

DIE MOUNT CAM FCC-HV

2016.15.

Order No	Width [mm]	Performance class [kN]*	Page
2016.15.006.□□.□00□.00	65	125 kN	91
2016.15.008.□□.□00□.00	85	125 kN	91
2016.15.009.□□.□00□.00	90	200 kN	99
2016.15.011.□□.□00□.00	115	200 kN	99
2016.15.012.□□.□00□.00	125	300 kN	107
2016.15.016.□□.□00□.00	160	300 kN	107
2016.15.018.□□.□00□.00	185	450 kN	115
2016.15.022.□□.□00□.00	220	450 kN	115
2016.15.026.□□.□00□.00	260	550 kN	123
2016.15.031.□□.□00□.00	310	550 kN	123
2016.15.034.□□.□00□.00	340	800 kN	131
2016.15.040.□□.□00□.00	400	800 kN	131

*For exact power values, please refer to the force diagrams of the corresponding cam units

assembly instructions	139
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Order options:

- .□000** Combination of sliding block / pin in cam unit bed
- .□001** Positioning of cam base via dowel pin
- .□002** Positioning of cam base via feather key (slot stone)
- .100□** Standard working surface on the slider (cast, no recess)
- .300□** Working surface as removable mounting plate

Ordering Code (example):

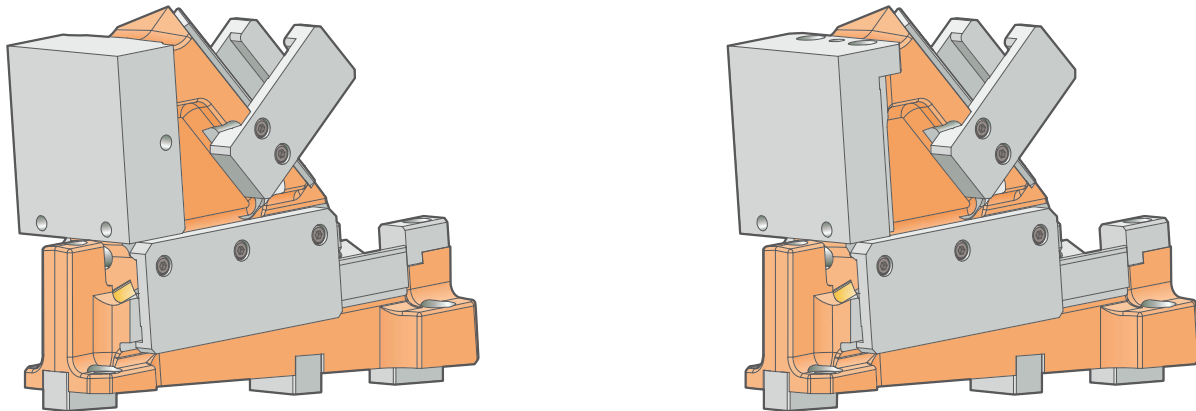
FIBRO Die Mounted Cam Unit FCC, width 85 mm	=	2016.15.008.□□.□00□.00
Slide angle $\varepsilon = 20^\circ$	=	20.
Working surface standard	=	100□
Positioning via dowel pin	=	□001
Order No	=	2016.15.008. 20. 1001. 00

DIE MOUNT CAM FCC-HV 2016.15.

EXPANDED RANGE



Following the successful launch in 2019, we are expanding the range of options available for our die mounted cam unit series this year: We are now offering for our standard range of die mounted cam units an optional mounting plate that can be disassembled upwards.



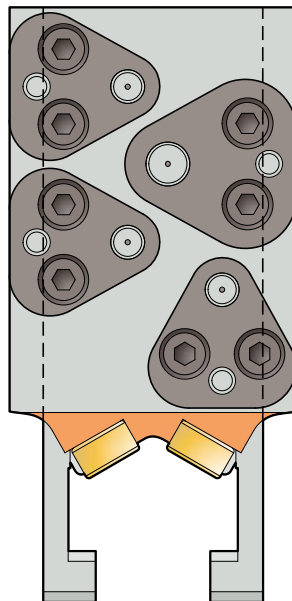
The removable mounting plate greatly simplifies the drilling pattern application, especially in traditional tool construction processes. Component-related changes can also be realised more easily without reworking the entire cam slide unit body.

The production of special mounting plates is possible. This means that overbuilding (permissible limits to be clarified with FIBRO!) of the cam unit can easily be realised.

DIE MOUNT CAM FCC-HV **DOUBLE WIDTHS**

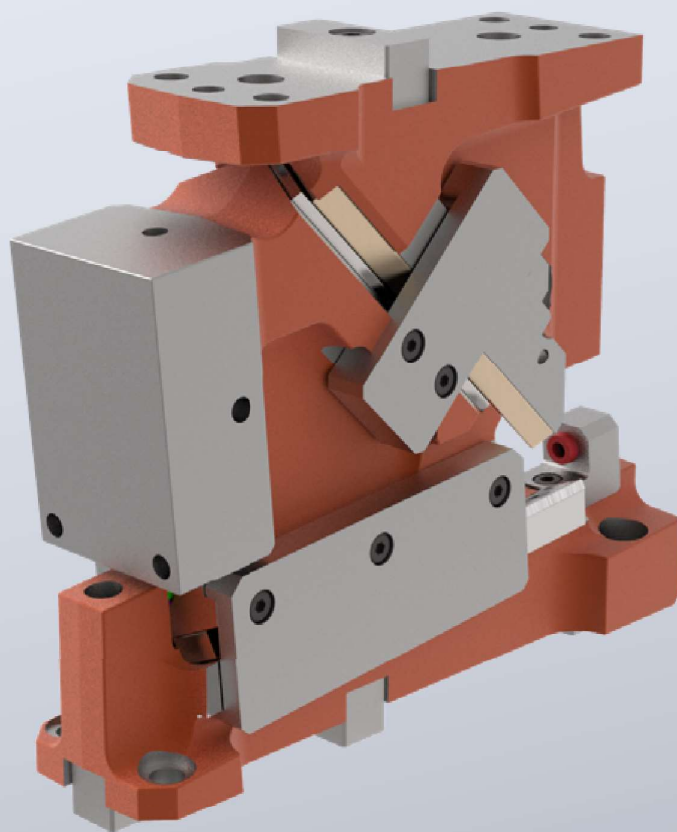
The width grading of the cam slide unit series 2016.15 + .26 is divided into 6x2 double widths, and thus available for each base width in a narrow design, as well as in a narrow design with a widened working surface. The narrow variants impress with their compact dimensions along the entire cam slide unit length, as well as high working forces on all segments of the cam slide unit working surface. With identical cam sliders, the widened designs offers more mounting space for low-force active components (e.g. punch retainers, scraper components) or for large active components with a homogeneous arrangement over the entire working surface.

The figure shows a version with a widened working area. Attached to this working surface are multiple punches with standard, polygon-shaped retainer plates. The force-free screw positions have been rotated into the outer area of the working surface. Multiple punches, through which the force vector is passed, are concentrated in the centre of the cam slide unit working surface.

