



Industrie Service

## EC - type-examination certificate

**Certificate no.:** ABV 550/2

**Notified body:** TÜV Industrie Service GmbH TÜV SÜD Gruppe  
(bis 31.03.2004 TÜV Süddeutschland Bau und Betrieb GmbH)  
Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile  
Westendstraße 199, 80686 München - Germany

**Applicant/  
Certificate holder:** Chr. Mayr GmbH & Co. KG  
Eichenstraße 1  
87665 Mauerstetten - Germany

**Date of submission:** 2004-12-14

**Manufacturer:** Chr. Mayr GmbH & Co. KG  
Eichenstraße 1  
87665 Mauerstetten - Germany

**Product, type:** Braking device acting on the traction sheave or the shaft of the traction sheave, as part of the protection device against overspeed for the car moving in upwards direction, type 894.001.1 SO, Größe 8

**Test Laboratory:** TÜV Industrie Service GmbH  
TÜV SÜD Gruppe  
Abteilung Aufzüge und Sicherheitsbauteile  
Westendstrasse 199, 80686 München - Germany

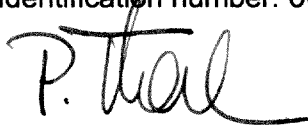
**Date and  
Number of test report:** 2005-01-11  
550/2

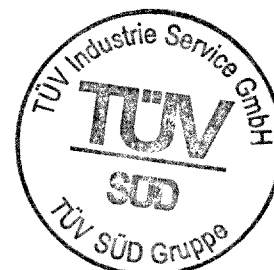
**EC-directive:** 95 / 16 / EC

**Statement:** The safety component conforms to the directive's safety requirements for the respective scope of application stated on page 1 - 2 of the annex to this EC type-examination certificate.

**Certificate date:** 2005-01-11

Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile  
EC-Identification number: 0036

  
Peter Tkalec





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## Annex to the EC type-examination certificate No. ABV 550/2 dated 2005-01-11

### 1. Scope of Application

- 1.1 Permissible brake force when the brake device acts on the brake disk while the car is moving upward 4530 N  
The brake force refers to a single brake resp. brake tongs.

Unless the brake disk is an integral element of the traction sheave (e. g. cast on), it must be connected directly or indirectly with the latter via the common shaft. In cases where brake disk and traction sheave are connected indirectly via the shaft, the brake disk must be positioned in the immediate vicinity of the traction sheave.

- 1.2 Maximum tripping speed of the overspeed governor and maximum rated speed

The maximum tripping speed of the overspeed governor and the maximum rated speed of the lift must be calculated on the basis of the brake disk maximum tripping speed and maximum rated speed (gliding speed) as outlined in sections 1.2.1 and 1.2.2 taking into account brake disk diameter effectively, traction sheave diameter and car suspension.

$$v = \frac{D_{TS} \times v_{BS}}{D_{BS} \times i}$$

$v$  = Tripping (rated) speed (m/s)  
 $D_{TS}$  = Diameter of the traction sheave from rope's center to rope's center (m)  
 $D_{BS}$  = Diameter of the brake disk effectively (m)  
 $v_{BS}$  = Gliding speed on the brake disk diameter effectively (m/s)  
 $i$  = Ratio of the car suspension

- 1.2.1 Maximum tripping speed (gliding speed) on the brake disk diameter effectively 10,00 m/s
- 1.2.2 Maximum rated speed (gliding speed) on the brake disk diameter effectively 8,70 m/s

### 2. Conditions

- 2.1 In order to comply with the redundancy required in Section 9.10.2 of EN 81-1, at least two braking devices (single brakes, brake tongs) must be used. Where more than two braking devices are used, redundancy requirements necessitate that a sufficient braking effect as outlined in section 12.4.2.1 of EN 81.1 is still maintained if one of the braking devices fails. It is not assumed that two braking devices will fail simultaneously.

- 2.2 Since the brake device represents only a part at the protection device against overspeed for the car moving in upwards direction an overspeed governor as per EN 81-1, paragraph 9.9 must be used to monitor the upward speed and the brake device must be triggered (engaged) via the overspeed governor's electric safety device.

Alternatively, the speed may also be monitored and the brake device engaged by a device other than an overspeed governor as per paragraph 9.9 if the device shows the same safety characteristics and has been type tested.



