

# STEERING COLUMNS TYPE KK...



The M+S Hydraulic KK Steering Columns transfer the torque from the steering wheel of the vehicle to the HKU, HKUS or other steering units of the same class. The KK steering columns consist of a pipe in which the control shaft is centred.

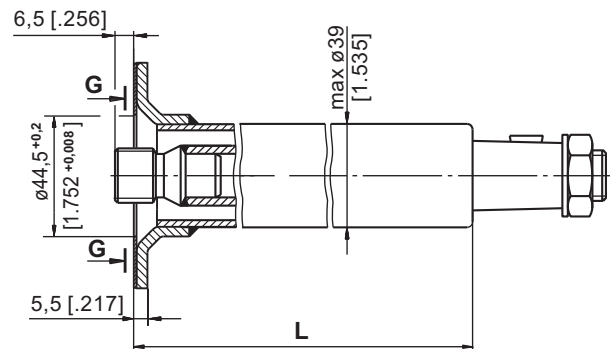
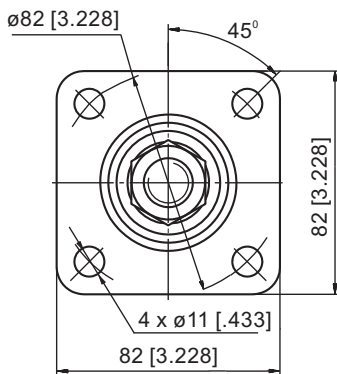
Permissible loads of the steering column are as follows:

Max. torque applied to the steering wheel      24 daNm [2124 lb-in]  
 Max. bending moment      20 daNm [1770 lb-in]  
 Max. axial load      100 daN [225 lbs]

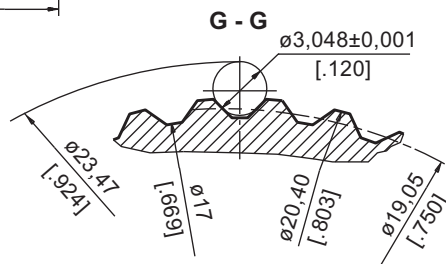
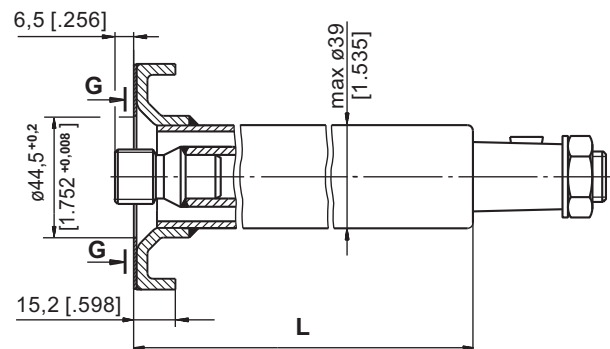
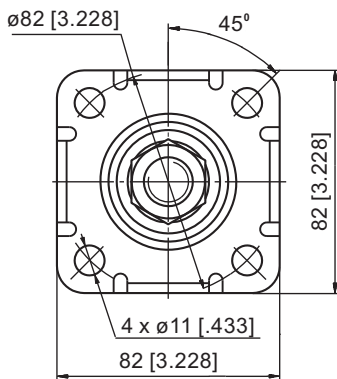
The steering column must be additionally supported when the length L exceeds 150 mm [5.91 in].

## DIMENSIONS AND MOUNTING DATA

### Type KK



### Type KKF



## SPECIFICATION DATA

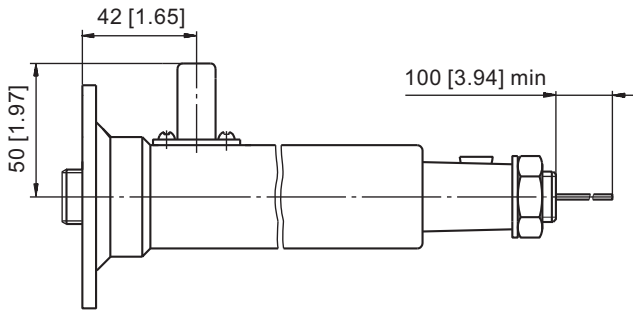
Involute Spline Data		
Modul	m	1.5875
Number of Teeth	z	12
Pressure Angle	$\alpha$	30°
Diametral Pitch	DP	16/32

