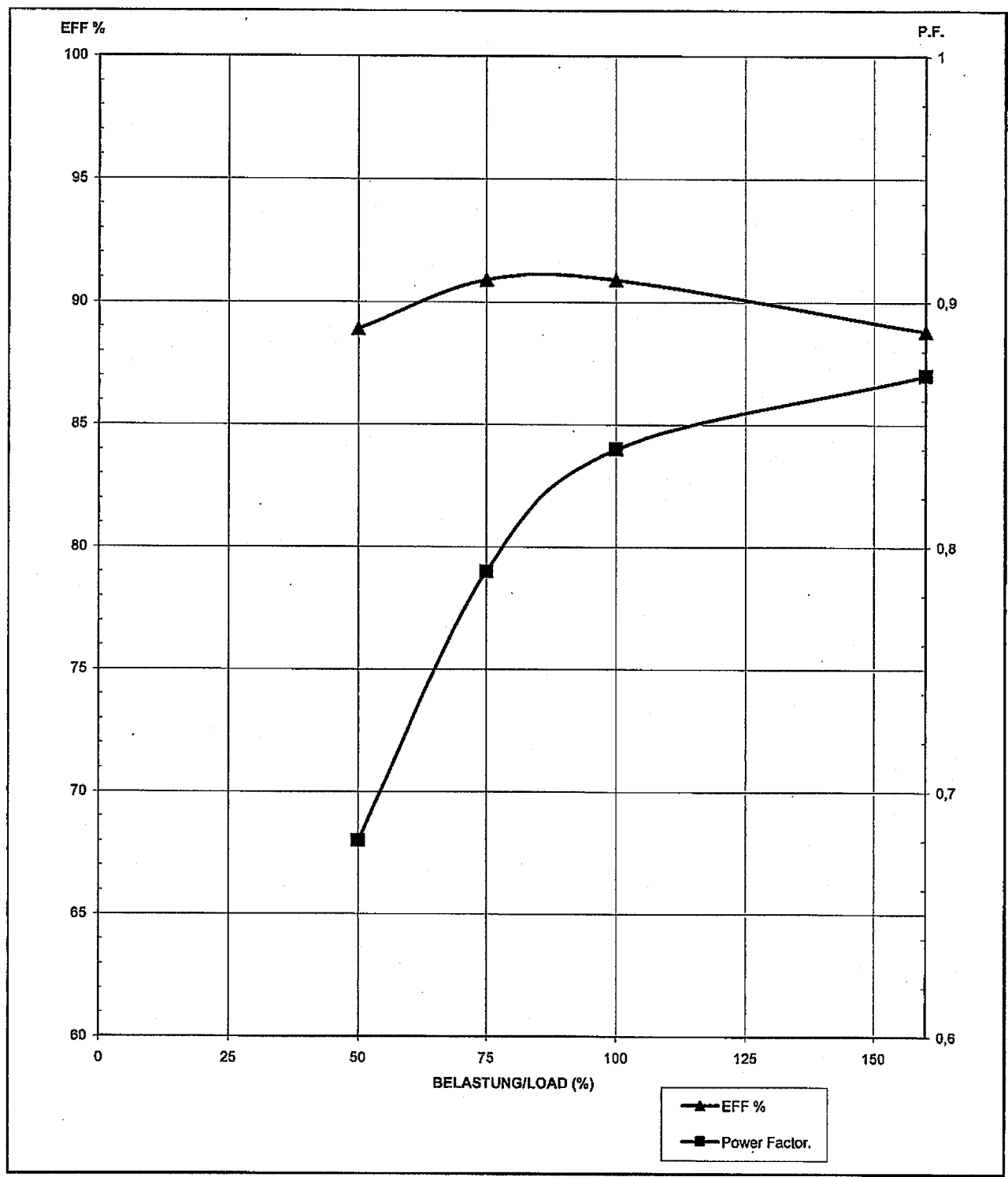


1 = Overload stator, cold
2 = Overload stator, hot
3 = Locked rotor, cold
4 = Locked rotor, hot

Ersteller	Name		
	Datum		
	Bearb.		
	Gepr.		
Kunde Customer		Auftrag/Anfrage Enquiry/Order	
Motor-Typ Motor-type		Nennleistung Rated output	
Nennspannung Rated voltage		Frequenz Frequency	
Nennstrom (I _N) Rated current (I _N)		Leistungsfaktor (cos φ) Power factor (cos φ)	
Drehzahl Speed		Nennmoment (M _N) Rated torque (M _N)	
Polzahl Pol number		calculated values	

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Leistungsfaktor-Wirkungsgrad-Leistung Power factor-Efficiency-Load

