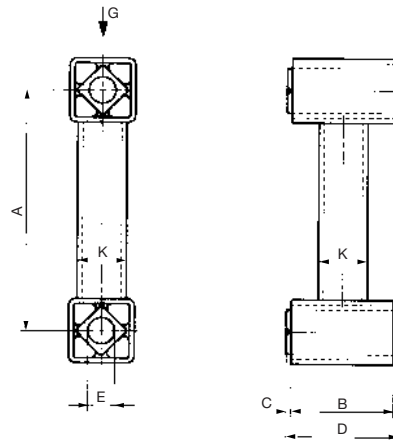




Rocker Suspension

Type AS-C



Art. No.	Type	G	n_{err}	sw	c_d	A	B	C	D	E	ØF	Weight in kg
07 071 001	△ AS-C 15	100	1200	17	5	100	40	2.5	45	$10^{+0.4}$	18	0.38
07 071 002	AS-C 18	200	1200	21	10	120	50	2.5	55	$13^{-0.2}$	24	0.56
07 071 003	AS-C 27	400	800	28	12	160	60	2.5	65	$16^{+0.5}$	34	1.31
07 071 004	AS-C 38	800	800	35	19	200	80	5	90	$20^{+0.5}$	40	2.60
07 071 005	△ AS-C 45	1600	800	35	33	200	100	5	110	$24^{+0.5}$	45	3.94
07 071 006	△ AS-C 50	2500	600	44	38	250	120	5	130	$30^{+0.5}$	60	6.05

G = max. loading in N per suspension

n_{err} = max. frequency in min^{-1} at $\pm 10^\circ$, from zero $\pm 5^\circ$

sw = max. amplitude in mm

c_d = dynamic spring value in N/mm at $\pm 5^\circ$, in frequency range 300–600 min^{-1}

Suspensions for higher loads available on request

△ available on request

Material Structure

Rocker arm made out of welded steel structure; inner square in light alloy profile.

Typical Calculation

Given:

Weight of trough = 200 kg

Material on trough = 50 kg

of this 20% coupling effect = 10 kg

Total weight of oscillating mass m (trough and coupling effect) = 210 kg

Eccentric radius R = 14 mm

Speed n_{err} = 320 min^{-1}

Oscillating machine factor $K = \frac{\left(\frac{2\pi}{60} \cdot n_{err}\right)^2 \cdot R}{9810} = 1.6$

Total spring value $c_t = m \cdot \left(\frac{2\pi}{60} \cdot n_{err}\right)^2 \cdot 0.001 = 235.8 \text{ N/mm}$

Wanted:

Number of double rocker suspensions of size 27 for example

a) in resonance operation

Here the total spring value of the suspensions must be about 10% above the total spring value c_t of the installation. From this follows: Spring value c_d of the rocker suspension AS 27 = 12 N/mm

Number of suspensions $z = \frac{c_t}{0.9 \cdot c_d} = \frac{235.8}{0.9 \cdot 12} = 21.8$ pieces

Selected: 22 of AS-P 27 or AS-C 27

b) without resonance operation

Here the total weight G must be taken up by the total number of rocker suspensions. The admissible loading of one AS 27 suspension is 400 N

Number of suspensions $z = \frac{m \cdot g}{G} = \frac{210 \cdot 9.81}{400} = 5.15$ pieces

Selected: 6 of AS-P 27 or AS-C 27