Parameters		Type				
		KK 75	KK 150	KK 390	KK 441	KK 750
L	mm	78	168,2	393	441	777,8
	[in]	[3.07]	[6.62]	[15.47]	[17.36]	[30.62]
Weight	kg	0,75	1,1	1,9	5,05	3,3
	[lb]	[1.65]	[2.43]	[4.19]	[11.13]	[7.28]

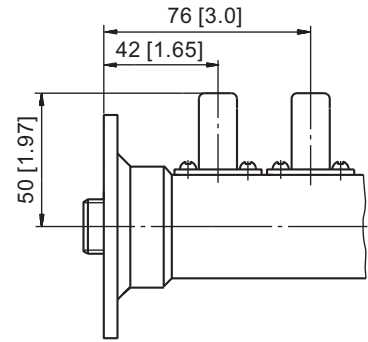
**Note:** The length L depends on the transport vehicle construction. For more information regarding other lengths and shaft versions, please refer to M+S Hydraulic.

**SOUND SIGNAL CONNECTION**

**E Option**



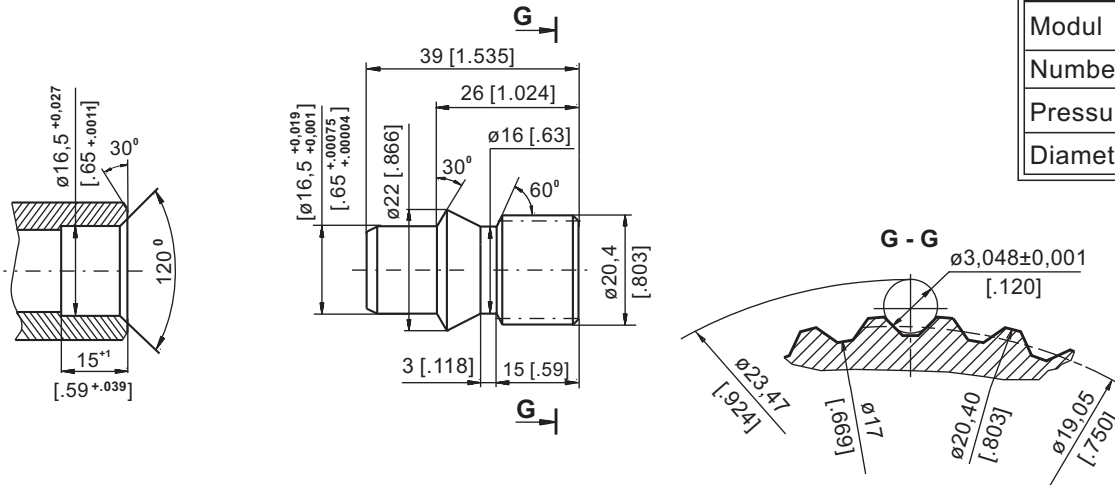
**EE Option**



**Shaft End Part**

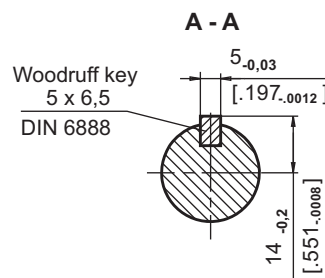
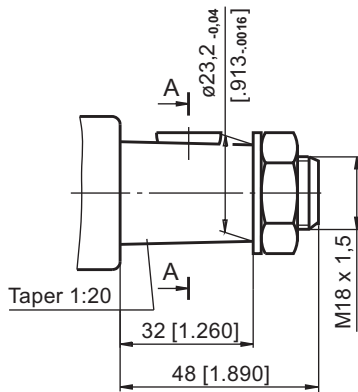
Order No: 46415 001 00