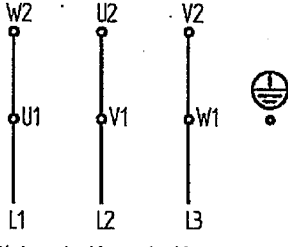
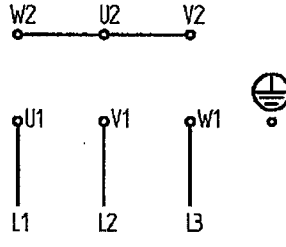


Die Datenbasis ist eine Typenprüfung eines elektrisch identischen Motors
The basis of the given values is a performance test of a electrical identical motor

		Name	Name
		Datum	Date
Änderung / Change	Bemerkung	117-PM-805	
	Motor Typ	DNGW-180MB-04A	
	Bemessungsleistung	18,50	kW
	Bemessungsspannung	415	V
	Drehzahl	1470	1/min rpm
Buchstabe	Frequency	50	HZ
	Polzahl	4	Number of poles
	Bemessungsmoment	120,2	Nm
Letter	Tag; Date	18.01.2011	
	Name; Name	MOOM153	
	Toleranzen nach/ Tolerances acc. to	DIN IEC 38 - DIN EN 60 034-1	
	Nr. No.	8874493_150	

Wicklung Winding Bobinage	 = an Klemme geführt connected with terminal raccordé à la borne	 = am Wickelkopf verbunden connected on the winding head raccordé à la tête du bobinage	 = Stempunktverbindung lose im Anschlußkasten Star-point is connected within the terminal box Branchement étoile à branché dans la boîtes à bornes
Änderungs-Bemerkung			
Änd.-Index			

Die räumliche Anordnung der Klemmen braucht nicht mit dieser Darstellung übereinstimmen.
The spatial arrangement of the terminals does not have to correspond with this drawing.
Il n'est pas nécessaire que la disposition des bornes dans la boîte corresponde à ce schéma.

Δ / Delta / Triangle  L1 L2 L3 Netz / Line / Ligne	Y / Star / Étoile  L1 L2 L3 Netz / Line / Ligne
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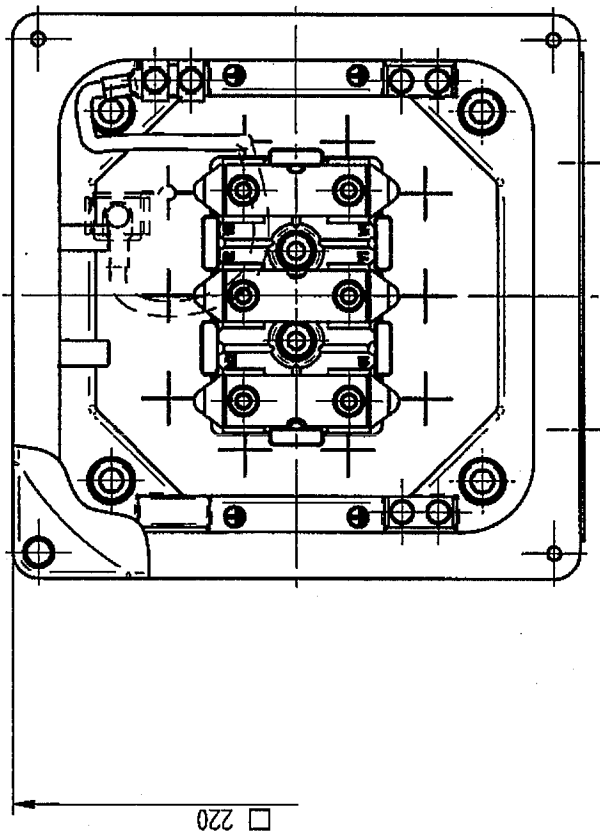
Schaltung und Spannung siehe Leistungsschild
Connection and voltage as given on the rating-plate
Connexion et tension sont indiquées sur la plaque indicatrice

X1001

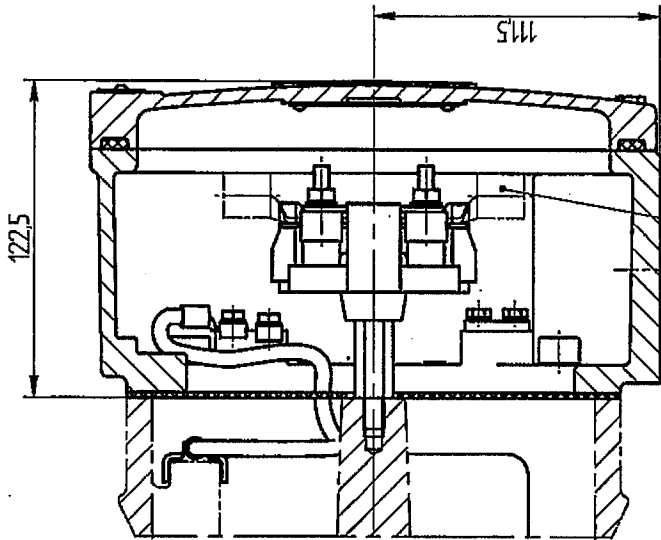
Ersteller		letzte Änderung:	
Datum	Name	Datum	Name
08.10.2004	Korvath		
03.12.2004	TWT58		