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- 2.3 In order to recognise the loss of redundancy the movement of each brake circuit (each single brake) is to be monitored separately and directly (e.g. by micro switches). If a brake circuit fails to engage (close) while the lift machine is at standstill, next movement of the lift must be prevented.
- 2.4 In cases where the lift machine moves despite the brake being engaged (closed), the lift machine must stop at the next operating sequence at the latest and the next movement of the lift must be prevented (The car may, for example, be prevented from traveling or, if already moving, halted either immediately or at the next floor, by querying the position of the micro switch which is used to monitor the mechanical movement of the brake circuits, should both brake circuits fail to open).
- 2.5 If the brake disk does not form an integral part of the traction sheave (e. g. cast on), the manufacturer of the drive unit or the installation company must provide calculation evidence that the brake disk - traction sheave connection is sufficiently safe. This connection also includes the shaft if the brake disk is positioned on the common shaft in the immediate vicinity of the traction sheave.

The calculation evidence must be enclosed with the technical documentation of the lift.

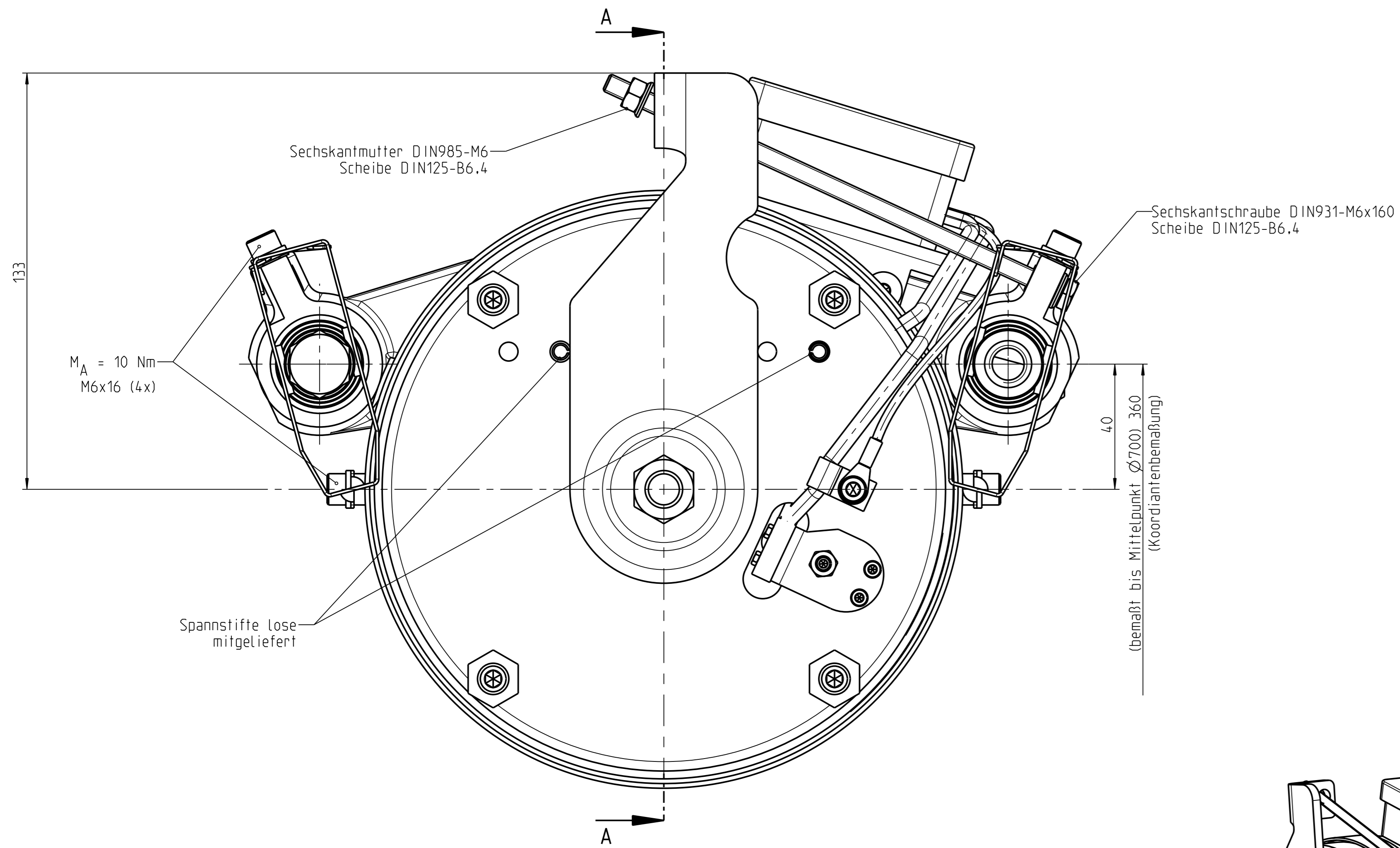
### 3. Remarks

- 3.1 The permissible brake force must be applied to the lift system in such a manner, that the empty car moving in upwards direction is not decelerated by more than  $1g_n$ .
- 3.2 In the scope of this type-examination it was found out, that the brake device also functions as a brake for normal operation, is designed as a redundant system and therefore meets the requirements to be used also as a part of the protection device against overspeed for the car moving in upwards direction.

