



UCCU COMPACT CAM UNIT

Best in class

voestalpine Camtec GmbH
www.voestalpine.com/camtec

voestalpine

ONE STEP AHEAD.



voestalpine Camtec

Your innovative and reliable partner

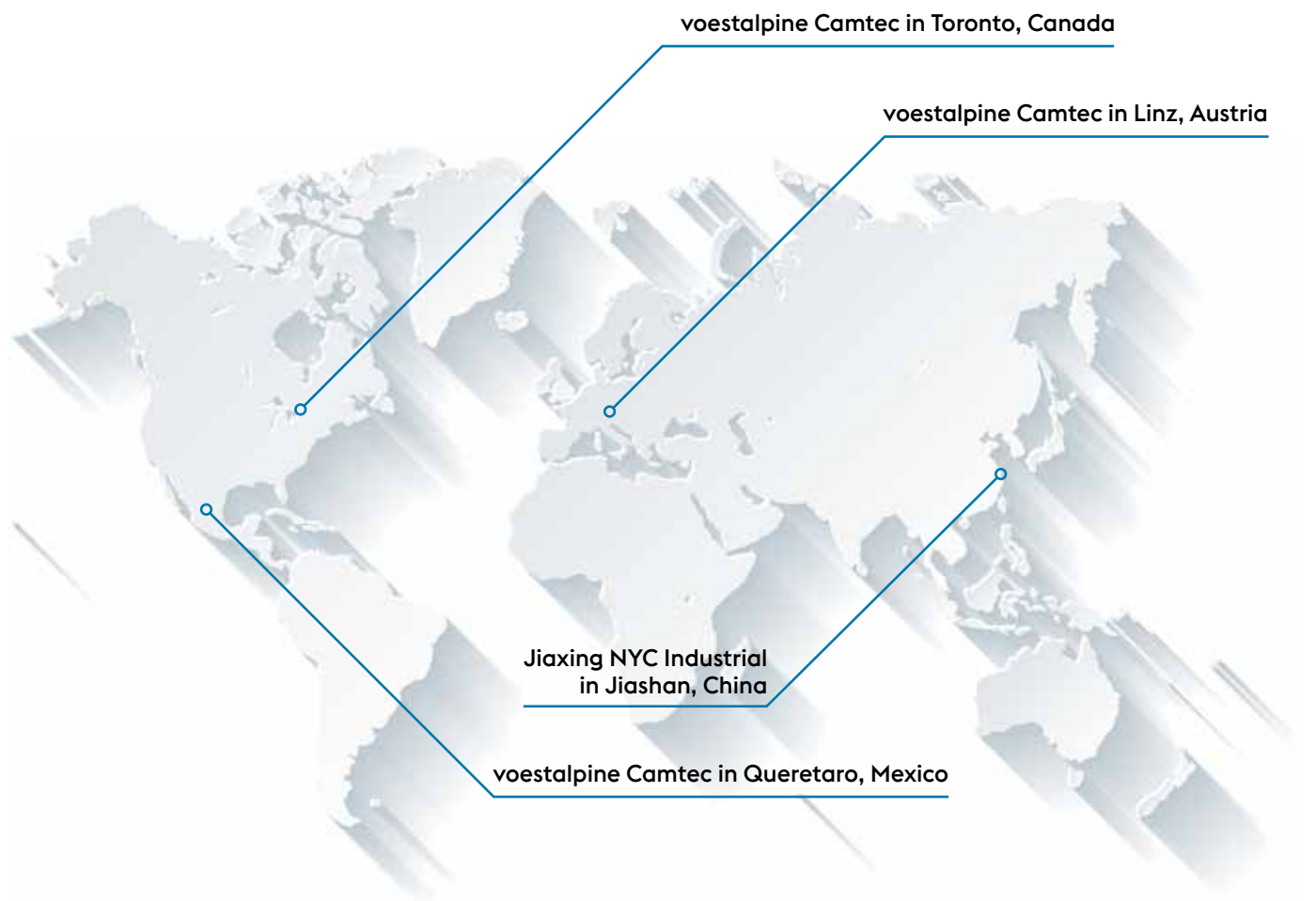
voestalpine Camtec is a world leader with many years of experience in the manufacturing of cam units and maintenance-free sliding elements.

