

Please read carefully before starting operation !

- Should any damage occur due to disregard of the following instructions the guarantee expires and the manufacturer is free from any obligations. The device can only be employed under operations parameters not exceeding the nominal capacity of the clutch or brake. Maximum torque and highest permissible power loss must be strictly observed. The available voltage must correspond to the operation voltage indicated on the identification plate. When a clutch of the E(R)AT ... -Type is used, the distance between the brush holders and the slide ring must correspond to the measure indicated on the table of dimensions.
If a brake is used, there is no slide ring and the connection is effectuated directly on the coil. Thereupon it must be checked that no body contact takes place.
If a clutch or a brake is operated in an extremely dustladen place (soot, wood chip, paper or cement dust) a dust cover should be provided. In such a case an additional fan should allow reliable dissipation of the heat developed.

Storage : Clutches and brakes must be stored in a dry place and protected against corrosion. The device can only be stored in its welded plastic hull containing moisture absorbing chips.

- Installation :
Installation of the device must be carried out with care in order to prevent damaging of bearing and packing. Any use of force impairs the function. The borehole present should be lightly smeared with a rust proofing grease. The system being lubricated for life, any other lubrication with oil or grease is not admitted as it would impair the performance of the device.
- Starting operation :
Clutches and brakes should be taken into operation by means of short current pulses to allow proper distribution of the magnetic particles. Thereupon the rotor speed correspond to the use required.
- Dismounting, Repairs :
Instructions for repair are supplied on request free of obligation. Upon disassembly of clutches and brakes any shock by knocks and shoves must be prevented. When removing the rotor a brace can be used.

c			Datum	29.12.1993	Zeichnungsnummer/ drawing number				operating instructions	Komm.Nr		Vertragsnummer
b			Bearb.	KIPP	1.1232E					General-Information		
a			Gepr.									
	Änderung	Datum	Name	Norm	Einbauort:	Ersatz fuer:	Ursprung:	28.01.2013	1 Bl.			

A
B
C
D
E
F

Repair instructions : Brakes Type *

FAS 2MD4	337 800 00	FAS 50M	338 200 00
FRAS 2MD4	337 801 00	FRAS 50M	338 250 00
FAS 21M	339 000 00	FAS 50RR	338 205 00
FRAS 21M	339 100 00		

"R" = heat sink

"RR" = remnant rotor

The magnetic particle clutch / brake should be disassembled in the following order.

During assembly, refer to the sectional drawing for the size of unit to be repaired.

Loosing the screws on the housing to make the rotor and housing accessible. All circlip rings must be removed. After removal of all circlip rings, the internal rotor can be completely disassembled.

Following disassembly, the rotor and housing must be carefully cleaned. Be careful not to damage the sealing rings and ensure that the ball bearings do not come into contact with magnetuc powder. Make absolutely sure that the spacers are refitted in the same order and number.

* Type FAS 2 cannot be repaired.

Important note !

Magnetic powder is only present between the drum rotor and the inner rotor. Be sure to use only the amount and particle size of magnetic powder approved for the particular type of clutch / brake.

