English

JOHANNES HÜBNER GIESSEN

ideas and solutions

Operating and Assembly Instructions

for couplings HKS 5, HKSI 5, HKDS 5, HKDSI 5 with Declaration of Conformity according to DIN EN ISO 13849-2

For Functional Safety use

Read the Operating and Assembly Instructions prior to assembly, starting installation and handling!
Keep for future reference!

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Translation of the original Operating and Assembly Instructions
Coupling_DIN_EN_ISO_13849-2-en-R8(2025-04-14)ID74587.docx

ID-74587-R8

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1 General

1.1 Information about the operating and assembly instructions

These operating and assembly instructions provide important instructions for working with the device. They must be carefully read prior to starting all tasks, and the instructions contained herein must be followed.

In addition, applicable local regulations for the prevention of industrial accidents and general safety regulations must be complied with.

1.2 Scope of delivery

- coupling
- Operating and Assembly instructions

1.3 Explanation of symbols

Warnings are indicated by symbols in these operating and assembly instructions. The warnings are introduced by signal words that express the scope of the hazard.
The warnings must be strictly heeded; you must act prudently to prevent accidents, personal injury, and property damage.

WARNING!
Indicates a possibly dangerous situation that can result in death or serious injury if it is not avoided.

CAUTION!
Indicates a possibly dangerous situation that can result in minor injury if it is not avoided.

CAUTION!
Indicates a possibly dangerous situation that can result in material damage if it is not avoided.

NOTES!
Indicates useful tips and recommendations as well as information for efficient and trouble-free operation.

NOTES!
Do not use a hammer or similar tool when installing the device due to the risk of damage occurring to the bearings or coupling!

WARNING!
If components are missing, do not add these components by own components. Otherwise the declaration of conformity loses its validity.

1.4 Disclaimer

All information and instructions in these (operating and assembly instructions) have been provided under due consideration of applicable guidelines, as well as our many years of experience.
The manufacturer assumes no liability for damages due to:

- Failure to follow the instructions in the operating and assembly instructions
- Non-intended use
- Deployment of untrained personnel
- Conversions of the couplings

In all other aspects the obligations agreed in the delivery contract as well as the delivery conditions of the manufacturer apply.

1.5 Copyright

NOTES!
Content information, text, drawings, graphics, and other representations are protected by copyright and are subject to commercial property rights.
It is strictly forbidden to make copies of any kind or by any means for any purpose other than in conjunction with using the device without the prior written agreement of the manufacturer. Any copyright infringements will be prosecuted.

1.6 Guarantee terms

The guarantee terms are provided in the manufacturer's terms and conditions.

1.7 Customer service

For technical information personnel is available that can be contacted by telephone, fax or email. See manufacturer's address on page 2.

2 Safety

DANGER!

This section provides an overview of all the important safety aspects that ensure protection of personnel, as well as safe and trouble-free coupling operation.
If these safety instructions are not complied with significant hazard can occur.

2.1 Responsibility of the owner

The coupling is used in commercial applications. Consequently the owner of the coupling is subject to the legal occupational safety obligations and subject to the safety, accident prevention and environmental protection regulations that are applicable for the couplings area of implementation. For all subsequently made works by the purchaser on components with fault exclusion the purchaser shall be solely responsible. Warranty claims arising from inadequately performed rework will not be taken over by Johannes Hübner Giessen. Any mechanical rework on components with fault exclusion needs the necessary examination and the written approval by Johannes Hübner Giessen.

NOTE!

The validity of the safety certificates is limited to 20 years.

2.2 Personnel

Installation and commissioning as well as disassembly routines must be carried out by skilled technical staff only.

2.3 Personal protective equipment

Wear personal protective equipment such as safety shoes and safety clothing to minimise risks to health and safety when carrying out work such as mounting, disassembling or commissioning. Adhere to all applicable statutory regulations as well as the rules and standards determined by the owner.

2.4 Intended use

The coupling has been designed and constructed exclusively for the intended use described here.

The function will only be reached when the coupling is carried out according to these instructions. Only use components specified by Johannes Hübner Fabrik elektrischer Maschinen GmbH.

2.5 Non intended use

The function as a safety component can only be achieved if all the limits stated in the instructions are complied with. Exceeding is improper.

2.6 Special dangers

Residual risks that have been determined based on a risk assessment are cited below.

2.6.1 Rotating shafts

WARNING!

Danger of injury due to rotating shafts and hot surfaces!
Touching rotating shafts can cause serious injuries.
Therefore:
Do not reach into moving parts/shafts or handle moving parts/shafts during operation.
Close to protect from injury all access openings in flanges with the corresponding plug screw, and provided you exposed rotating components with protective covers.
Do not open covers during operation. Prior to opening the covers ensure that all parts have come to a standstill.

2.6.1 Exceeding the maximum speed

WARNING!

If the mechanical data according to the table become exceeded, the declaration of conformity loses its validity.