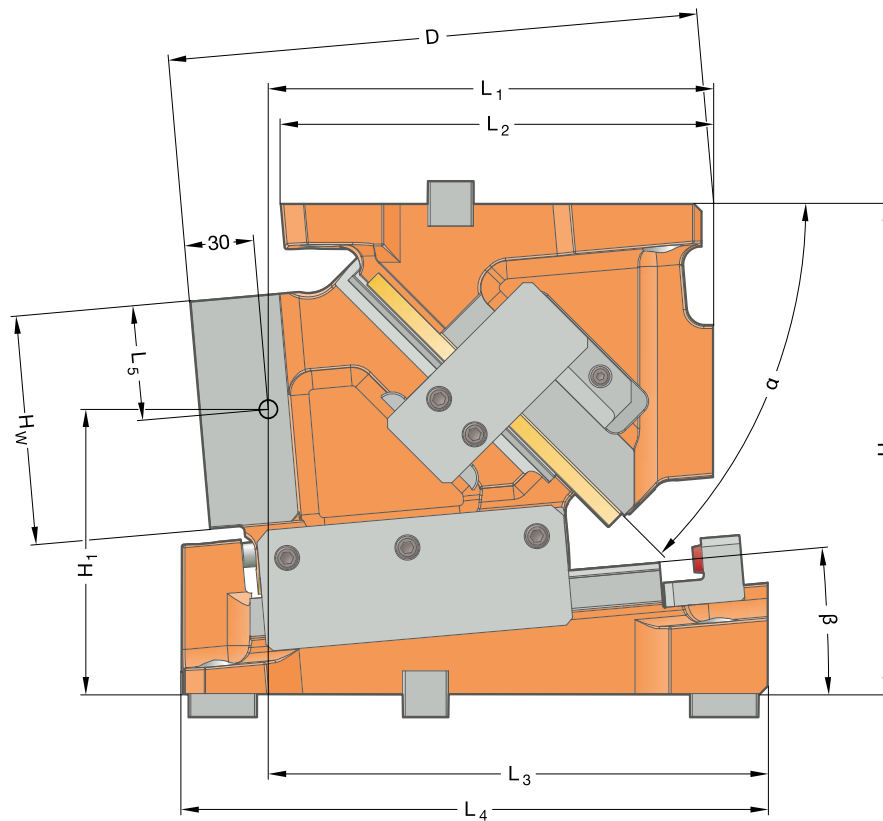
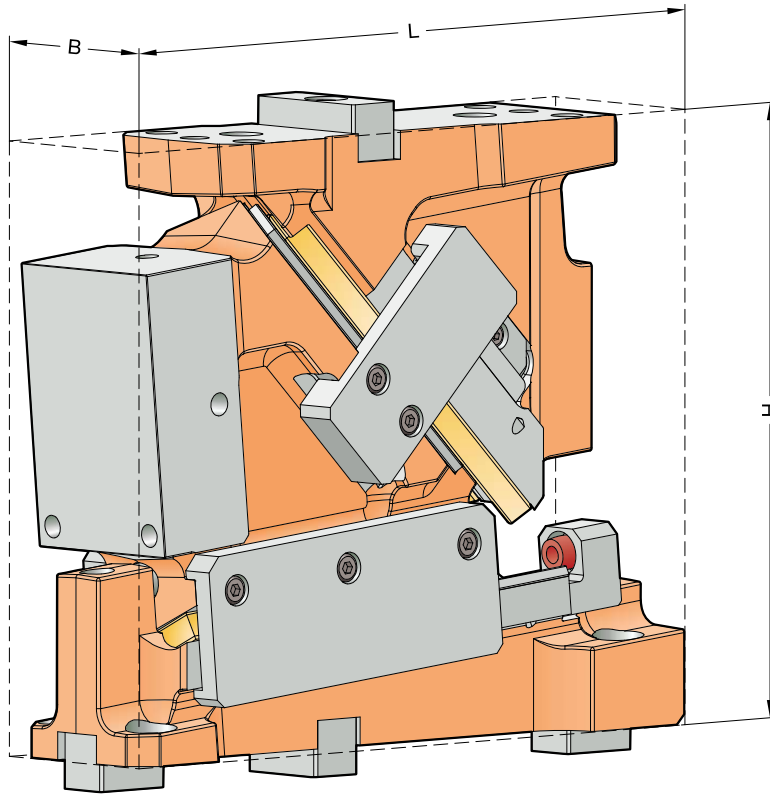


DIE MOUNT CAM FCC-HV
2016.15.006./008.

Working width: 65/85 mm
Performance class: 125 kN

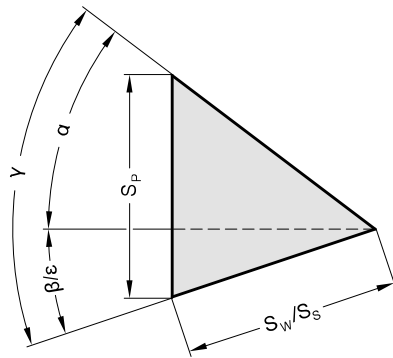


DIE MOUNT CAM FCC-HV 2016.15.006./008.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.006./008.

SIZE TABLE



Order No	L [mm]	B [mm]	H [mm]	H ₁ [mm]	H _w [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L ₄ [mm]	D [mm]	β [°]	α [°]	S _w [mm]	S _p * [mm]
2016.15.006.00.□00□.00	273	65	220	87,5	100	199	180	255	271	233	0	50	58,0	69,1
2016.15.008.00.□00□.00		85												
2016.15.006.05.□00□.00	268	65	220	107,05	100	207	180	255	270	241	5	45	58,0	62,8
2016.15.008.05.□00□.00		85												
2016.15.006.10.□00□.00	276	65	220	111,73	100	223	175	255	276	234	10	40	58,0	58,0
2016.15.008.10.□00□.00		85												
2016.15.006.15.□00□.00	281	65	220	130,44	100	229	175	255	270	236	15	35	58,0	54,2
2016.15.008.15.□00□.00		85												
2016.15.006.20.□00□.00	288	65	220	143,64	100	243	180	250	268	236	20	30	58,0	51,3
2016.15.008.20.□00□.00		85												
2016.15.006.25.□00□.00	291	65	220	159,47	100	247	180	245	259	236	25	25	58,0	49,0
2016.15.008.25.□00□.00		85												

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

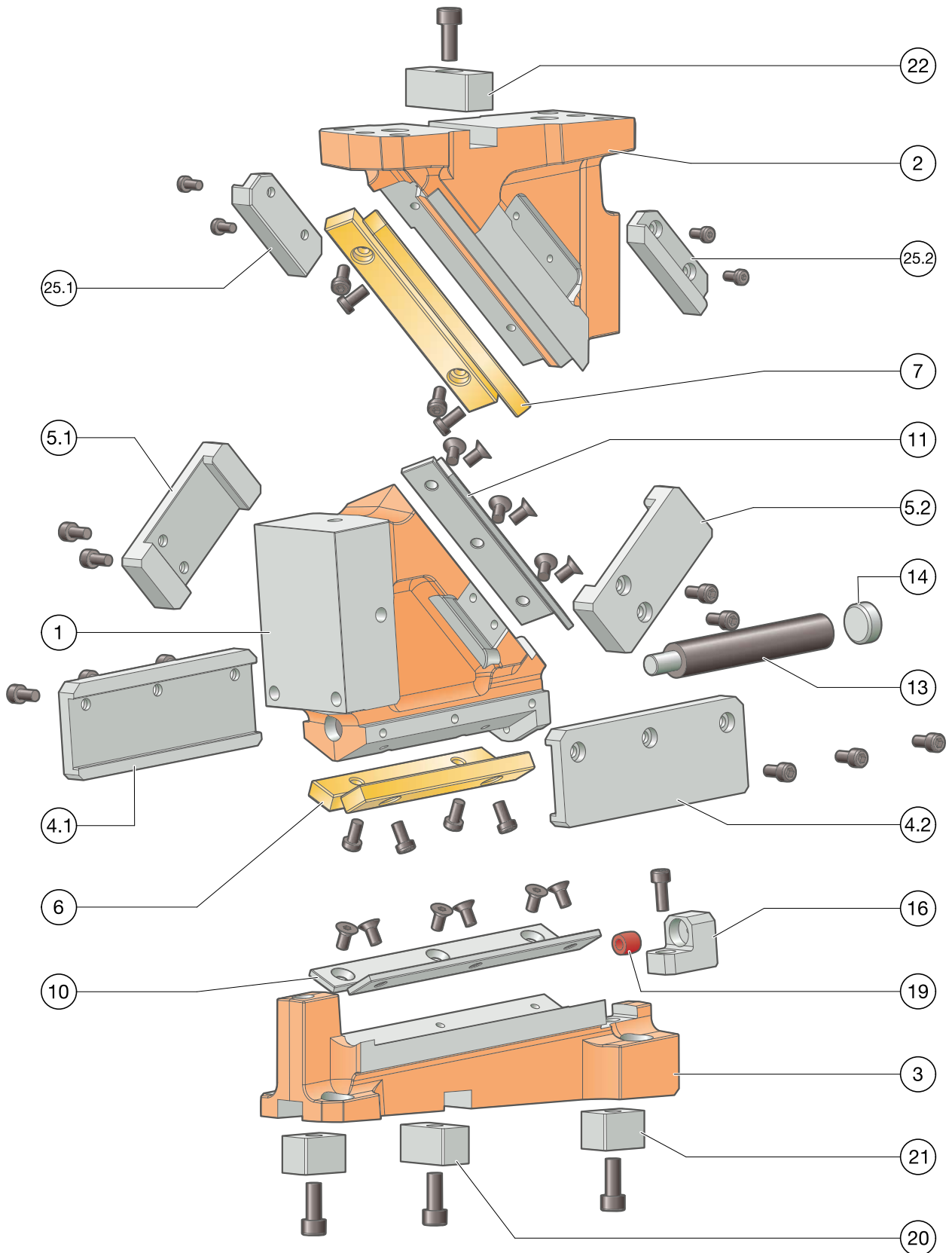
Cam base:

