

English translation of German original

Technical Data Sheet TI-B20

Spring-base for SITEMA - Safety Brakes KSP

General Information

Purpose

SITEMA Safety Brake KSP can in normal cases only be unlocked if their clamping system is not under load. This is a matter of principle and complies with the relevant safety regulations.

However this advantage does not necessarily apply to small loads with a simultaneously high release pressure (for details see minimal loads F6 in „*Technical Data Sheet TI-B11*“).

If, however, the slide or any other load carrying device overshoots after reaching its top cut-off position, or moves slightly downward for any particular reason, the Safety Brake KSP is subjected to a partial load. In practice this means that the slide must first be raised before a closing movement of the press is possible. This effect, often found to be disturbing and time-wasting, can be avoided by not bolting the Safety Brake KSP directly to the machine frame, but rather on a spring-base.

Solution

The housing (1) is securely fixed to the machine frame. Inside this housing the flange plate (2) which bears the Safety Brake KSP, is free to move vertically (stroke "h") as well as transversely (by the permitted eccentricity of "x"), and is allowed to tilt. The Safety Brake KSP when released (i.e. not under load) is pressed upward by the spring (3), against the stop. If the slide should settle slightly (due to leakage, for example) while the Safety Brake KSP is engaged, only the spring force — which is very low in comparison to the holding force — is exerted on the Safety Brake KSP. In this case, the Safety Brake KSP can be released without an upward movement. Only when the lowering movement exceeds stroke length "h", the full weight of the slide will be borne by the Safety Brake KSP. Now it is possible to release the Safety Brake KSP after only a short upward movement.

Note:

The overall lowering path, after which the slide will be secured mechanically, is increased by the distance h (for h see picture at *page 2*). This amount is to be taken into consideration when making safety analyses for engineering purposes. Special note must be made of this in the operating instructions for the machine.

Advantages

Raising the slide before the lowering movement is no longer required, even if a leakage should occur at the cylinder seals.

The **spring-base also compensates for certain misalignment** between the slide guide and the clamping rod. Other methods are not necessary in this case.

There are two alternatives for **attaching** the Safety Brake KSP to the **machine frame**. Either using threaded holes arranged identical to the ones on the clamping device or the externally attached shoulder which engages with the coupling flange.

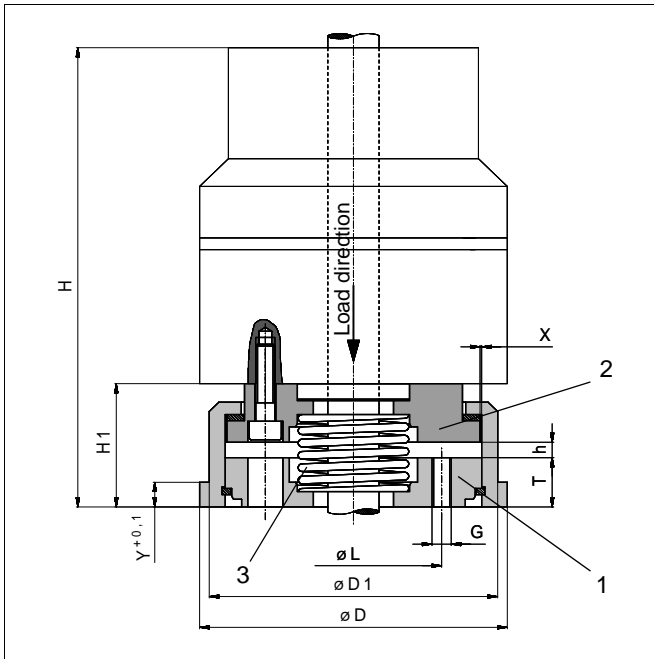
Mounting

Normally the the spring-base is factory-mounted to the Safety Brake KSP, ready for use. For retrofitting, the spring base is supplied fully assembled and just has to be attached on the attachment side of the Safety Brake.

The electric control of the Safety Brake KSP unit is described in „*Technical Informationen TI-B10*“. The required release pressure is 4,5 bar. Pressure must be supplied via a flexible line.

Dimensionen

For these pneumatic version the connecting hoses often rather small and flexible. In order to prevent kinking or squeezing, the suiting spring bases internally have an anti-twist protection.



Dessin 1: Spring base for Safety Brake KSP

Safety Brake	Spring-base	H	H1	D	D1	Y	L	G	T	h	X
	Ident.-No.	mm	mm	mm	mm	mm	mm		mm	mm	mm
KSP 16	FS 016 30	149	40	90	96	8	55	6xM6	16	5	0,5
KSP 22	FS 022 30	184	47	114	120	10	60	6xM6	22	5	1
KSP 25	FS 025 30	192	50	134	140	10	70	6xM8	21	5	1
KSP 28	FS 028 30	233	60	178	184	12	80	6xM8	29	6	1

Subject to modification without prior notice