

O-KS COMPACT CAM UNIT

The premium model for highest precision and performance

voestalpine Camtec GmbH
www.voestalpine.com/camtec

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ONE STEP AHEAD.

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voestalpine Camtec

Your innovative and reliable partner

voestalpine Camtec is a global leader with many years of experience in the production of cam units and maintenance free cam sliders.

Our sector-specific expertise and knowledge of the manufacturing processes of our customers have established us as a reliable partner to renowned companies in the automotive and mechanical engineering industries. We provide our customers with innovative products and high-quality service. Our team of technical specialists is dedicated to providing effective solutions worldwide. Our state-of-the-art sliding elements and technologies, our spare parts management and rapid response times and our comprehensive services put us one step ahead.

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WORLDWIDE CUSTOMER SERVICE AND PRODUCT AVAILABILITY

The headquarters of voestalpine Camtec is located in Linz, Austria. Our international locations, subsidiaries and investment in other companies make it possible for us to flexibly respond to your needs and provide high-quality services at your specific location. Our dedicated warehouses in Linz, Canada and China can react quickly to orders within 24 to 48 hours in the event of incidents involving machine downtime.



Our international team of experts remains at your service:
Please find your contact partner online at **www.voestalpine.com/camtec**
or contact us at **sales.camtec@voestalpine.com**

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O-KS – OPTIMIZED COMPACT CAM UNIT

For highest precision and long service life

The new and perfected compact cam unit is of the highest quality and is equipped with innovative features. Our premium model combines effective product design with optimized applications. The result is a perfectly designed and efficient cam unit with added value.

HIGHLY COMPACT DESIGN AND REDUCED COMPLEXITY
resulting from reduced number of components

STRONG RETRACTION FORCES
for the processing of high-strength steels

PATENTED 1° ANGLE
of side plates

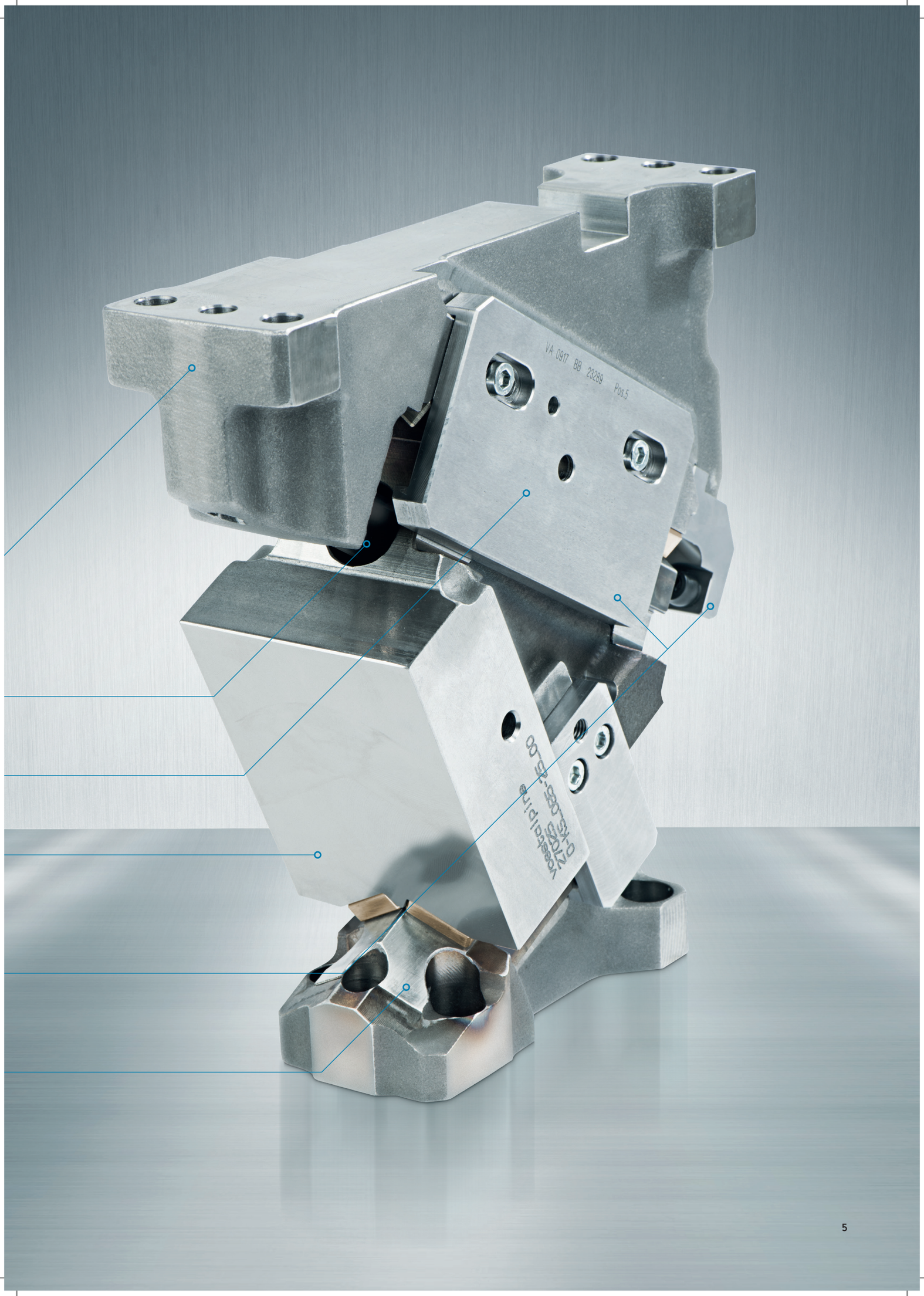
CONVINCING MANUFACTURING QUALITY
based on certified materials and optimized surface properties

FLEXIBLY EXCHANGEABLE
from the back or the side – for improved handling and more efficient tool usage

HARDENED SLIDING SURFACES
for high loads

Please find the most state-of-the-art O-KS cam units in our product finder:
www.voestalpine.com/camtec/Product-Finder

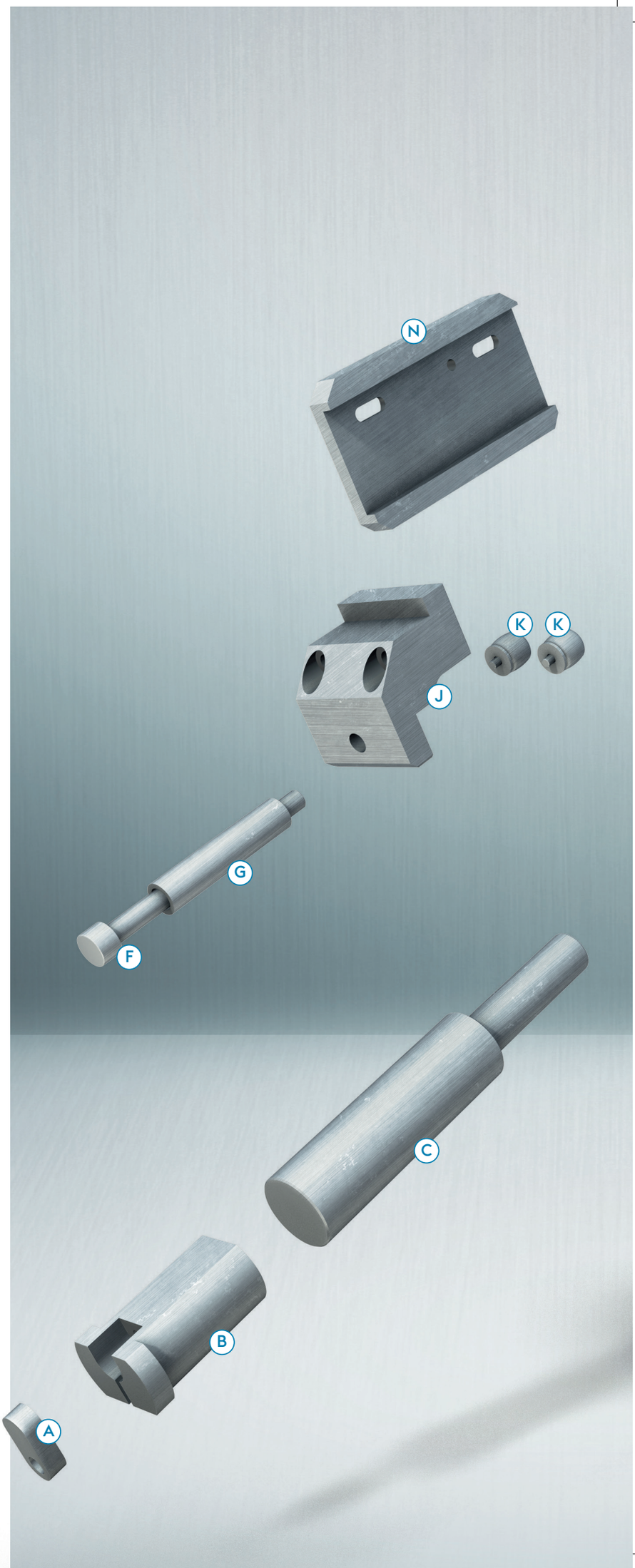
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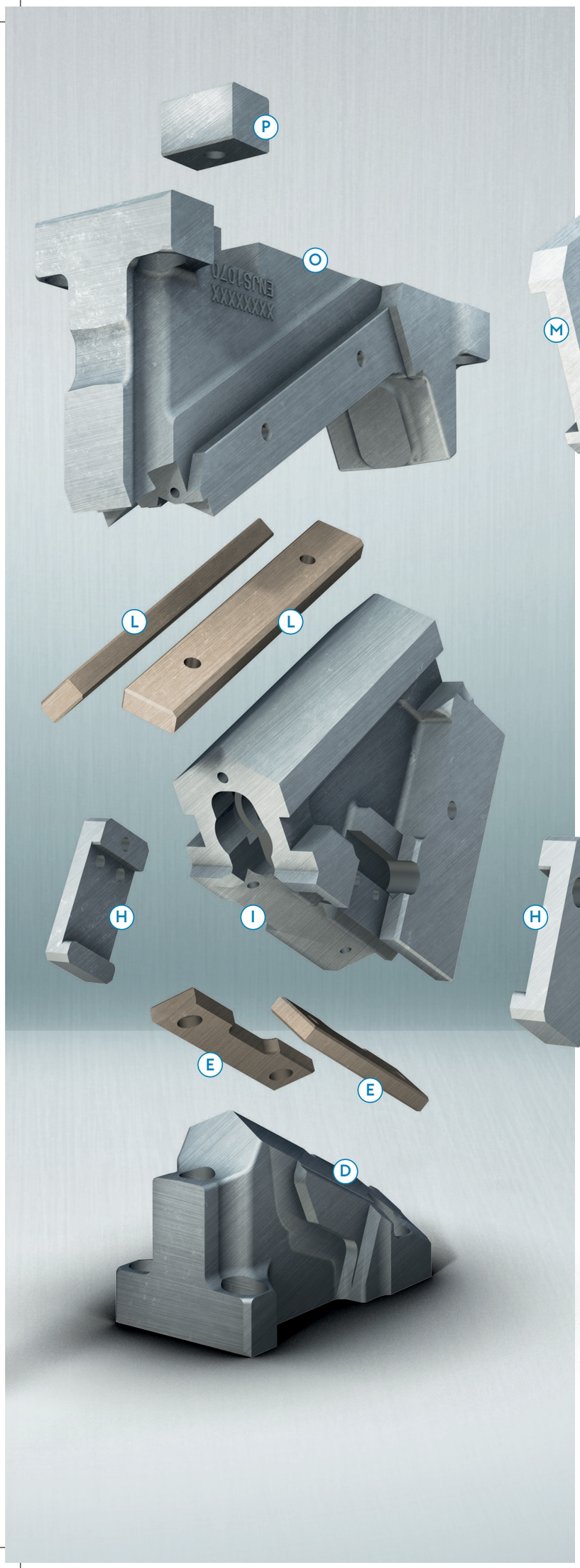
HIGH-PRECISION DESIGN

The O-KS cam unit consists of very few components, which guarantees high-quality initial installation and maintenance.

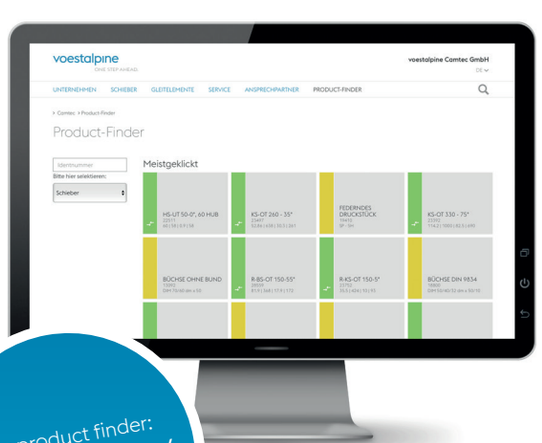


- (A) Lock plate
- (B) Blanking-off plate
- (C) Gas spring
- (D) Driver
- (E) Wear plates
- (F) Lock-out screw
- (G) Lock-out shell
- (H) Forced retractor
- (I) Sliding element
- (J) Stop
- (K) Dampers
- (L) Wear plates
- (M) Side plate (left)
- (N) Side plate (right)
- (O) Cam unit bed
- (P) Fitting key

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FIND YOUR SOLUTION QUICKLY, EASILY AND SYSTEMATICALLY.



Our product finder:
www.voestalpine.com/camtec/Product-Finder

With respect to design, ordering and spare parts management, you will find detailed product information quickly and easily in our download center.

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O-KS TECHNICAL DETAILS

Important information at a glance

Here you will find important technical data for optimized operation of your compact cam unit as well as details on force distribution. Should you have any further questions about O-KS, our experienced team of specialists will be happy to assist you at any time. Please contact us at **sales.camtec@voestalpine.com**.