4 × M10
2 × \varnothing 10

Driver:

4 × M10
2 × \varnothing 10

DIE MOUNT CAM FCC-HV 2016.15.006./008.
EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.006./008.

PARTS LIST

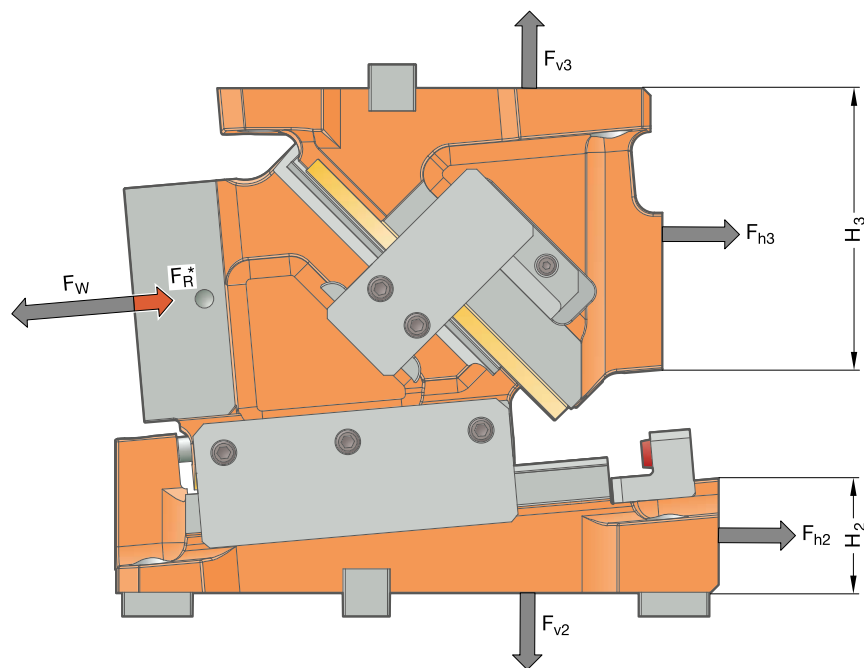


Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8					
9					
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12					
13	1	Gas spring	2487.12.00170.075	--	x
14	1	Locking tappet	1.7131	--	x
15 (not shown)	1	Locking tappet pin			x
16	1	Slide stop	1.1191	--	x
17	1	Spacer			x
18	1	Lock-out system	1.1191	--	x
19	1	Damper	2452.10.012.011.2	--	x
20	1	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	1	Feather key (T-nut)	1.1191	--	x
23					
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.006./008. SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_W [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.00□.00.□00□.00	0	138	15	-10	143	148	143	40	135
2016.15.00□.05.□00□.00	5	138	15	2	143	135	155	55	115
2016.15.00□.10.□00□.00	10	150	15	16	155	131	181	55	115
2016.15.00□.15.□00□.00	15	150	15	30	153	115	192	80	95
2016.15.00□.20.□00□.00	20	150	15	43	150	98	201	95	90
2016.15.00□.25.□00□.00	25	135	15	50	131	72	188	115	70

* Identified retraction force F_R can only be achieved with mounted mechanical retractions
.00□. = 65 mm (.006.) or 85 mm (.008.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_W .

DIE MOUNT CAM FCC-HV 2016.15.006./008.

FORCE DIAGRAM



Support via cast shoulder

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	0°	20	32	41	74	41	32
	20	33	48	92	48	33	
	20	33	61	112	61	33	
	20	33	59	138	59	33	
	20	32	58	102	58	32	

Support via feather key

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	0°	20	23	28	30	28	23
	20	23	27	29	27	23	
	20	23	25	28	25	23	
	20	22	23	26	23	22	
	20	20	22	25	22	20	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	5°	20	30	48	112	48	30
	20	30	54	117	54	30	
	20	30	54	138	54	30	
	20	29	51	133	51	29	
	20	27	48	107	48	27	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	5°	20	24	30	38	30	24
	20	25	31	35	31	25	
	20	26	30	32	30	26	
	20	25	28	29	28	25	
	20	24	26	28	26	24	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	10°	20	29	51	102	51	29
	20	28	50	133	50	28	
	20	27	48	150	48	27	
	20	26	45	150	45	26	
	20	25	43	105	43	25	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	10°	20	28	33	34	33	28
	20	27	31	33	31	27	
	20	25	30	31	30	25	
	20	24	29	29	29	24	
	20	22	28	28	28	22	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	15°	20	38	59	93	59	38
	20	41	64	128	64	41	
	20	43	71	150	71	43	
	20	46	79	130	79	46	
	20	38	64	107	64	38	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	15°	20	28	36	42	36	28
	20	29	34	38	34	29	
	20	29	32	35	32	29	
	20	28	29	32	29	28	
	20	26	28	30	28	26	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	20°	20	37	59	122	59	37
	20	36	62	130	62	36	
	20	35	59	150	59	35	
	20	32	54	105	54	32	
	20	31	50	71	50	31	

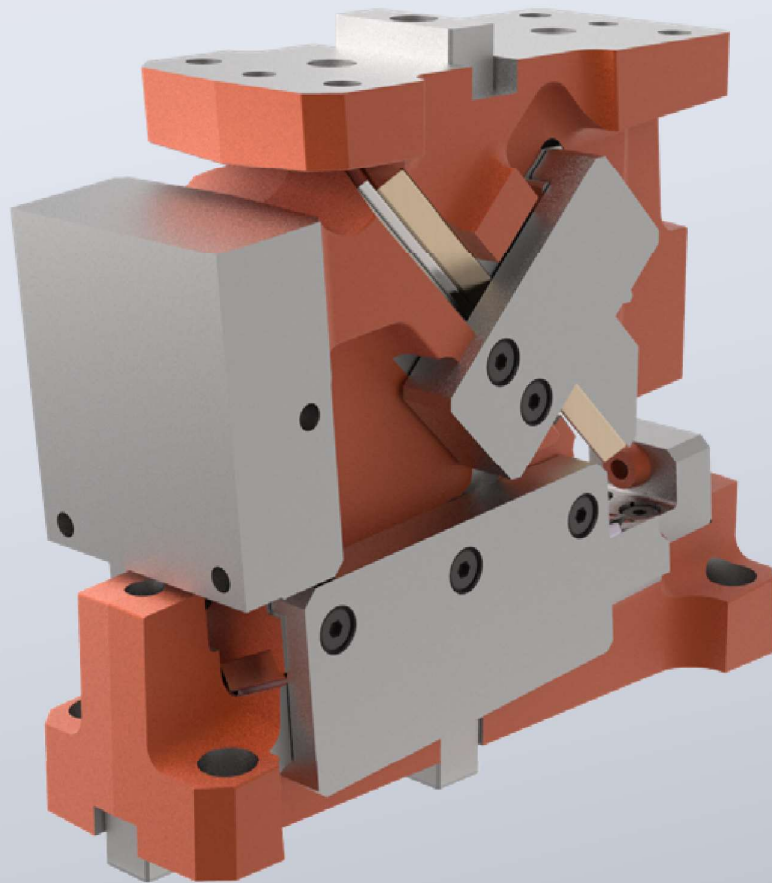
		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	20°	20	29	37	45	37	29
	20	28	35	42	35	28	
	20	26	33	38	33	26	
	20	25	31	36	31	25	
	20	23	29	33	29	23	