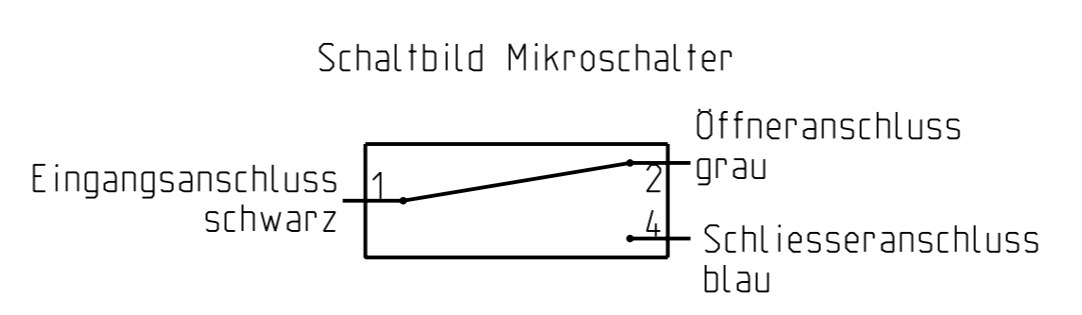
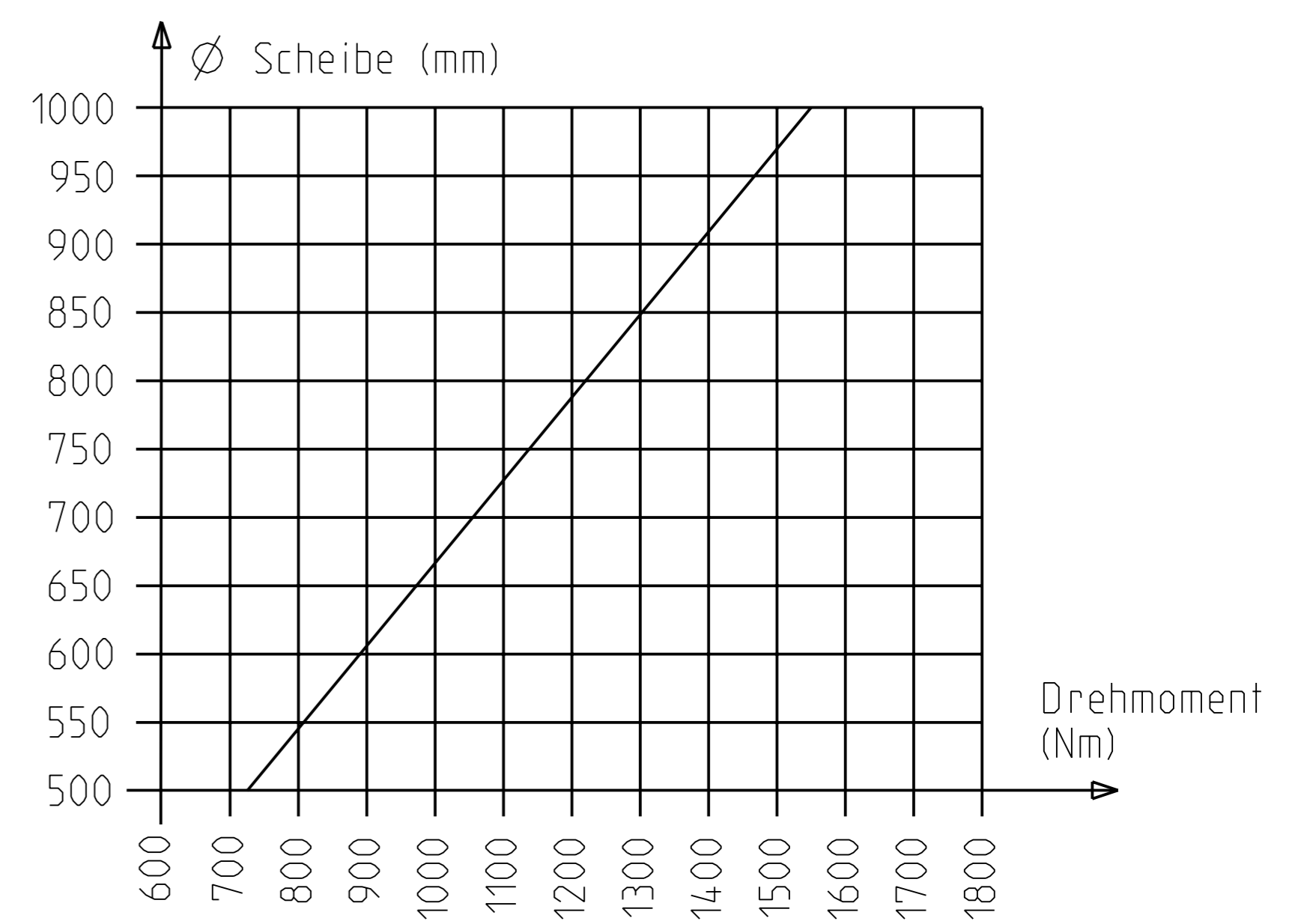
