



*Tool Holding Without Limit*

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and Ireland



# PULLING HEADS

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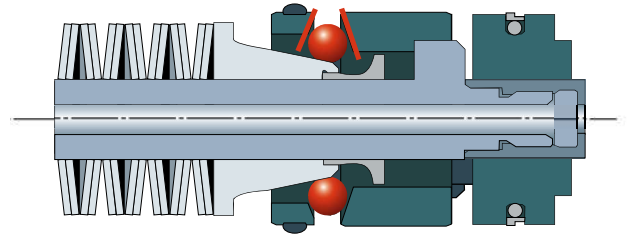
## ORDER CODE

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Design form											

# SK PULLING HEADS

## OTT-JAKOB STEEP TAPER – THE ADVANTAGES

OTT-JAKOB steep taper clamping systems feature a multiple intensification of the spring force. The protected, maintenance-free position of the force intensifying mechanism at the back of the spindle shaft ensures reliable functionality over the entire life span of the clamping system.



Power drawbars have the following advantages over spring drawbars:

- ▲ High pull-in forces and compact dimensions
- ▲ Lower release forces, which results in less spindle bearing load and the opportunity to use smaller unclamping units
- ▲ Easier to balance due to smaller masses
- ▲ Self-locking effectively prevents frictional corrosion and vibration damage to the spindle taper