		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	25°	20	35	48	68	48	35
	20	35	58	88	58	35	
	20	34	56	119	56	34	
	20	31	51	135	51	31	
	20	29	48	99	48	29	

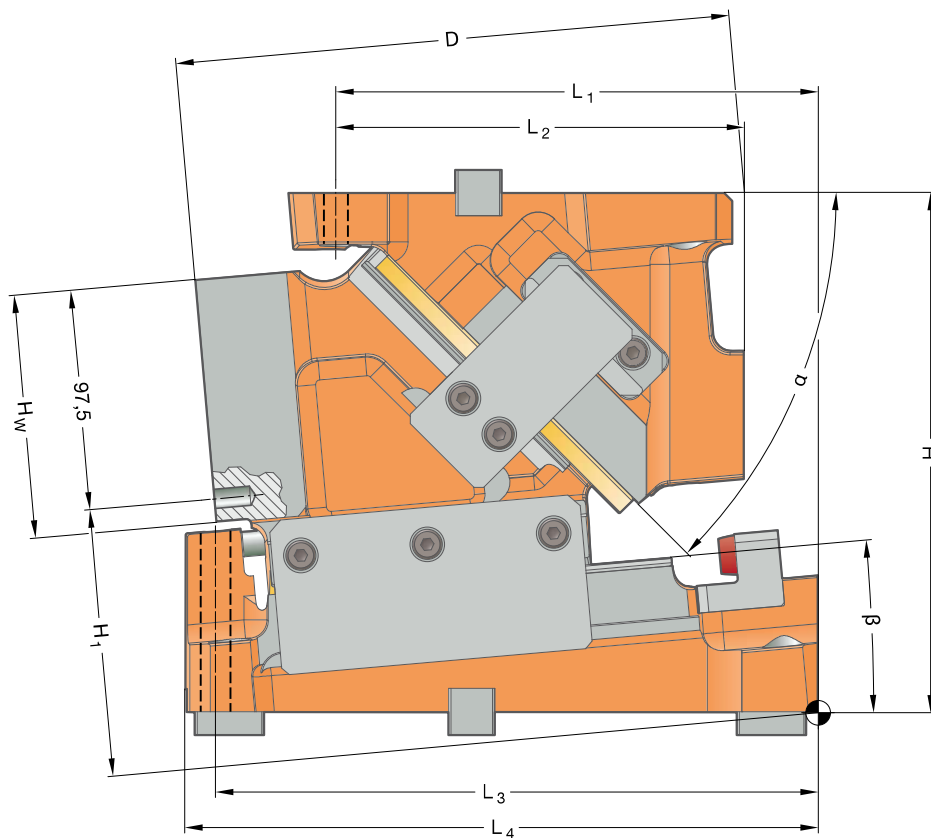
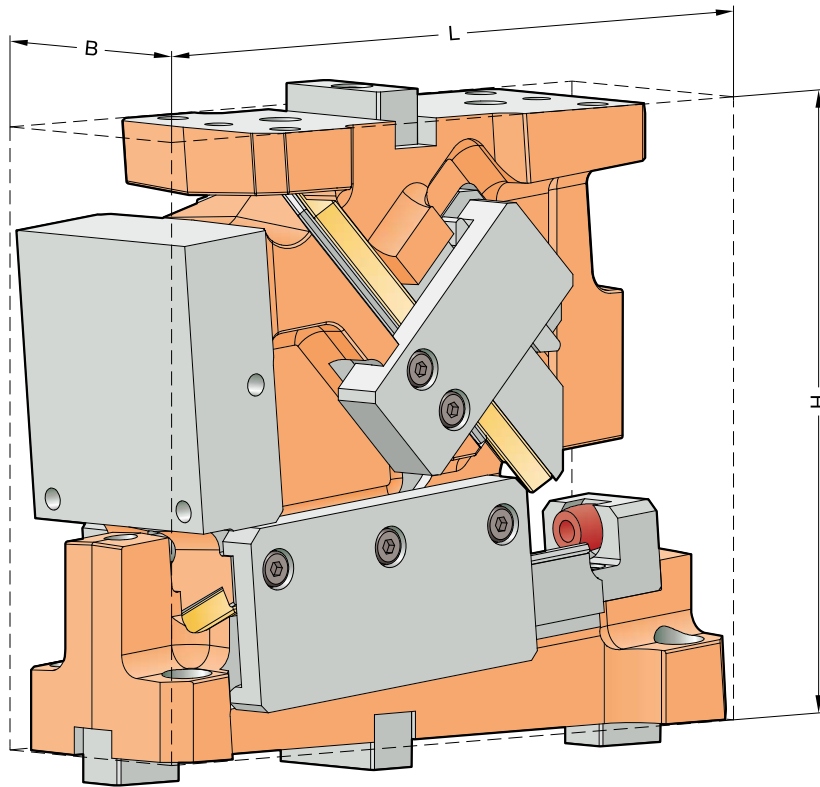
		Width 85 mm					
		10	22.5	20	22.5	10	
Height 100 mm	25°	20	29	42	53	42	29
	20	27	43	48	43	27	
	20	25	39	44	39	25	
	20	24	36	39	36	24	
	20	23	33	36	33	23	

DIE MOUNT CAM FCC-HV
2016.15.009./011.

Working width: 90/115 mm
Performance class: 200 kN

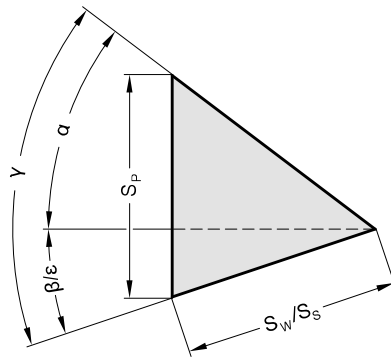


DIE MOUNT CAM FCC-HV 2016.15.009./011.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.009./011.

SIZE TABLE



Order No	L [mm]	B [mm]	H [mm]	H ₁ [mm]	H _w [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L ₄ [mm]	D [mm]	β [°]	α [°]	S _w [mm]	S _p * [mm]
2016.15.009.00.□00□.00	276	90	225	97,5	105	197	175	260	276	233,0	0	50	58,0	69,1
2016.15.011.00.□00□.00		115												
2016.15.009.05.□00□.00	274	90	225	112,47	105	210	175	260	274	237,0	5	45	58,0	62,8
2016.15.011.05.□00□.00		115												
2016.15.009.10.□00□.00	280	90	225	122,28	105	215	175	260	277	245,0	10	40	58,0	58,0
2016.15.011.10.□00□.00		115												
2016.15.009.15.□00□.00	289	90	225	141,65	105	230	185	260	271	250,0	15	35	58,0	54,2
2016.15.011.15.□00□.00		115												
2016.15.009.20.□00□.00	302	90	225	157,48	105	240	185	265	284	254,0	20	30	58,0	51,3
2016.15.011.20.□00□.00		115												
2016.15.009.25.□00□.00	306	90	225	169,49	105	250	185	265	274	249,0	25	25	58,0	49,0
2016.15.011.25.□00□.00		115												

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

Cam base:

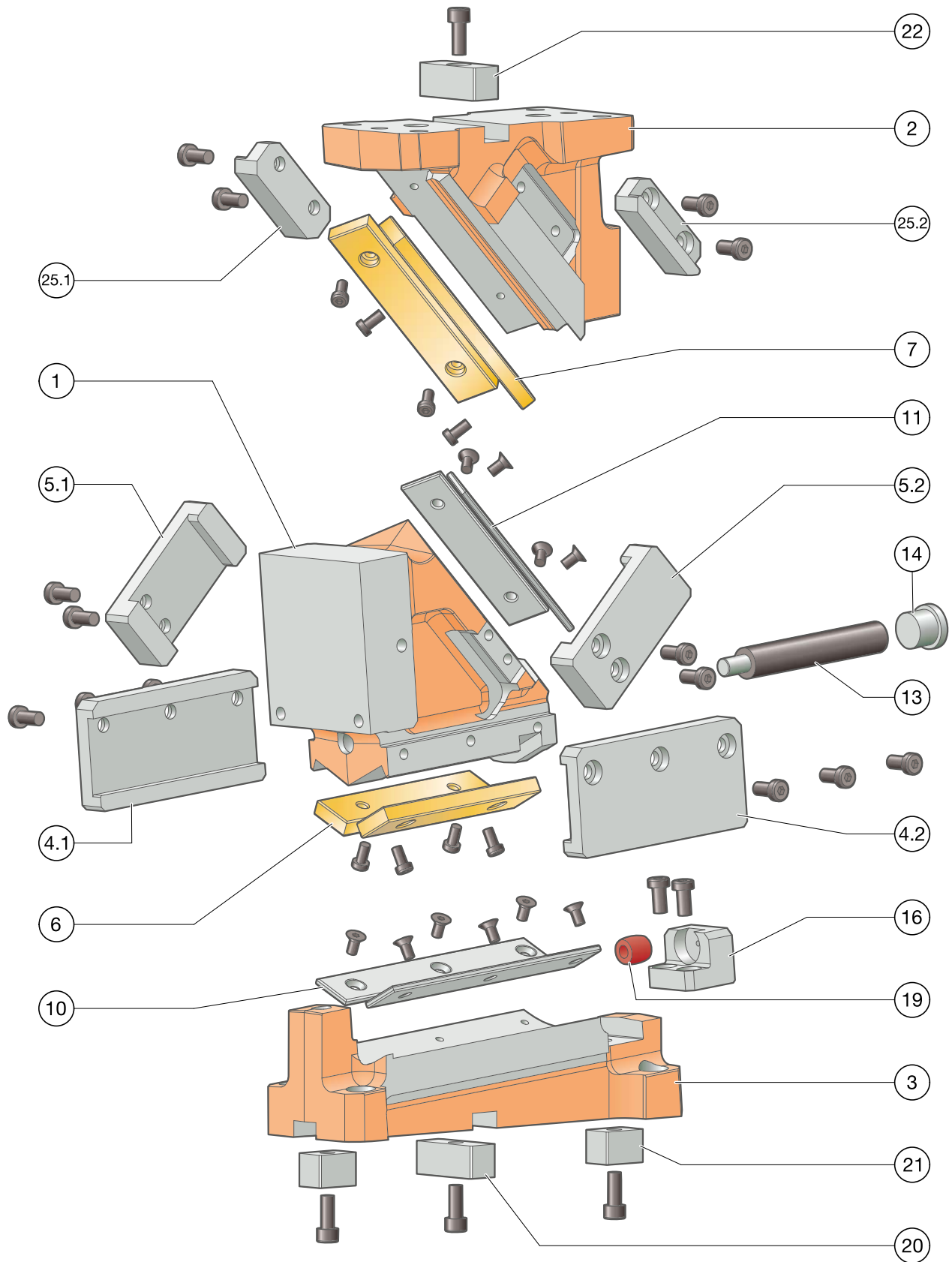
4 × M10
2 × ø10

Driver:

4 × M10
2 × ø10

DIE MOUNT CAM FCC-HV 2016.15.009./011.

EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.009./011.

PARTS LIST



Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8					
9					
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12					
13	1	Gas spring	2487.12.00170.075	--	x
14	1	Locking tappet	1.7131	--	x
15 (not shown)	1	Locking tappet pin		--	x
16	1	Slide stop	1.1191	--	x
17 (not shown)	1	Spacer			x
18 (not shown)	1	Lock-out system	1.1191	--	x
19	1	Damper	2452.10.017.016.1	--	x
20	1	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	1	Feather key (T-nut)	1.1191	--	x
23					
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

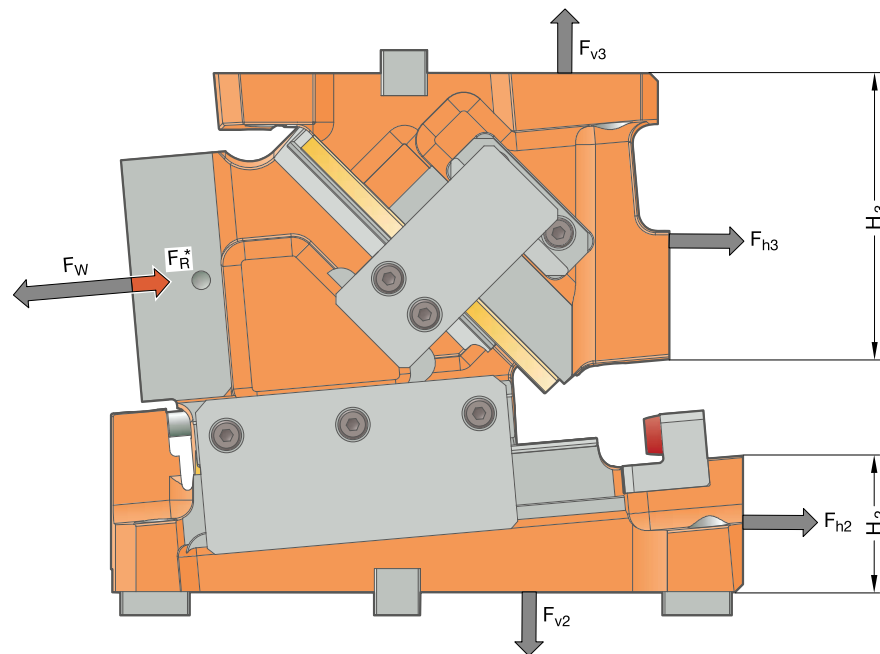
* Feather key (slot stone) only with order option .1002 (positioning of cam unit base via feather key)

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.009./011.

SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_W [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.000.00.0000.00	0	194	25	-14	201	208	201	45	130
2016.15.000.05.0000.00	5	194	25	4	201	190	218	60	120
2016.15.000.10.0000.00	10	194	25	21	200	170	234	70	120
2016.15.000.15.0000.00	15	191	25	38	195	147	244	90	105
2016.15.000.20.0000.00	20	194	25	56	194	127	260	100	80
2016.15.000.25.0000.00	25	194	25	72	188	104	270	115	70

* Identified retraction force F_R can only be achieved with mounted mechanical retractions
 .000. = 90 mm (.009.) or 115 mm (.011.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_W .

DIE MOUNT CAM FCC-HV 2016.15.009./011.

FORCE DIAGRAM



Support via cast shoulder

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	0°	21	33	49	94	138	94	49	33
		21	32	47	91	176	91	47	32
		21	31	45	86	191	86	45	31
		21	29	41	81	194	81	41	29
		21	26	40	81	109	81	40	26

Support via feather key

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	0°	21	22	25	32	38	32	25	22
		21	23	27	34	38	34	27	23
		21	24	28	32	37	32	28	24
		21	22	27	30	35	30	27	22
		21	22	25	28	32	28	25	22

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	5°	21	35	50	78	137	78	50	35
		21	33	49	76	165	76	49	33
		21	32	46	70	194	70	46	32
		21	30	42	68	194	68	42	30
		21	27	40	68	108	68	40	27

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	5°	21	22	25	32	39	32	25	22
		21	23	27	34	38	34	27	23
		21	24	27	32	36	32	27	24
		21	22	27	30	34	30	27	22
		21	22	25	28	30	28	25	22

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	10°	21	30	43	81	137	81	43	30
		21	28	41	76	169	76	41	28
		21	26	38	70	194	70	38	26
		21	23	34	65	194	65	34	23
		21	22	32	65	108	65	32	22

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	10°	21	19	24	32	40	32	24	19
		21	21	25	34	42	34	25	21
		21	22	27	36	39	36	27	22
		21	23	29	36	37	36	29	23
		21	21	29	34	34	34	29	21