Sector-specific expertise and detailed knowledge of manufacturing processes made voestalpine Camtec the go-to reliable partner of renowned companies in the automotive and mechanical engineering industry. Our customers are provided with innovative products and high-quality service. Our team of highly trained technical specialists is

dedicated to providing excellent, long lasting and effective solutions. They will be happy to support you and answer any questions. voestalpine Camtec's state-of-the-art sliding elements, technologies, spare parts management system, rapid turnaround and our comprehensive service and support put us one step ahead.

WORLDWIDE CUSTOMER SERVICE AND PRODUCT AVAILABILITY

With headquarters in Linz, Austria and locations and subsidiaries around the globe, voestalpine Camtec is able to respond quickly to your needs, providing high quality, local service and support wherever you are. Dedicated inventories in Austria, Canada and China make it possible to react quickly in the event of an emergency breakdown.



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

UCCU FOR BEST RESULTS IN NARROW SPACES

Space-saving. Practical. Precise.

UCCU, the ultra-compact cam unit, creates new prospects in the world of modern tool development. Proven quality combined with unique product design to create a variety of new application possibilities. The result is a compact cam unit designed to fit where others can't, but maintain high levels of performance and reliability.

COMPACT DESIGN WITH LOW LEVEL OF COMPLEXITY

and very few individual components

HIGH RETRACTION FORCE

for the processing of high-strength steels

HIGH QUALITY

surface finish and material grades

PATENTED 1° ANGLE

of side plates

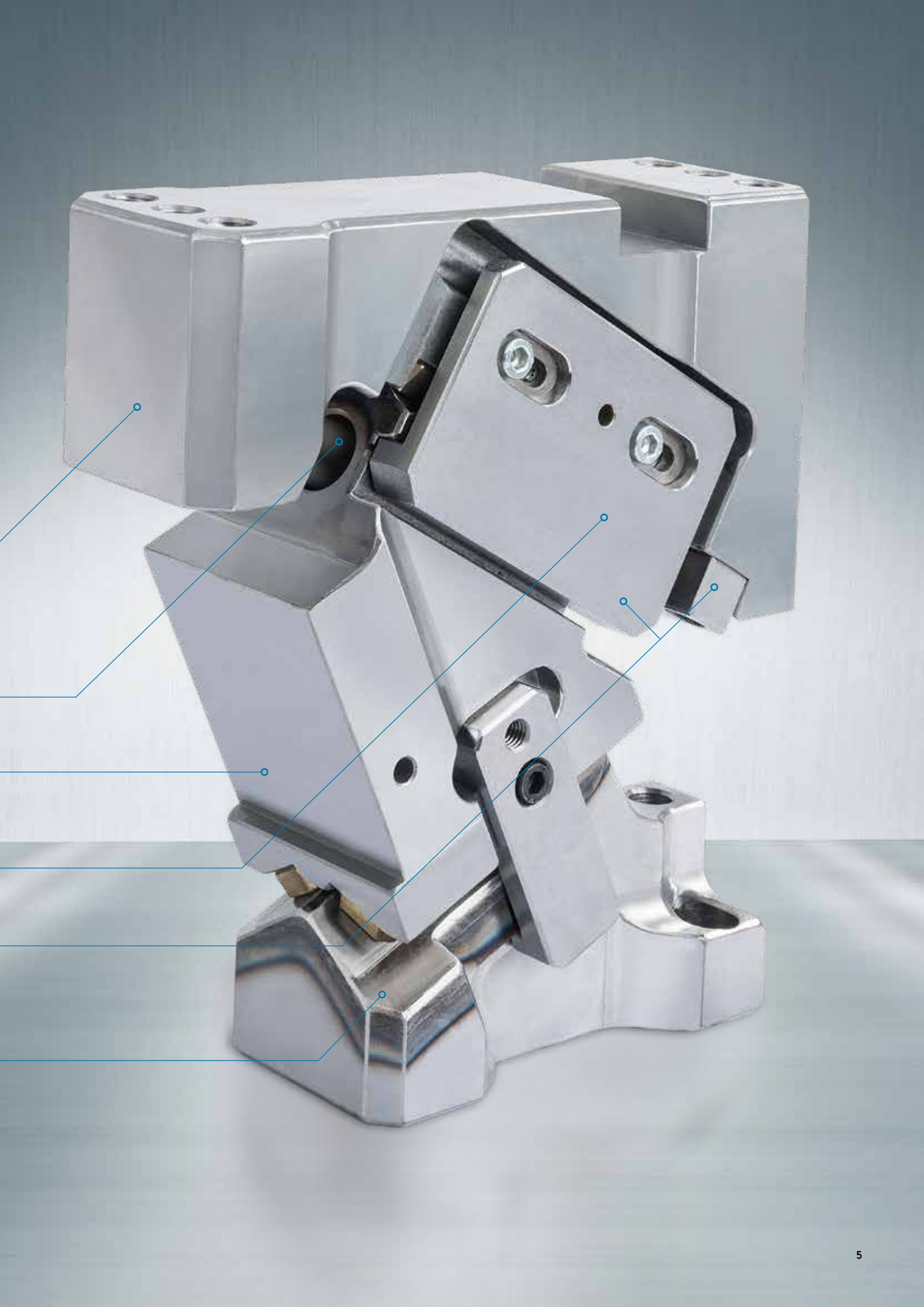
CAM SLIDE REMOVAL – FLEXIBILITY

from the rear or top

HARDENED SLIDING SURFACES

for high loads

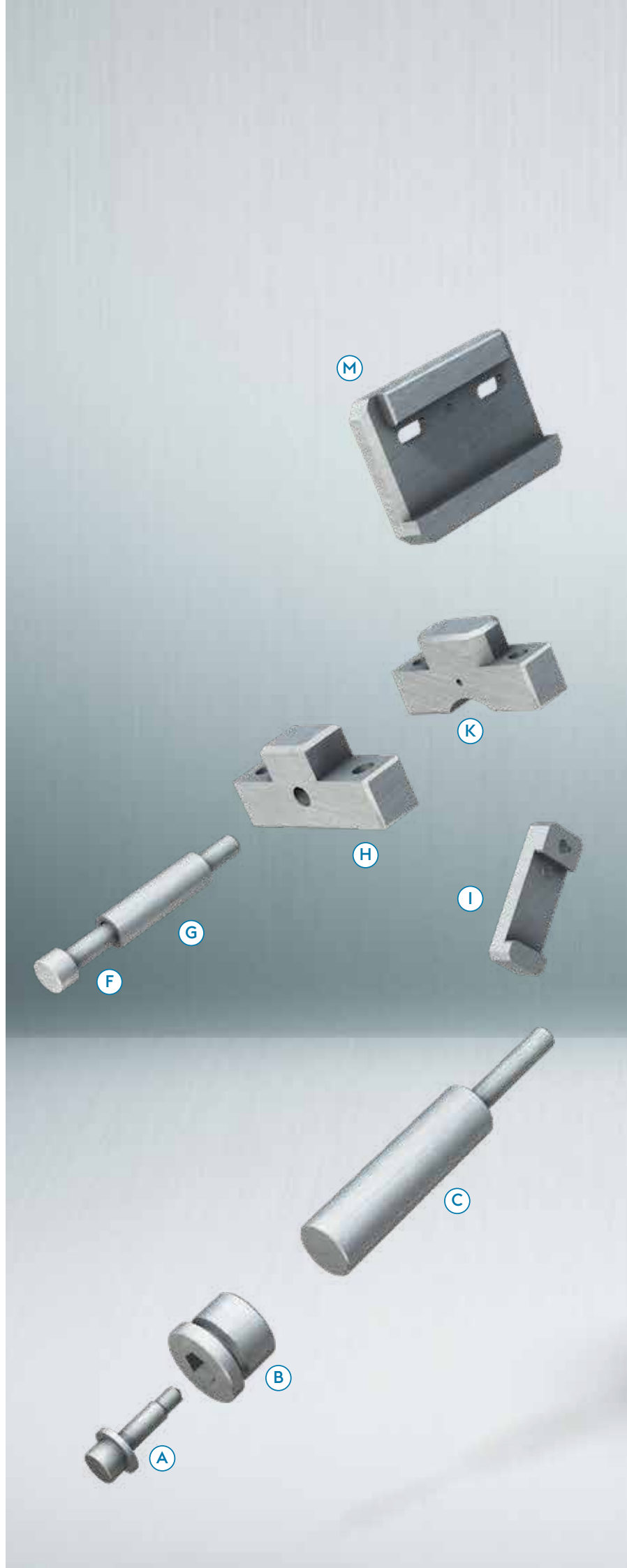
Please find the most state-of-the-art UCCU cam units in our product finder: www.voestalpine.com/camtec/Product-Finder



