The 3-Axes-Manipulator KM 931 features maximum manoeuvrability for your attachments at the loader crane's tip – and provides flexibility of the loader crane's use in any arc position.

- ▶ 3-axes-manipulator: maneuverability by three hydraulic functions: gripping, rotating and tilting (3<sup>rd</sup> hydraulic circuit needed).
- **▷** Endless rotation.
- ▶ **High loads** up to 2,200 lbs.
- ▶ **Precise positioning** guaranteed by self-locking worm drive (KM 931-1000).
- ▷ 5-line feedthrough.
- **▷** Exchange system for the use with different attachments.



Туре	Load capacity (lbs)	Slewing angle	Tilting angle	Rotation	Self weight (lbf)
KM 931-1000	2,200	130°	± 80°	360° endless	638
Package consists of:	manipulator, hydraulic pilot controlled brake, worm drive, non-return valve				
Please note:	tubes or poles have to be grabbed always in the centre of gravity				

Туре	Description
KM 980-2 c	Solenoid valve to upgrade to the third hydraulic control circuit, to switch when there are only two free hydraulic circuits available for three required funtions (rotate, grab and tilt) – for 12/24 V, operating pressure max. 3,600 psi, oil flow 15.9 GPM. Complete including assembly parts, hose protection, hoses and assembly

Requirements of Truck Crane		
Three hydraulic circuits needed		
Operating pressure:	2,900 - 3,500 psi	
Oil flow:	5 - max, 10,5 GPM	

## Technical Drawings