Drehstrommotor, Käfigläufer, Y oder Δ , 6 Klemmen	Schaltbild
Three-phase motor, star or delta connection	Wiring diagram
Moteur triphasé, connexion triangle ou étoile	Schéma de branchement
	X1001
	de/en/fr

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Anzahl der Klemmen nach Schaltbild
Number of terminals acc. to wiring diagram.
Beim Anschließen des Motors sind die Bezeichnungen
der Klemmen gemäß Schaltbild zu beachten.
For connection of the motor observe the terminal markings
according to the wiring diagram.



Max. Anschlußquerschnitt 35mm².
Max. cross section 35mm².
Wahlweise mit Kabelschuh max. 50mm².
Optionally with cable lug max. 50mm².

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Werkstoff/Material		Formel/Size DIN A 3	
Oberfläche/Surface		Materialnummer Material No.	
Toleranz ISO 8015		00	
Abgemessene Abstände/Dimensions: 530 ±0,3 sonstige: ISO 2768-mH		Name	
Werkstoffkennzeichen:		Datum/Date	
00		25.02.2010	
Änderungs-Bemerkung/Revision note		2001MKS-WPA	
Gewicht/Mass:		00781301	
25002		9-101D 202.60-K	
Ers. für		Anschlußkasten	
Ursprung		f. A. / E.-225	
Origin		Konformitätsbetrachtung	

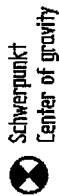
P.5 8

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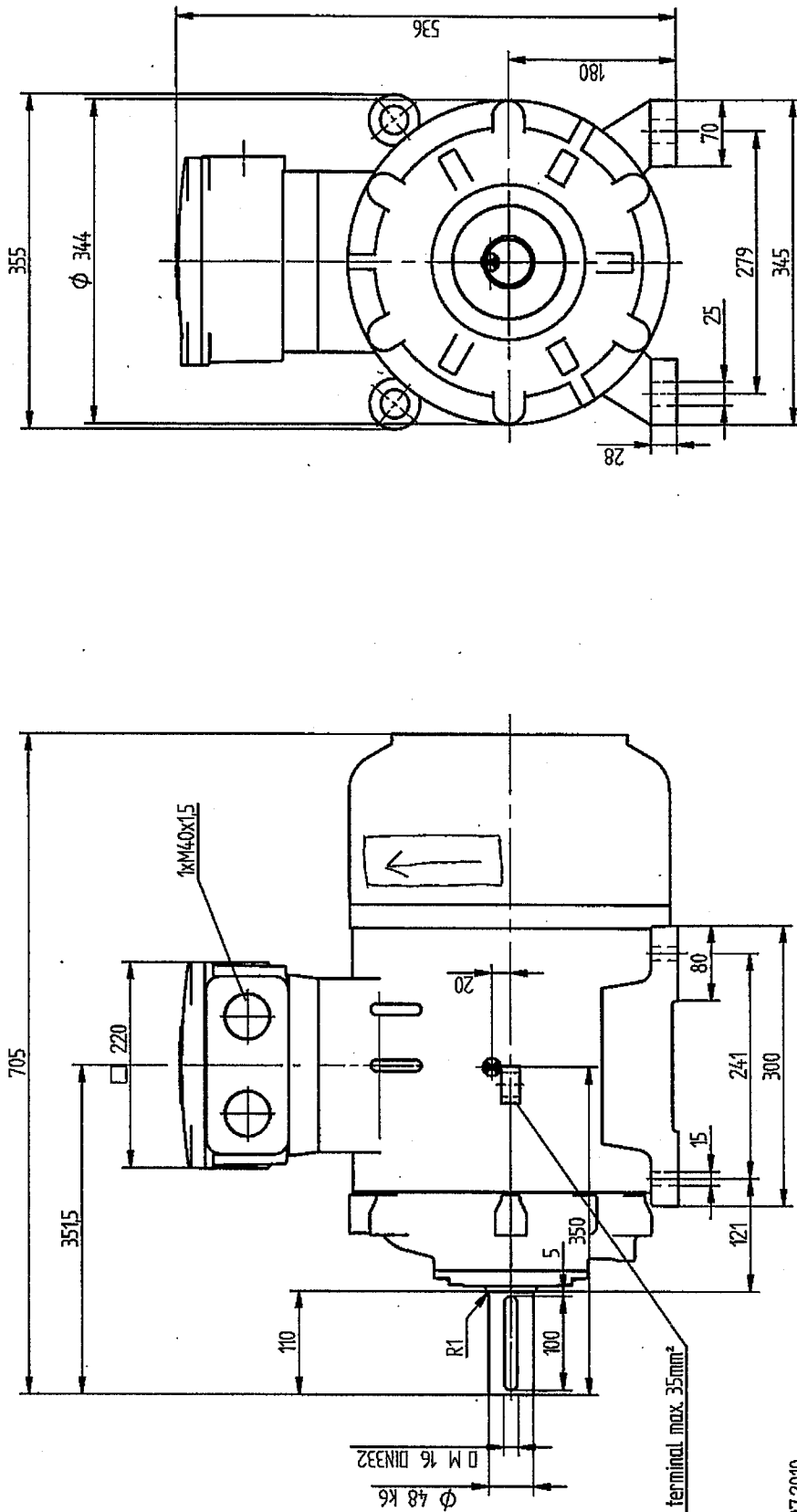
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Paßfedern DIN 6885.
Key to DIN 6885.