HIGHLY COMPACT WITH FOCUS ON THE APPLICATION

Sophisticated component geometries and application-specific optimization are impressive features of the highly compact UCCU design.

- Ⓐ Retaining screw
- Ⓑ Plug screw
- Ⓒ Gas spring
- Ⓓ Driver
- Ⓔ Wear plates (B)
- Ⓕ Lock-out screw
- Ⓖ Lock-out shell
- Ⓗ Lock-out plate
- Ⓘ Forced retractor
- ⓵ Cam Slide
- Ⓚ Stop
- Ⓛ Wear plates (A)
- Ⓜ Side plate (R)
- Ⓝ Side plate (L)
- Ⓞ Cam base
- Ⓟ Fitting key





**FIND YOUR SOLUTION QUICKLY,
EASILY AND SYSTEMATICALLY.**



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

When it comes to design, ordering and spare parts management, you will be able to quickly and easily find product details and information using our download center.



UCCU, TECHNICAL DETAILS

Important information at a glance

The following information contains pertinent technical data for the Ultra Compact Cam Unit – UCCU. Should you require further information or have any question, an experienced team of specialists will be happy to assist you any time. Please contact us at sales.camtec@voestalpine.com

	UCCU
Average service life (depending on loads)	2,000,000 strokes
Guranteed Service Life (Warranty)	1,000,000 strokes
Precision adjustments made during assembly	Yes
Sliding surfaces	At least Rz 6.3, hardened
Field of application	Punching operations, beveling, cutting and forming
Angle range	0° – 75°
Tensile strength of driver, sliding element and cam bed materials	700 N/mm ² minimum
Available widths	60 mm
Lock-out system	Yes
Guide clamps	Sinter
Positive return	Both sides
Tooling Points	Yes
Gas spring	Yes
Special cam unit options	Yes
Compliant with BAK/VDI	Yes
Compliant with NAAMs	Yes

Please visit our site for technical details and additional information:
www.voestalpine.com/camtec/Product-Finder