Involute Spline Data		
Modul	m	1.5875
Number of Teeth	z	12
Pressure Angle	$\alpha$	30°
Diametral Pitch	DP	16/32

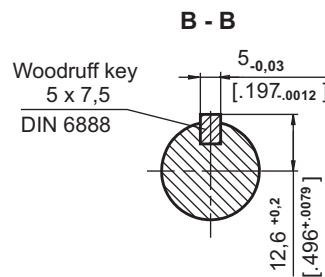
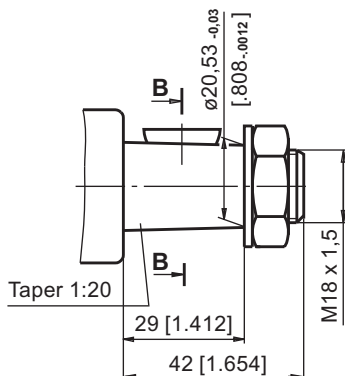


**SHAFT VERSIONS**

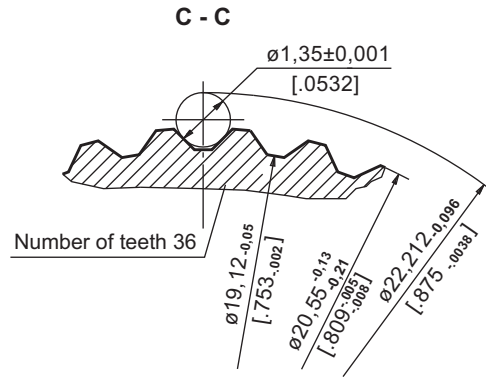
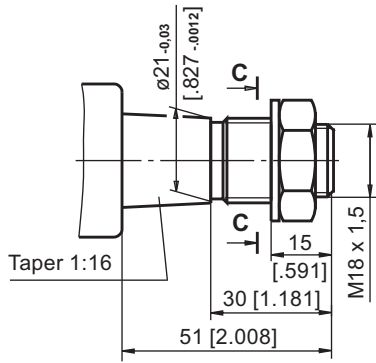
**TYPE I**



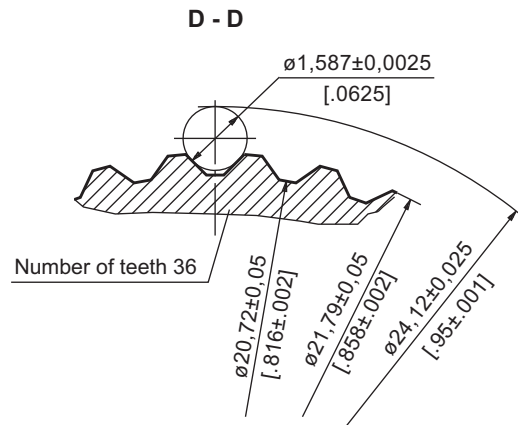
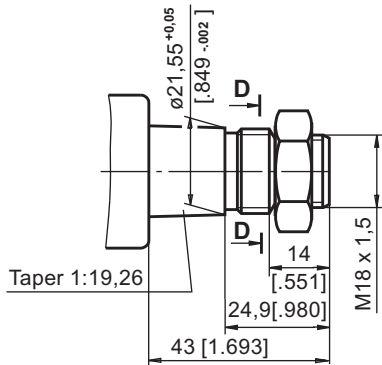
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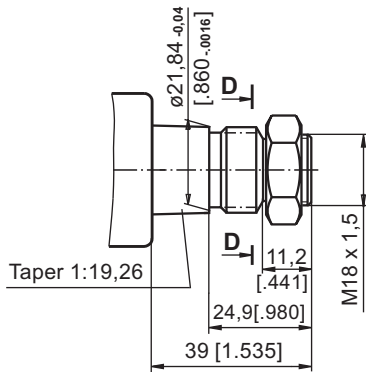
**TYPE III**