3 Mechanical Data

Specification	Value	Unit
Shock resistance	short time 100 continuous load 10	g
Vibration resistance	Short time 20 (*) continuous load 3	g
Torque	3	Nm
Temperature range	-50 … +120 (HKS and HKDS) -25 … +85 (HKSI and HKDSI)	°C
Max. speed	6000	rpm
Mounting precision	<u>HKS 5 / HKSI 5:</u> axial misalignment: ± 1 mm angle : 0,5° <u>HKDS 5 / HKDSI 5:</u> axial misalignment: ± 1,5 mm radial misalignment: ± 0,5mm	

NOTE!

If the permissible mounting accuracies become exceeded, the load on the coupling increases. The fatigue strength can then no longer be ensured

The coupling is equipped with an emergency runner which allows an emergency run with reduced angular accuracy in the event of overloading (fail safe).

The breakage of an overloaded spring should be monitored by the signal matching of the motor and transmitter signals. If these values deviate from one another, a coupling defect must be assumed by overloading and the entire system must be transferred to a safe state. The coupling must then be checked for damage (see chapter 7.3 inspection schedule “).

(*) For loads more than 10 g, the set screws must be secured with Loctite® thread locker

4 Installation and Commissioning

4.1 Safety note

Note!
Observe the safety instructions contained in chapter 2 when installing and during other work on the coupling!

Personnel
Installation and commissioning must be carried out by skilled technical staff only.

4.2 Technical Notes

Danger!
Do not use a hammer or similar tool when mounting the coupling.

Ambient temperature
The max. permissible ambient temperature must be observed. Otherwise the declaration of conformity loses its validity.

4.3 Required Tools

- Allen key 2 mm

4.4 Preparation of the installation

1. Clean the shafts and check for damage. Repair any damage.
2. Check the existing shaft offset (axial, radial and angle) and adjust with the permissible values.

4.5 Mounting

NOTE!
To avoid overloading the coupling, the limits for mounting accuracy according to chapter 3 must be strictly observed.
To facilitate alignment, we recommend the use of our assembly gauge (see chapter 4.6.)

1. Lightly grease the (motor) shaft
2. Fit coupling onto (motor) shaft. You must be able to mount the coupling without force.
3. Secure the coupling hub on the (motor) shat with a grub screw
4. Lightly grease the encoder shaft.
5. Mount the encoder.
6. Ensure that the coupling is not prestressed as far as possible.
7. Secure the coupling hub on the encoder shaft with a grub screw. For loads more than 10 g, the set screws must be secured with Loctite® thread locker

WARNING!

The spring lamellas must not be overloaded during assembly. For this reason, it is forbidden to act on the hubs by means of hammer or similar tools. Installation must be easy.

4.6 Mounting tools

The alignment of the shafts to each other is facilitated with the aid of the assembly gauge available as an accessory: The coupling fixed with this is optimally aligned during assembly, which facilitates the installation of further components.

1. Insert the coupling into the half shell. Recesses are provided in the half-shells that allow access to the set screws. It must be ensured that these are easily accessible (note the position of the coupling).Tighten the 4 screws.
2. Carry out the coupling assembly according to chapter 4.5.
3. Loosen 4 screws.
4. Remove the half shells.



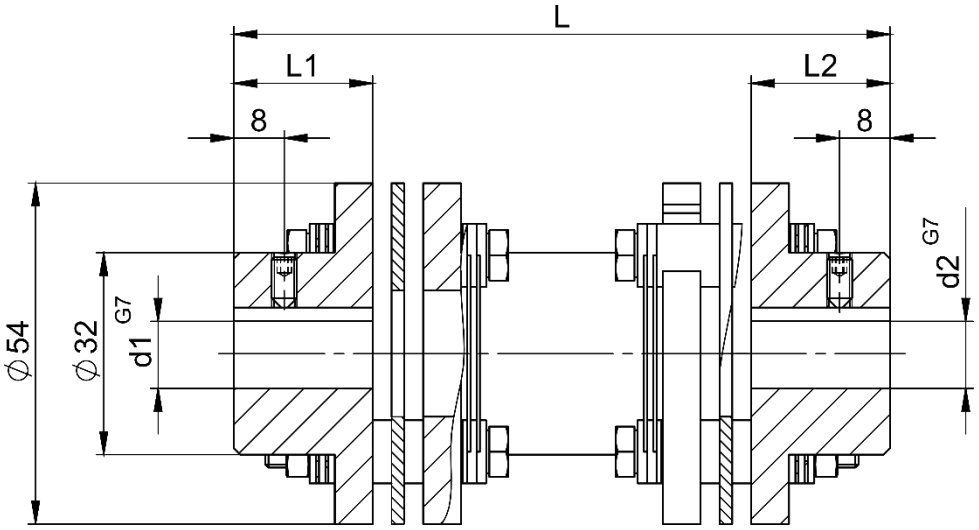
5 Dismantling

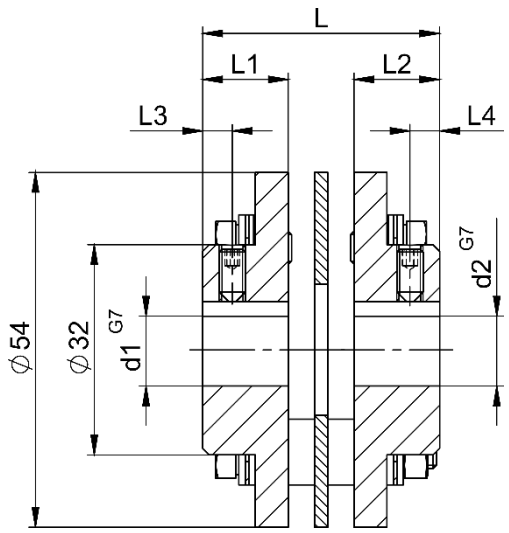
To dismantle follow the installation in reverse order.