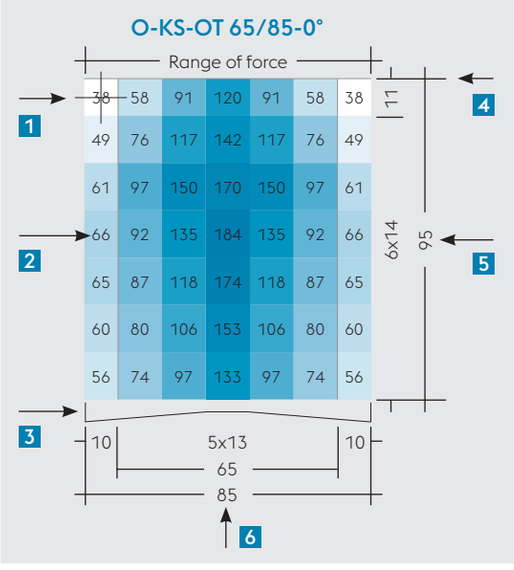
	O-KS
Average service life (depending on loads)	2,000,000 strokes
Guaranteed service life	1,000,000 strokes
Precision adjustments made during assembly	Yes
Sliding surfaces	At least Rz 6.3, hardened
Field of application	Shaping, beveling, punching cutting
Angle range	0°–75°
Tensile strength of driver, sliding element and cam bed materials	700 N/mm^2 minimum
Available widths	65/85, 90/110, 125/160, 175/220, 260/330, 400/500
Lock-out system	Yes
Guide clamps	1.7225 / Sinter
Positive return	Both sides
Measuring holes	Yes
Gas spring	Yes
Special cam unit options	Yes
Compliant with BAK/VDI	Yes
NAAMs insert point	Yes

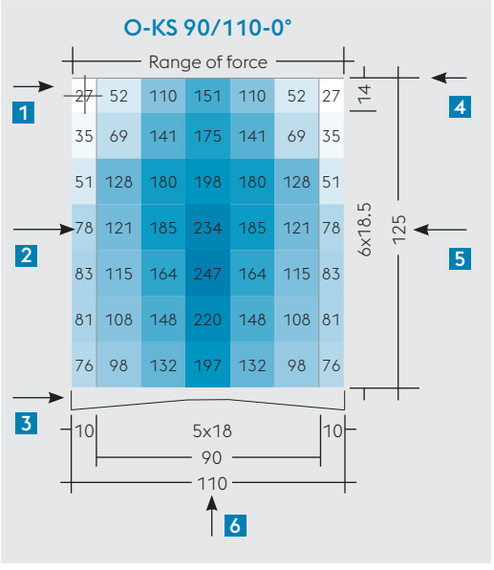
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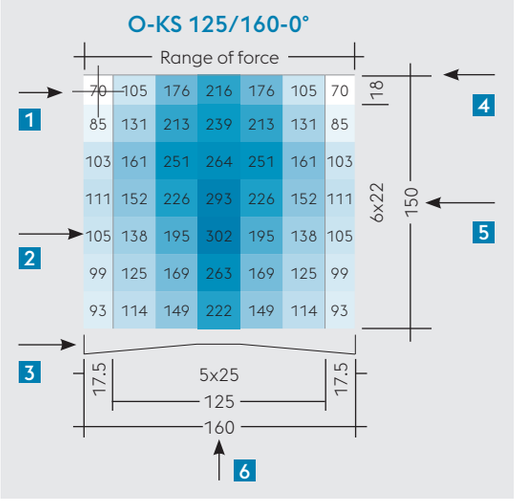
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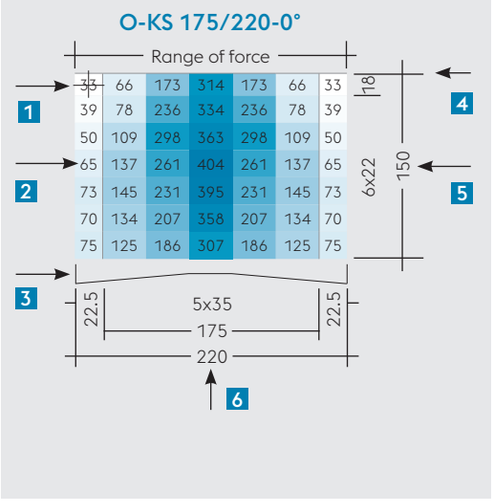
PERMISSIBLE CAM FORCES

The following overview shows the permissible cam force in the midpoint of each field in the direction of cam travel (rounded values). In the event of several different forces, the common center of force must be determined and compared with the values indicated in the table. All introduced forces must always be lower than those indicated in the table.











The coloring in the force diagrams reflects tendencies in the range of values from the smallest force to the maximum cam force for each method of support.

1. Force in the midpoint of each field
2. Value of force kN
3. Cam unit bottom
4. Top work face
5. Height of work face
6. Work face width

The height and width of the work surface are always displayed in proportion to each other.

The O-KS features a highly convincing force diagram that depicts both shouldering and fitting key support.

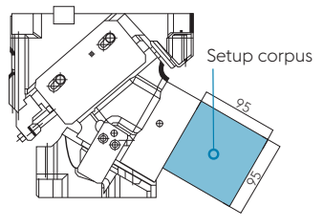
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PERMISSIBLE CAM FORCES

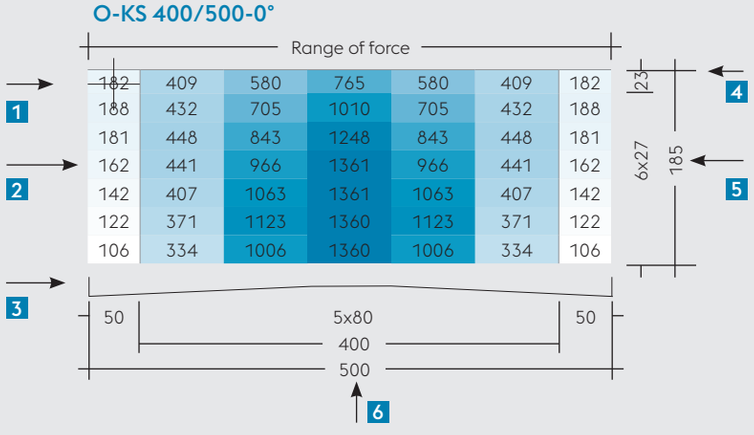
O-KS 260/330-0°



As a guideline, the length of the setup corpus must not exceed the height of the work surface. The setup corpus should be as compact as possible. Additional sliding plate supports should be provided for longer superstructures. Please contact **engineering.camtec@voestalpine.com** if you have any questions.

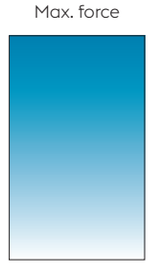


O-KS 400/500-0°



1. Force in the midpoint of each field
2. Value of force kN
3. Cam unit bottom
4. Top work face
5. Height of work face
6. Work face width

Max. force



Min. force

The coloring in the force diagrams reflects tendencies in the range of values from the smallest force to the maximum cam force for each method of support.

The O-KS features a highly convincing force diagram that depicts both shouldering and fitting key support.

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O-KS ASSEMBLY 1

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

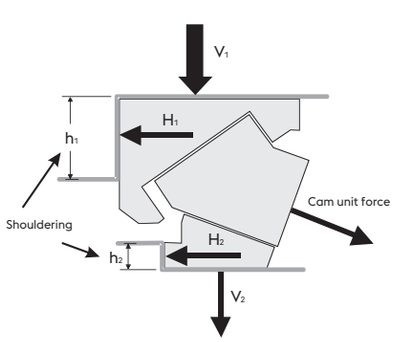
O-KS 65/85 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 65	O-KS 85	O-KS 65	O-KS 85		O-KS 65	O-KS 85	
27000	27020	O-KS 65-0°	O-KS 85-0°	0°	16.2	17.0	28.93
27001	27021	O-KS 65-5°	O-KS 85-5°	5°	16.3	17.1	29.04
27002	27022	O-KS 65-10°	O-KS 85-10°	10°	15.7	16.5	35.00
27003	27023	O-KS 65-15°	O-KS 85-15°	15°	15.8	16.6	35.69
27004	27024	O-KS 65-20°	O-KS 85-20°	20°	15.7	16.5	36.86
27005	27025	O-KS 65-25°	O-KS 85-25°	25°	15.8	16.6	38.22
27006	27026	O-KS 65-30°	O-KS 85-30°	30°	15.6	16.4	35.38
27007	27027	O-KS 65-35°	O-KS 85-35°	35°	15.7	16.5	37.41
27008	27028	O-KS 65-40°	O-KS 85-40°	40°	15.9	16.8	39.57
27009	27029	O-KS 65-45°	O-KS 85-45°	45°	16.1	16.9	42.87
27010	27030	O-KS 65-50°	O-KS 85-50°	50°	16.3	17.1	47.16
27011	27031	O-KS 65-55°	O-KS 85-55°	55°	16.4	17.2	52.85
27012	27032	O-KS 65-60°	O-KS 85-60°	60°	15.9	16.7	49.24
27013	27033	O-KS 65-65°	O-KS 85-65°	65°	16.2	17.0	46.61
27014	27034	O-KS 65-70°	O-KS 85-70°	70°	16.2	17.0	57.59
27015	27035	O-KS 65-75°	O-KS 85-75°	75°	16.2	17.1	76.10

O-KS 65/85 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0°	184	154	184	154	0	155	20	6.8
5°	209	164	195	146	13	155	20	7.6
10°	186	186	156	154	27	125	30	6.6
15°	202	189	159	137	37	125	30	7.6
20°	187	211	122	147	54	100	60	6.5
25°	203	215	124	129	60	100	60	7.3
30°	200	163	137	63	36	105	60	12.2
35°	205	163	136	45	32	105	60	15.2
40°	208	192	111	58	49	100	80	12.8
45°	213	191	110	40	40	100	80	15.4
50°	217	191	110	25	29	100	80	19.0
55°	220	191	110	11	16	100	80	21.0
60°	212	222	39	39	67	40	110	12.0
65°	218	222	39	25	53	40	110	13.8
70°	222	222	39	13	37	40	110	20.0
75°	225	222	39	5	19	40	110	20.5

The cam unit force is distributed as shown in the sketch:



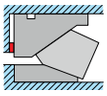
Shouldering: h_1 (top), h_2 (bottom)
Press: V_1 (vertical)
Cam base: H_1 (horizontal)
Driver: H_2 (horizontal), V_2 (vertical)

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O-KS ASSEMBLY 1

65 mm and 85 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 65/85-0°

38	58	91	120	91	58	38
49	76	117	142	117	76	49
61	97	150	170	150	97	61
66	92	135	184	135	92	66
65	87	118	174	118	87	65
60	80	106	153	106	80	60
56	74	97	133	97	74	56

65 mm width
85 mm width

O-KS 65/85-5°

31	47	81	118	81	47	31
40	65	112	142	112	65	40
53	90	150	174	150	90	53
62	97	146	209	146	97	62
62	91	131	205	131	91	62
59	83	117	192	117	83	59
54	76	105	160	105	76	54

65 mm width
85 mm width

O-KS 65/85-10°

37	57	93	128	93	57	37
48	76	120	154	120	76	48
61	97	151	182	151	97	61
70	100	152	186	152	100	70
69	94	136	186	136	94	69
64	87	119	172	119	87	64
59	79	105	152	105	79	59

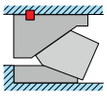
65 mm width
85 mm width

O-KS 65/85-15°

30	47	83	125	83	47	30
38	64	114	156	114	64	38
51	89	151	187	151	89	51
65	103	163	201	163	103	65
67	97	146	202	146	97	67
63	89	128	195	128	89	63
58	81	114	173	114	81	58

65 mm width
85 mm width

95 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 65/85-0°

32	37	37	37	37	37	32
36	37	37	37	37	37	36
36	37	37	37	37	37	36
37	37	37	37	37	37	37
37	37	37	37	37	37	37
37	37	37	37	37	37	37
37	37	37	37	37	37	37

65 mm width
85 mm width

O-KS 65/85-5°

29	36	39	39	39	36	29
33	39	39	39	39	39	33
39	39	40	40	40	39	39
39	39	40	40	40	39	39
40	40	40	40	40	40	40
40	40	40	40	40	40	40
40	40	40	40	40	40	40

65 mm width
85 mm width

O-KS 65/85-10°

35	44	45	45	45	44	35
39	44	45	45	45	44	39
44	45	45	45	45	45	44
44	45	45	45	45	45	44
45	45	45	45	45	45	45
45	45	45	44	45	45	45
45	45	45	45	45	45	45

65 mm width
85 mm width

O-KS 65/85-15°

30	41	48	48	48	41	30
36	47	48	48	48	47	36
41	48	48	48	48	48	41
47	48	48	48	48	48	47
48	48	48	48	48	48	48
49	49	48	48	48	49	49
48	49	49	49	49	49	48

65 mm width
85 mm width

95 mm high

Rounded values

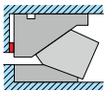
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Use our product finder to quickly and simply find just the right O-KS model for your needs:
www.voestalpine.com/camtec/Product-Finder

O-KS ASSEMBLY 1

65 mm and 85 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 65/85-20°

37	56	93	132	93	56	37
48	75	120	158	120	75	48
61	97	149	187	149	97	61
74	108	160	187	160	108	74
73	100	145	186	145	100	73
68	91	129	181	129	91	68
62	84	114	167	114	84	62

65 mm width
85 mm width

O-KS 65/85-25°

30	47	81	127	81	47	30
38	64	113	158	113	64	38
50	87	150	192	150	87	50
67	109	174	203	174	109	67
68	103	156	202	156	103	68
66	94	137	203	137	94	66
61	85	121	187	121	85	61

65 mm width
85 mm width

O-KS 65/85-30°

17	26	49	99	49	26	17
22	37	77	147	77	37	22
29	56	127	190	127	56	29
41	82	167	200	167	82	41
47	81	151	199	151	81	47
48	74	128	198	128	74	48
45	64	104	177	104	64	45