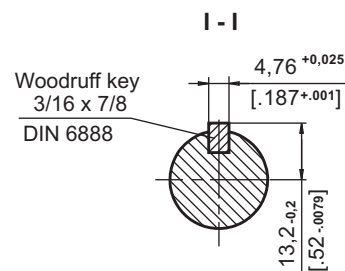
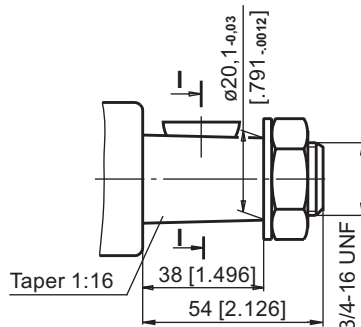
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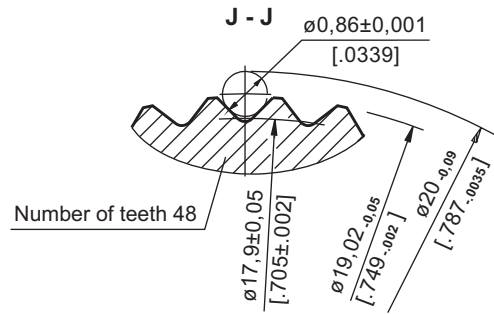
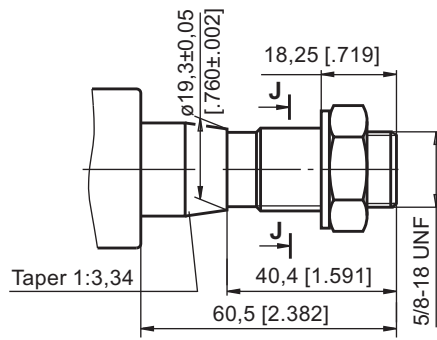
**TYPE V**



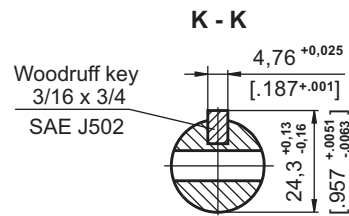
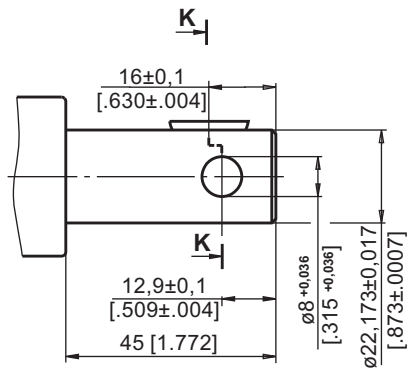
**TYPE VI**



