

## Safety nut SIFA



### Function

A safety nut is designed for use where stripping and break up of the thread could cause a hazard to persons.

A safety nut can also provide protection for other equipment against the consequences of machine failures and downtimes.

### Wear

Once the wear exceeds max. 25% of the screw pitch, the load nut (R) or the gearbox (S) must be replaced.

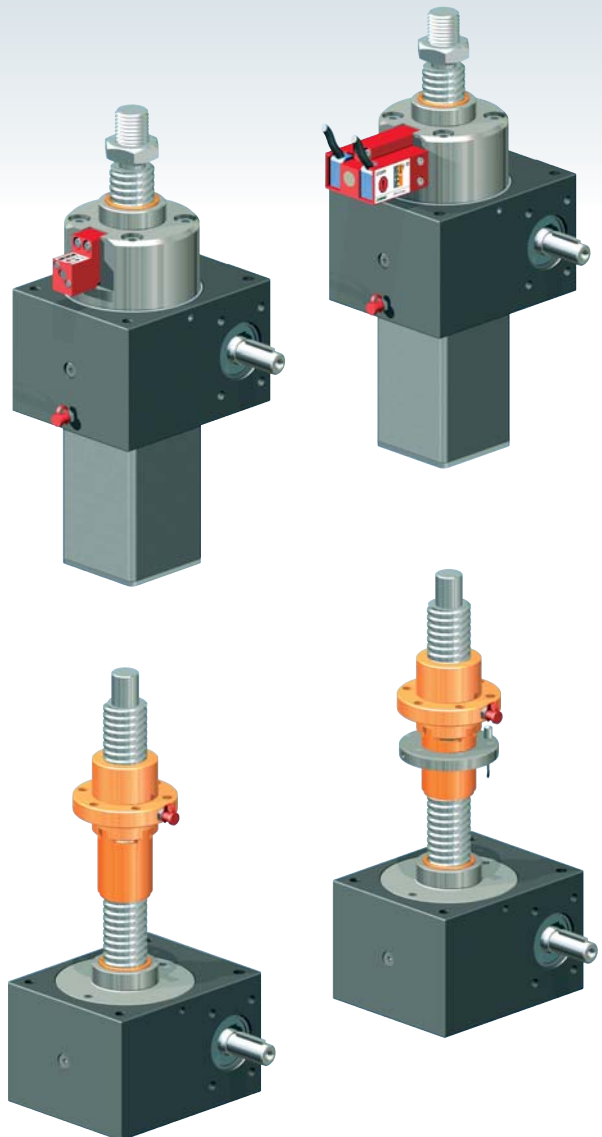
### Monitoring

Wear and thread play should be checked and documented at regular intervals (depending on the duty cycle).

This allows the fitting of replacement parts to be planned ahead, reducing unscheduled system downtime.

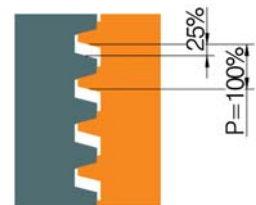
### Electrical monitoring

Electrical monitoring gives a signal when wear reaches approx. 25%. This signal can be displayed immediately at a central control point. Replacement of the worn parts can then be scheduled.



Screw jacks	Pitch P	max. permissible wear/ thread play* (25% of P)
[TrØxP]	[mm]	[mm]
Tr16x4, Tr18x4, Tr20x4	4	1.0
Tr30x6	6	1.5
Tr40x7	7	1.75
Tr 55x9	9	2.25

\* Identical for double pitch screws (same thread flank thickness)



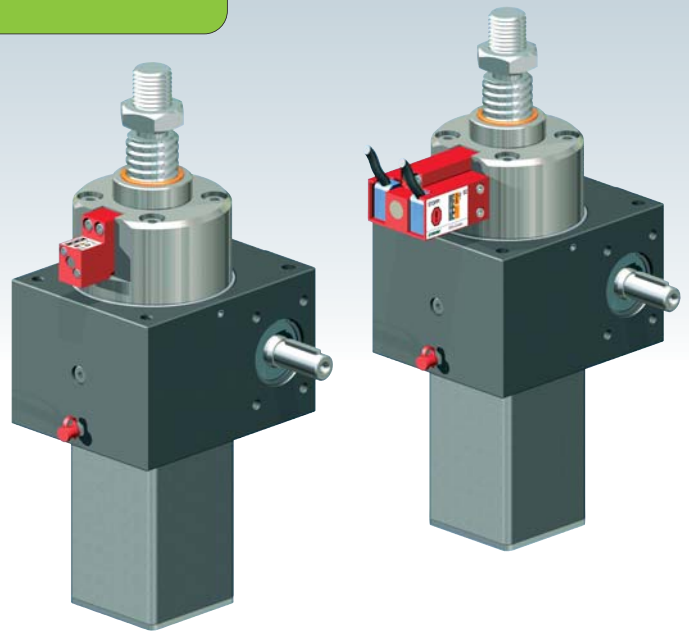
max. 25% wear



We have patents registered or pending for a range of functions and components.