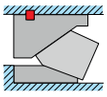
65 mm width
85 mm width

O-KS 65/85-35°

14	21	39	78	39	21	14
18	30	64	132	64	30	18
23	45	110	191	110	45	23
32	68	166	205	166	68	32
41	77	155	205	155	77	41
44	73	132	205	132	73	44
43	65	109	179	109	65	43

65 mm width
85 mm width

95 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 65/85-20°

36	49	58	58	58	49	36
44	58	58	58	58	58	44
51	58	59	59	59	58	51
58	58	59	59	59	58	58
59	59	59	59	59	59	59
58	59	59	59	59	59	58
56	59	59	59	59	59	56

65 mm width
85 mm width

O-KS 65/85-25°

30	44	62	63	62	44	30
37	55	63	63	63	55	37
45	63	63	63	63	63	45
55	63	63	63	63	63	55
58	63	63	63	63	63	58
58	63	63	63	63	63	58
55	63	63	63	63	63	55

65 mm width
85 mm width

O-KS 65/85-30°

17	26	44	57	44	26	17
22	35	57	57	57	35	22
29	45	57	57	57	45	29
38	56	57	57	57	56	38
44	57	57	57	57	57	44
46	58	58	57	58	58	46
44	56	58	58	58	56	44

65 mm width
85 mm width

O-KS 65/85-35°

14	21	37	56	37	21	14
18	29	52	59	52	29	18
23	38	59	59	59	38	23
32	51	59	59	59	51	32
39	58	60	59	60	58	39
43	60	60	59	60	60	43
43	57	60	60	60	57	43

65 mm width
85 mm width

95 mm high

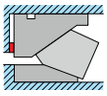
Rounded values

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O-KS ASSEMBLY 1

65 mm and 85 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 65/85-40°

18	29	57	113	57	29	18
24	41	88	161	88	41	24
32	62	143	208	143	62	32
44	85	167	208	167	85	44
53	88	149	207	149	88	53
55	83	129	204	129	83	55
52	74	111	180	111	74	52

65 mm width
85 mm width

O-KS 65/85-45°

15	23	44	92	44	23	15
19	32	71	149	71	32	19
25	49	124	205	124	49	25
34	70	163	211	163	70	34
46	83	152	213	152	83	46
50	82	137	211	137	82	50
48	74	119	184	119	74	48

65 mm width
85 mm width

O-KS 65/85-50°

11	16	29	62	29	16	11
14	22	50	119	50	22	14
18	34	90	192	90	34	18
25	56	152	215	152	56	25
35	72	155	217	155	72	35
41	74	143	215	143	74	41
42	68	123	185	123	68	42

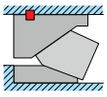
65 mm width
85 mm width

O-KS 65/85-55°

10	13	22	45	22	13	10
11	17	38	96	38	17	11
14	26	71	176	71	26	14
20	44	124	217	124	44	20
28	61	150	220	150	61	28
32	63	146	214	146	63	32
34	60	124	182	124	60	34

65 mm width
85 mm width

95 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 65/85-40°

18	29	54	74	54	29	18
24	40	73	74	73	40	24
32	52	74	74	74	52	32
44	71	75	75	75	71	44
52	75	75	75	75	75	52
55	74	75	75	75	74	55
52	70	76	75	76	70	52

65 mm width
85 mm width

O-KS 65/85-45°

15	23	42	70	42	23	15
19	31	60	77	60	31	19
25	43	77	77	77	43	25
34	57	77	77	77	57	34
46	72	77	77	77	72	46
50	73	78	78	78	73	50
48	68	77	78	77	68	48

65 mm width
85 mm width

O-KS 65/85-50°

11	16	28	52	28	16	11
14	22	47	78	47	22	14
18	33	78	79	78	33	18
25	45	78	79	78	45	25
35	60	79	79	79	60	35
41	64	79	79	79	64	41
42	61	80	80	80	61	42

65 mm width
85 mm width

O-KS 65/85-55°

10	13	22	44	22	13	10
11	17	37	80	37	17	11
14	26	62	80	62	26	14
20	37	78	80	78	37	20
28	51	80	80	80	51	28
32	53	81	81	81	53	32
34	54	82	82	82	54	34

65 mm width
85 mm width

95 mm high

Rounded values

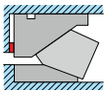
VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 14 04.10.19 12:15

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O-KS ASSEMBLY 1

65 mm and 85 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 65/85-60°

18	30	63	117	63	30	18
23	43	98	166	98	43	23
31	66	158	211	158	66	31
44	88	171	212	171	88	44
49	87	154	212	154	87	49
49	78	134	211	134	78	49
46	68	111	180	111	68	46

65 mm width
85 mm width

O-KS 65/85-65°

16	24	49	106	49	24	16
19	34	79	165	79	34	19
25	53	135	218	135	53	25
34	73	172	216	172	73	34
43	80	159	217	159	80	43
47	77	141	218	141	77	47
44	68	118	183	118	68	44

65 mm width
85 mm width

O-KS 65/85-70°

11	16	33	74	33	16	11
14	23	58	135	58	23	14
18	37	102	205	102	37	18
25	59	162	222	162	59	25
34	71	165	222	165	71	34
39	73	146	222	146	73	39
38	66	122	188	122	66	38

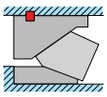
65 mm width
85 mm width

O-KS 65/85-75°

10	14	25	55	25	14	10
12	19	43	112	43	19	12
15	29	79	183	79	29	15
20	47	138	221	138	47	20
27	60	156	225	156	60	27
30	61	151	223	151	61	30
31	57	129	188	129	57	31

65 mm width
85 mm width

95 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 65/85-60°

18	30	63	117	63	30	18
23	43	98	166	98	43	23
31	66	158	206	158	66	31
44	88	171	208	171	88	44
49	87	154	210	154	87	49
49	78	134	210	134	78	49
46	68	111	180	111	68	46

65 mm width
85 mm width

O-KS 65/85-65°

16	24	49	106	49	24	16
19	34	79	165	79	34	19
25	53	135	218	135	53	25
34	73	172	216	172	73	34
43	80	159	217	159	80	43
47	77	141	218	141	77	47
44	68	118	183	118	68	44

65 mm width
85 mm width

O-KS 65/85-70°

11	16	33	74	33	16	11
14	23	58	135	58	23	14
18	37	102	205	102	37	18
25	59	161	218	161	59	25
34	71	165	221	165	71	34
39	73	146	221	146	73	39
38	66	122	188	122	66	38

65 mm width
85 mm width

O-KS 65/85-75°

10	14	25	55	25	14	10
12	19	43	112	43	19	12
15	29	79	183	79	29	15
20	47	138	218	138	47	20
27	60	156	224	156	60	27
30	61	151	223	151	61	30
31	57	129	188	129	57	31

65 mm width
85 mm width

95 mm high

Rounded values

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 15 04.10.19 12:15

O-KS ASSEMBLY 2

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

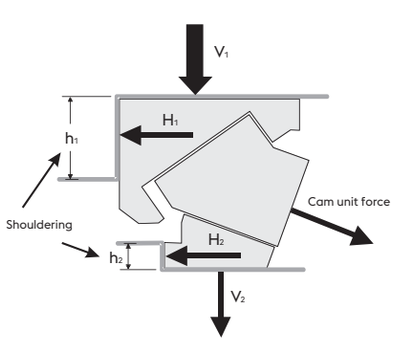
O-KS 90/110 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 90	O-KS 110	O-KS 90	O-KS 110		O-KS 90	O-KS 110	
27040	27060	O-KS 90-0°	O-KS 110-0°	0°	35.0	36.1	28.93
27041	27061	O-KS 90-5°	O-KS 110-5°	5°	34.8	36.0	29.04
27042	27062	O-KS 90-10°	O-KS 110-10°	10°	34.7	35.8	35.00
27043	27063	O-KS 90-15°	O-KS 110-15°	15°	34.7	35.8	35.69
27044	27064	O-KS 90-20°	O-KS 110-20°	20°	34.0	35.2	36.86
27045	27065	O-KS 90-25°	O-KS 110-25°	25°	34.1	35.2	38.22
27046	27066	O-KS 90-30°	O-KS 110-30°	30°	34.4	35.6	35.38
27047	27067	O-KS 90-35°	O-KS 110-35°	35°	34.8	35.9	37.41
27048	27068	O-KS 90-40°	O-KS 110-40°	40°	33.6	34.7	39.57
27049	27069	O-KS 90-45°	O-KS 110-45°	45°	34.0	35.1	42.89
27050	27070	O-KS 90-50°	O-KS 110-50°	50°	34.2	35.3	47.16
27051	27071	O-KS 90-55°	O-KS 110-55°	55°	34.4	35.5	52.85
27052	27072	O-KS 90-60°	O-KS 110-60°	60°	32.9	34.0	49.24
27053	27073	O-KS 90-90°	O-KS 110-65°	65°	33.3	34.4	46.61
27054	27074	O-KS 90-70°	O-KS 110-70°	70°	33.5	34.6	57.59
27055	27075	O-KS 90-75°	O-KS 110-75°	75°	33.7	34.8	76.10

O-KS 90/110 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0°	247	207	247	207	0	190	30	6.8
5°	297	233	278	207	18	190	30	7.6
10°	308	308	258	255	45	148	30	6.7
15°	323	302	253	218	59	148	30	7.5
20°	325	367	212	256	93	109	65	6.4
25°	347	367	212	220	103	109	65	7.2
30°	361	294	247	114	66	143	65	12.2
35°	372	295	248	82	57	143	65	16.1
40°	370	341	197	103	87	102	105	11.7
45°	373	334	193	71	71	102	105	15.4
50°	385	339	195	44	52	102	105	24.4
55°	390	339	196	20	28	102	105	23.5
60°	366	384	68	67	115	52	135	11.1
65°	376	383	68	43	91	52	135	14.0
70°	384	384	68	23	64	52	135	22.1
75°	388	384	68	9	33	52	135	23.5

The cam unit force is distributed as shown in the sketch:



Shouldering:	h_1 (top)
	h_2 (bottom)
Press:	V_1 (vertical)
Cam base:	H_1 (horizontal)
Driver:	H_2 (horizontal)
	V_2 (vertical)

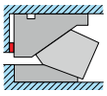
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O-KS ASSEMBLY 2

90 mm and 110 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 90/110-0°

27	52	110	151	110	52	27
34	69	140	174	140	69	34
50	126	179	197	179	126	50
76	122	185	232	185	122	76
83	116	166	246	166	116	83
81	109	149	225	149	109	81
77	99	135	199	135	99	77

90 mm width
110 mm width

O-KS 90/110-5°

27	41	87	146	87	41	27
34	49	127	184	127	49	34
51	92	171	203	171	92	51
64	127	201	281	201	127	64
70	118	180	297	180	118	70
72	103	159	259	159	103	72
70	97	144	215	144	97	70

90 mm width
110 mm width

O-KS 90/110-10°

24	47	118	174	118	47	24
36	84	154	214	154	84	36
51	115	206	240	206	115	51
72	147	221	278	221	147	72
92	141	214	306	214	141	92
73	124	190	287	190	124	73
67	111	163	244	163	111	67

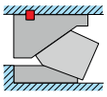
90 mm width
110 mm width

O-KS 90/110-15°

25	41	78	161	78	41	25
31	54	134	207	134	54	31
40	68	203	255	203	68	40
47	70	250	288	250	70	47
67	114	231	320	231	114	67
80	125	201	319	201	125	80
81	110	176	281	176	110	81

125 mm high

90 mm width
110 mm width



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 90/110-0°

27	50	58	54	58	50	27
33	60	62	62	62	60	33
33	61	62	63	62	61	33
56	60	60	63	60	60	56
60	57	60	56	60	57	60
61	59	61	58	61	59	61
62	62	56	60	56	62	62

90 mm width
110 mm width

O-KS 90/110-5°

27	40	67	66	67	40	27
33	45	67	61	67	45	33
44	66	67	71	67	66	44
47	62	63	66	63	62	47
56	64	64	63	64	64	56
61	63	65	64	65	63	61
60	63	66	66	66	63	60

90 mm width
110 mm width

O-KS 90/110-10°

24	45	76	78	76	45	24
34	74	75	78	75	74	34
39	69	68	75	68	69	39
52	70	75	69	75	70	52
68	74	76	75	76	74	68
56	75	75	68	75	75	56
57	75	70	67	70	75	57

90 mm width
110 mm width

O-KS 90/110-15°

25	40	62	80	62	40	25
31	52	80	85	80	52	31
40	64	79	80	79	64	40
47	63	65	81	65	63	47
57	75	74	82	74	75	57
68	80	81	82	81	80	68
73	80	81	81	81	80	73

125 mm high

90 mm width
110 mm width

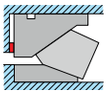
Rounded values

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 17 04.10.19 12:15

O-KS ASSEMBLY 2

90 mm and 110 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 90/110-20°

35	58	125	209	125	58	35
51	92	174	251	174	92	51
55	129	230	289	230	129	55
57	146	280	317	280	146	57
59	148	254	324	254	148	59
81	141	216	319	216	141	81
90	127	187	293	187	127	90

90 mm width
110 mm width

O-KS 90/110-25°

27	42	97	185	97	42	27
33	56	152	238	152	56	33
36	39	213	289	213	39	36
64	133	273	336	273	133	64
73	144	253	347	253	144	73
73	131	224	347	224	131	73
71	123	195	324	195	123	71

90 mm width
110 mm width

O-KS 90/110-30°

12	16	31	73	31	16	12
15	20	50	148	50	20	15
19	27	44	225	44	27	19
27	53	188	297	188	53	27
33	68	213	343	213	68	33
36	78	197	361	197	78	36
44	82	173	329	173	82	44