FORCE DISTRIBUTION AND PERMISSIBLE CAM FORCES

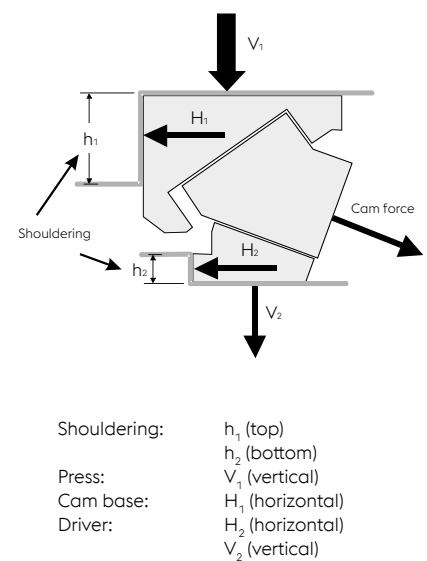
UCCU 60 mm cam unit specifications

Identification number	Name	Angle	Weight [kg]	Stroke [mm]
27080	UCCU 60-0°	0°	11.28	21.86
27081	UCCU 60-5°	5°	11.23	21.94
27082	UCCU 60-10°	10°	10.82	26.45
27083	UCCU 60-15°	15°	10.81	26.96
27084	UCCU 60-20°	20°	10.62	25.81
27085	UCCU 60-25°	25°	10.56	26.76
27086	UCCU 60-30°	30°	11.01	21.23
27087	UCCU 60-35°	35°	11.19	22.44
27088	UCCU 60-40°	40°	11.34	23.74
27089	UCCU 60-45°	45°	11.63	25.72
27090	UCCU 60-50°	50°	11.57	28.29
27091	UCCU 60-55°	55°	11.62	31.71
27092	UCCU 60-60°	60°	10.60	35.45
27093	UCCU 60-65°	65°	10.75	41.95
27094	UCCU 60-70°	70°	10.59	51.83
27095	UCCU 60-75°	75°	10.67	68.49

UCCU 60 mm cam unit force distribution

Cam angle	Maximum cam force	Force distribution at maximum cam force [kN]				Shouldering [mm]		Stripping force
		V1	H1	V2	H2	h1	h2	
0°	86	72.17	86.00	72.16	0.00	145	26	6.8
5°	92	72.19	86.03	64.17	5.61	145	26	7.6
10°	84	84.00	70.48	69.41	12.24	120	26	6.7
15°	90	84.17	70.62	60.87	16.31	120	26	7.5
20°	85	96.09	55.48	67.02	24.39	106	48	6.4
25°	90	95.15	54.94	57.12	26.63	106	48	7.2
30°	109	88.86	74.56	34.36	19.84	120	48	12.2
35°	112	88.82	74.53	24.58	17.21	120	48	16.1
40°	109	100.46	58.00	30.39	25.50	106	48	11.7
45°	112	100.42	57.98	21.22	21.22	106	48	15.4
50°	113	99.37	57.37	12.80	15.26	106	48	19.4
55°	115	99.97	57.72	5.77	8.24	106	48	18.0
60°	109	114.24	20.14	19.84	34.36	50	90	11.1
65°	115	117.25	20.67	13.02	27.92	50	90	14.0
70°	114	114.00	20.10	6.87	18.89	50	90	19.5
75°	117	115.67	20.39	2.65	9.89	50	90	18.0

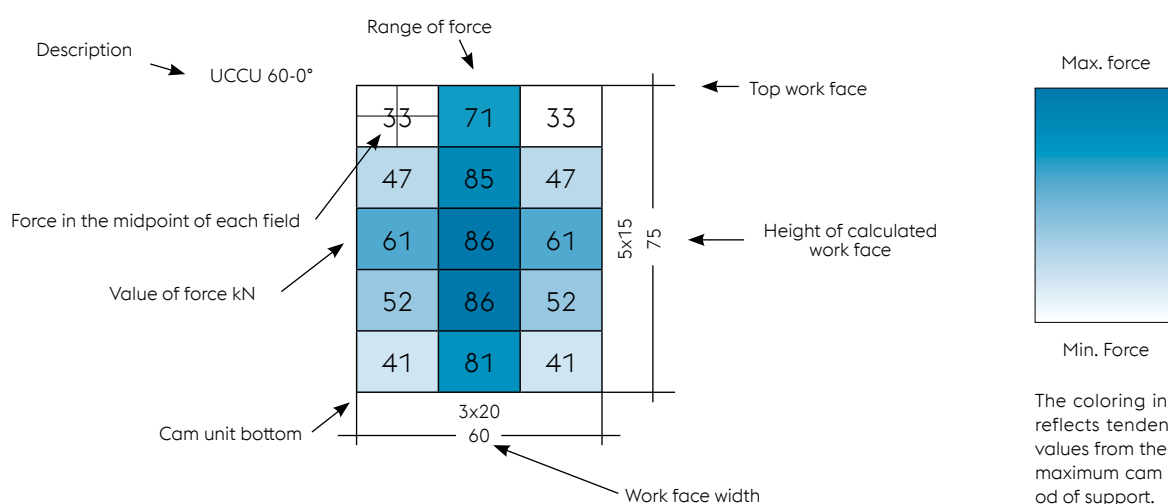
The cam unit force is distributed as shown in the sketch.