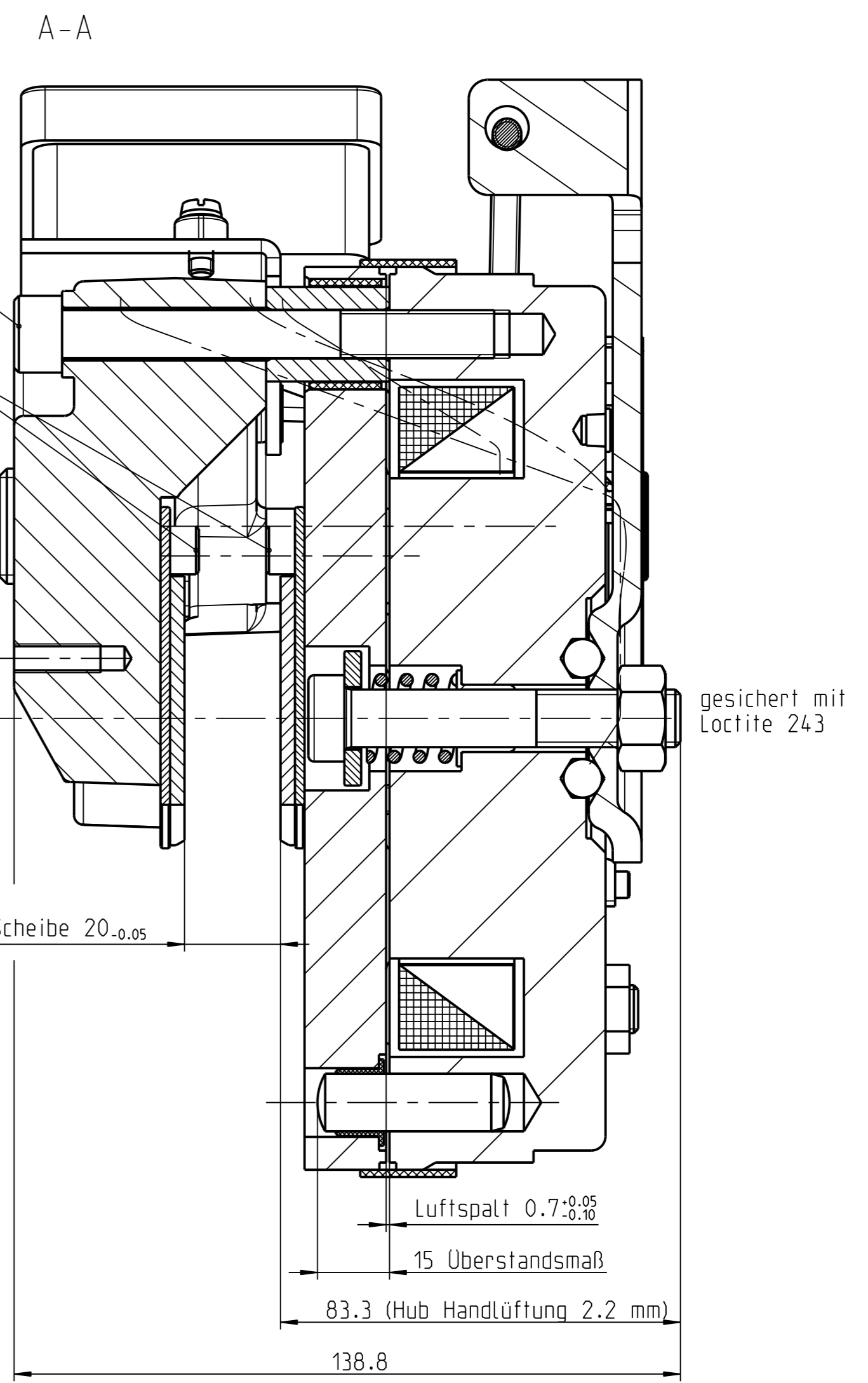
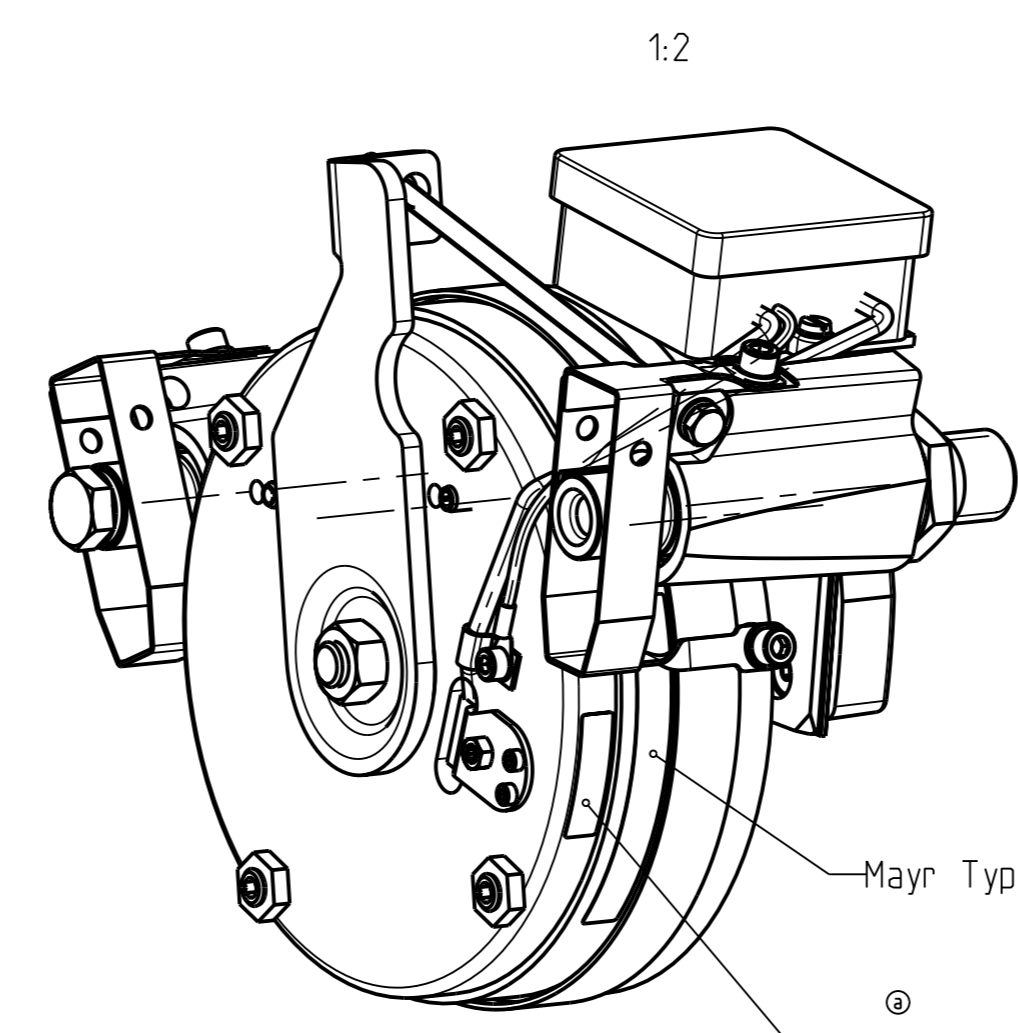