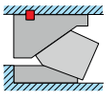
90 mm width
110 mm width

O-KS 90/110-35°

11	14	24	30	24	14	11
12	16	37	55	37	16	12
17	23	45	203	45	23	17
18	24	162	292	162	24	18
19	25	213	355	213	25	19
29	51	211	373	211	51	29
37	72	185	349	185	72	37

125 mm high

90 mm width
110 mm width



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 90/110-20°

35	57	98	99	98	57	35
50	87	99	94	99	87	50
47	98	99	100	99	98	47
45	98	99	100	99	98	45
47	99	98	100	98	99	47
70	98	98	100	98	98	70
83	97	99	100	99	97	83

90 mm width
110 mm width

O-KS 90/110-25°

27	41	83	106	83	41	27
33	55	105	107	105	55	33
36	36	102	103	102	36	36
54	91	102	104	102	91	54
63	104	105	105	105	104	63
65	101	107	106	107	101	65
66	101	108	107	108	101	66

90 mm width
110 mm width

O-KS 90/110-30°

12	16	31	57	31	16	12
15	20	49	92	49	20	15
19	27	41	95	41	27	19
27	49	84	95	84	49	27
33	63	95	95	95	63	33
36	74	95	95	95	74	36
44	79	95	95	95	79	44

90 mm width
110 mm width

O-KS 90/110-35°

11	14	24	30	24	14	11
12	16	37	45	37	16	12
17	23	43	95	43	23	17
18	21	89	97	89	21	18
19	21	98	94	98	21	19
29	47	98	95	98	47	29
37	69	98	96	98	69	37

125 mm high

90 mm width
110 mm width

Rounded values

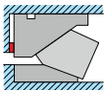
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O-KS ASSEMBLY 2

90 mm and 110 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 90/110-40°

13	17	34	96	34	17	13
15	21	60	165	60	21	15
19	31	121	270	121	31	19
27	56	222	348	222	56	27
33	71	243	370	243	71	33
42	85	228	366	228	85	42
44	87	197	352	197	87	44

90 mm width
110 mm width

O-KS 90/110-45°

12	15	27	62	27	15	12
14	18	43	130	43	18	14
18	23	45	246	45	23	18
21	35	170	340	170	35	21
25	45	237	368	237	45	25
29	52	235	373	235	52	29
37	67	204	368	204	67	37

90 mm width
110 mm width

O-KS 90/110-50°

8	9	14	35	14	9	8
9	12	21	88	21	12	9
11	14	37	192	37	14	11
15	26	128	300	128	26	15
21	42	195	370	195	42	21
29	58	232	386	232	58	29
33	63	230	379	230	63	33

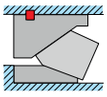
90 mm width
110 mm width

O-KS 90/110-55°

7	8	11	13	11	8	7
9	11	17	35	17	11	9
11	16	40	162	40	16	11
14	22	80	284	80	22	14
17	30	158	361	158	30	17
21	42	194	385	194	42	21
21	46	206	389	206	46	21

90 mm width
110 mm width

125 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 90/110-40°

13	17	34	86	34	17	13
15	21	59	124	59	21	15
19	31	119	124	119	31	19
27	53	120	124	120	53	27
33	67	117	124	117	67	33
42	81	116	124	116	81	42
44	84	116	122	116	84	44

90 mm width
110 mm width

O-KS 90/110-45°

12	15	27	62	27	15	12
14	18	42	119	42	18	14
18	23	43	126	43	23	18
21	33	113	125	113	33	21
25	41	125	128	125	41	25
29	48	126	129	126	48	29
37	64	126	121	126	64	37

90 mm width
110 mm width

O-KS 90/110-50°

8	9	14	35	14	9	8
9	12	21	82	21	12	9
11	14	36	128	36	14	11
15	25	114	131	114	25	15
21	40	129	128	129	40	21
29	55	129	122	129	55	29
33	60	128	115	128	60	33

90 mm width
110 mm width

O-KS 90/110-55°

7	8	11	13	11	8	7
9	11	16	32	16	11	9
11	16	39	125	39	16	11
14	22	77	132	77	22	14
17	28	117	132	117	28	17
21	39	131	132	131	39	21
21	44	131	125	131	44	21

90 mm width
110 mm width

125 mm high

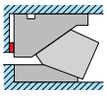
Rounded values

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O-KS ASSEMBLY 2

90 mm and 110 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 90/110-60°

13	17	36	107	36	17	13
15	22	59	190	59	22	15
20	33	118	292	118	33	20
27	58	244	353	244	58	27
37	83	256	365	256	83	37
45	95	241	366	241	95	45
54	97	215	366	215	97	54

90 mm width
110 mm width

O-KS 90/110-65°

11	14	25	28	25	14	11
13	17	36	45	36	17	13
17	24	34	269	34	24	17
21	33	42	350	42	33	21
28	56	211	371	211	56	28
34	72	267	375	267	72	34
40	78	236	376	236	78	40

90 mm width
110 mm width

O-KS 90/110-70°

8	10	16	37	16	10	8
9	13	27	98	27	13	9
12	17	27	221	27	17	12
13	20	119	329	119	20	13
19	38	221	374	221	38	19
24	49	247	384	247	49	24
28	55	237	384	237	55	28

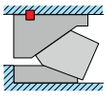
90 mm width
110 mm width

O-KS 90/110-75°

8	8	11	22	11	8	8
9	11	19	59	19	11	9
10	15	48	183	48	15	10
13	19	56	312	56	19	13
18	33	164	373	164	33	18
24	41	211	388	211	41	24
27	41	164	384	164	41	27

125 mm high

90 mm width
110 mm width



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 90/110-60°

13	17	36	107	36	17	13
15	22	59	190	59	22	15
20	33	118	292	118	33	20
27	58	244	347	244	58	27
37	83	256	357	256	83	37
45	95	241	358	241	95	45
54	97	215	358	215	97	54

90 mm width
110 mm width

O-KS 90/110-65°

11	14	25	28	25	14	11
13	17	36	45	36	17	13
17	24	34	269	34	24	17
21	33	42	350	42	33	21
28	56	211	368	211	56	28
34	72	267	368	267	72	34
40	78	236	369	236	78	40

90 mm width
110 mm width

O-KS 90/110-70°

8	10	16	37	16	10	8
9	13	27	98	27	13	9
12	17	27	221	27	17	12
13	20	119	329	119	20	13
19	38	221	366	221	38	19
24	49	247	373	247	49	24
28	55	236	373	236	55	28

90 mm width
110 mm width

O-KS 90/110-75°

8	8	11	22	11	8	8
9	11	19	59	19	11	9
10	15	48	183	48	15	10
13	19	56	312	56	19	13
18	33	164	365	164	33	18
24	41	211	377	211	41	24
27	41	164	378	164	41	27

125 mm high

90 mm width
110 mm width

Rounded values

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O-KS ASSEMBLY 3

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

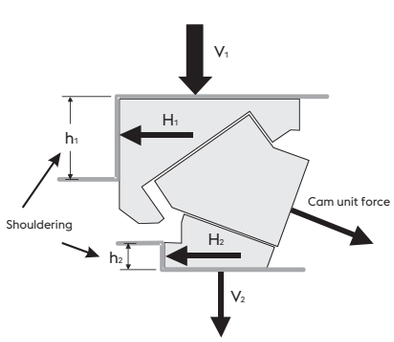
O-KS 125/160 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 125	O-KS 160	O-KS 125	O-KS 160		O-KS 125	O-KS 160	
27100	27120	O-KS 125-0°	O-KS 160-0°	0°	57.5	59.7	35.35
27101	27121	O-KS 125-5°	O-KS 160-5°	5°	57.3	59.5	35.49
27102	27122	O-KS 125-10°	O-KS 160-10°	10°	56.7	59.0	42.78
27103	27123	O-KS 125-15°	O-KS 160-15°	15°	56.7	58.9	43.62
27104	27124	O-KS 125-20°	O-KS 160-20°	20°	56.7	58.9	46.08
27105	27125	O-KS 125-25°	O-KS 160-25°	25°	56.8	59.0	47.78
27106	27126	O-KS 125-30°	O-KS 160-30°	30°	54.2	56.4	44.23
27107	27127	O-KS 125-35°	O-KS 160-35°	35°	54.4	56.7	46.76
27108	27128	O-KS 125-40°	O-KS 160-40°	40°	54.0	56.3	50.87
27109	27129	O-KS 125-45°	O-KS 160-45°	45°	54.4	56.7	55.11
27110	27130	O-KS 125-50°	O-KS 160-50°	50°	55.1	57.3	48.50
27111	27131	O-KS 125-55°	O-KS 160-55°	55°	55.3	57.5	54.36
27112	27132	O-KS 125-60°	O-KS 160-60°	60°	54.5	56.8	49.24
27113	27133	O-KS 125-125°	O-KS 160-65°	65°	54.8	57.1	46.61
27114	27134	O-KS 125-70°	O-KS 160-70°	70°	55.1	57.4	57.59
27115	27135	O-KS 125-75°	O-KS 160-75°	75°	55.1	57.4	76.10

O-KS 125/160 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0°	302	253	302	253	0	190	40	9.2
5°	305	239	285	213	19	190	40	10.3
10°	376	376	316	311	55	150	40	9.2
15°	395	369	310	267	72	150	40	10.3
20°	392	443	256	309	113	115	85	8.8
25°	422	446	258	268	125	115	85	9.9
30°	405	330	277	128	74	130	85	17.6
35°	420	333	280	92	65	130	85	23.2
40°	422	389	225	118	99	105	135	16.8
45°	440	394	228	83	83	105	135	22.2
50°	430	378	218	49	58	105	135	33.0
55°	445	387	223	22	32	105	135	25.4
60°	428	449	79	78	135	53	160	14.8
65°	441	450	79	50	107	53	160	18.6
70°	460	460	81	28	76	53	160	27.7
75°	445	440	78	10	38	53	160	25.5

The cam unit force is distributed as shown in the sketch:



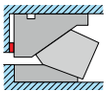
Shouldering: h_1 (top), h_2 (bottom)
Press: V_1 (vertical)
Cam base: H_1 (horizontal)
Driver: H_2 (horizontal), V_2 (vertical)

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 21 04.10.19 12:15

O-KS ASSEMBLY 3

125 mm and 160 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 125/160-0°

74	102	182	217	182	102	74
92	135	217	237	217	135	92
110	166	251	262	251	166	110
112	152	224	293	224	152	112
106	137	194	299	194	137	106
100	124	168	260	168	124	100
93	113	147	220	147	113	93

125 mm width
160 mm width

O-KS 125/160-5°

49	72	119	181	119	72	49
56	90	157	208	157	90	56
69	124	211	238	211	124	69
91	150	240	259	240	150	91
96	138	207	303	207	138	96
94	125	177	281	177	125	94
88	113	153	238	153	113	88

125 mm width
160 mm width

O-KS 125/160-10°

66	98	162	251	162	98	66
85	128	217	282	217	128	85
91	159	285	310	285	159	91
111	175	281	340	281	175	111
110	160	242	379	242	160	110
107	144	206	334	206	144	107
100	131	178	277	178	131	100

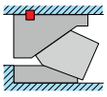
125 mm width
160 mm width

O-KS 125/160-15°

58	85	140	251	140	85	58
65	103	188	289	188	103	65
83	139	285	326	285	139	83
105	169	302	360	302	169	105
109	160	259	389	259	160	109
107	148	220	360	220	148	107
98	134	189	306	189	134	98

125 mm width
160 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 125/160-0°

74	92	111	112	111	92	74
88	113	112	112	112	113	88
96	112	112	112	112	112	96
102	112	112	112	112	112	102
100	111	112	112	112	111	100
98	112	112	113	112	112	98
93	109	112	112	112	109	93

125 mm width
160 mm width

O-KS 125/160-5°

49	71	109	125	109	71	49
56	86	124	125	124	86	56
68	113	123	125	123	113	68
86	122	121	125	121	122	86
94	122	118	124	118	122	94
94	118	122	125	122	118	94
88	110	124	123	124	110	88

125 mm width
160 mm width

O-KS 125/160-10°

66	96	137	144	137	96	66
85	120	146	143	146	120	85
90	141	145	145	145	141	90
106	145	145	145	145	145	106
109	145	143	143	143	145	109
107	137	144	144	144	137	107
100	128	145	143	145	128	100

125 mm width
160 mm width

O-KS 125/160-15°

58	85	134	160	134	85	58
65	100	160	160	160	100	65
83	124	161	161	161	124	83
105	152	161	161	161	152	105
109	148	156	158	156	148	109
107	141	159	159	159	141	107
98	131	160	157	160	131	98

125 mm width
160 mm width

150 mm high

Rounded values

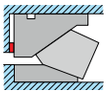
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O-KS ASSEMBLY 3

125 mm and 160 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 125/160-20°

63	88	153	301	153	88	63
74	119	198	340	198	119	74
89	134	267	377	267	134	89
108	179	331	378	331	179	108
116	176	286	378	286	176	116
114	161	240	359	240	161	114
106	145	204	319	204	145	106

125 mm width
160 mm width

O-KS 125/160-25°

58	79	136	285	136	79	58
65	93	179	354	179	93	65
85	137	249	371	249	137	85
102	161	277	398	277	161	102
115	173	290	428	290	173	115
115	163	255	416	255	163	115
104	144	216	360	216	144	104

125 mm width
160 mm width

O-KS 125/160-30°

21	29	50	113	50	29	21
26	38	71	190	71	38	26
33	55	129	280	129	55	33
40	76	241	352	241	76	40
56	102	227	394	227	102	56
61	107	200	367	200	107	61
65	103	174	307	174	103	65

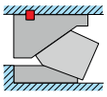
125 mm width
160 mm width

O-KS 125/160-35°

18	24	42	87	42	24	18
21	31	61	157	61	31	21
28	45	99	269	99	45	28
37	71	195	366	195	71	37
49	92	220	409	220	92	49
57	97	197	394	197	97	57
61	95	167	332	167	95	61