Klemmenkasten um je 90° drehbar.
Terminal box rotatable at 90° intervals.



Item-no. 117-PM-805



Rev.0 / PM052 / 14.07.2010

LOHER

Approved for use in CAD-SE environments.
Diese technische Zeichnung ist gezeichnet nach DIN ISO 15010.
This technical document is proprietary (DIN ISO 16016).



Maßstab / Drawing scale: 20501
Classification: 20501

Erstellt / created: 30.06.2010
Name: Z001MKV-STHA
Datum / Date: 30.06.2010
Name: Z001MKV-LEIN

Letzte Änderung / Last change: 00
Name: Name
Datum / Date: Name

Drehstrommotor
Three-phase-motor
Bauform/mounting: IM B3

Typ / type: DNE-180M-02

Zeichnungs-Nr. / Drawing No: MLD18-0023-M1L8874493_150
Maßstab / Scale: 1:5
Zusatz / Addition: 3
Format/DIN A: 3
Sprache / Language: de/en
Blatt / Sheet: 8

Doc-ID: 00814616

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

Plotstatus / Print status: IM B3

LOHER	Lager- und Schmierdatenblatt Data sheet for bearing and lubrication		
Lagerung / Bearings			
Lager AS Bearing DE	6311 / C3	DIN 625	
Lager BS Bearing NDE	6311 / C3	DIN 625	
Schmierung / Lubrication			
Schmierart Type of lubrication	Nachschmierung Regreasing		
Schmiermittel Lubrication	Shell Alvania RL3		
Fetterstfüllmenge First filling quantity of grease	AS: DE:	150 g	BS: NDE:
Fettnachschmiermenge Regreasing quantity	AS: DE:	17 g	BS: NDE:
Nachschmierfrist bei Nachschmiereinrichtung Relubrication interval with regreasing device	11000 h	bei Umgebungstemperatur at ambient temperature -20/+40 °C	
Fettstandzeit bei Dauerschmierung Grease life with permanent lubrication	—		
Lagerlebensdauer Bearing life time	50000 h		
max. Lagertemperatur max. bearing temperature	120 °C		
Sonstige Daten und Bemerkungen: Additional data and remarks: <i>Zusätzlich zu diesem Lager- und Schmierdatenblatt ist die Betriebsanleitung zu beachten!</i> <i>In addition to this data sheet for bearing and lubrication the operating instruction should be observed!</i>			
Bemerkung Remark ITEM-NO. 117-PM- 805			
Motor Typ Motor type	DNGW-180MB-04A	Bemessungsleistung Rated output	18,5 kW
Bemessungsspannung Rated voltage	415 V	Bemessungsstrom Rated current	33,5 A
Drehzahl Speed	1470 1/min rpm	Leistungsfaktor Power factor	0,84
Frequenz Frequency	50 Hz c/s	Polzahl Number of poles	4
		Bemessungsmoment Rated torque	120,2 Nm
Bearb.; Designed	Tag; Date	Name; Name	Toleranzen nach/Tolerances acc. to DIN EN 60 034-1
Gepr.; Checked	14.07.10	PM OD 50	
			Nr. No.
			LSD 04626