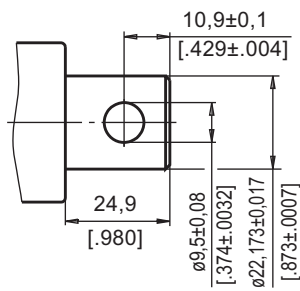
**TYPE VII**



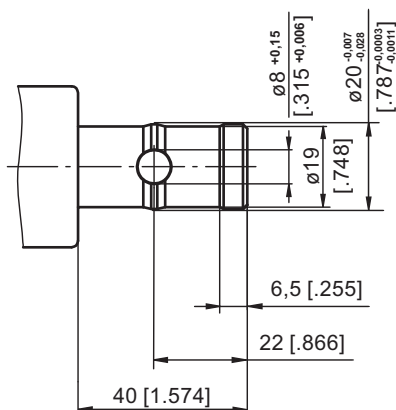
**TYPE VIII**



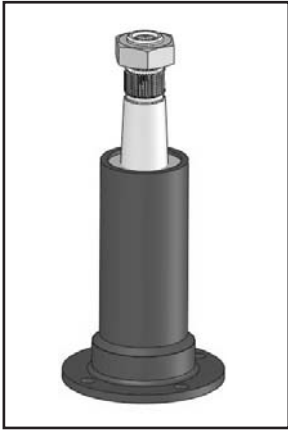
**TYPE IX**



**TYPE XIII**

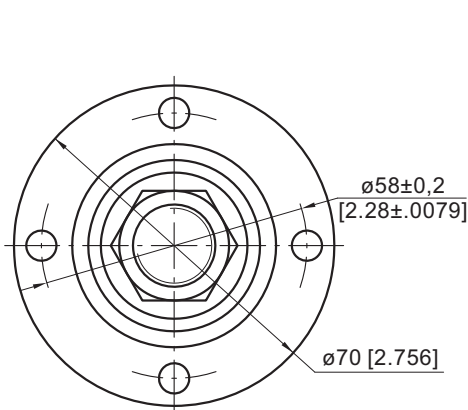


# STEERING COLUMNS TYPE KKM...



The M+S Hydraulic KKM Steering Columns transfer the torque from the steering wheel of the vehicle to the HKUM or other steering units of the same class. The KKM steering columns consist of a pipe in which the control shaft is centred.

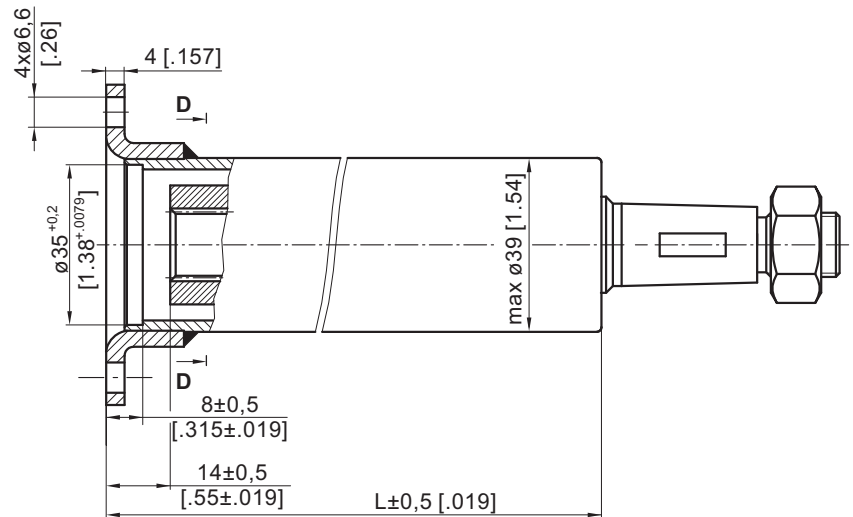
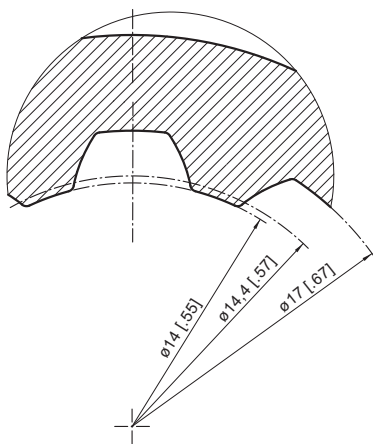
## DIMENSIONS AND MOUNTING DATA



D-D

5:1

Involute spline data  
A17x14 DIN5482



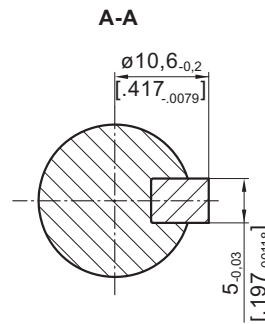
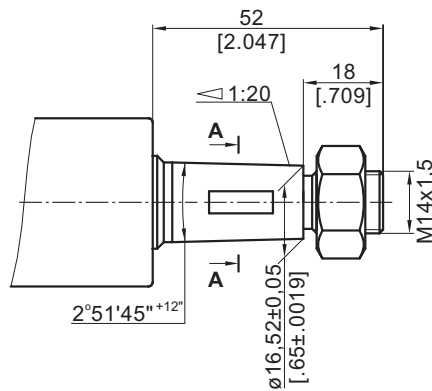
## SPECIFICATION DATA

Length	Type	
	KKM 165	KKM 355
L, mm [in]	165 [6.496]	355 [13.976]