6 Mounting protocol

Date	
Serial number	
Fitter	
Signature fitter	

The completed assembly protocol is part of the operating authorization and kept in a safe until the end of the period of use of the coupling.





7 Inspections

7.1 Safety inspections

NOTE/PERSONNEL
Skilled technical staff only are permitted to inspect the coupling and the installation. Observe the safety instructions contained in **Chapter 2** when inspecting or working on the coupling!

7.2 Maintenance Information

The coupling is maintenance free. However, to guarantee optimum fault-free operations we recommend that you carry out the following inspections.

7.3 Inspection schedule

Interval	Inspection
Yearly	Check spring lamellas for damage
	Visual check for visible changes
	Check clamping screws for tightness

WARNING!
A repair may only be carried out by Johannes Hübner Fabrik elektrischer Maschinen GmbH.

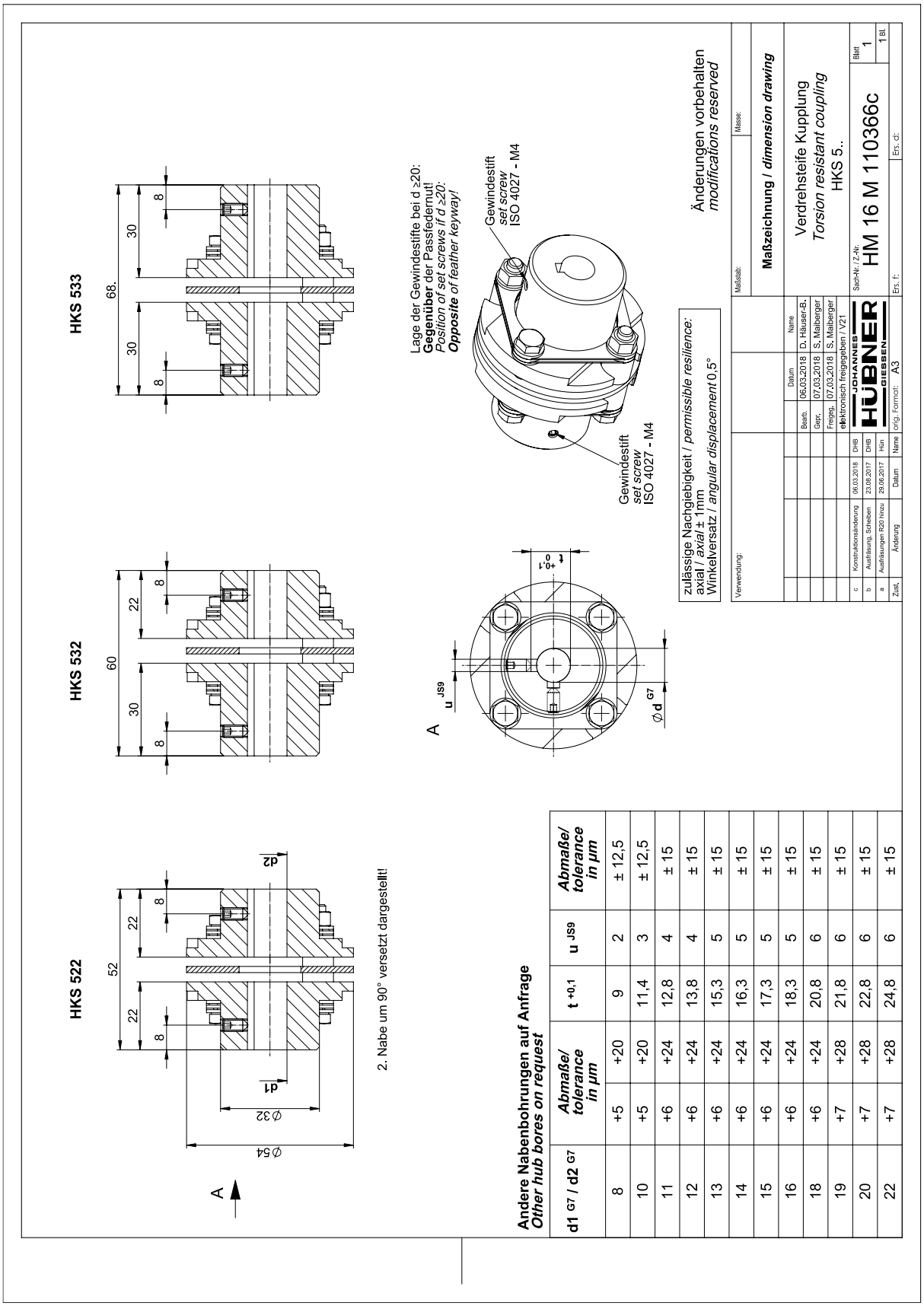
8 Disposal

8.1 Disposal procedure

The manufacturer is not obliged to take back the adapter flange.

