Overload protection with clamping hub

for all
chain drives
belt drives

NEW
NEW · NEW
**NEW**
NEW · NEW

load holding torque limiter

- ● *Easy fast assembly*
- ● *Safe, keyless clamping hub*
- ● *Economic and reliable*
- ● *Suitable for high friction work and high torque capacities*

your reliable partner

ROBA®-clamp

Clamping hub load holding overload protection for all chain and belt drives

Characteristics and advantages

❐ *Very easy fast assembly with a single locking screw*

❐ *Safe torque transmission via keyless clamping hub*

❐ *Economic and reliable*

❐ *Suitable for high friction work and high torque capacities*
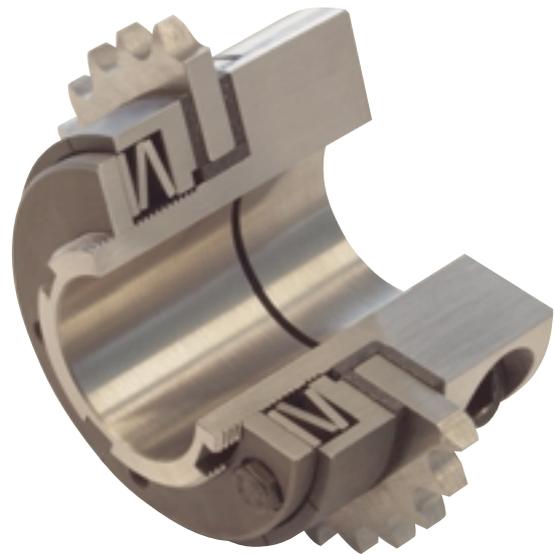
Example: ROBA®-clamp with fitted chain-sprocket (dimensions on request).

Protection for expensive machinery components

The ROBA®-clamp is used as overload protection for machine drives with chain sprockets or belt pulleys. It is used wherever expensive, sensitive motors, transmission units or machinery components require protection against overloads. Should an overload occur, the drive element slips and, therefore, limits the torque. The ROBA®-clamp is used in packing machines, conveyors and material handling systems and equipment, construction machinery, textile machinery, agricultural machinery, in equipment for the chemical industry together with general engineering machinery.

ROBA®-tron speed monitor

The ROBA®-tron monitors „increasing" or „decreasing" speeds. If the adjusted speed is achieved, the ROBA®-tron will signal the drive "off" or it is used for another control function. A signal is transmitted when the control flag passes through the initiator zone and is compared with the pre-set switch-off speed.

Please request separate documents for detailed information.

Function

The drive element (chain-sprocket or V-belt pulley) is put onto the bearing bushing and clamped between the friction linings by means of the thrust washer, cup springs and the adjusting nut. The stronger the cup spring is pressed together by the adjusting nut, the higher is the torque, with which the drive element slips through. An exact adjustment of the torque is described in the installation and operating instructions.

Rule of thumb:

ROBA®-clamp Type 106.11_ for large friction work and low torque (cup springs with single layer, single applied force);

ROBA®-clamp Type 106.21_ for medium friction work and higher torque (cup springs with double layer, double applied force);

ROBA®-clamp Type 106.31_ for small friction work and very high torque (cup springs with triple layer, triple applied force).

Simple construction – High quality

The ROBA®-clamp is despite its simple construction a high-quality machine component. It is fully machined and phosphated and, therefore, protected against rust. The ROBA®-clamp, a rotating component, fits very easily into all drive systems as a result of its smooth construction. It is particularly suitable for attachment to the outside of machines and for those systems which must be kept clean easily. The ROBA®-clamp and all other ROBA®-slip hubs are designed in such a way that they can be adapted very easily to very varied working conditions, e.g. high slipping frequency and low torque or low friction work and extremely high torque, as well as intermediate stages of torque and friction work, and the desired service life. (see also „rule of thumb" mentioned below).

ROBA®-slip hubs - Quality standard with friction type protective elements

❐ The short robust hub ensures compact overall dimensions.

❐ Torque transmission via four wide dogs – absolutely reliable even under shock or reversing load conditions.

❐ Asbestos free friction linings with a large surface area together with low wear rate ensure a long working life.

❐ Adjusting nut together with graduation scale for simple torque setting and adjustment for wear.

❐ Self contained torque adjustment nut assembly preventing unintentional rotation of the adjusting nut and modification of the torque adjustment.

❐ Low rate cup springs maintain a minimal torque reduction due to wear.