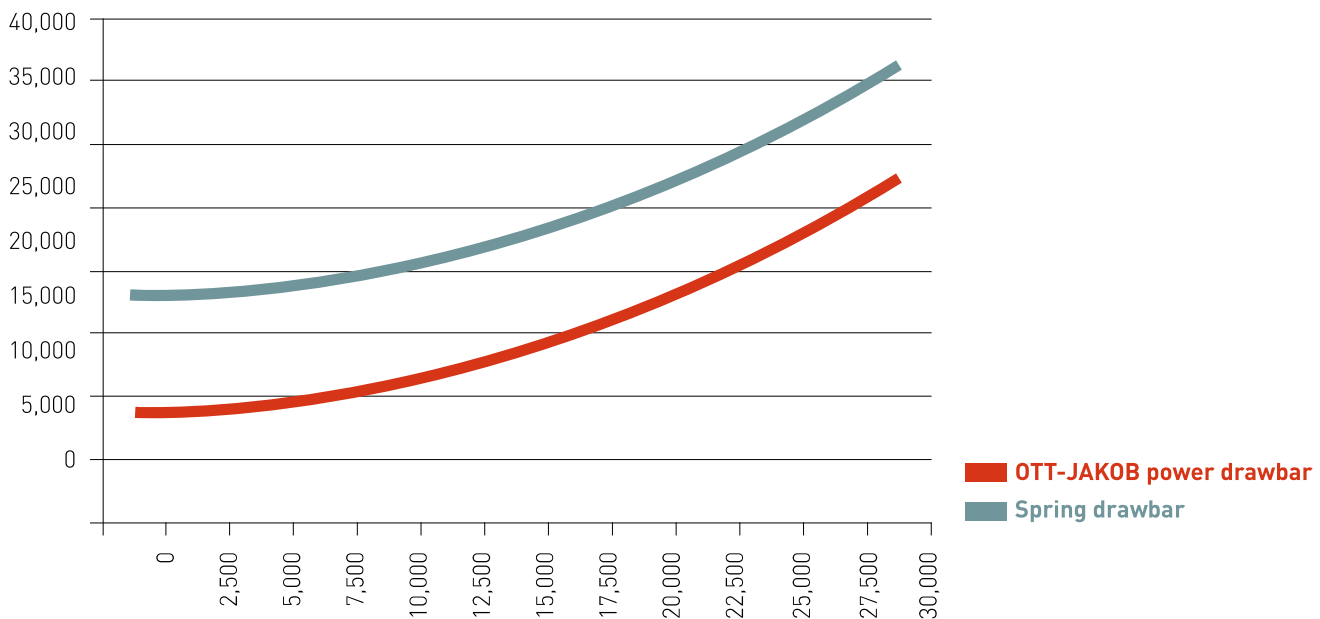
## Unclamp force as a function of RPM

### Parameters

Interface: SK40 DIN

Bearing  $\varnothing$  at front: 65 mm

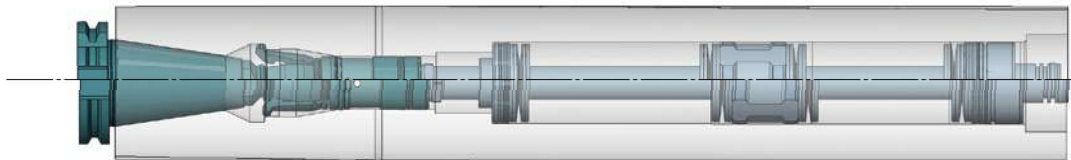
### Unclamp force



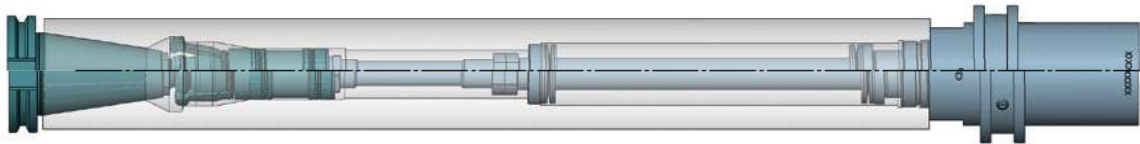
## DESIGN FORMS



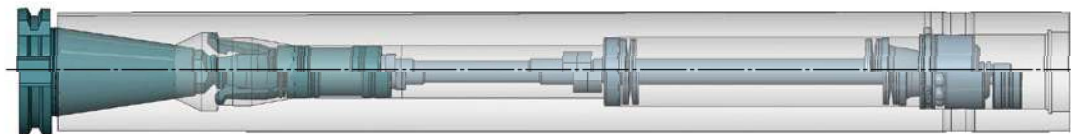
With our spring drawbar, there is no intensification of the spring force; i.e. there is a direct connection between the spring and the clamped tool. If the tool is subjected to higher pull-out forces during the machining process, the quality can be impaired. Compared to OTT-JAKOB power drawbar systems (ES/IS), stronger springs are required to reach the nominal force. The resulting disadvantages are higher space requirements and, depending on the system, a higher unclamping force. On the positive side, there is the lower unclamping stroke compared to power drawbar systems.



With the inside spindle drawbar (ES), the gears are located in a cylinder behind the spindle shaft. Due to the position of the gears, a simple and uncomplicated position monitoring of the clamping system is possible (different types of signal ring are available). The ES design is suitable for applications involving spindle speeds of up to 10,000 rpm.