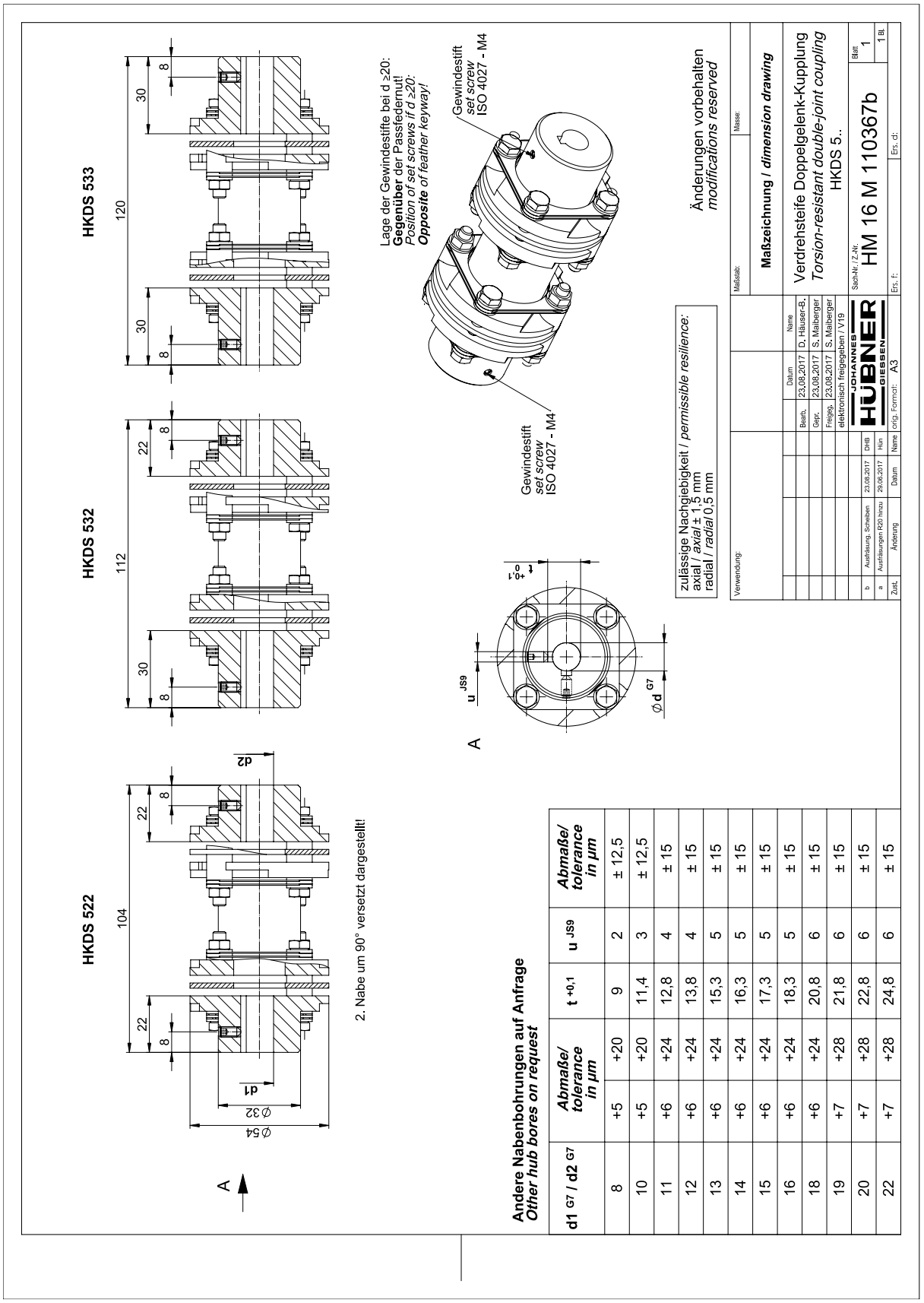
For information on environmentally sound disposal please contact your local authority or a special disposal company.

9 Dimension drawings



Andere Nabenbohrungen auf Anfrage
Other hub bores on request

d1 G7 / d2 G7	Abmaße/ tolerance in µm		t +0,1	u JS9	Abmaße/ tolerance in µm
8	+5	+20	9	2	± 12,5
10	+5	+20	11,4	3	± 12,5
11	+6	+24	12,8	4	± 15
12	+6	+24	13,8	4	± 15
13	+6	+24	15,3	5	± 15
14	+6	+24	16,3	5	± 15
15	+6	+24	17,3	5	± 15
16	+6	+24	18,3	5	± 15
18	+6	+24	20,8	6	± 15
19	+7	+28	21,8	6	± 15
20	+7	+28	22,8	6	± 15
22	+7	+28	24,8	6	± 15