SIFA-S translating screw

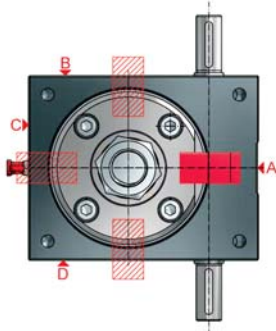
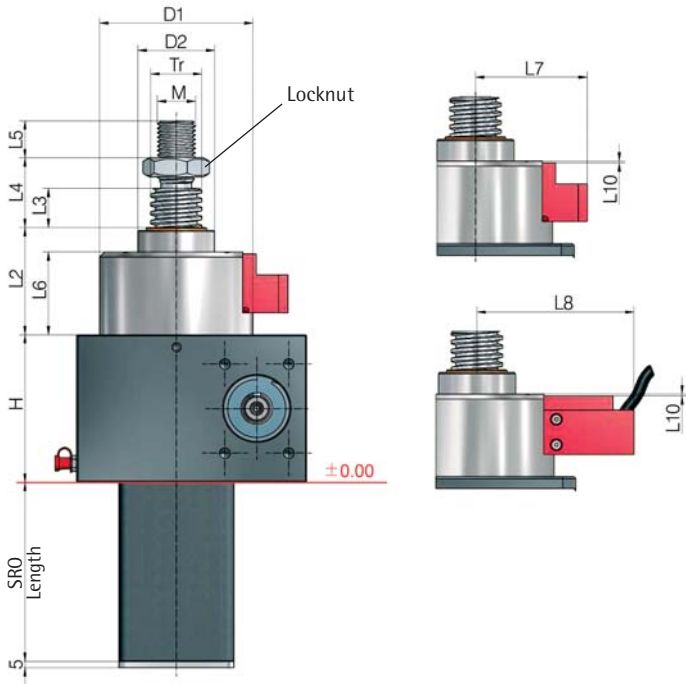


Function S version



The load is borne by the worm wheel via the screw. If the worm wheel screw thread wears through, the SIFA restrains the screw. The load remains supported.

Direction of loading, compressive and tensile  
The new SIFA-S operates equally in both compressive and tensile directions of loading!



Ordering code:

GSZ-50-SN-SIFA-OP-A

Version  
SN or SL  
Monitoring  
OP: visual  
EL: electrical (wear, thread stripping)  
ELV: only wear  
ELD: only thread stripping  
NO: without any monitoring  
Position  
A (standard), B, C or D  
(can also subsequently be rotated steplessly through 360°)

**i** further technical information: Page 75

Screw jack	Stroke travel/rev.		Tr thread	H	D1	D2	L2	L3 <sup>1)</sup>	L4 <sup>1)</sup>	L5	L6	L7	L8	L9	L10	M
	SN	SL														
GSZ-10	1	0.25	20x4	74	81	39	74	10	22	20	58	72	108	21	1	M14
GSZ-25	1	0.25	30x6	82	92	46	76	10	26	22	59	79	114	25	1	M20
GSZ-50	1	0.25	40x7	116	120	60	84	10	34	29	65	88	123	58	1	M30
GSZ-100	1	0.25	55x9	160	135	85	103	20	48	48	73	95	130	80	9	M36

<sup>1)</sup> See Section 8 for extension if bellows or spiral spring is fitted

## SIFA-S, monitoring

### Visual

#### Monitoring

Wear should be checked and documented at regular intervals. This allows the fitting operation for replacement to be planned in good time so as to avoid system downtime.

#### OK

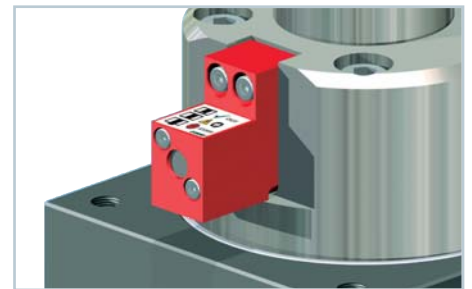
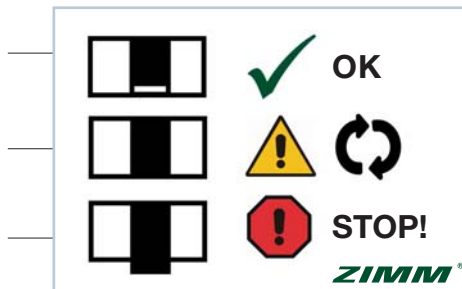
Wear still <25% of P

#### CAUTION!

max. permissible wear reached –  
Replace the gearbox

#### STOP!

Wear >25% or thread already worn through –  
Stop operation immediately!