150 mm high

125 mm width
160 mm width



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 125/160-20°

63	88	147	201	147	88	63
74	118	181	202	181	118	74
89	127	201	202	201	127	89
108	163	202	202	202	163	108
116	166	202	198	202	166	116
114	157	202	201	202	157	114
106	144	191	202	191	144	106

125 mm width
160 mm width

O-KS 125/160-25°

58	79	132	221	132	79	58
65	93	168	221	168	93	65
85	135	221	221	221	135	85
102	155	221	221	221	155	102
115	166	221	221	221	166	115
115	160	221	221	221	160	115
104	144	205	221	205	144	104

125 mm width
160 mm width

O-KS 125/160-30°

21	29	50	113	50	29	21
26	38	71	177	71	38	26
33	54	122	197	122	54	33
40	71	192	197	192	71	40
56	100	198	195	198	100	56
61	107	186	193	186	107	61
65	103	166	194	166	103	65

125 mm width
160 mm width

O-KS 125/160-35°

18	24	42	87	42	24	18
21	31	61	148	61	31	21
28	45	95	209	95	45	28
37	71	185	209	185	71	37
49	91	204	205	204	91	49
57	97	184	202	184	97	57
61	95	159	204	159	95	61

150 mm high

125 mm width
160 mm width

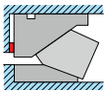
Rounded values

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O-KS ASSEMBLY 3

125 mm and 160 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 125/160-40°

21	29	52	126	52	29	21
25	38	74	210	74	38	25
33	55	124	317	124	55	33
41	77	226	399	226	77	41
51	93	237	414	237	93	51
60	106	215	402	215	106	60
66	106	185	343	185	106	66

125 mm width
160 mm width

O-KS 125/160-45°

19	26	45	99	45	26	19
23	33	66	183	66	33	23
30	49	114	312	114	49	30
39	76	221	406	221	76	39
49	92	242	417	242	92	49
59	101	220	428	220	101	59
63	100	191	380	191	100	63

125 mm width
160 mm width

O-KS 125/160-50°

19	44	106	131	106	44	19
21	47	112	165	112	47	21
23	49	119	253	119	49	23
26	51	130	403	130	51	26
32	63	194	427	194	63	32
37	66	200	430	200	66	37
41	68	175	391	175	68	41

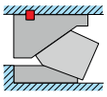
125 mm width
160 mm width

O-KS 125/160-55°

10	13	19	31	19	13	10
12	17	34	82	34	17	12
15	25	67	231	67	25	15
20	40	125	397	125	40	20
29	60	183	430	183	60	29
36	69	188	435	188	69	36
40	70	170	398	170	70	40

125 mm width
160 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 125/160-40°

21	29	52	126	52	29	21
25	38	73	203	73	38	25
33	55	121	269	121	55	33
41	77	218	269	218	77	41
51	93	227	269	227	93	51
60	106	207	269	207	106	60
66	106	180	269	180	106	66

125 mm width
160 mm width

O-KS 125/160-45°

19	26	45	99	45	26	19
23	33	66	178	66	33	23
30	49	112	281	112	49	30
39	76	214	281	214	76	39
49	92	233	280	233	92	49
59	101	210	281	210	101	59
63	100	185	281	185	100	63

125 mm width
160 mm width

O-KS 125/160-50°

19	44	106	131	106	44	19
21	47	112	165	112	47	21
23	49	119	253	119	49	23
26	51	130	403	130	51	26
32	63	194	427	194	63	32
37	66	200	430	200	66	37
41	68	175	391	175	68	41

125 mm width
160 mm width

O-KS 125/160-55°

10	13	19	31	19	13	10
12	17	34	82	34	17	12
15	25	67	226	67	25	15
20	40	117	271	117	40	20
29	60	174	279	174	60	29
36	69	178	279	178	69	36
40	70	162	280	162	70	40

125 mm width
160 mm width

150 mm high

Rounded values

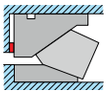
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O-KS ASSEMBLY 3

125 mm and 160 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 125/160-60°

22	31	53	129	53	31	22
26	39	77	227	77	39	26
34	58	143	355	143	58	34
42	76	217	415	217	76	42
55	104	276	418	276	104	55
67	121	259	419	259	121	67
74	121	223	406	223	121	74

125 mm width
160 mm width

O-KS 125/160-65°

19	26	47	104	47	26	19
22	34	70	193	70	34	22
29	47	106	330	106	47	29
39	74	187	424	187	74	39
51	102	266	430	266	102	51
60	113	258	432	258	113	60
66	110	220	425	220	110	66

125 mm width
160 mm width

O-KS 125/160-70°

12	16	26	48	26	16	12
14	21	43	115	43	21	14
18	30	85	270	85	30	18
25	48	147	432	147	48	25
33	71	231	449	231	71	33
41	84	237	449	237	84	41
46	87	212	430	212	87	46

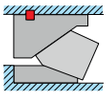
125 mm width
160 mm width

O-KS 125/160-75°

10	13	19	31	19	13	10
12	17	33	82	33	17	12
15	24	66	234	66	24	15
19	39	124	410	124	39	19
28	60	193	432	193	60	28
36	73	208	435	208	73	36
41	75	190	400	190	75	41

125 mm width
160 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 125/160-60°

22	31	53	129	53	31	22
26	39	77	227	77	39	26
34	58	143	355	143	58	34
42	76	217	415	217	76	42
55	104	276	418	276	104	55
67	121	259	419	259	121	67
74	121	223	406	223	121	74

125 mm width
160 mm width

O-KS 125/160-65°

19	26	47	104	47	26	19
22	34	70	193	70	34	22
29	47	106	330	106	47	29
39	74	187	424	187	74	39
51	102	266	430	266	102	51
60	113	258	432	258	113	60
66	110	220	425	220	110	66

125 mm width
160 mm width

O-KS 125/160-70°

12	16	26	48	26	16	12
14	21	43	115	43	21	14
18	30	85	270	85	30	18
25	48	147	432	147	48	25
33	71	231	449	231	71	33
41	84	237	449	237	84	41
46	87	212	430	212	87	46

125 mm width
160 mm width

O-KS 125/160-75°

10	13	19	31	19	13	10
12	17	33	82	33	17	12
15	24	66	234	66	24	15
19	39	124	410	124	39	19
28	60	193	432	193	60	28
36	73	208	435	208	73	36
41	75	190	400	190	75	41

125 mm width
160 mm width

150 mm high

Rounded values

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 25 04.10.19 12:15

O-KS ASSEMBLY 4

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

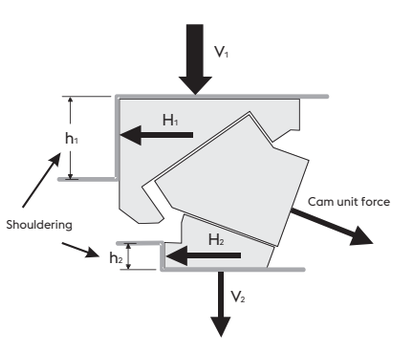
O-KS 175/220 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 175	O-KS 220	O-KS 175	O-KS 220		O-KS 175	O-KS 220	
27140	27160	O-KS 175-0°	O-KS 220-0°	0°	85.5	88.4	41.78
27141	27161	O-KS 175-5°	O-KS 220-5°	5°	85.4	88.2	41.94
27142	27162	O-KS 175-10°	O-KS 220-10°	10°	83.8	86.7	50.56
27143	27163	O-KS 175-15°	O-KS 220-15°	15°	83.9	86.8	51.55
27144	27164	O-KS 175-20°	O-KS 220-20°	20°	82.1	85.0	55.30
27145	27165	O-KS 175-25°	O-KS 220-25°	25°	82.2	85.1	59.24
27146	27166	O-KS 175-30°	O-KS 220-30°	30°	79.3	82.2	53.07
27147	27167	O-KS 175-35°	O-KS 220-35°	35°	79.9	82.8	56.11
27148	27168	O-KS 175-40°	O-KS 220-40°	40°	78.7	81.6	62.18
27149	27169	O-KS 175-45°	O-KS 220-45°	45°	78.9	81.8	67.36
27150	27170	O-KS 175-50°	O-KS 220-50°	50°	79.8	82.9	60.63
27151	27171	O-KS 175-55°	O-KS 220-55°	55°	79.7	82.8	67.94
27152	27172	O-KS 175-60°	O-KS 220-60°	60°	79.8	82.7	68.94
27153	27173	O-KS 175-175°	O-KS 220-65°	65°	79.4	82.3	60.59
27154	27174	O-KS 175-70°	O-KS 220-70°	70°	80.0	83.1	74.86
27155	27175	O-KS 175-75°	O-KS 220-75°	75°	79.2	82.3	98.93

O-KS 175/220 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0°	404	339	404	339	0	190	38	15.6
5°	456	358	426	318	28	190	38	17.5
10°	566	566	475	468	82	148	38	15.5
15°	606	567	476	410	110	148	38	17.3
20°	576	651	376	454	165	115	82	14.9
25°	605	640	369	384	179	115	82	16.7
30°	562	458	384	177	102	130	82	28.3
35°	544	431	362	119	84	130	82	37.4
40°	605	558	322	169	142	100	130	28.8
45°	615	551	318	117	117	100	130	38.0
50°	650	572	330	74	88	100	130	42.5
55°	643	559	323	32	46	100	130	39.4
60°	637	668	118	116	201	50	148	25.9
65°	638	650	115	72	155	50	148	31.4
70°	663	663	117	40	110	50	148	42.6
75°	662	654	115	15	56	50	148	39.5

The cam unit force is distributed as shown in the sketch:



Shouldering:	h_1 (top)
	h_2 (bottom)
Press:	V_1 (vertical)
Cam base:	H_1 (horizontal)
Driver:	H_2 (horizontal)
	V_2 (vertical)

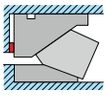
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O-KS ASSEMBLY 4

175 mm and 220 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 175/220-0°

79	66	173	314	173	66	79
86	78	236	334	236	78	86
102	109	298	363	298	109	102
120	137	261	404	261	137	120
133	145	231	395	231	145	133
125	134	207	358	207	134	125
116	125	186	307	186	125	116

175 mm width
220 mm width

O-KS 175/220-5°

74	112	147	253	147	112	74
87	124	183	234	183	124	87
94	137	319	381	319	137	94
107	159	272	404	272	159	107
94	151	242	456	242	151	94
100	137	200	399	200	137	100
101	130	182	331	182	130	101

175 mm width
220 mm width

O-KS 175/220-10°

64	101	201	364	201	101	64
73	122	254	428	254	122	73
79	135	346	478	346	135	79
95	155	313	518	313	155	95
99	155	275	566	275	155	99
104	148	241	482	241	148	104
102	137	211	388	211	137	102

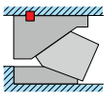
175 mm width
220 mm width

O-KS 175/220-15°

56	88	180	390	180	88	56
61	100	240	454	240	100	61
68	117	311	497	311	117	68
81	144	320	497	320	144	81
84	141	291	606	291	141	84
91	139	256	534	256	139	91
93	136	225	424	225	136	93

175 mm width
220 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 175/220-0°

79	65	138	167	138	65	79
86	74	142	183	142	74	86
102	99	159	182	159	99	102
120	128	154	177	154	128	120
133	141	160	176	160	141	133
125	133	173	181	173	133	125
116	122	158	183	158	122	116

175 mm width
220 mm width

O-KS 175/220-5°

74	112	144	180	144	112	74
87	123	161	166	161	123	87
94	126	195	192	195	126	94
107	151	179	180	179	151	107
94	147	189	180	189	147	94
100	136	180	176	180	136	100
101	129	167	194	167	129	101

175 mm width
220 mm width

O-KS 175/220-10°

64	101	184	189	184	101	64
73	119	169	214	169	119	73
79	124	222	214	222	124	79
95	148	220	215	220	148	95
99	151	220	213	220	151	99
104	147	219	212	219	147	104
102	137	204	221	204	137	102

175 mm width
220 mm width

O-KS 175/220-15°

56	88	173	236	173	88	56
61	99	217	236	217	99	61
68	109	214	237	214	109	68
81	137	232	237	232	137	81
84	137	230	216	230	137	84
91	138	231	214	231	138	91
93	136	216	232	216	136	93

175 mm width
220 mm width

150 mm high

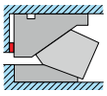
Rounded values

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O-KS ASSEMBLY 4

175 mm and 220 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 175/220-20°

87	125	208	427	208	125	87
97	146	266	481	266	146	97
105	160	331	521	331	160	105
120	185	392	565	392	185	120
127	183	343	576	343	183	127
125	171	296	572	296	171	125
120	163	278	500	278	163	120

175 mm width
220 mm width

O-KS 175/220-25°

74	100	175	425	175	100	74
76	91	183	486	183	91	76
85	117	312	524	312	117	85
90	154	322	596	322	154	90
104	156	335	605	335	156	104
108	165	306	601	306	165	108
110	161	268	531	268	161	110

175 mm width
220 mm width

O-KS 175/220-30°

63	90	158	241	158	90	63
67	98	176	360	176	98	67
71	97	143	391	143	97	71
71	104	252	562	252	104	71
75	114	244	548	244	114	75
74	110	204	454	204	110	74
71	103	175	364	175	103	71

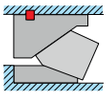
175 mm width
220 mm width

O-KS 175/220-35°

29	40	80	172	80	40	29
32	46	107	293	107	46	32
36	55	122	446	122	55	36
38	60	123	535	123	60	38
43	75	211	544	211	75	43
44	78	226	533	226	78	44
47	79	202	476	202	79	47

175 mm width
220 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 175/220-20°

87	125	201	270	201	125	87
97	145	252	274	252	145	97
105	157	287	280	287	157	105
120	176	286	281	286	176	120
127	179	286	286	286	179	127
125	170	274	287	274	170	125
120	163	272	286	272	163	120