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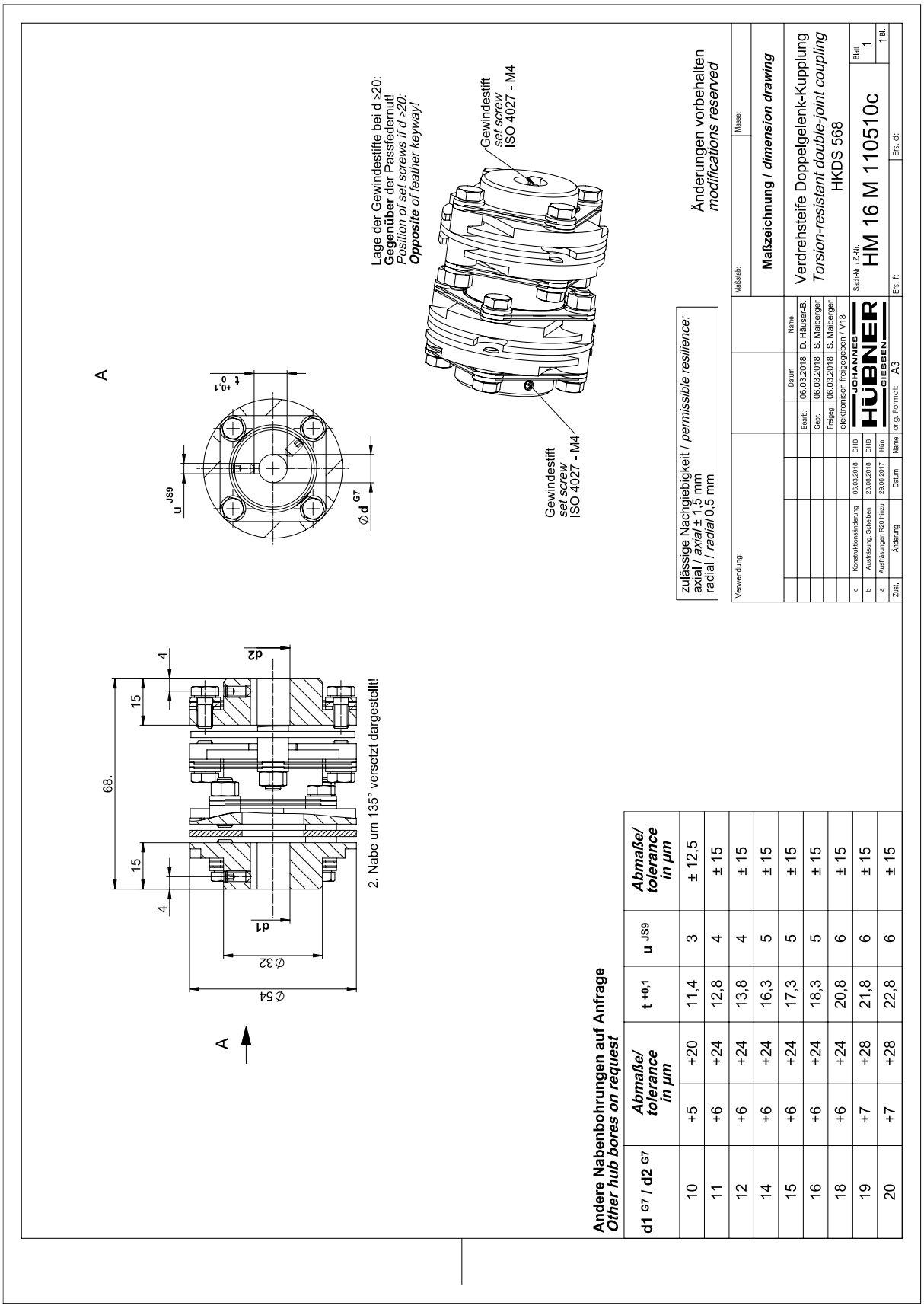

