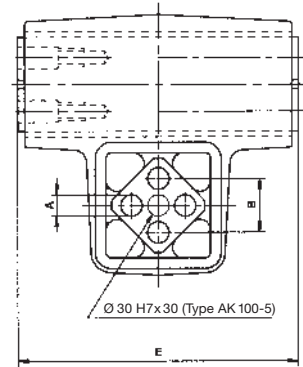
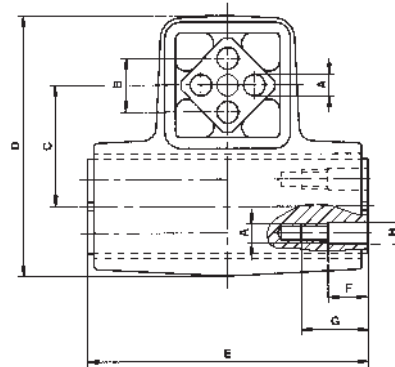




Universal Joint

Type AK



Art. No.	Type	G = max. Load in N per support	n_{err} max. in min^{-1} at $\pm 5^\circ$	A	B	C	D	$E_{-0.3}^0$	F	G	$\varnothing H$	Weight in kg
07 061 001	AK 15	160	1200	$5_{-0}^{+0.5}$	$10^{\pm 0.2}$	27	54	65	-	-	-	0.40
07 061 002	AK 18	300	800	$6_{-0}^{+0.5}$	$12^{\pm 0.3}$	32	64	85	-	-	-	0.60
07 061 003	AK 27	800	800	$8_{-0}^{+0.5}$	$20^{\pm 0.4}$	45	97	105	-	-	-	1.90
07 061 004	AK 38	1600	800	$10_{-0}^{+0.5}$	$25^{\pm 0.4}$	60	130	130	-	-	-	3.70
07 061 005	AK 45	3000	600	$12_{-0}^{+0.5}$	$35^{\pm 0.5}$	72	156	160	-	-	-	4.50
07 061 011	AK 50	5600	400	M12	$40^{\pm 0.5}$	78	172	210	40	70	12.25	11.40
07 061 007	AK 60	10000	300	M16	45	100	200	310	50	80	16.50	31.00
07 061 008	AK 80	20000	150	M20	60	136	272	410	50	90	20.50	73.00
07 061 009	AK 100-4	30000	100	M24	75	170	340	410	50	100	25	124.00
07 061 010	AK 100-5	40000	100	M24	75	170	340	510	50	100	25	148.00

For the fixation of the inner squares of the universal joints type AK 15 to AK 45 we suggest the use of threaded bolts passing the full element length. For the sizes AK 50 to AK 100 it is recommendable to use tension shaft screws

quality **8.8**. The inner square profiles of the AK 50 to AK 100 are also having lowered thread bores, in order to allow the use of tensile shaft screws.

Material Structure

The housings of element types AK 27, 38, 45, 50 and 100-4 are made out of nodular cast; the other housings are made in welded steel structure. The inner squares of the sizes AK 15 to AK 50 are light alloy profiles; the squares of the types AK 60, 80 and 100 are made out of steel.

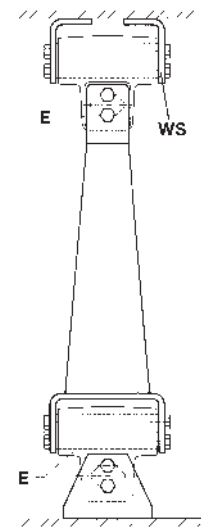


Universal Joint

Type AK

Joint Support

In order to obtain a regular torsional load on all elements and a harmonic circular motion, the inner elements "E" of the universal joints must be fitted offset 90° to the one underneath. The connection between the two universal joints AK and the support ready to be installed must be adapted to the corresponding installation height, and be provided by the customer. For the fixing of the inner square sections we recommend to use hexagonal shaft screws of 8.8 quality. For the size AK 50 or bigger there are threads borings on the inner squares of the elements.



Installation Guidelines

The oscillation angle α must not exceed 10° ($\pm 5^\circ$). Otherwise the elements "E" must be set with longer center distance (distance "X"). In order to eliminate the tilting and cardanic movements, the upper elements of the universal joint support are placed at the height close to the centre of gravity S of the screen box.

Typical Calculation ("Upright" Version)

Total oscillating mass	m	= 1600 kg
Eccentric radius	R	= 25 mm
Support height	X	= 800 mm
Oscillating angle	α	= 3.6°
Speed	n_{err}	= 230 min ⁻¹
Number of universal joint supports	z	= 4 pieces

$$\text{Max. dynamic load per support } G = \frac{m \cdot g \cdot 1.25^*}{z}$$

$$= \frac{1600 \cdot 9.81 \cdot 1.25^*}{4} = 4905 \text{ N}$$

Selected: 4 supports with each 2 AK 50 elements = 8 AK 50

* = Due to the instability of the "upright" sifters, we include a security factor of 1.25 for the calculation of the AK elements.

Suspended Version

We recommend our AK universal joints also for this version, which is especially used for screening tables and tumbling gyrators. Usually unbalanced motors are used to drive the screens, causing the discharge-end to oscillate freely (tumbling movements). The universal joints are under traction. However, the actual units remain the same. This version doesn't require a security factor.