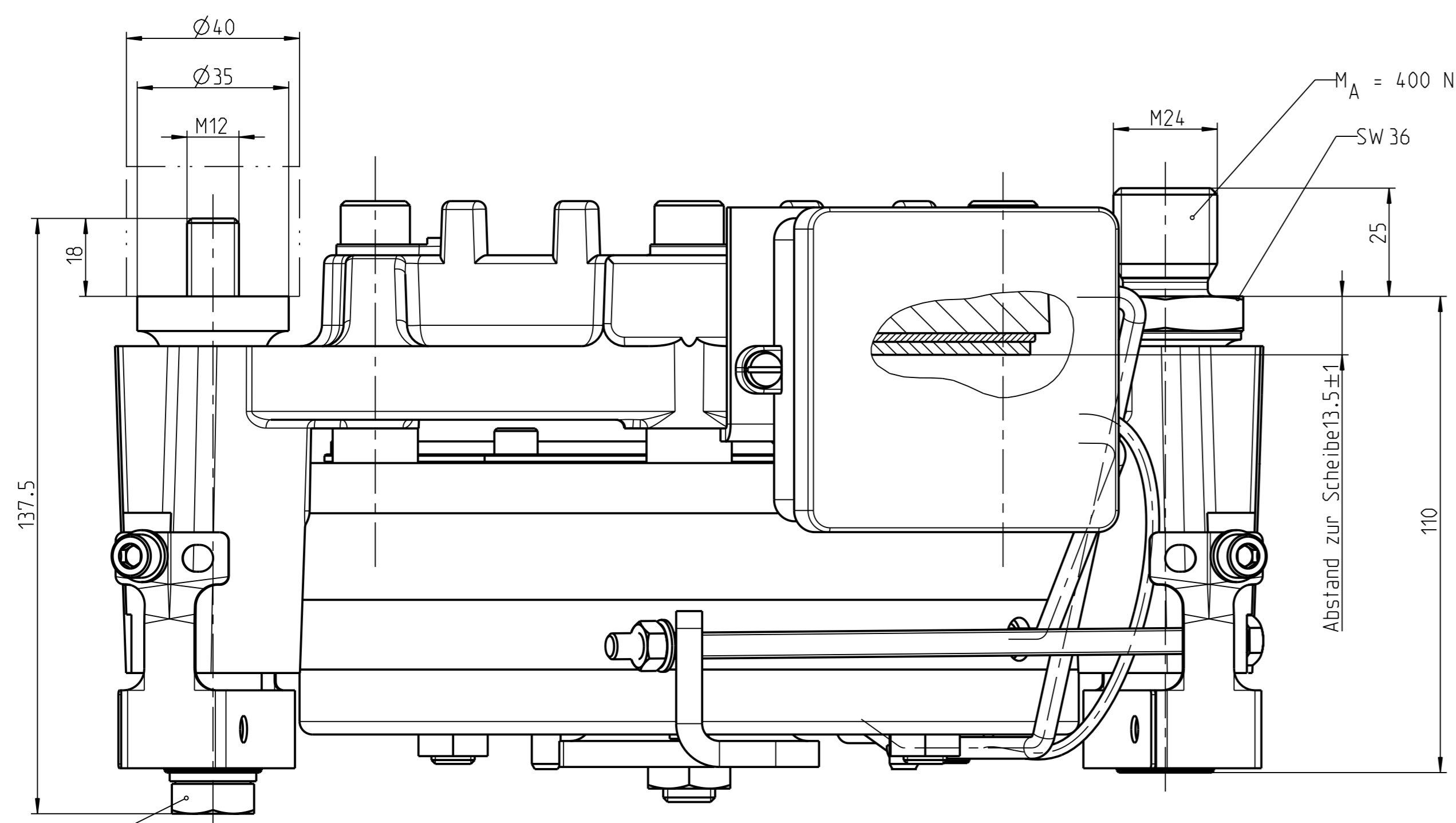
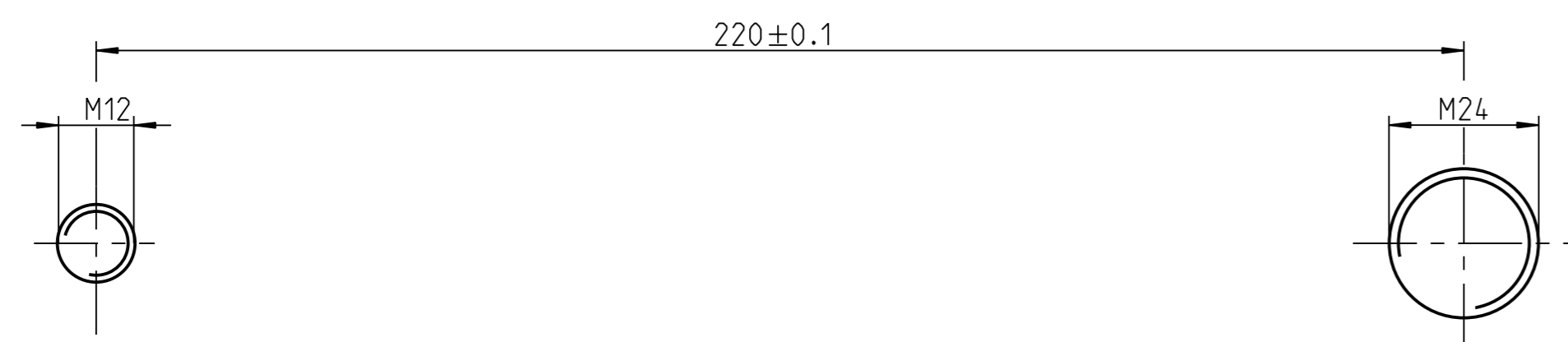
This type examination only refers to the requirements pertaining to brake devices as per EN 81-1, paragraph 9.10.