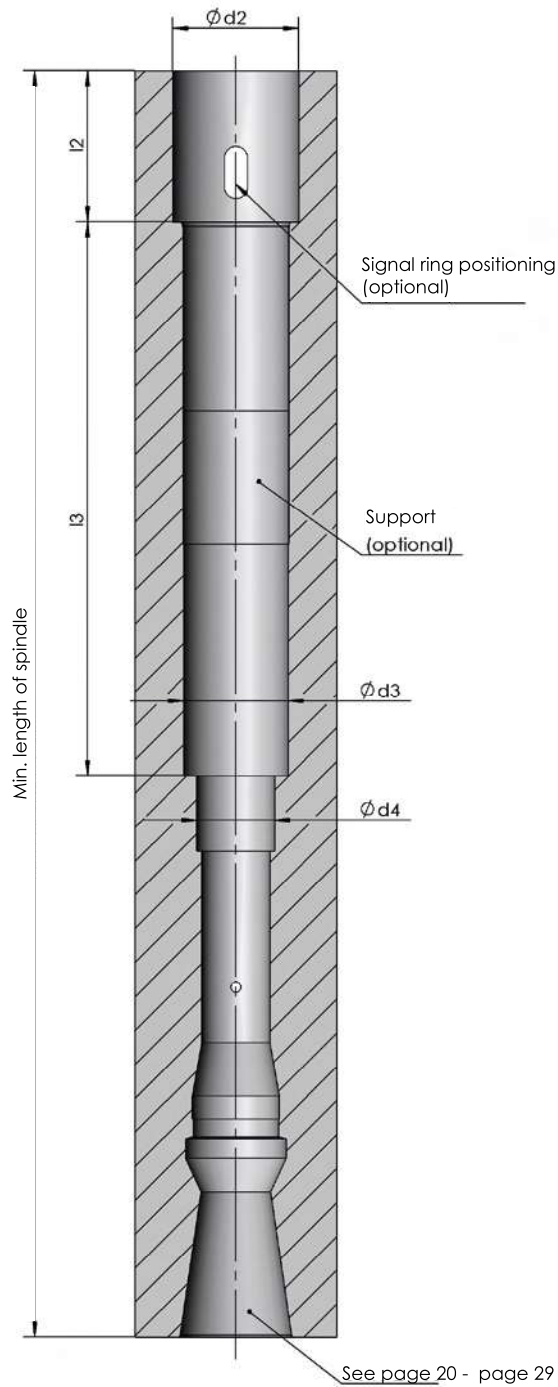


In order to ensure that our steep taper clamping systems can also be used at higher RPMs, the structure of the spindle integrated spring power drawbar was kept as compact as possible by the force intensifying mechanism built into the spindle shaft. This allows for rotation speeds far higher than 10,000 rpm.



Design form

INSIDE CONTOUR OF FS PULLING HEADS



## DESIGN FORM

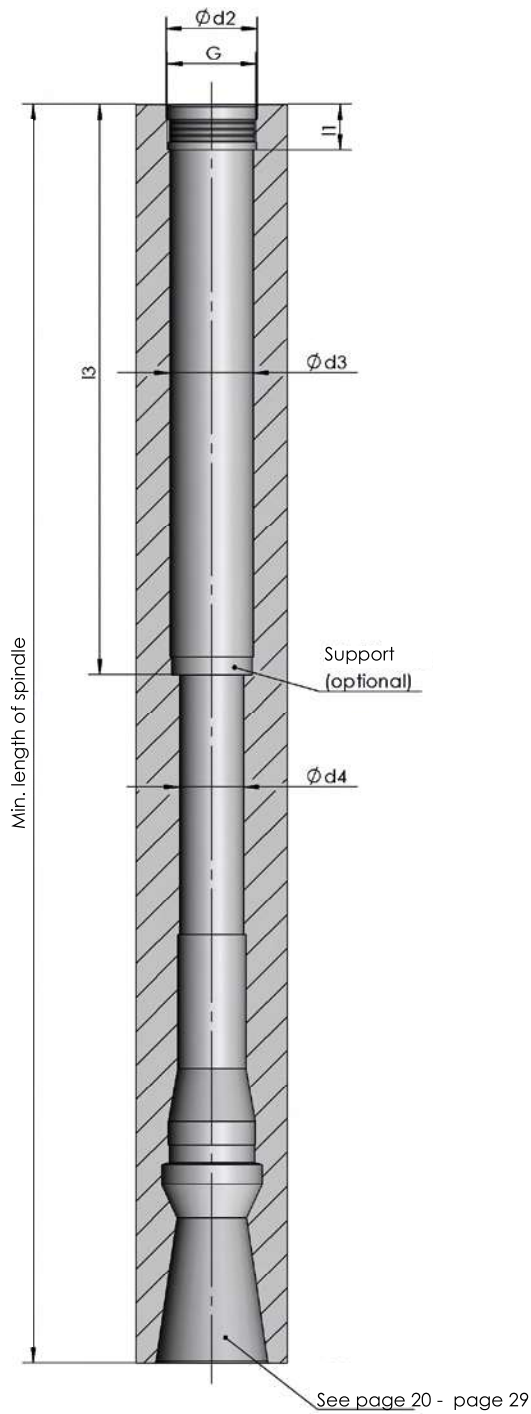


PULLING HEAD	Nominal size	30	40	50	60
	$\varnothing d_2$	23,5	42	58	80
	$\varnothing d_3$	23,5	42	58	73
	$\varnothing d_4$	as required			
	$l_2$	20	33	33	50
	$l_3$	138	217	200	350
	Min. length of spindle	280	436	500	720