### Electrical

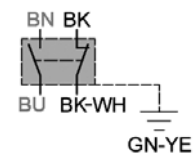
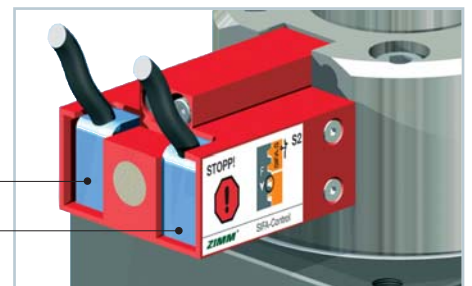
#### WARNING! Switch S1

At 25% wear the limit switch S1 trips. The customer must detect this signal. This enables substitution to be planned well in advance and therefore prevents any unnecessary downtime.



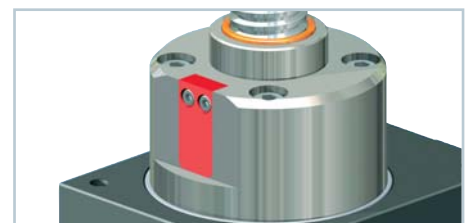
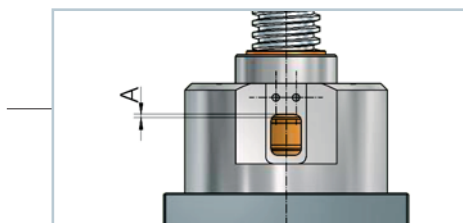
#### STOP! Switch S2

If after the first signal operation of the jack continues, the nut will continue to wear until the thread is worn through. When the thread is worn through, the safety nut takes the load. The limit switch S2 trips. The customer must detect this signal and stop the system.



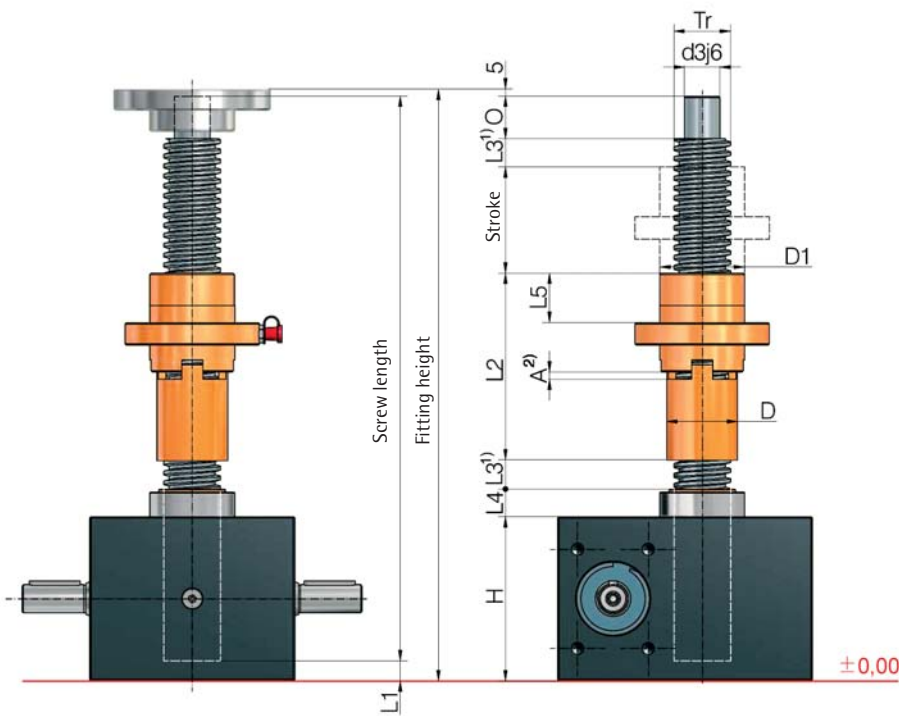
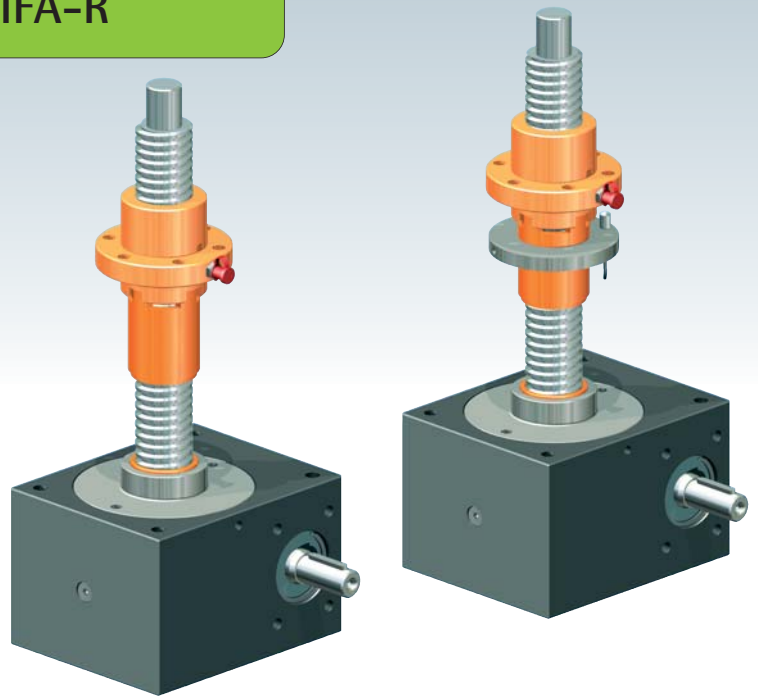
### Without any monitoring