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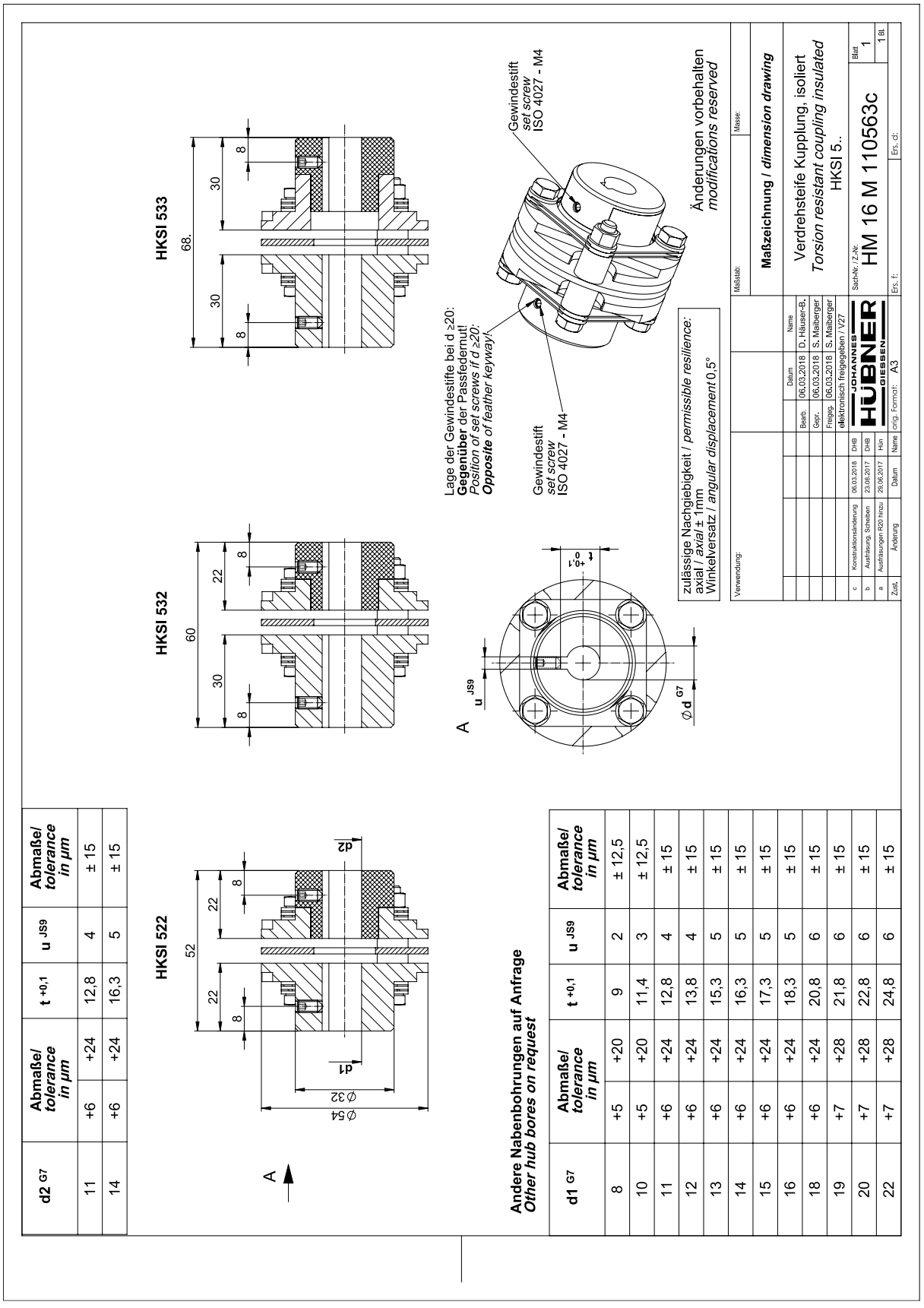

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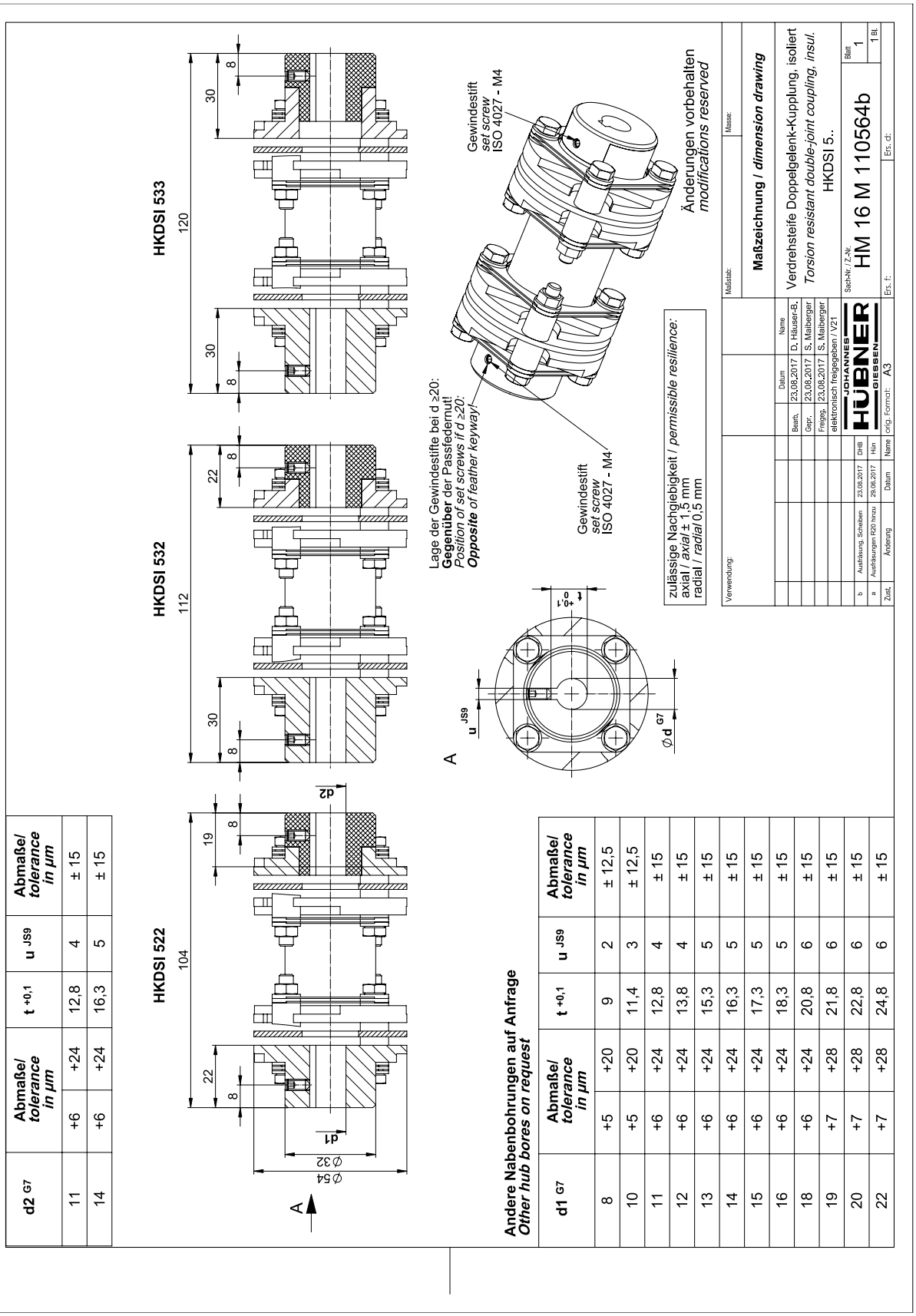