The dimensions above are example values. They can be adjusted for very long or short clamping systems or changed to meet your requirements if you have extremely narrow spindle shafts. The contour can also be adjusted to suit customer requirements.

Design form

INSIDE CONTOUR OF ES PULLING HEADS



## DESIGN FORM



PULLING HEAD	Nominal size	30	40	50	60
	G	M35 × 1.5	M35 × 1.5	M45 × 1.5	M75 × 1.5
	$\varnothing d_2$	36	36	48	76
	$\varnothing d_3$	30	33	41.5	73
	$\varnothing d_4$	19	27	30	56
	$l_1$	17	18	20	26
	$l_3$	118.2	226.5	257	396
	Min. length of spindle	260	415	500	780

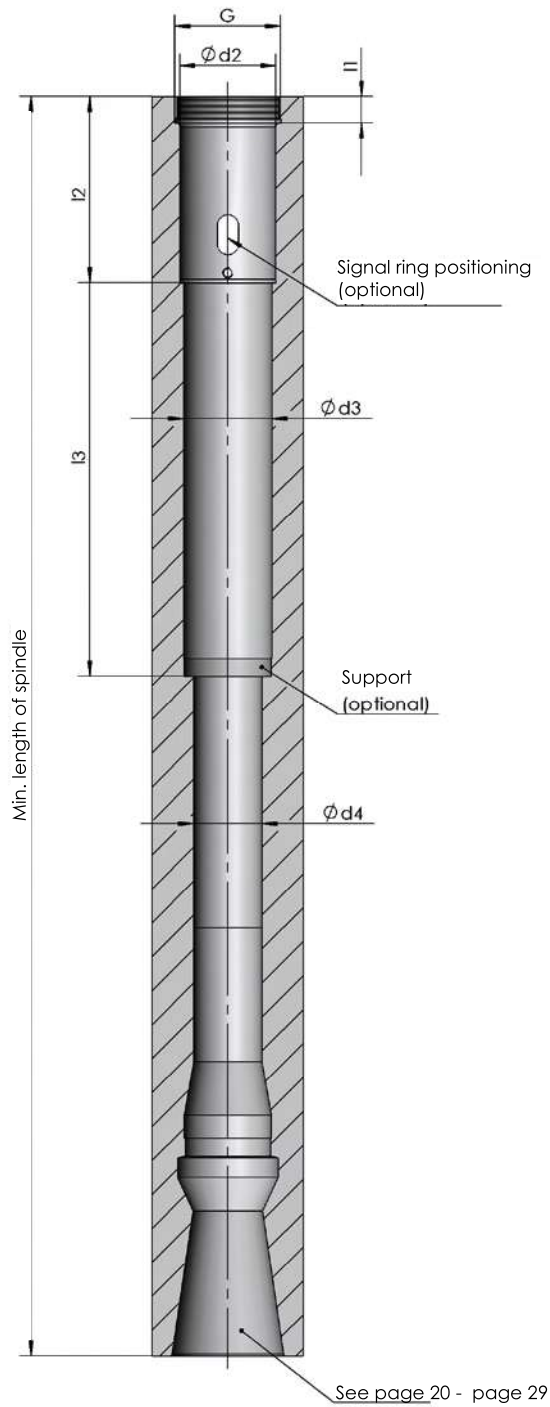
The dimensions above are standard values. They can be adjusted for very long or short clamping systems or changed to meet your requirements if you have extremely narrow spindle shafts.