If the version used has no monitoring, the dimension A must be measured and documented when new, then regularly checked and documented.





SIFA-R rotating screw



Function R version



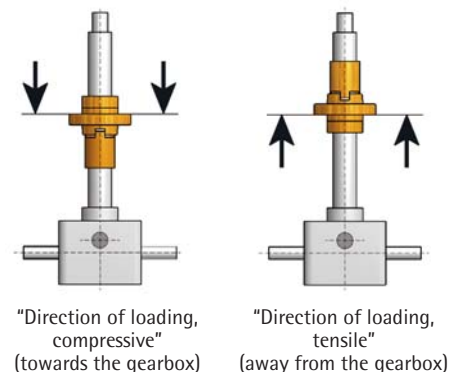
The load is borne by the duplex nut. The safety nut runs alongside the duplex nut, bearing no load. If the nut thread is worn through due to wear, the SIFA takes the load on the duplex nut.

**Direction of loading, compressive or tensile**  
A drawing showing the direction of loading is necessary in order to ensure the safety function. The SIFA-R operates in only one direction of loading.

- further technical information: Page 75
- see the respective screw jack page for all other dimensions
- see Section 4 for accessories
- SIFA in combination with self-aligning nut PM available on request

Screw jacks	Tr thread	H	D1	D	d3j6	O	L1	L2	L3 <sup>1)</sup>	L4	L5	A <sup>2)</sup>
GSZ-2	16x4	50	26	22	10	12	3	70	10	11	20	3
GSZ-5	18x4	62	29	24	12	15	8	70	10	12	20	3
GSZ-10	20x4	74	39	28	15	20	8	84	10	16	20	3
GSZ-25	30x6	82	46	38	20	25	5	95	10	17	23	4
GSZ-50	40x7	116	60	50	25	30	13	133	10	19	36	4
GSZ-100	55x9	160	85	65	40	45	10	173	20	30	54	6

Make sure you fit it the right way up:

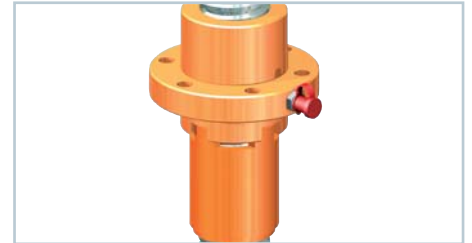
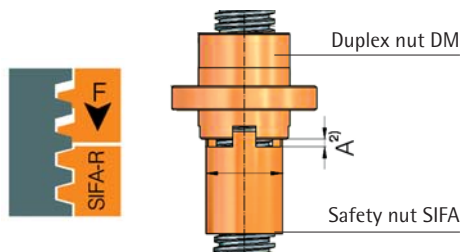


<sup>1)</sup> See Section 8 for extension if bellows or spiral spring is fitted  
<sup>2)</sup> approx. original setting, must be measured and documented by the customer, and referred to when checking

## SIFA-R, monitoring

### Visual

Dimension A is approx. the original setting. Dimension A must be measured and documented by the customer, and referred to when checking. This enables substitution to be planned well in advance and therefore prevents any unnecessary downtime. When the thread is worn through, take the equipment out of service immediately.



### Electrical

The initiator must be set that it switches off when the load nut reaches 25% of the wear. This enables a replacement to be planned well in advance and therefore prevents any unnecessary downtime. When the thread is worn through, take the system out of service immediately.