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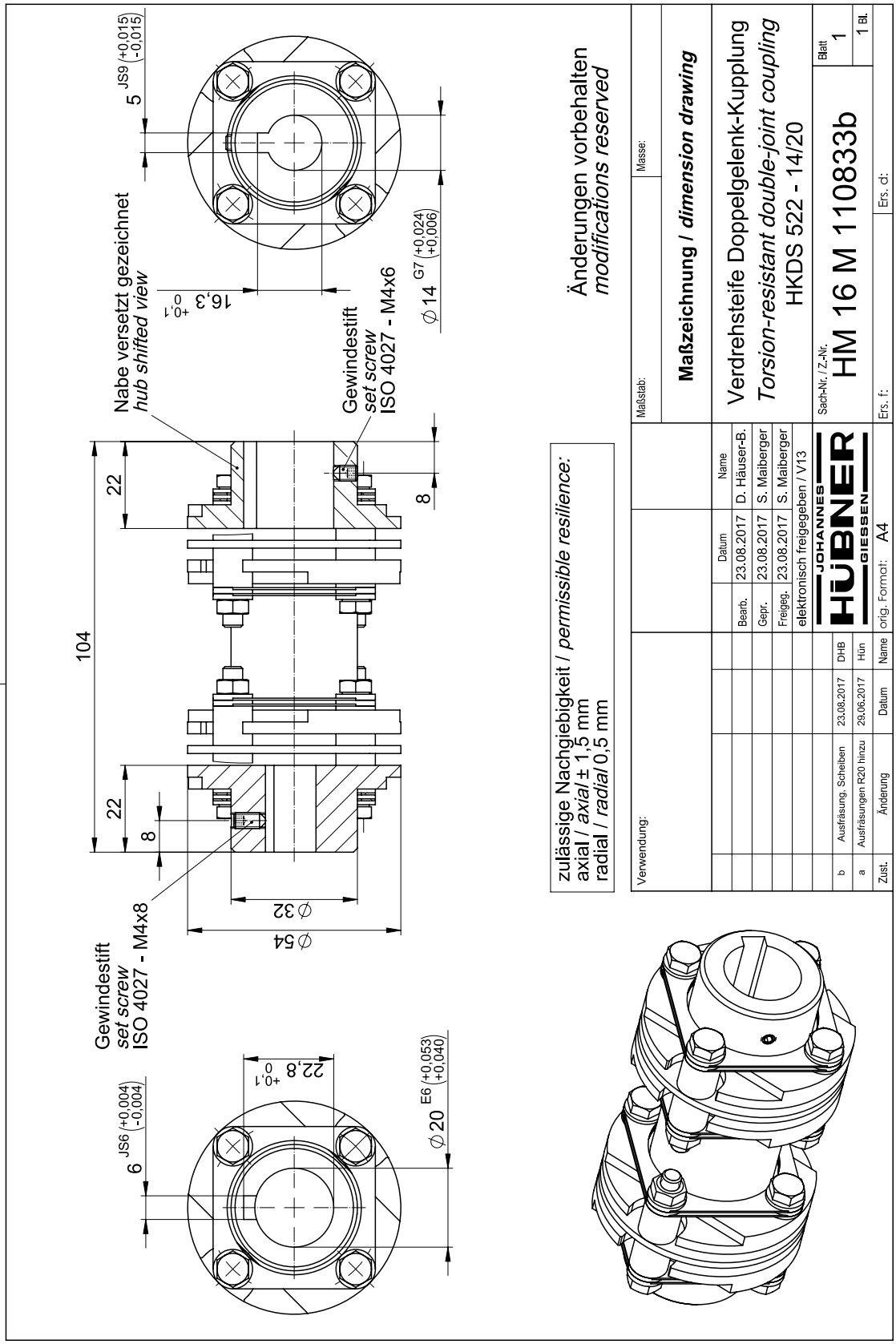
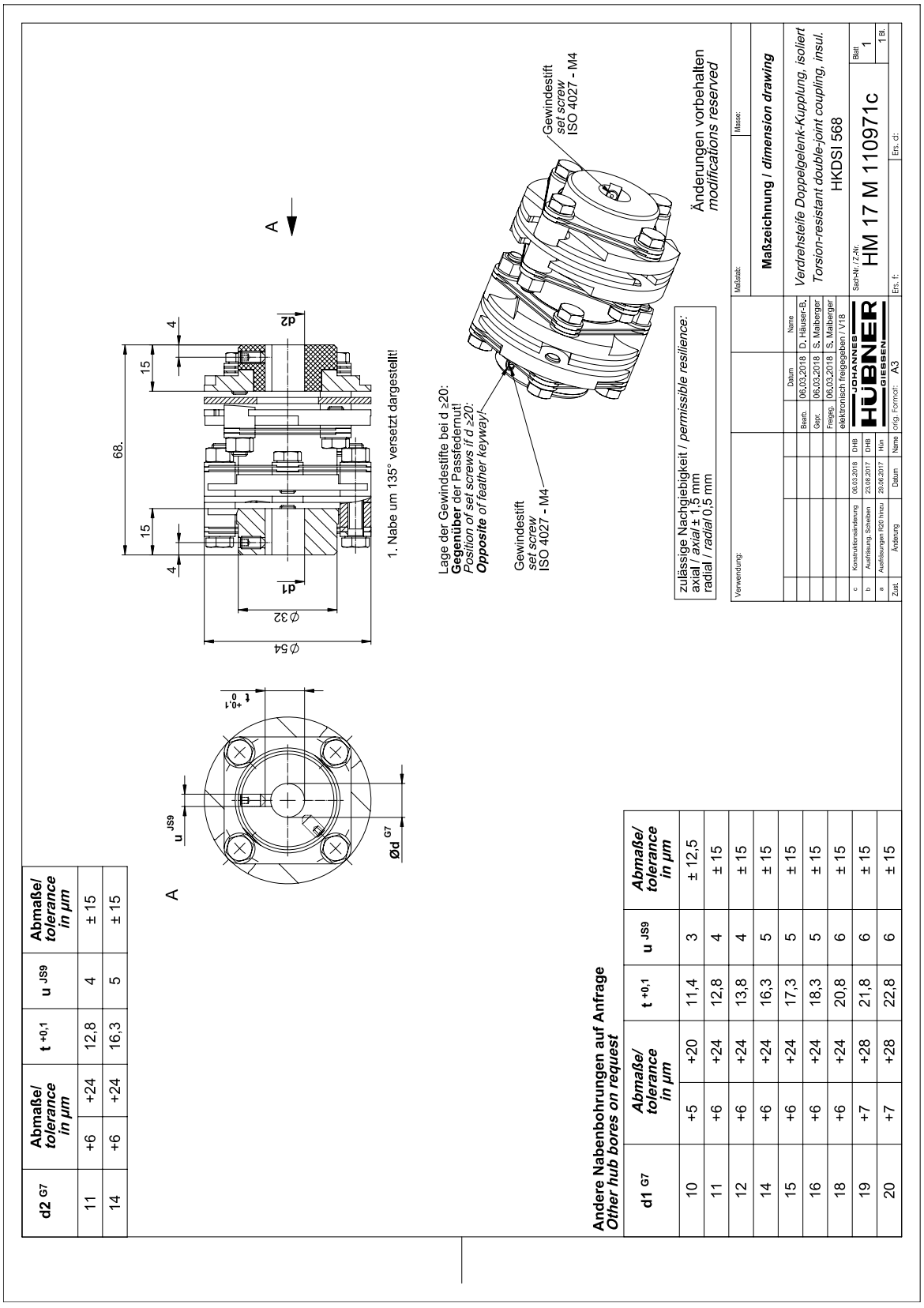