❐ Alternative spring layers ensure a wide torque range per size.

❐ Bronze bearing bushing can be shortened to suit the width of the drive element.

❐ The ROBA®-tron overspeed monitor prevents too lengthy slippage of the drive elements or is used to monitor chain breakage on the driven unit.

ROBA®-clamp

Sizes 0 to 2
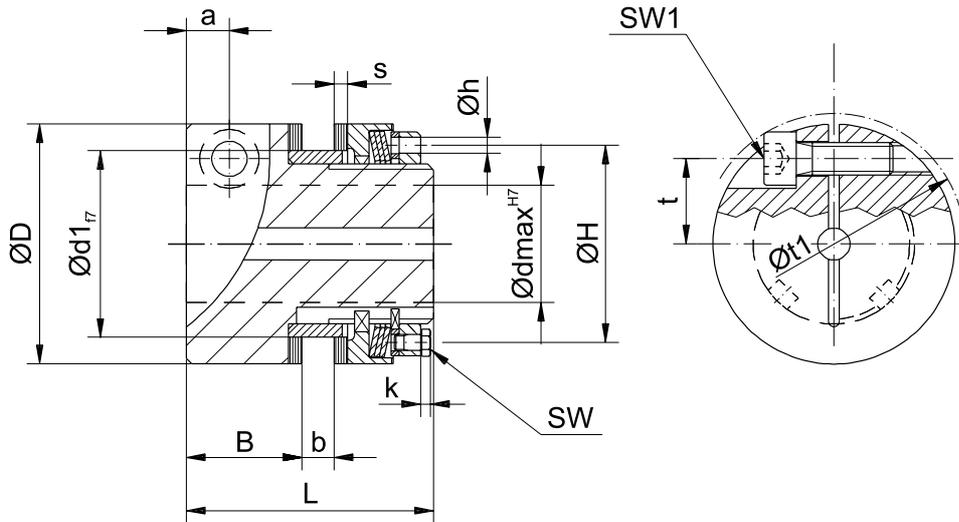
Type 106._ _ _

Technical data and dimensions

Size	Limit torque for overload			Speed rpm		Weight pilot bored	Tightening torques for clamping screw SW$_1$
	Type 106.11_	Type 106.21_	Type 106.31_		max. difference-speed		
	Nm	Nm	Nm	n$_{max}$		kg	Nm
0	2 – 10	10 – 20	18 – 30	8500	500	0,5	16
01	6 – 30	30 – 60	60 – 90	6600	500	0,85	41
1	14 – 70	70 – 130	130 – 200	5600	500	1,25	83
2	26 – 130	130 – 250	250 – 400	4300	500	2,3	145

Size	a	B	b$_{min}$	b$_{max}$	D	d$_1$ H8*	d$_{min}$[3] from[5]	from[6]	d$_{max}$
0	8	21,5	2	6	45	35	7	12	22
01	10	26	3	8	58	40	–	12	25
1	12	30	3	10	68	44	12	20	28
2	14	34	4	12	88	58	15	20	40

Size	H	h	k	L	SW	SW$_1$	s	t	t$_1$
0	37	3	–	46	2	5	2,5	16	50
01	46	5	–	55	2,5	6	3	19	62
1	50	5	1,3	65	3	8	3	22	74
2	67	6	3	72	10[1]	10	3	30	93

* Fit indication H8 refers to bore of the output element.

We reserve the right to make dimensional and design alterations.

Order example:

To be included when ordering, please state	Size	Type	Bore Ø d^{H7}	Width of the drive element b	With speed monitoring system
Order number:		1 0 6 . _ _ _			

0 ÷ 2
* Lower torque range 1
* Medium torque range 2
* High torque range 3
Standard friction lining 1
Friction lining for oil bath [2] 4
Special low-friction material [4] 5
Adjusting nut standard 0
Adjusting nut with radial adjustment 1

Depending on size; when not stated, we deliver the bearing bushing for maximum overall width b$_{max}$.
For smaller drive elements the bearing bushing is shortened.

depending on size

1) Hexagon head cap screw DIN 933
2) Attainable torque on request 30 % of the Type 106.31_
3) Observe shaft loading
4) Only low torque range (Type 106.11_) permissible. Attainable torque 50 %
5) Transmittable limiting torque = 60 % of the Type 106.31_
6) Transmittable limiting torque = 100 % of the Type 106.31_

Example: Order number 2 / 106.210 / 30 / 10