Checking whether the requirements as per paragraph 12.4 have been complied with is not part of this type examination.

- 3.3 In order to provide identification, information about the basic design and its functioning and to show which parts have been tested pertaining to the tested and approved type, drawing no. E 077 08 018 000 110 dated 20 August 2004 is to be enclosed with the EC type-examination certificate and the Annex thereto. The installation conditions and connection requirements are presented or described in separate documents (e.g. assembly and operating instructions).
- 3.4 The EC type-examination certificate may only be used in connection with the pertinent annex.



Bohrbild für Anschraubung



Federkraft bei 0.7mm Luftspalt:  
4275N bis 4725N  
(gemessen ohne Dämpfungsbolzen)

Technische Daten / technical data

M	= 1050 Nm
n	= 160 1/min
U	= 207 V
P	= 102 W
ED	= 60 %
U	= - V

Wechselstrom-schaltleistung		Gleichstrom-schaltleistung	
Spannung V AC	Widerstandslast A / Rlast	Spannung V DC	Widerstandslast A / Rlast
125	5	bis 30	5
250	5	125	0.5
		250	0.25

für den sicheren Betrieb:  
minimale Belastung von 12V und 10 mA

gefertigt aus	Zeichn.-Nr.	Artikel-Nr.	* Abweich. v. Lagerteil
20.08.2004	Bigiel	8169252	
Gezeichnet	20.08.2004	Bigiel	
Geprüft			
Normgegr.			
Werkstoff			
Werkstoff-Nr.			
RSD 8/894.001.1 SO 207V		E07708018000110	
Mmin=1050Nm F=4500 +/-225N		Fertig-Gewicht: 8169252	
Maßstab	1:1	Größe	8
Reg. St.	Type 894.001.1S	gew.	Zeichnungs-Nr. 576165
Kunde		ger.	20.074

24V Ausführung - Art.Nr. 8170703

**EG – Konformitätserklärung**  
*EC – Declaration of conformity*  
**Déclaration CE de conformité**  
*Dichiarazione CE di conformità*  
**Declaración CE de conformidad**  
*Declaração de conformidade da CE*

Im Sinne der EG-Richtlinie Aufzüge 95/16/EG erklären wir  
*In terms of the EC Directive 95/16/EC relating to lifts, we*  
Conformément à la directive européenne 95/16/CE sur les ascenseurs, nous, la société  
*Secondo la Direttiva CE per ascensori 95/16/CE, la presente*  
En el sentido de la Directiva CE 95/16/CE sobre ascensores  
*Nos termos da diretiva da CE 95/16/CE relacionados aos elevadores declaramos*

**Chr. Mayr GmbH + Co. KG**  
**Eichenstraße 1**  
**D-87665 Mauerstetten**

dass die angeführten Produkte in alleiniger Verantwortung entwickelt, konstruiert und gefertigt wurden in Übereinstimmung mit der oben genannten EG-Richtlinie.  
*declare that the products stated below have been developed, constructed and manufactured in sole responsibility and in conformity with the above mentioned EC Directive.*  
déclarons sous notre seule responsabilité que les produits listés ci-dessous ont été développés, conçus et usinés dans le respect de la directive CE mentionnée ci-dessus.  
*dichiara che i prodotti sotto elencati sono stati progettati e realizzati sotto la propria responsabilità e in conformità alle Direttive CE sopra riportate.*  
declaramos que los productos indicados han sido desarrollados, construidos y fabricados de acuerdo con la Directiva CE arriba mencionada.  
*que os produtos abaixo mencionados foram desenvolvidos, construídos e fabricados sob única responsabilidade e em conformidade com a diretiva CE acima mencionada.*

**Elektromagnetische Federdruckbremse / Electromagnetic spring applied brakes / Freins électromagnétiques à ressort de pression / Freni elettromagnetici a molle compresse / Frenos de muelles electromagnéticos / Freio eletromagnético de molas**

Produkt / Product / Produit / Prodotto / Producto / Produto	Größen / Sizes / Tailles / Grandezze / Dimensión / Dimensão	Typen / Types / Types / Serie / Tipos / Tipos	ANVP
ROBA <sup>®</sup> -diskstop <sup>®</sup>	8	894.001. __	1, **, ***

**Jahr der Herstellung:**  
*Year of manufacture:*  
**Année de production:**  
*Anno di produzione:*  
**Año de fabricación:**  
*Ano de fabricação:*

**Siehe Typenschild am Produkt**  
*see product label*  
**Voir l'étiquette sur le produit**  
*vedi l'etichetta sul prodotto*  
**ver placa de identificación del producto**  
*Ver placa do produto*