ORDER CODE

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Design form

INSIDE CONTOUR OF IS PULLING HEADS



## DESIGN FORM

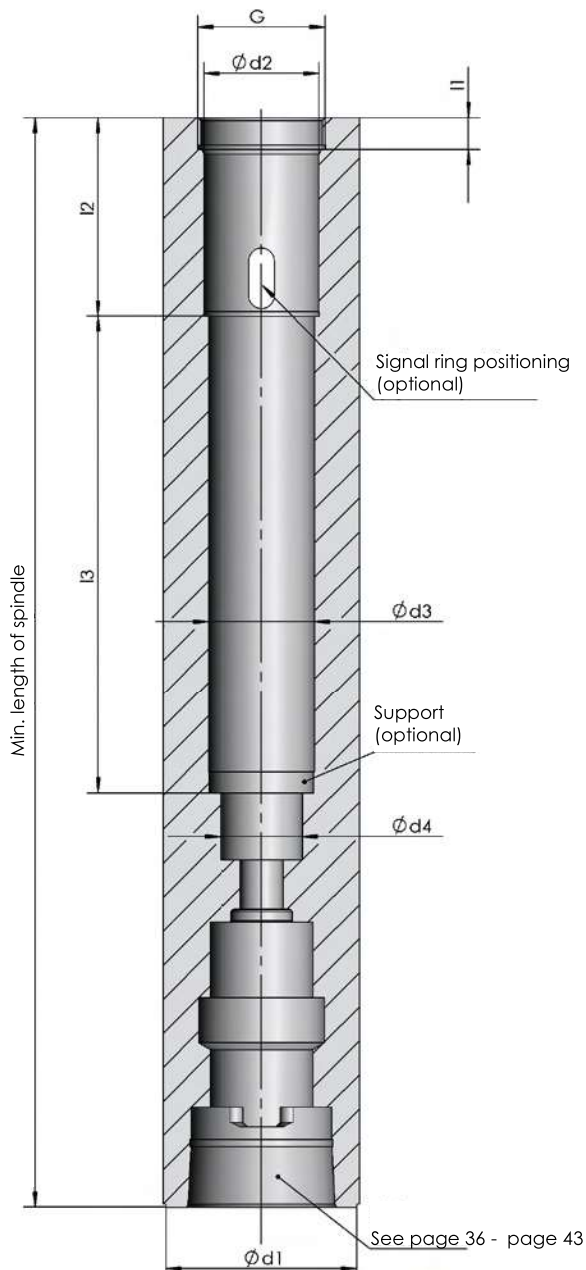


PULLING HEAD	Nominal size	30	40	50	60
	G	M42 × 1.5	M42 × 1.5	M52 × 1.5	M85 × 1.5
	$\varnothing d_2$	38	38	48	80
	$\varnothing d_3$	35	35	41.5	73
	$\varnothing d_4$	19	27	30	52
	$l_1$	10.5	10.5	14	17
	$l_2$	74	74	100.5	135
	$l_3$	145	156.1	271	On request
	Min. length of spindle	360	420	610	On request

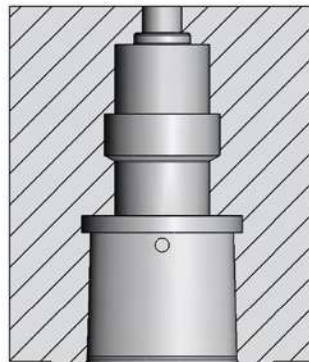
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# HSK, PSC, TS (KM4X™) PULLING HEADS

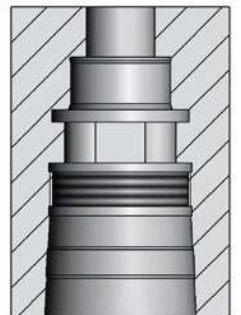
## INSIDE CONTOUR OF HSK PULLING HEAD



PSC holder



TS (KM4X™) holder



The adjacent table does not apply to PSC and TS (KM4X™); values available on request.