PERMISSIBLE CAM FORCES

The following overview shows the permissible cam force in the center 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.

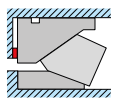


The UCCU features a highly convincing force diagram that depicts both shouldering and fitting key support.

UCCU FORCE DISTRIBUTION

Angle dimension 0° – 15°

Permissible cam forces



Shouldering

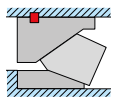
Shouldering support at top and bottom

UCCU 60-0°		
33	71	33
47	85	47
61	86	61
52	86	52
41	81	41
60		

UCCU 60-5°		
34	79	34
51	91	51
59	92	59
48	91	48
35	82	35
60		

UCCU 60-10°		
29	68	29
43	82	43
61	84	61
55	83	55
43	84	43
60		

UCCU 60-15°		
30	77	30
48	88	48
62	90	62
50	90	50
38	86	38
60		



Fitting key

Fitting key support at top, shouldering support at bottom

UCCU 60-0°		
27	26	27
27	27	27
27	27	27
27	27	27
27	27	27
60		

UCCU 60-5°		
28	29	28
29	29	29
29	29	29
29	29	29
29	29	29
60		

UCCU 60-10°		
28	33	28
33	33	33
32	32	32
33	33	33
33	33	33
60		

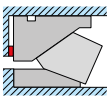
UCCU 60-15°		
29	34	29
35	35	35
35	35	35
35	35	35
34	36	34
60		

Rounded values

UCCU FORCE DISTRIBUTION

Angle dimension 20° – 35°

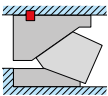
Permissible cam forces



Shouldering
Shouldering support at top
and bottom

Space-saving. Practical.
Precise.

UCCU 60-20°			UCCU 60-25°			UCCU 60-30°			UCCU 60-35°		
31	71	31	31	80	31	14	62	14	9	47	9
45	84	45	49	90	49	25	102	25	17	91	17
59	85	59	62	90	62	47	109	47	33	111	33
53	84	53	50	90	50	51	109	51	52	112	52
42	83	42	39	84	39	42	101	42	44	104	44
60			60			60			60		



Fitting key
Fitting key support at top, shouldering
support at bottom

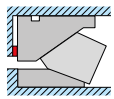
UCCU 60-20°			UCCU 60-25°			UCCU 60-30°			UCCU 60-35°		
31	42	31	31	46	31	14	40	14	9	35	9
40	43	40	43	46	43	25	40	25	17	42	17
42	42	42	45	45	45	40	40	40	33	42	33
43	43	43	46	46	46	41	41	41	42	42	42
41	43	41	39	46	39	39	41	39	41	42	41
60			60			60			60		

Rounded values

UCCU FORCE DISTRIBUTION

Angle dimension 40° – 55°

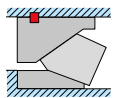
Permissible cam forces



Shouldering

Shouldering support at top and bottom

UCCU 60-40°			UCCU 60-45°			UCCU 60-50°			UCCU 60-55°		
11	57	11	4	40	4	3	47	3	3	33	3
23	101	23	9	89	9	6	104	6	3	90	3
44	109	44	30	112	30	31	113	31	7	115	7
53	108	53	51	110	51	45	108	45	40	110	40
42	99	42	46	102	46	34	85	34	38	91	38
60			60			60			60		