Nabe versetzt gezeichnet
hub shifted view
Gewindestift
set screw
ISO 4027 - M4x6
Gewindestift
set screw
ISO 4027 - M4x8
104
22
22
8
8
ϕ32
ϕ54
ϕ14 G7 (+0,024 +0,006)
16,3 +0,1 0
5 JS9 (+0,015 -0,015)
22,8 +0,1 0
ϕ20 E6 (+0,053 +0,040)
6 JS6 (+0,004 -0,004)
Änderungen vorbehalten
modifications reserved
zulässige Nachgiebigkeit / permissible resilience:
axial / axial ± 1,5 mm
radial / radial 0,5 mm
Verwendung:
Maßstab:
Masse:
Maßzeichnung / dimension drawing
Verdrehsteife Doppelgelenk-Kupplung
Torsion-resistant double-joint coupling
HKDS 522 - 14/20
Sach-Nr. / Z.-Nr.
HM 16 M 110833b
Blatt 1
1 Bl.
Ers. f:
Ers. d:
Bearb. 23.08.2017 D. Häuser-B.
Gepr. 23.08.2017 S. Maiberger
Freigeg. 23.08.2017 S. Maiberger
elektronisch freigegeben / V13
JOHANNES HÜBNER GIESSEN
orig. Format: A4
b Ausfräsung, Scheiben 23.06.2017 DHB
a Ausfräsungen R20 hinzu 29.06.2017 Hün
Zust. Änderung Datum Name



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