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	15°	21	29	43	81	130	81	43	29
		21	27	40	76	155	76	40	27
		21	25	37	68	180	68	37	25
		21	23	32	62	191	62	32	23
		21	21	30	59	108	59	30	21

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	15°	21	21	26	34	44	34	26	21
		21	21	28	38	48	38	28	21
		21	23	29	40	46	40	29	23
		21	23	33	42	42	42	33	23
		21	21	29	38	39	38	29	21

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	20°	21	33	48	84	119	84	48	33
		21	32	46	86	187	86	46	32
		21	30	43	81	194	81	43	30
		21	27	40	73	151	73	40	27
		21	25	35	73	104	73	35	25

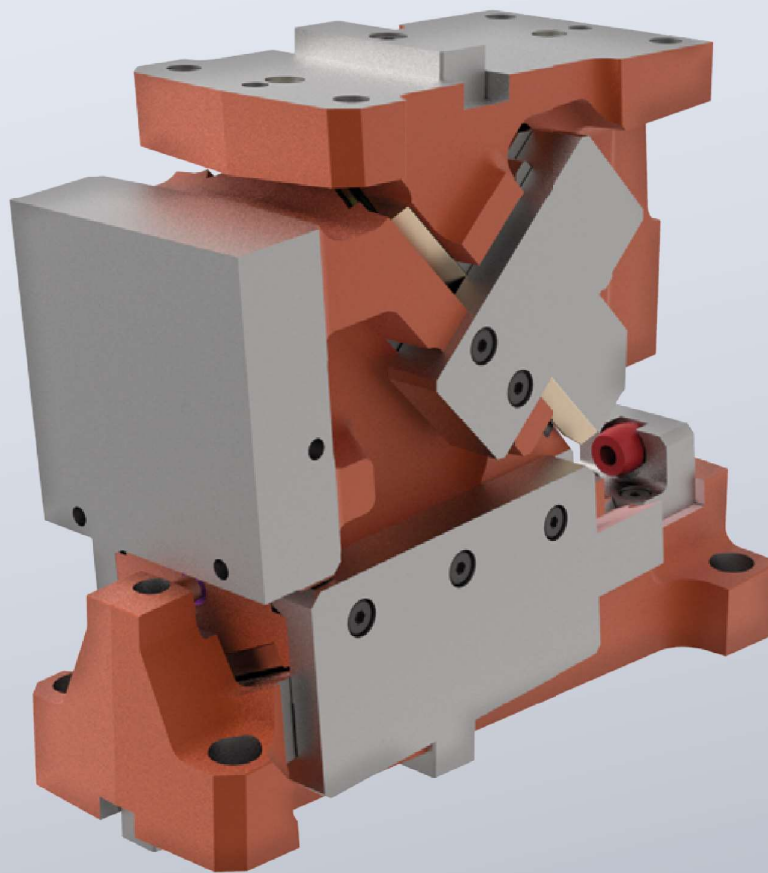
		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	20°	21	21	27	40	53	40	27	21
		21	25	29	42	57	42	29	25
		21	25	32	46	53	46	32	25
		21	26	36	46	48	46	36	26
		21	24	33	43	44	43	33	24

		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	25°	21	35	49	81	112	81	49	35
		21	35	51	92	140	92	51	35
		21	32	48	86	187	86	48	32
		21	31	42	78	194	78	42	31
		21	26	37	78	101	78	37	26

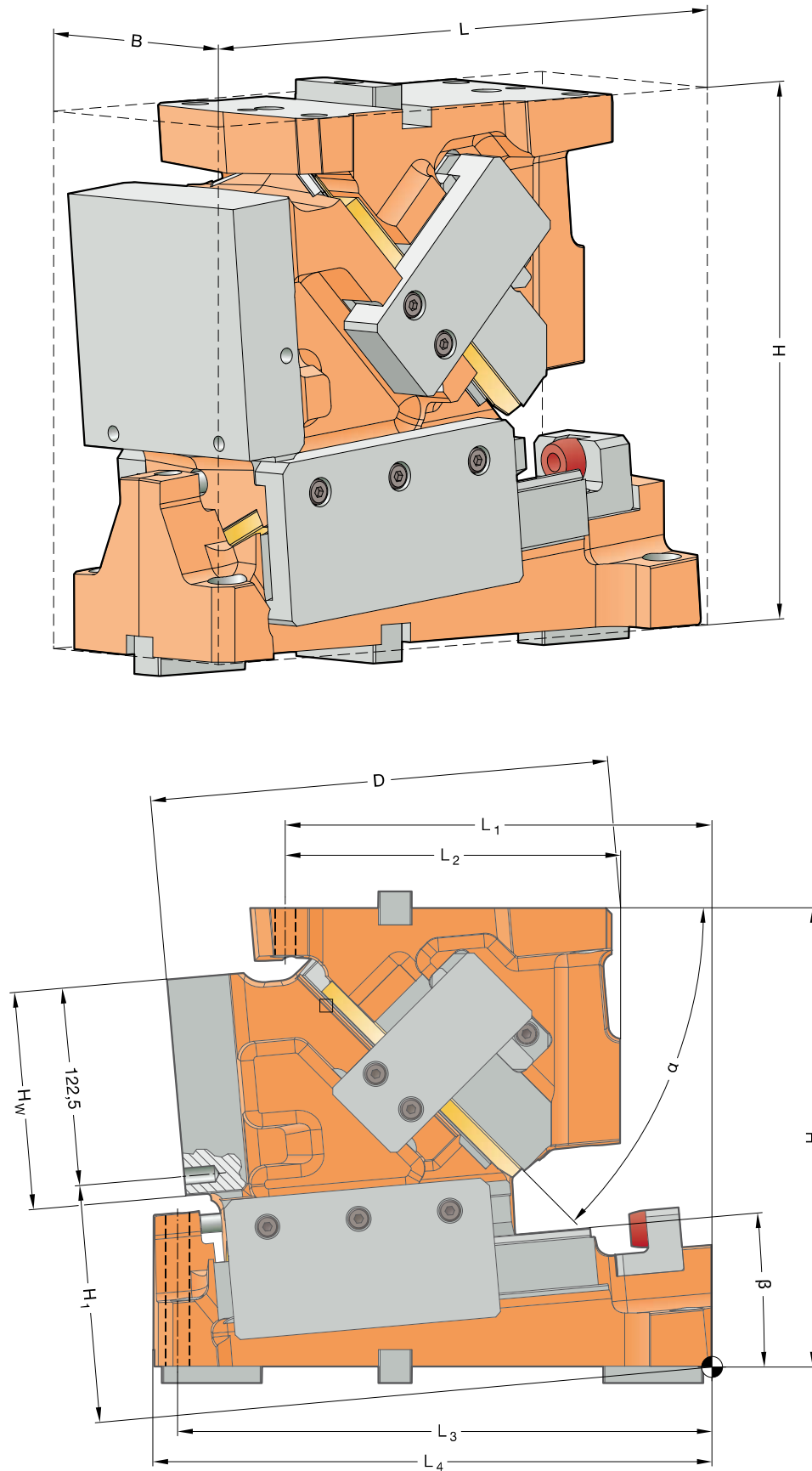
		Width 115 mm							
		12.5	17.5	17.5	20	17.5	17.5	12.5	
Height 105 mm	25°	21	22	28	42	60	42	28	22
		21	23	30	45	58	45	30	23
		21	25	33	48	53	48	33	25
		21	26	36	44	46	44	36	26
		21	25	34	40	42	40	34	25

DIE MOUNT CAM FCC-HV
2016.15.012./016.

Working width: 125/160 mm
Performance class: 300 kN

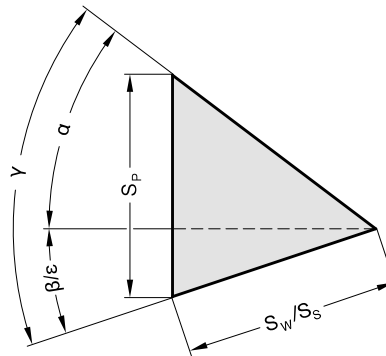


DIE MOUNT CAM FCC-HV 2016.15.012./016.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.012./016.