Fitting key

Fitting key support at top, shoudering support at bottom

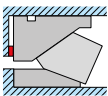
UCCU 60-40°			UCCU 60-45°			UCCU 60-50°			UCCU 60-55°		
11	47	11	4	38	4	3	37	3	3	33	3
23	52	23	9	53	9	6	55	6	3	54	3
44	52	44	30	53	30	31	55	31	7	56	7
52	53	52	51	54	51	45	56	45	40	57	40
42	53	42	46	55	46	34	58	34	38	58	38
60			60			60			60		

Rounded values

UCCU FORCE DISTRIBUTION

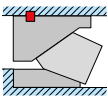
Angle dimension 60° – 75°

Permissible cam forces



Shouldering
Shouldering support at top
and bottom

UCCU 60-60°			UCCU 60-65°			UCCU 60-70°			UCCU 60-75°		
13	61	13	10	53	10	8	58	8	6	40	6
23	101	23	18	100	18	18	105	18	11	93	11
45	109	45	35	115	35	35	114	35	24	115	24
64	109	64	58	114	58	52	112	52	45	117	45
47	102	47	49	107	49	39	91	39	41	93	41
60			60			60			60		



Fitting key
Fitting key support at top, shouldering
support at bottom

UCCU 60-60°			UCCU 60-65°			UCCU 60-70°			UCCU 60-75°		
13	61	13	10	53	10	8	58	8	6	40	6
23	101	23	18	100	18	18	105	18	11	93	11
45	109	45	35	115	35	35	114	35	24	115	24
64	109	64	58	114	58	52	112	52	45	117	45
47	102	47	49	107	49	39	91	39	41	93	41
60			60			60			60		

Rounded values



PRE-MACHINING SERVICES

**Flexible, precise and economical –
reducing your die build time**

voestalpine Camtec can provide custom machining to the cam unit prior to shipping. We would utilize your CAD info to input threaded holes, pre-drill bore holes, custom milling or even mount trim steels or forms onto the cam face. This is a great benefit and saves customers days of preparation when cams arrive prior to mounting the cams on

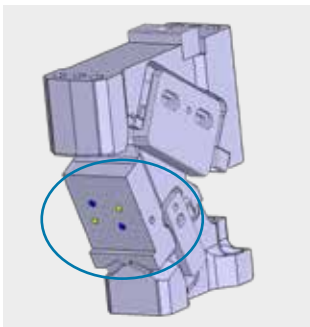
the die assembly. Please send us any inquiries regarding Pre-machining Services to the following email address:
anarbeitung.camtec@voestalpine.com

We are very flexible and are willing to complete to your requirements.

Example of UCCU pre-machining

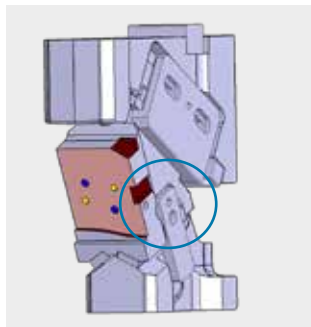
Standard preprocessing

Processing on working face



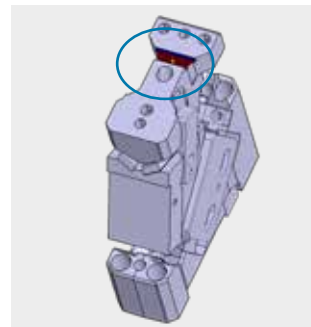
Extended preprocessing

Processing to side of working face



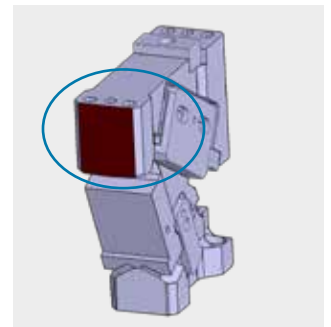
Extended preprocessing

Processing on punch (groove)



Extended preprocessing

Processing on cam bed



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09/2018

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ONE STEP AHEAD.