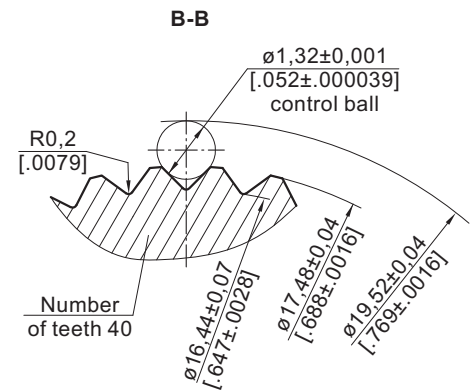
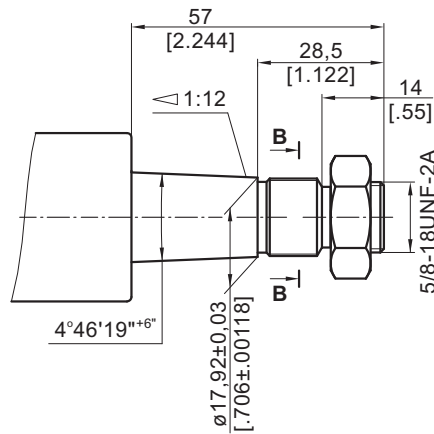
**Note:** The length L depends on the transport vehicle construction. For more information regarding other lengths and shaft versions, please refer to M+S Hydraulic.

**SHAFT VERSIONS**

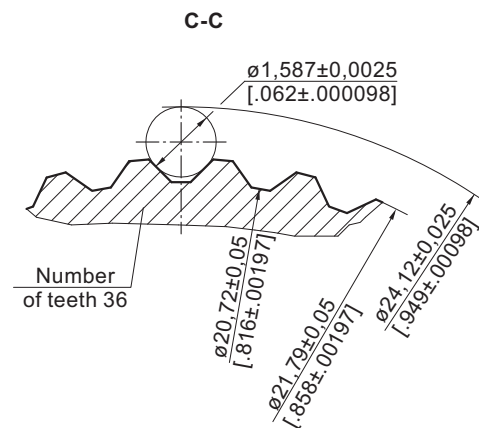
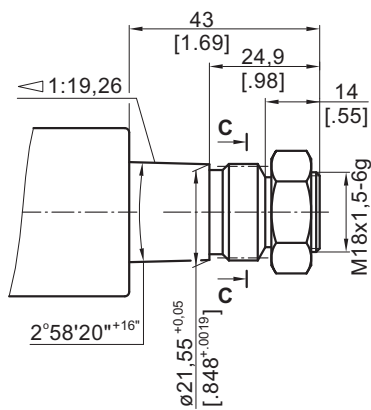
**TYPE S1**



**TYPE S2**



**TYPE S3**



**Ordering**  
STEERING  
COLUMNS

**ORDER CODE KK**

	1	2	3	4	5	6
KK						

**Pos.1 - Mounting Flange**

omit - Flange without Tabs

**F** - Flange with Tabs

**Pos.2 - Length, mm (acc. to table)**

**Pos.3 - Shaft Extensions**

I, II, III, IV, V, VI, VII, VIII, IX, XIII

**Pos.4 - Signal Connection (Option)**

omit - without electric signal connection

**E** - with one electric signal connection

**EE\*** - with two electric signal connection

**Pos.5 - Option (Paint)\*\***

omit - No Paint

**P** - Painted

**PC** - Corrosion Protected Paint

**Pos.6 - Design Series**

omit - Factory specified

**Notes:** \* For steering column's length  $L > 150$  mm [5.9 in] only.

\*\* Colour at customer's request.

The steering columns are yellow galvanized as standard.

**ORDER CODE KKM**

	1	2	3	4
KKM				

**Pos.1 - Length, mm [in] (acc. to table)**

**Pos.2 - Shaft Extensions**

S1, S2, S3

**Pos.3 - Option (Paint)\***

omit - No Paint

**P** - Painted

**PC** - Corrosion Protected Paint

**Pos.4 - Design Series**

omit - Factory specified

**Notes:** \* Colour at customer's request.

The steering columns are yellow galvanized as standard.

The main technical features correspond to the standard steering columns type KK.