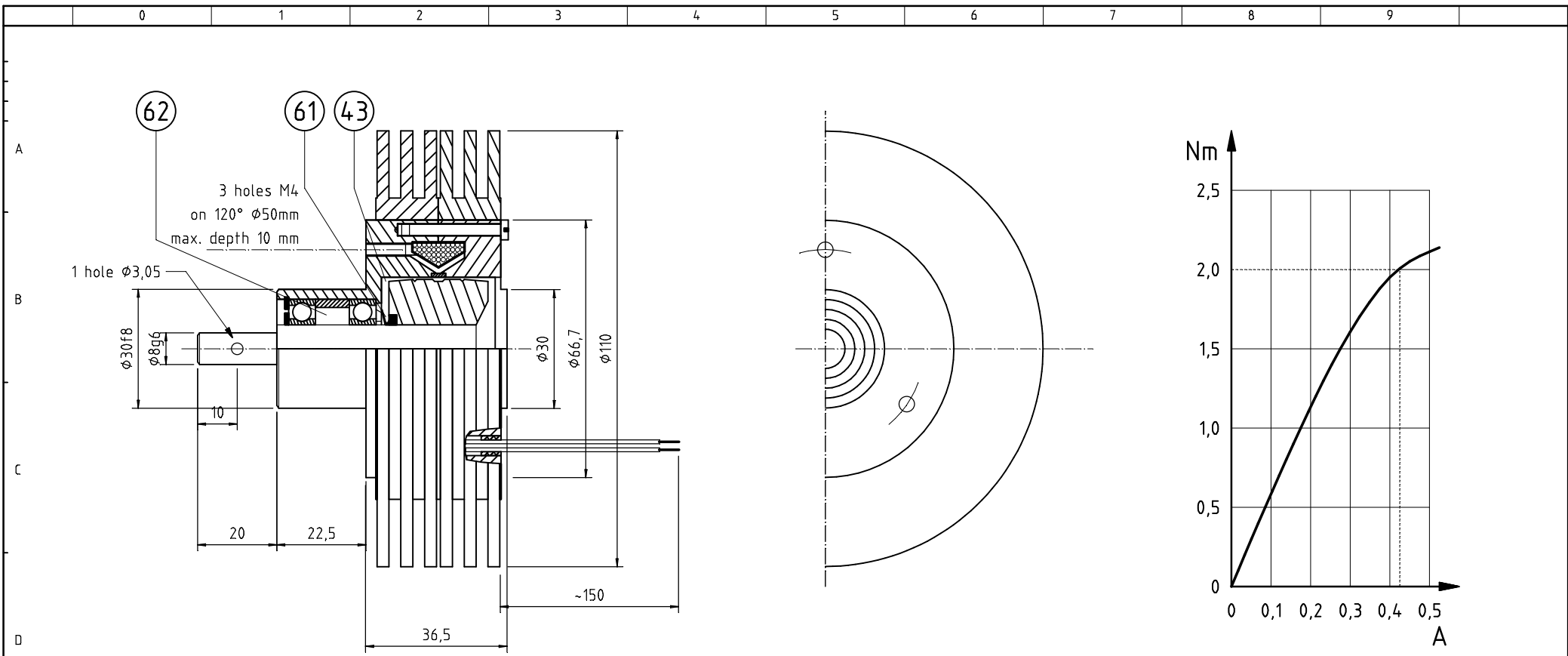
The old magnetic powder must not be re-used.

Assemble the unit in reverse order.

Spare parts :

Item	Pcs	Type 21	Stock-No.
62	2	Ball bearing	Only available as a complete repair kit.
61	1	V- ring seal	
43	-	Magnetic powder 6,5 gr / 50 µ	

Item	Pcs	Type 50	Stock-No.
8	2	Ball bearing	Only available as a complete repair kit.
9	1	V- ring seal	
21	-	Magnetic powder 7 gr / 50 µ	



Only applicable for horizontal shaft position !

In order to avoid magnetic leakage flux and to achieve a good heat removal, non-ferrous metals should be used for installation or attachment of auxiliary components (not for drive shaft).

dimensions and specifications subjekt to change

rated torque	residual torque	field values			resistance at 20°C	operating times		max. admissible power loss			mass moment of inertia		weight
		maximum values	rated current			t_{on} [ms]	t_{off} [ms]	0 min ⁻¹	1500 min ⁻¹	3000 min ⁻¹	ext. rotor	int. rotor	
M_{max} [Nm]	M_{res} [Nm]	P [W]	U [V]	I_N [A]	R [Ω]			P_V [W]	P_V [W]	P_V [W]	J [kgm ²]	J [kgm ²]	m [kg]
2	0,04	16	24	0,45	31	130	60	35	-	-	-	35·10 ⁻⁶	0,91 1,25*

*) heat sink "R"

item	amount	parts
62	2	ball bearing
61	1	V ring gasket
43	-	air gap for magnetic powder