175 mm width
220 mm width

O-KS 175/220-25°

74	100	170	306	170	100	74
76	91	174	295	174	91	76
85	117	301	275	301	117	85
90	154	309	306	309	154	90
104	155	307	303	307	155	104
108	164	287	305	287	164	108
110	161	257	304	257	161	110

175 mm width
220 mm width

O-KS 175/220-30°

63	90	157	213	157	90	63
67	98	172	274	172	98	67
71	97	137	261	137	97	71
71	104	238	250	238	104	71
75	114	231	270	231	114	75
74	110	196	275	196	110	74
71	103	171	274	171	103	71

175 mm width
220 mm width

O-KS 175/220-35°

29	40	80	172	80	40	29
32	46	106	269	106	46	32
36	55	115	287	115	55	36
38	60	110	245	110	60	38
43	75	197	241	197	75	43
44	78	214	268	214	78	44
47	79	193	282	193	79	47

175 mm width
220 mm width

150 mm high

Rounded values

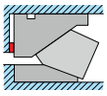
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O-KS ASSEMBLY 4

175 mm and 220 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 175/220-40°

62	91	159	234	159	91	62
67	99	174	358	174	99	67
71	109	203	536	203	109	71
75	121	262	597	262	121	75
75	116	237	605	237	116	75
73	113	224	515	224	113	73
70	107	201	417	201	107	70

175 mm width
220 mm width

O-KS 175/220-45°

45	54	105	186	105	54	45
53	75	147	252	147	75	53
53	68	130	388	130	68	53
50	55	141	569	141	55	50
61	86	207	615	207	86	61
65	97	256	614	256	97	65
68	104	240	535	240	104	68

175 mm width
220 mm width

O-KS 175/220-50°

39	53	91	137	91	53	39
44	62	115	162	115	62	44
48	71	134	186	134	71	48
53	81	172	532	172	81	53
57	89	190	621	190	89	57
62	98	203	650	203	98	62
65	101	205	592	205	101	65

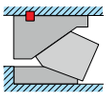
175 mm width
220 mm width

O-KS 175/220-55°

37	51	86	116	86	51	37
41	59	108	139	108	59	41
47	68	119	177	119	68	47
51	77	157	535	157	77	51
56	86	190	622	190	86	56
59	90	170	643	170	90	59
61	95	194	643	194	95	61

175 mm width
220 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 175/220-40°

62	91	159	234	159	91	62
67	99	172	320	172	99	67
71	109	193	298	193	109	71
75	121	250	346	250	121	75
75	116	225	350	225	116	75
73	113	216	354	216	113	73
70	107	198	347	198	107	70

175 mm width
220 mm width

O-KS 175/220-45°

45	54	105	186	105	54	45
53	75	147	250	147	75	53
53	68	129	366	129	68	53
50	55	130	328	130	55	50
61	86	195	352	195	86	61
65	97	244	360	244	97	65
68	104	233	363	233	104	68

175 mm width
220 mm width

O-KS 175/220-50°

39	53	91	137	91	53	39
44	62	115	162	115	62	44
48	71	134	175	134	71	48
53	81	161	283	161	81	53
57	89	178	353	178	89	57
62	98	190	369	190	98	62
65	101	195	371	195	101	65

175 mm width
220 mm width

O-KS 175/220-55°

37	51	86	116	86	51	37
41	59	108	139	108	59	41
47	68	118	168	118	68	47
51	77	148	333	148	77	51
56	86	179	367	179	86	56
59	90	166	559	166	90	59
61	95	194	643	194	95	61

175 mm width
220 mm width

150 mm high

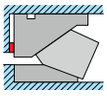
Rounded values

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O-KS ASSEMBLY 4

175 mm and 220 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 175/220-60°

57	81	143	260	143	81	57
61	90	170	431	170	90	61
65	102	202	595	202	102	65
69	110	211	627	211	110	69
71	115	234	637	234	115	71
70	113	243	634	243	113	70
66	105	216	579	216	105	66

175 mm width
220 mm width

O-KS 175/220-65°

44	60	107	158	107	60	44
48	69	133	224	133	69	48
53	79	168	475	168	79	53
59	94	227	601	227	94	59
63	106	258	638	258	106	63
68	115	280	633	280	115	68
70	116	272	631	272	116	70

175 mm width
220 mm width

O-KS 175/220-70°

37	51	86	129	86	51	37
41	59	105	154	105	59	41
46	67	128	175	128	67	46
51	76	167	582	167	76	51
55	86	198	655	198	86	55
59	95	212	663	212	95	59
62	99	207	652	207	99	62

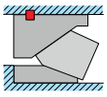
175 mm width
220 mm width

O-KS 175/220-75°

37	49	77	113	77	49	37
41	56	99	151	99	56	41
45	65	129	199	129	65	45
49	74	166	557	166	74	49
53	82	193	657	193	82	53
57	89	202	662	202	89	57
59	91	192	632	192	91	59

175 mm width
220 mm width

150 mm high



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 175/220-60°

57	81	143	260	143	81	57
61	90	170	431	170	90	61
65	102	202	595	202	102	65
69	110	211	627	211	110	69
71	115	234	637	234	115	71
70	113	243	634	243	113	70
66	105	216	579	216	105	66

175 mm width
220 mm width

O-KS 175/220-65°

44	60	107	158	107	60	44
48	69	133	224	133	69	48
53	79	168	475	168	79	53
59	94	227	601	227	94	59
63	106	258	638	258	106	63
68	115	280	633	280	115	68
70	116	272	631	272	116	70

175 mm width
220 mm width

O-KS 175/220-70°

37	51	86	129	86	51	37
41	59	105	154	105	59	41
46	67	128	175	128	67	46
51	76	167	582	167	76	51
55	86	198	655	198	86	55
59	95	212	663	212	95	59
62	99	207	652	207	99	62

175 mm width
220 mm width

O-KS 175/220-75°

37	49	77	113	77	49	37
41	56	99	151	99	56	41
45	65	129	199	129	65	45
49	74	166	557	166	74	49
53	82	193	657	193	82	53
57	89	202	662	202	89	57
59	91	192	632	192	91	59

175 mm width
220 mm width

150 mm high

Rounded values

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O-KS ASSEMBLY 5

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

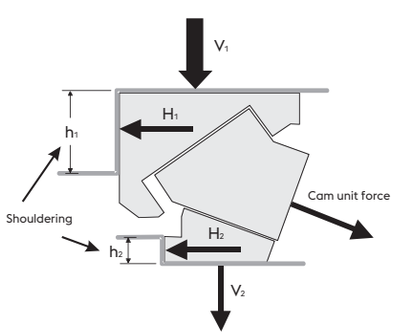
O-KS 260/330 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 260	O-KS 330	O-KS 260	O-KS 330		O-KS 260	O-KS 330	
27180	27200	O-KS 260-0°	O-KS 330-0°	0°	151.5	156.7	41.78
27181	27201	O-KS 260-5°	O-KS 330-5°	5°	151.4	156.6	42.75
27182	27202	O-KS 260-10°	O-KS 330-10°	10°	148.7	153.9	52.04
27183	27203	O-KS 260-15°	O-KS 330-15°	15°	148.9	154.1	53.68
27184	27204	O-KS 260-20°	O-KS 330-20°	20°	147.5	152.7	57.82
27185	27205	O-KS 260-25°	O-KS 330-25°	25°	148.1	153.3	61.50
27186	27206	O-KS 260-30°	O-KS 330-30°	30°	142.0	147.6	56.61
27187	27207	O-KS 260-35°	O-KS 330-35°	35°	142.5	148.1	60.26
27188	27208	O-KS 260-40°	O-KS 330-40°	40°	140.5	146.1	67.04
27189	27209	O-KS 260-45°	O-KS 330-45°	45°	140.7	146.3	73.32
27190	27210	O-KS 260-50°	O-KS 330-50°	50°	141.5	147.1	64.94
27191	27211	O-KS 260-55°	O-KS 330-55°	55°	141.4	146.9	81.96
27192	27212	O-KS 260-60°	O-KS 330-60°	60°	143.3	149.0	68.94
27193	27213	O-KS 260-260°	O-KS 330-65°	65°	143.2	148.9	60.59
27194	27214	O-KS 260-70°	O-KS 330-70°	70°	143.1	148.7	74.86
27195	27215	O-KS 260-75°	O-KS 330-75°	75°	142.5	148.0	98.93

O-KS 260/330 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0	781	655	781	655	0	186	48	30.9
5	827	649	773	577	50	186	48	34.6
10	802	802	673	663	117	142	48	30.7
15	857	801	672	580	155	142	48	34.4
20	773	874	505	610	222	110	82	29.6
25	827	874	505	525	245	110	82	33.2
30	806	657	551	254	147	125	83	56.0
35	829	657	552	182	127	125	83	61.6
40	830	765	442	231	194	95	145	57.2
45	846	759	438	160	160	95	145	61.7
50	536	471	272	61	72	95	145	57.6
55	725	630	364	36	52	95	145	53.4
60	830	870	153	151	262	45	180	51.7
65	849	866	153	96	206	45	190	61.8
70	666	666	117	40	110	45	190	57.7
75	639	632	111	14	54	45	190	53.5

The cam unit force is distributed as shown in the sketch:



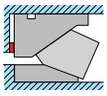
Shouldering:	h_1 (top)
	h_2 (bottom)
Press:	V_1 (vertical)
Cam base:	H_1 (horizontal)
Driver:	H_2 (horizontal)
	V_2 (vertical)

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 31 04.10.19 12:15

O-KS ASSEMBLY 5

260 mm and 330 mm models

Permissible cam forces



Shouldering

Shouldering support at top and bottom

O-KS 260/330-0°

88	200	364	553	364	200	88
98	225	434	653	434	225	98
111	255	520	738	520	255	111
123	287	609	778	609	287	123
137	318	686	781	686	318	137
152	346	736	781	736	346	152
165	365	724	781	724	365	165

150 mm high

260 mm width

330 mm width

O-KS 260/330-5°

59	156	276	424	276	156	59
66	179	350	555	350	179	66
76	207	439	693	439	207	76
86	238	540	792	540	238	86
97	270	637	822	637	270	97
109	302	721	827	721	302	109
120	324	736	827	736	324	120

150 mm high

260 mm width

330 mm width

O-KS 260/330-10°

100	222	387	586	387	222	100
109	247	456	678	456	247	109
123	278	544	773	544	278	123
136	309	632	799	632	309	136
150	339	708	802	708	339	150
164	366	753	802	753	366	164
172	370	738	802	738	370	172

150 mm high

260 mm width

330 mm width

O-KS 260/330-15°

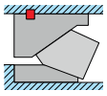
69	188	311	493	311	188	69
76	213	389	625	389	213	76
87	244	484	758	484	244	87
98	278	591	849	591	278	98
108	310	685	857	685	310	108
120	342	761	857	761	342	120
121	338	751	857	751	338	121

150 mm high

260 mm width

330 mm width

Permissible cam forces



Fitting key

Fitting key support at top, shouldering support at bottom

O-KS 260/330-0°

65	115	164	221	164	115	65
72	128	195	261	195	128	72
82	145	234	295	234	145	82
92	163	274	311	274	163	92
103	180	309	313	309	180	103
114	196	332	313	332	196	114
124	207	327	313	327	207	124

150 mm high

260 mm width

330 mm width

O-KS 260/330-5°

41	89	124	169	124	89	41
46	102	157	222	157	102	46
53	118	197	277	197	118	53
60	134	243	317	243	134	60
68	152	287	329	287	152	68
77	170	325	331	325	170	77
85	183	332	331	332	183	85

150 mm high

260 mm width

330 mm width

O-KS 260/330-10°

74	127	174	234	174	127	74
81	141	205	271	205	141	81
91	158	245	309	245	158	91
102	176	285	320	285	176	102
112	192	320	321	320	192	112
123	208	340	321	340	208	123
131	210	333	321	333	210	131

150 mm high

260 mm width

330 mm width

O-KS 260/330-15°

47	108	140	197	140	108	47
52	122	175	250	175	122	52
59	139	218	303	218	139	59
67	158	266	340	266	158	67
75	176	309	343	309	176	75
83	193	343	343	343	193	83
84	191	339	343	339	191	84

150 mm high

260 mm width

330 mm width

Rounded values

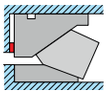
VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 32 04.10.19 12:15

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O-KS ASSEMBLY 5

260 mm and 330 mm models

Permissible cam forces



Shouldering

Shouldering support at top and bottom

O-KS 260/330-20°

92	196	346	525	346	196	92
102	219	413	625	413	219	102
114	247	496	715	496	247	114
128	278	584	768	584	278	128
142	307	664	773	664	307	142
157	335	728	773	728	335	157
172	356	727	773	727	356	172

150 mm high

260 mm width

330 mm width

O-KS 260/330-25°

61	159	265	413	265	159	61
68	182	338	531	338	182	68
77	209	425	670	425	209	77
88	240	525	778	525	240	88
99	273	626	819	626	273	99
112	306	715	827	715	306	112
123	329	736	827	736	329	123

150 mm high

260 mm width

330 mm width

O-KS 260/330-30°

57	75	130	252	130	75	57
65	96	226	436	226	96	65
74	122	343	618	343	122	74
84	150	462	765	462	150	84
93	176	549	801	549	176	93
103	193	582	806	582	193	103
108	194	535	806	535	194	108

150 mm high

260 mm width

330 mm width

O-KS 260/330-35°

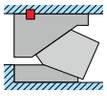
50	62	76	152	76	62	50
55	80	173	359	173	80	55
62	104	297	590	297	104	62
69	129	423	768	423	129	69
76	148	509	820	509	148	76
80	158	539	829	539	158	80
81	152	498	829	498	152	81