Mauerstetten den 12.05.2011

Ort und Datum / place and date / Lieu et date /  
luogo - data / fecha y lugar / Lugar e data

  
Dipl. Ing. (FH) / graduate engineer / Engenheiro graduado  
Geschäftsführer / Managing Director / Directeur Général / Gerente / Gerente  
Günther Klingler

**Angewendete Normen, Vorschriften und Prüfungen (ANVP) / Applied standards, regulations and inspections (ANVP) / Normes, prescriptions et contrôles appliqués (ANVP) / In conformità alle direttive UE di norme, specifiche e controlli (ANVP) / Normas, regulaciones e inspecciones aplicadas (ANVP) / Normas, regulamentações e inspeções aplicadas (ANVP)**

1	DIN EN 81-1	05/2000	Sicherheitsregeln – Konstruktion u. Einbau von Aufzügen	95/16/EG
1	DIN EN 81-1	05/2000	Safety rules – Construction and installation of lifts	95/16/EC
1	DIN EN 81-1	05/2000	Règles de sécurité – construction et installation d'ascenseurs	95/16/CE
1	DIN EN 81-1	05/2000	Regole di sicurezza per la costruzione e il montaggio di ascensori	95/16/CE
1	DIN EN 81-1	05/2000	Reglas de seguridad – Construcción y montaje de ascensores	95/16/CE
1	DIN EN 81-1	05/2000	Regras de segurança – Construção e instalação de elevadores	95/16/CE

**Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile, Überwachung gemäß Aufzugsrichtlinie:**

*Certification body for lifts and safety components, monitoring of production acc. lifts directive:*

**Organisme de certification pour ascenseurs et composants de sécurité, contrôle de production selon la directive sur les ascenseurs:**

*Organismo di certificazione per ascensori e componenti di sicurezza, controllo di produzione secondo la Direttiva per ascensori :*

**Centro de certificación para ascensores y componentes de seguridad, supervisión según la directiva de ascensores:**

*Centro de certificação para elevadores e componentes de segurança, monitoramento conforme a diretiva para elevadores:*

**© TÜV SÜD Industrie Service GmbH  
Westendstraße 199  
D-80686 München**

**Kennnummer 0036 / Identification number 0036 / Numéro d'identification 0036 / Numero d'identificazione 0036 / Número de identificación 0036 / Número de identificação 0036 /**

**Sicherheitsfunktion / Safety function / Fonction de sécurité / Funzione di sicurezza / Función de seguridad / Função de segurança**

**Bremseinrichtung, als Teil der Schutzeinrichtung für den aufwärtsfahrenden Fahrkorb gegen Übergeschwindigkeit.**

*Brake device to be used as part of the protective unit to prevent excessive speeds on upward-moving elevator cages.*

**Dispositif de freinage faisant partie du système de protection contre les survitesses en remontée accidentelle des cabines d'ascenseurs.**

*Dispositivo di frenatura da usare come sistema di protezione per prevenire la fuga verso l'alto della cabina*

**Dispositivo de frenado que se utiliza como parte del dispositivo de seguridad para evitar velocidades excesivas de la jaula del ascensor en movimiento ascendente**

*Dispositivo de freio para ser usado como parte da unidade de proteção para prevenir excesso de velocidade nas caixas de elevadores em movimento ascendente*

**EG-Baumusterprüfbescheinigung / EC type examination certificate / No d'homologation CE / Certificato di esame CE N / Certificado CE de examen de tipo / Certificado de exame "CE de tipo"**

**ABV 550, 550/1, 550/2**

	* EG-Maschinenrichtlinie 2006/42/EG98/37/EG * Directive 2006/42/CE sur les machines * Directiva de Máquinas CE 2006/42/EG98/37/CE	* EC-Machinery directive 2006/42/EC * Direttiva macchine 2006/42/CE * Diretiva para maquinaria CE 2006/42/CE
X	** EG-Richtlinien Niederspannung 2006/95/EG ** Directive 2006/95/CE sur les basses tensions ** Directivas CE de Baja Tensión 2006/95/CE	** EC-Low voltage directive 2006/95/EC ** Direttiva CE per il basso voltaggio 2006/95/CE ** Diretiva de baixa voltagem CE 2006/95/CE
X	*** Elektromagnetische Verträglichkeit 2004/108/EG *** Directive 2004/108/CE sur la compatibilité électromagnétique *** Compatibilidad Electromagnética 2004/108/CE	*** Electromagnetic compatibility directive 2004/108/EC *** Direttiva CE per la compatibilità elettromagnetica 2004/108/CE *** Diretiva de compatibilidade eletromagnética 2004/108/CE

Mauerstetten den 12.05.2011

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