150 mm high

260 mm width

330 mm width

Permissible cam forces



Fitting key

Fitting key support at top, shouldering support at bottom

O-KS 260/330-20°

70	112	156	210	156	112	70
77	125	186	250	186	125	77
87	141	223	286	223	141	87
98	158	263	307	263	158	98
108	174	299	309	299	174	108
120	190	329	309	329	190	120
132	202	328	309	328	202	132

150 mm high

260 mm width

330 mm width

O-KS 260/330-25°

19	84	103	144	103	84	19
22	96	142	202	142	96	22
27	110	185	266	185	110	27
32	126	236	315	236	126	32
39	142	291	331	291	142	39
46	160	337	331	337	160	46
52	174	329	331	329	174	52

150 mm high

260 mm width

330 mm width

O-KS 260/330-30°

48	43	58	101	58	43	48
54	54	101	174	101	54	54
61	68	154	247	154	68	61
69	83	208	306	208	83	69
77	97	247	320	247	97	77
84	107	262	323	262	107	84
89	108	241	323	241	108	89

150 mm high

260 mm width

330 mm width

O-KS 260/330-35°

42	36	34	61	34	36	42
46	46	77	144	77	46	46
51	58	133	236	133	58	51
57	71	190	307	190	71	57
62	81	229	328	229	81	62
66	87	243	332	243	87	66
66	84	224	332	224	84	66

150 mm high

260 mm width

330 mm width

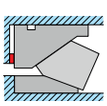
Rounded values

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 33 04.10.19 12:15

O-KS ASSEMBLY 5

260 mm and 330 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 260/330-40°

63	86	162	313	162	86	63
70	107	262	487	262	107	70
79	134	382	687	382	134	79
89	162	500	818	500	162	89
100	187	580	830	580	187	100
108	202	594	830	594	202	108
112	198	537	830	537	198	112

150 mm high

260 mm width

330 mm width

O-KS 260/330-45°

53	80	231	176	231	80	53
61	96	275	372	275	96	61
69	114	327	580	327	114	69
78	133	380	759	380	133	78
85	152	426	832	426	152	85
92	167	460	846	460	167	92
97	178	483	846	483	178	97

150 mm high

260 mm width

330 mm width

O-KS 260/330-50°

22	43	182	159	182	43	22
26	54	230	343	230	54	26
30	66	280	421	280	66	30
35	78	330	495	330	78	35
39	90	370	530	370	90	39
44	102	404	536	404	102	44
48	110	430	536	430	110	48

150 mm high

260 mm width

330 mm width

O-KS 260/330-55°

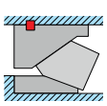
24	43	188	153	188	43	24
28	55	238	320	238	55	28
32	68	297	502	297	68	32
35	77	343	652	343	77	35
37	84	381	713	381	84	37
39	92	410	725	410	92	39
41	93	417	725	417	93	41

150 mm high

260 mm width

330 mm width

Permissible cam forces



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 260/330-40°

63	77	82	157	82	77	63
70	92	119	221	119	92	70
79	112	174	312	174	112	79
89	134	227	372	227	134	89
100	153	264	377	264	153	100
108	168	270	377	270	168	108
112	167	244	377	244	167	112

150 mm high

260 mm width

330 mm width

O-KS 260/330-45°

53	68	119	86	119	68	53
61	80	125	169	125	80	61
69	95	149	264	149	95	69
78	112	173	345	173	112	78
85	128	194	378	194	128	85
92	141	209	385	209	141	92
97	151	220	385	220	151	97

150 mm high

260 mm width

330 mm width

O-KS 260/330-50°

22	33	93	76	93	33	22
26	41	105	156	105	41	26
30	50	127	191	127	50	30
35	59	150	225	150	59	35
39	68	168	241	168	68	39
44	78	184	244	184	78	44
48	85	195	244	195	85	48

150 mm high

260 mm width

330 mm width

O-KS 260/330-55°

24	43	188	153	188	43	24
28	55	238	320	238	55	28
32	68	297	502	297	68	32
35	77	343	652	343	77	35
37	84	381	713	381	84	37
39	92	410	725	410	92	39
41	93	417	725	417	93	41

150 mm high

260 mm width

330 mm width

Rounded values

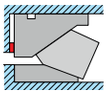
VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 34 04.10.19 12:15

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O-KS ASSEMBLY 5

260 mm and 330 mm models

Permissible cam forces



Shouldering

Shouldering support at top and bottom

O-KS 260/330-60°

61	70	43	289	43	70	61
69	84	70	462	70	84	69
78	100	102	663	102	100	78
88	118	132	804	132	118	88
98	135	150	828	150	135	98
107	150	156	830	156	150	107
112	154	147	830	147	154	112

150 mm high

260 mm width

330 mm width

O-KS 260/330-65°

52	63	85	174	85	63	52
58	84	182	373	182	84	58
66	108	312	581	312	108	66
74	134	431	760	431	134	74
82	156	522	834	522	156	82
88	171	559	849	559	171	88
93	174	532	849	532	174	93

150 mm high

260 mm width

330 mm width

O-KS 260/330-70°

21	34	102	181	102	34	21
24	47	183	315	183	47	24
27	62	280	473	280	62	27
30	78	379	602	379	78	30
33	90	443	655	443	90	33
37	100	470	666	470	100	37
39	99	456	666	456	99	39

150 mm high

260 mm width

330 mm width

O-KS 260/330-75°

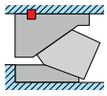
22	35	103	188	103	35	22
23	47	187	353	187	47	23
25	61	292	526	292	61	25
24	69	381	630	381	69	24
24	74	414	639	414	74	24
23	72	417	639	417	72	23
23	67	375	625	375	67	23

150 mm high

260 mm width

330 mm width

Permissible cam forces



Fitting key

Fitting key support at top, shouldering support at bottom

O-KS 260/330-60°

61	70	43	289	43	70	61
69	84	70	462	70	84	69
78	100	102	663	102	100	78
88	118	132	804	132	118	88
98	135	150	828	150	135	98
107	150	156	830	156	150	107
112	154	147	830	147	154	112

150 mm high

260 mm width

330 mm width

O-KS 260/330-65°

52	63	85	174	85	63	52
58	84	182	373	182	84	58
66	108	312	581	312	108	66
74	134	431	760	431	134	74
82	156	522	834	522	156	82
88	171	559	849	559	171	88
93	174	532	849	532	174	93

150 mm high

260 mm width

330 mm width

O-KS 260/330-70°

21	34	102	181	102	34	21
24	47	183	315	183	47	24
27	62	280	473	280	62	27
30	78	379	602	379	78	30
33	90	443	655	443	90	33
37	100	470	666	470	100	37
39	99	456	666	456	99	39

150 mm high

260 mm width

330 mm width

O-KS 260/330-75°

22	35	103	188	103	35	22
23	47	187	353	187	47	23
25	61	292	526	292	61	25
24	69	381	630	381	69	24
24	74	414	639	414	74	24
23	72	417	639	417	72	23
23	67	375	625	375	67	23

150 mm high

260 mm width

330 mm width

Rounded values

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O-KS ASSEMBLY 6

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

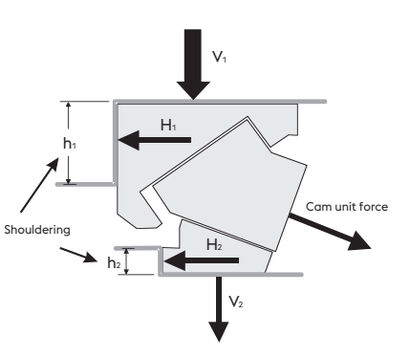
O-KS 400/500 mm cam unit specifications

Identification number		Designation		Angle	Weight [kg]		Stroke [mm]
O-KS 400	O-KS 500	O-KS 400	O-KS 500		O-KS 400	O-KS 500	
27220	27240	O-KS 400-0°	O-KS 500-0°	0°	308.7	321.3	41.78
27221	27241	O-KS 400-5°	O-KS 500-5°	5°	307.2	319.8	42.75
27222	27242	O-KS 400-10°	O-KS 500-10°	10°	300.7	313.3	52.04
27223	27243	O-KS 400-15°	O-KS 500-15°	15°	300.0	312.6	53.68
27224	27244	O-KS 400-20°	O-KS 500-20°	20°	294.5	307.0	57.82
27225	27245	O-KS 400-25°	O-KS 500-25°	25°	294.0	306.6	61.50
27226	27246	O-KS 400-30°	O-KS 500-30°	30°	283.6	296.4	64.99
27227	27247	O-KS 400-35°	O-KS 500-35°	35°	287.7	300.6	60.26
27228	27248	O-KS 400-40°	O-KS 500-40°	40°	279.7	292.5	75.42
27229	27249	O-KS 400-45°	O-KS 500-45°	45°	286.7	299.6	73.32
27230	27250	O-KS 400-50°	O-KS 500-50°	50°	288.4	301.1	64.94
27231	27251	O-KS 400-55°	O-KS 500-55°	55°	291.5	304.1	81.96
27232	27252	O-KS 400-60°	O-KS 500-60°	60°	280.4	293.2	68.94
27233	27253	O-KS 400-400°	O-KS 500-65°	65°	285.4	298.3	60.59
27234	27254	O-KS 400-70°	O-KS 500-70°	70°	288.8	301.6	74.86
27235	27255	O-KS 400-75°	O-KS 500-75°	75°	289.0	300.9	98.93

O-KS 400/500 mm cam unit force distribution

Angle	Maximum cam force [kN]	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force [kN]
		V1	H1	V2	H2	h1	h2	
0°	1361	1142	1361	1142	0	228	30	87.8
5°	1453	1140	1359	1014	89	228	41	84.2
10°	1264	1264	1061	1045	184	179	45	88.0
15°	1179	1103	925	797	214	179	45	84.3
20°	1358	1535	886	1071	390	135	79	88.1
25°	1449	1532	884	920	429	135	90	84.4
30°	1237	1008	846	390	225	157	90	63.3
35°	1148	910	764	252	176	157	90	59.4
40°	1125	1037	599	314	263	120	140	63.3
45°	1156	1036	598	219	219	120	160	59.5
50°	1090	959	553	124	147	120	160	55.5
55°	1013	881	508	51	73	120	160	51.5
60°	1131	1185	209	206	356	59	155	63.5
65°	1151	1173	207	130	280	59	170	59.6
70°	1174	1174	207	71	195	59	185	55.6
75°	1022	1010	178	23	86	59	185	51.5

The cam unit force is distributed as shown in the sketch:



Shouldering:	h_1 (top)
	h_2 (bottom)
Press:	V_1 (vertical)
Cam base:	H_1 (horizontal)
Driver:	H_2 (horizontal)
	V_2 (vertical)

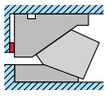
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O-KS ASSEMBLY 6

400 mm and 500 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 400/500-0°

182	409	580	765	580	409	182
188	432	705	1010	705	432	188
181	448	843	1248	843	448	181
162	441	966	1361	966	441	162
142	407	1063	1361	1063	407	142
122	371	1123	1360	1123	371	122
106	334	1006	1360	1006	334	106

185 mm high

400 mm width
500 mm width

O-KS 400/500-5°

51	255	326	336	326	255	51
55	273	457	620	457	273	55
59	288	596	946	596	288	59
62	299	745	1251	745	299	62
55	306	886	1444	886	306	55
47	288	996	1453	996	288	47
41	261	980	1453	980	261	41

185 mm high

400 mm width
500 mm width

O-KS 400/500-10°

167	295	433	523	433	295	167
177	314	548	769	548	314	177
188	336	672	1042	672	336	188
198	359	798	1222	798	359	198
206	383	911	1264	911	383	206
212	404	995	1264	995	404	212
207	413	1026	1264	1026	413	207

185 mm high

400 mm width
500 mm width

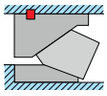
O-KS 400/500-15°

85	214	193	290	193	214	85
91	233	319	511	319	233	91
100	251	456	730	456	251	100
109	271	592	962	592	271	109
117	292	738	1140	738	292	117
126	313	872	1179	872	313	126
132	331	952	1179	952	331	132

185 mm high

400 mm width
500 mm width

Permissible cam forces



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 400/500-0°

128	163	145	305	145	163	128
132	173	176	305	176	173	132
126	179	211	305	211	179	126
113	176	242	305	242	176	113
99	163	266	305	266	163	99
85	148	281	305	281	148	85
74	133	252	305	252	133	74

185 mm high

400 mm width
500 mm width

O-KS 400/500-5°

36	102	98	336	98	102	36
38	109	137	336	137	109	38
42	115	179	336	179	115	42
44	119	223	336	223	119	44
38	122	266	336	266	122	38
33	115	299	336	299	115	33
28	104	294	336	294	104	28

185 mm high

400 mm width
500 mm width

O-KS 400/500-10°

59	86	58	290	58	86	59
64	93	96	355	96	93	64
70	100	137	355	137	100	70
76	108	177	355	177	108	76
82	117	221	355	221	117	82
88	125	262	355	262	125	88
93	133	286	355	286	133	93

185 mm high

400 mm width
500 mm width

O-KS 400/500-15°

124	144	204	361	204	144	124
130	153	244	361	244	153	130
136	162	280	361	280	162	136
139	171	309	361	309	171	139
137	172	327	361	327	172	137
134	174	331	361	331	174	134
123	164	310	361	310	164	123

185 mm high

400 mm width
500 mm width

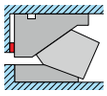
Rounded values

VACA-W19011_O-KS-Folder-RZ_EN_2509.indd 37 04.10.19 12:15

O-KS ASSEMBLY 6

400 mm and 500 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 400/500-20°

206	361	680	1007	680	361	206
217	384	813	1245	813	384	217
227	406	933	1358	933	406	227
232	428	1031	1357	1031	428	232
228	429	1089	1356	1089	429	228
223	436	1103	1357	1103	436	223
204	410	1035	1356	1035	410	204

185 mm high

400 mm width
500 mm width

O-KS 400/500-25°

105	249	330	335	330	249	105
113	266	451	617	451	266	113
121	285	586	923	586	285	121
130	304	733	1248	733	304	130
139	323	877	1440	877	323	139
148	342	990	1449	990	342	148
153	359	1027	1449	1027	359	153

185 mm high

400 mm width
500 mm width

O-KS 400/500-30°

81	196	260	465	260	196	81
83	210	457	806	457	210	83
84	220	656	1125	656	220	84
84	226	809	1237	809	226	84
82	227	870	1237	870	227	82
80	224	797	1237	797	224	80
71	217	586	1179	586	217	71

185 mm high

400 mm width
500 mm width

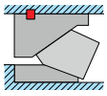
O-KS 400/500-35°

34	135	133	167	133	135	34
36	162	251	414	251	162	36
38	196	382	772	382	196	38
40	212	549	1065	549	212	40
41	221	656	1148	656	221	41
42	227	652	1148	652	227	42
43	228	537	1110	537	228	43

185 mm high

400 mm width
500 mm width

Permissible cam forces



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 400/500-20°

124	144	204	361	204	144	124
130	153	244	361	244	153	130
136	162	280	361	280	162	136
139	171	309	361	309	171	139
137	172	327	361	327	172	137
134	174	331	361	331	174	134
123	164	310	361	310	164	123

185 mm high

400 mm width
500 mm width

O-KS 400/500-25°

95	100	115	330	115	100	95
101	106	158	375	158	106	101
109	114	176	375	176	114	109
117	122	220	375	220	122	117
125	129	263	375	263	129	125
133	137	297	375	297	137	133
138	144	308	375	308	144	138

185 mm high

400 mm width
500 mm width

O-KS 400/500-30°

73	79	104	402	104	79	73
74	84	183	402	183	84	74
75	88	262	402	262	88	75
76	90	324	402	324	90	76
74	91	348	402	348	91	74
72	90	319	402	319	90	72
64	87	234	402	234	87	64

185 mm high

400 mm width
500 mm width

O-KS 400/500-35°

30	54	55	167	55	54	30
33	65	101	396	101	65	33
34	78	153	410	153	78	34
36	85	219	410	219	85	36
37	89	263	410	263	89	37
38	91	261	410	261	91	38
39	91	215	410	215	91	39

185 mm high

400 mm width
500 mm width

Rounded values

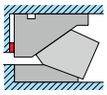
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Use our product finder to quickly and simply find just the right O-KS model for your needs:
www.voestalpine.com/camtec/Product-Finder

O-KS ASSEMBLY 6

400 mm and 500 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 400/500-40°

76	245	228	402	228	245	76
78	261	405	710	405	261	78
79	273	588	1023	588	273	79
80	281	724	1125	724	281	80
79	284	777	1125	777	284	79
77	279	713	1125	713	279	77
66	269	525	1072	525	269	66

185 mm high

400 mm width
500 mm width

O-KS 400/500-45°

23	111	160	230	160	111	23
24	203	231	469	231	203	24
25	214	410	831	410	214	25
25	219	561	1111	561	219	25
25	217	648	1156	648	217	25
23	211	616	1156	616	211	23
20	202	473	1068	473	202	20

185 mm high

400 mm width
500 mm width

O-KS 400/500-50°

24	148	292	299	292	148	24
25	167	328	684	328	167	25
26	187	361	1090	361	187	26
26	204	378	1090	378	204	26
27	218	380	1090	380	218	27
27	226	380	1090	380	226	27
27	228	380	1090	380	228	27

185 mm high

400 mm width
500 mm width

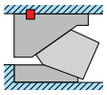
O-KS 400/500-55°

24	160	305	330	305	160	24
24	180	354	409	354	180	24
26	200	386	701	386	200	26
28	214	394	940	394	214	28
29	224	394	1013	394	224	29
30	228	394	1013	394	228	30
30	228	394	1013	394	228	30

185 mm high

400 mm width
500 mm width

Permissible cam forces



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 400/500-40°

69	123	137	335	137	123	69
70	131	243	592	243	131	70
71	137	353	612	353	137	71
72	141	434	612	434	141	72
71	142	466	612	466	142	71
69	139	428	612	428	139	69
60	135	315	612	315	135	60

185 mm high

400 mm width
500 mm width

O-KS 400/500-45°

23	102	108	123	108	102	23
24	122	139	328	139	122	24
25	128	246	582	246	128	25
25	131	337	777	337	131	25
25	130	389	777	389	130	25
23	127	370	777	370	127	23
20	121	284	748	284	121	20

185 mm high

400 mm width
500 mm width

O-KS 400/500-50°

24	118	234	272	234	118	24
25	134	262	622	262	134	25
26	150	289	991	289	150	26
26	163	303	991	303	163	26
27	174	304	991	304	174	27
27	181	304	991	304	181	27
27	183	304	991	304	183	27

185 mm high

400 mm width
500 mm width

O-KS 400/500-55°

24	160	305	330	305	160	24
24	180	354	409	354	180	24
26	200	386	701	386	200	26
28	214	394	940	394	214	28
29	224	394	1013	394	224	29
30	228	394	1013	394	228	30
30	228	394	1013	394	228	30

185 mm high

400 mm width
500 mm width

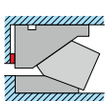
Rounded values

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O-KS ASSEMBLY 6

400 mm and 500 mm models

Permissible cam forces



Shouldering

Shouldering support
at top and bottom

O-KS 400/500-60°

66	267	402	451	402	267	66
66	275	548	764	548	275	66
65	279	678	1059	678	279	65
61	275	765	1131	765	275	61
51	266	777	1131	777	266	51
39	250	707	1131	707	250	39
32	230	557	1023	557	230	32

185 mm high

400 mm width
500 mm width

O-KS 400/500-65°

32	191	208	210	208	191	32
32	203	354	467	354	203	32
32	216	508	828	508	216	32
33	222	623	1106	623	222	33
34	224	684	1151	684	224	34
32	220	664	1151	664	220	32
28	212	576	1064	576	212	28

185 mm high

400 mm width
500 mm width

O-KS 400/500-70°

24	210	215	220	215	210	24
21	215	372	424	372	215	21
22	218	528	821	528	218	22
22	214	638	1127	638	214	22
22	205	677	1174	677	205	22
21	190	622	1174	622	190	21
20	176	513	1039	513	176	20

185 mm high

400 mm width
500 mm width

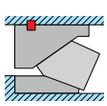
O-KS 400/500-75°

22	213	216	392	216	213	22
20	208	374	690	374	208	20
18	199	549	956	549	199	18
16	186	641	1022	641	186	16
13	169	651	1022	651	169	13
10	148	563	1022	563	148	10
9	125	440	861	440	125	9

185 mm high

400 mm width
500 mm width

Permissible cam forces



Fitting key

Fitting key support at top,
shouldering support at bottom

O-KS 400/500-60°

66	267	402	451	402	267	66
66	275	548	764	548	275	66
65	279	678	1059	678	279	65
61	275	765	1131	765	275	61
51	266	777	1131	777	266	51
39	250	707	1131	707	250	39
32	230	557	1023	557	230	32

185 mm high

400 mm width
500 mm width

O-KS 400/500-65°

32	191	208	210	208	191	32
32	203	354	467	354	203	32
32	216	508	828	508	216	32
33	222	623	1106	623	222	33
34	224	684	1151	684	224	34
32	220	664	1151	664	220	32
28	212	576	1064	576	212	28

185 mm high

400 mm width
500 mm width

O-KS 400/500-70°

24	210	215	220	215	210	24
21	215	372	424	372	215	21
22	218	528	821	528	218	22
22	214	638	1127	638	214	22
22	205	677	1174	677	205	22
21	190	622	1174	622	190	21
20	176	513	1039	513	176	20

185 mm high

400 mm width
500 mm width

O-KS 400/500-75°

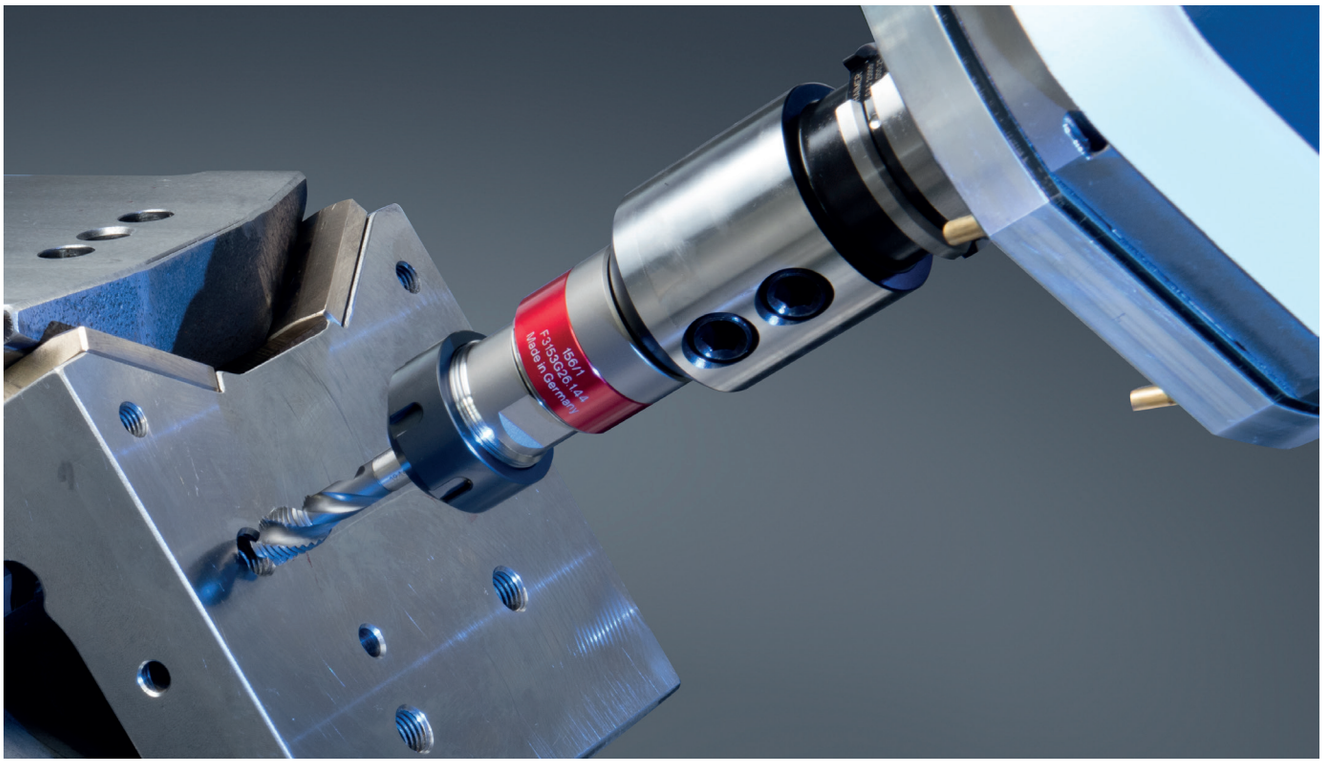
22	213	216	392	216	213	22
20	208	374	690	374	208	20
18	199	549	956	549	199	18
16	186	641	1022	641	186	16
13	169	651	1022	651	169	13
10	148	563	1022	563	148	10
9	125	440	861	440	125	9

185 mm high

400 mm width
500 mm width

Rounded values

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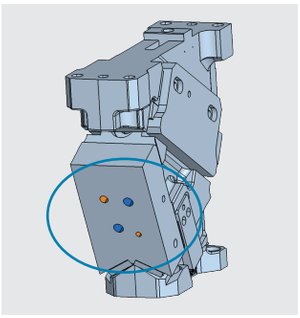
CUSTOM PROCESSING

Flexible, precise and economical

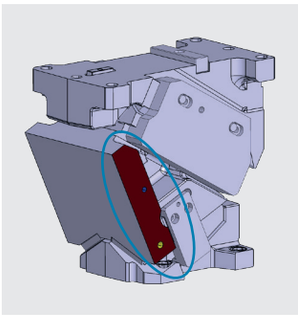
voestalpine Camtec provides comprehensive preparation of your cam unit: Individual adjustment of the work surface width, e.g. from 110 to 105 mm, will guarantee maximum flexibility. We would be happy to use your CAD data to prepare threads, pre-drill bore holes, carry out customized milling or mount elements on your cam unit. This saves our customers from having to perform additional work steps. Please send us any inquiries pertaining to standard preprocessing of the work face or other customized preprocessing to **anarbeitung.camtec@voestalpine.com**

Example of O-KS preprocessing

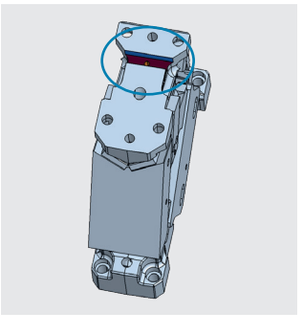
Processing on working face
Standard preprocessing



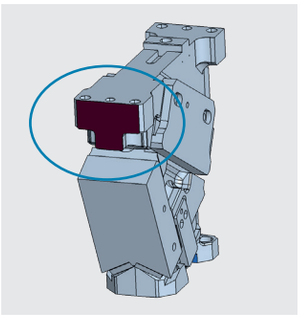
Adjustment of working surface width
Extended preprocessing



Processing on punch (groove)
Extended preprocessing



Processing on cam bed
Extended preprocessing



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UCCU FOR NEARLY LIMITLESS APPLICATION

Space-saving. Practical. Precise.

This is the ultra-compact cam unit (UCCU)! Proven quality combined with effective product design creates completely new perspectives in the world of modern tool development. Sophisticated component geometries and application-specific optimization are impressive features of the highly compact UCCU design. The UCCU features a highly convincing force diagram that depicts both shouldering and fitting key support.

The result: a cam unit designed to efficiently meet every tool requirement.

Would you like to learn more about UCCU? Please contact our team of specialists at **sales.camtec@voestalpine.com**





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10/2019

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