SIZE TABLE



Order No	L [mm]	B [mm]	H [mm]	H ₁ [mm]	H _w [mm]	L ₁ [mm]	L ₂ [mm]	L ₃ [mm]	L ₄ [mm]	D [mm]	β [°]	α [°]	S _w [mm]	S _p * [mm]
2016.15.012.00.□00□.00	339	125	275	122,5	130	250	210	285	339	270,0	0	50	70,0	83,4
2016.15.016.00.□00□.00		160												
2016.15.012.05.□00□.00	335	125	275	137,19	130	265	210	285	335	275,0	5	45	70,0	75,8
2016.15.016.05.□00□.00		160												
2016.15.012.10.□00□.00	339	125	275	151,52	130	270	210	285	337	284,0	10	40	70,0	70,0
2016.15.016.10.□00□.00		160												
2016.15.012.15.□00□.00	350	125	275	175,21	130	290	225	275	330	291,0	15	35	70,0	65,5
2016.15.016.15.□00□.00		160												
2016.15.012.20.□00□.00	361	125	275	188,68	130	300	225	275	335	294,0	20	30	70,0	61,9
2016.15.016.20.□00□.00		160												
2016.15.012.25.□00□.00	371	125	275	210,86	130	315	225	275	329	289,0	25	25	70,0	59,2
2016.15.016.25.□00□.00		160												

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

Cam base:

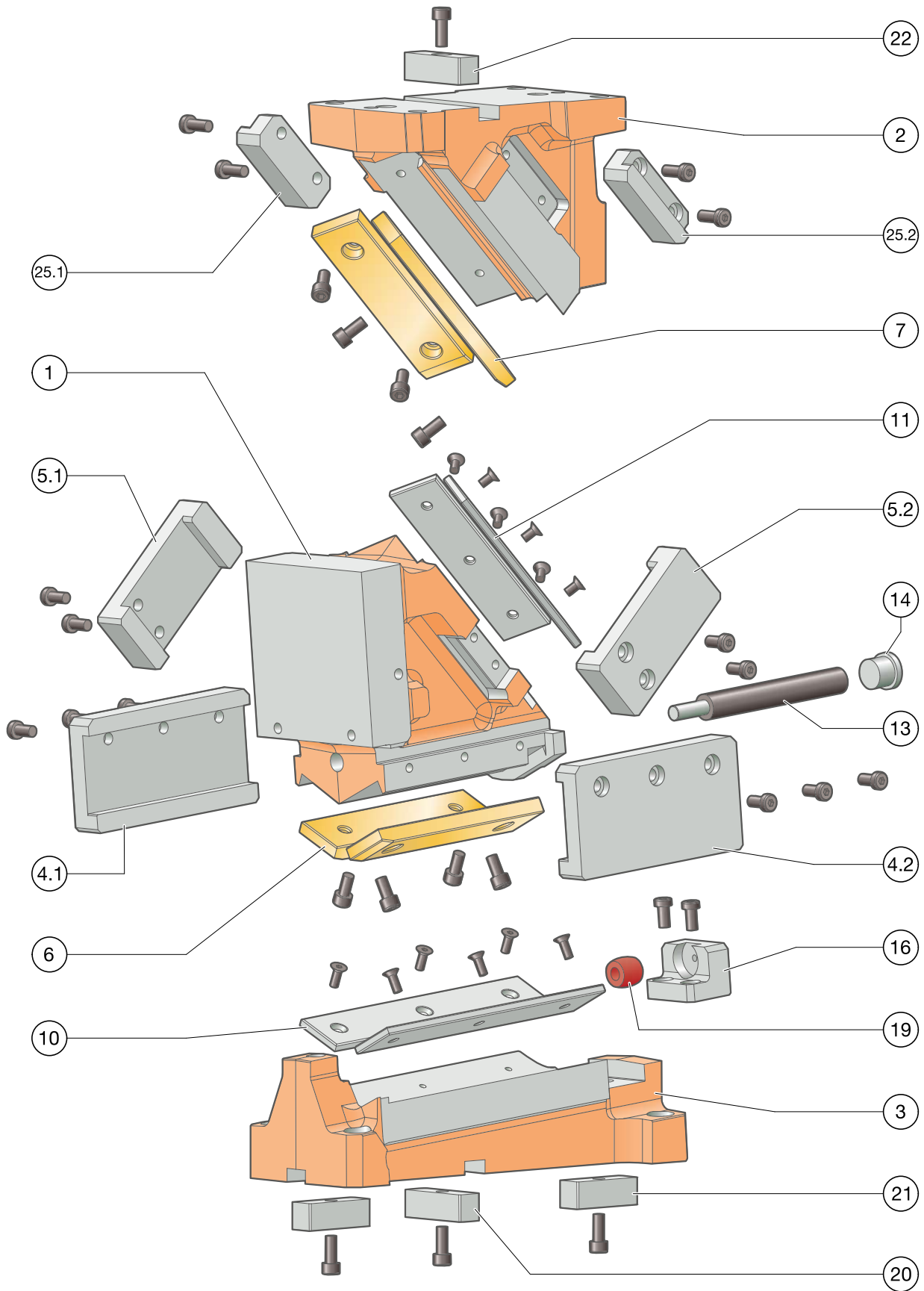
4 × M12
2 × ø12

Driver:

4 × M12
2 × ø12

DIE MOUNT CAM FCC-HV 2016.15.012./016.

EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.012./016.

PARTS LIST



Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8					
9					
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12					
13	1	Gas spring	2487.12.00170.100	--	x
14	1	Locking tappet	1.7131	--	x
15 (not shown)	1	Locking tappet pin			x
16	1	Slide stop	1.1191	--	x
17 (not shown)	1	Spacer			x
18 (not shown)	1	Lockout system	1.1191	--	x
19	1	Damper	2452.10.022.019.2	--	x
20	1	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	1	Feather key (T-nut)	1.1191	--	x
23					
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

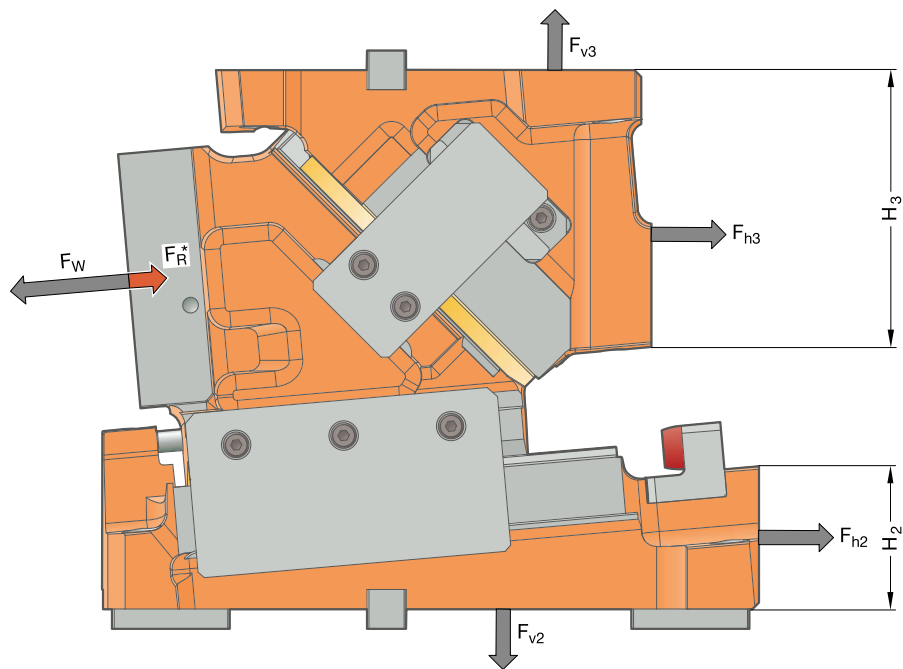
* Feather key (slot stone) only with order option .1002 (positioning of cam unit base via feather key)

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.012./016.

SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_W [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.0□□.00.□00□.00	0	320	30	-23	331	343	331	50	145
2016.15.0□□.05.□00□.00	5	320	30	6	332	313	360	65	135
2016.15.0□□.10.□00□.00	10	350	30	38	361	307	422	80	135
2016.15.0□□.15.□00□.00	15	350	30	69	357	269	447	110	115
2016.15.0□□.20.□00□.00	20	245	30	70	245	160	328	125	110
2016.15.0□□.25.□00□.00	25	248	30	92	240	132	345	155	90

* Identified retraction force F_R can only be achieved with mounted mechanical retractions

.0□□. = 125 mm (.012.) or 160 mm (.016.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_W .

DIE MOUNT CAM FCC-HV 2016.15.012./016.

FORCE DIAGRAM



Support via cast shoulder

0°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	56	70	96	128	96	70	56
	26	63	84	120	160	120	84	63
	26	77	98	144	208	144	98	77
	26	84	119	192	320	192	119	84
	26	84	112	192	288	192	112	84

Support via feather key

0°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	33	42	60	74	60	42	33
	26	35	45	62	70	62	45	35
	26	37	48	60	66	60	48	37
	26	38	50	56	62	56	50	38
	26	35	47	53	58	53	47	35

5°		Width 160 mm						
		60	60	60	40	60	60	60
Height 130 mm	26	44	57	97	129	97	57	44
	26	47	66	121	161	121	66	47
	26	55	72	144	209	144	72	55
	26	59	81	179	320	179	81	59
	26	77	95	182	276	182	95	77

5°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	26	33	46	59	46	33	26
	26	27	35	49	61	49	35	27
	26	28	37	52	60	52	37	28
	26	29	39	53	56	53	39	29
	26	31	41	50	52	50	41	31

10°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	44	57	86	107	86	57	44
	26	44	60	106	132	106	60	44
	26	45	60	123	168	123	60	45
	26	42	60	140	252	140	60	42
	26	46	57	129	350	129	57	46

10°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	30	37	48	60	48	37	30
	26	32	40	52	60	52	40	32
	26	34	42	52	56	52	42	34
	26	32	42	50	51	50	42	32
	26	31	40	46	49	46	40	31

15°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	48	66	126	176	126	66	48
	26	52	74	156	218	156	74	52
	26	51	68	150	281	150	68	51
	26	46	63	137	350	137	63	46
	26	46	57	138	281	138	57	46

15°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	29	38	56	74	56	38	29
	26	30	40	61	78	61	40	30
	26	32	43	65	81	65	43	32
	26	31	43	70	74	70	43	31
	26	27	38	64	68	64	38	27

20°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	46	56	77	114	77	56	46
	26	45	66	93	139	93	66	45
	26	42	59	108	170	108	59	42
	26	36	50	113	238	113	50	36
	26	35	45	101	245	101	45	35

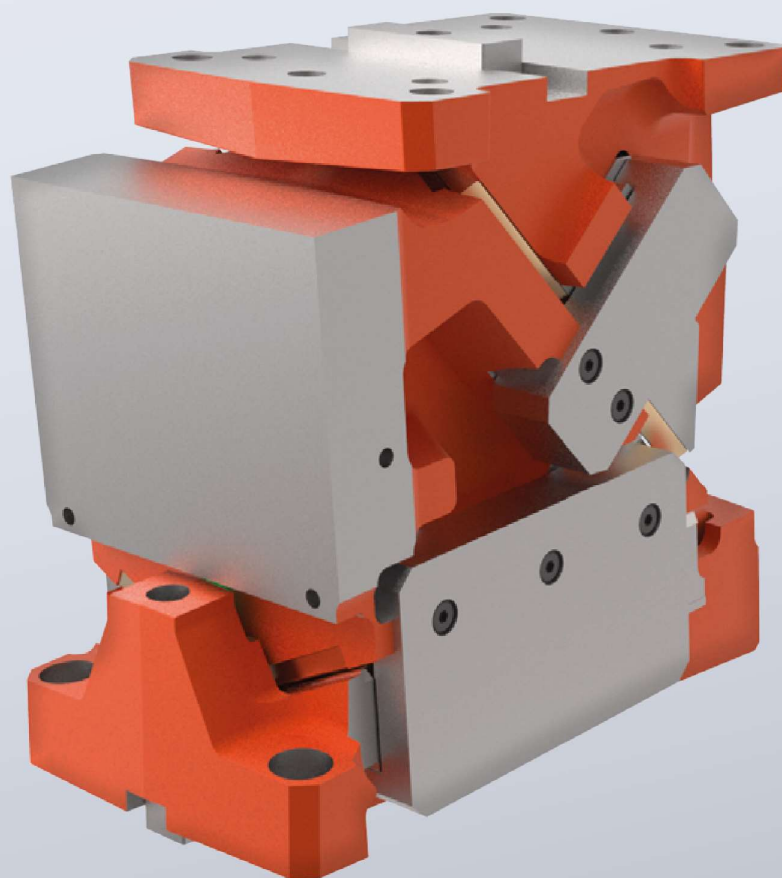
20°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	26	32	41	50	41	32	26
	26	28	34	45	53	45	34	28
	26	30	37	49	56	49	37	30
	26	26	37	53	56	53	37	26
	26	23	43	51	53	51	43	23

25°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	51	70	99	146	99	70	51
	26	54	76	120	178	120	76	54
	26	50	65	139	221	139	65	50
	26	42	55	123	232	123	55	42
	26	40	49	101	248	101	49	40

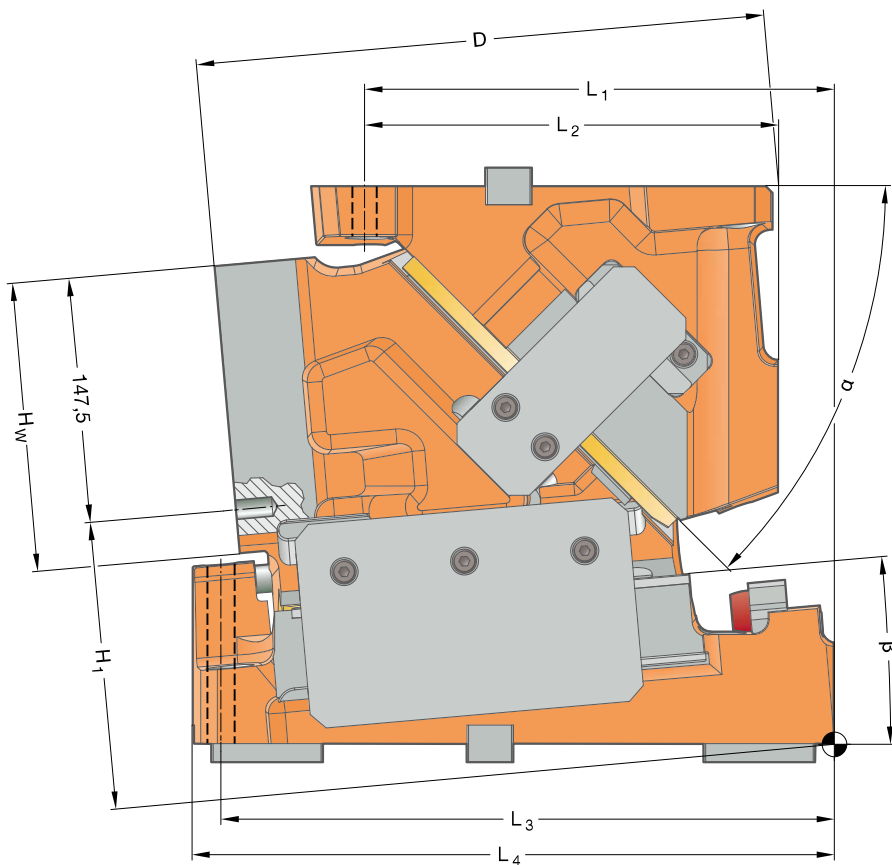
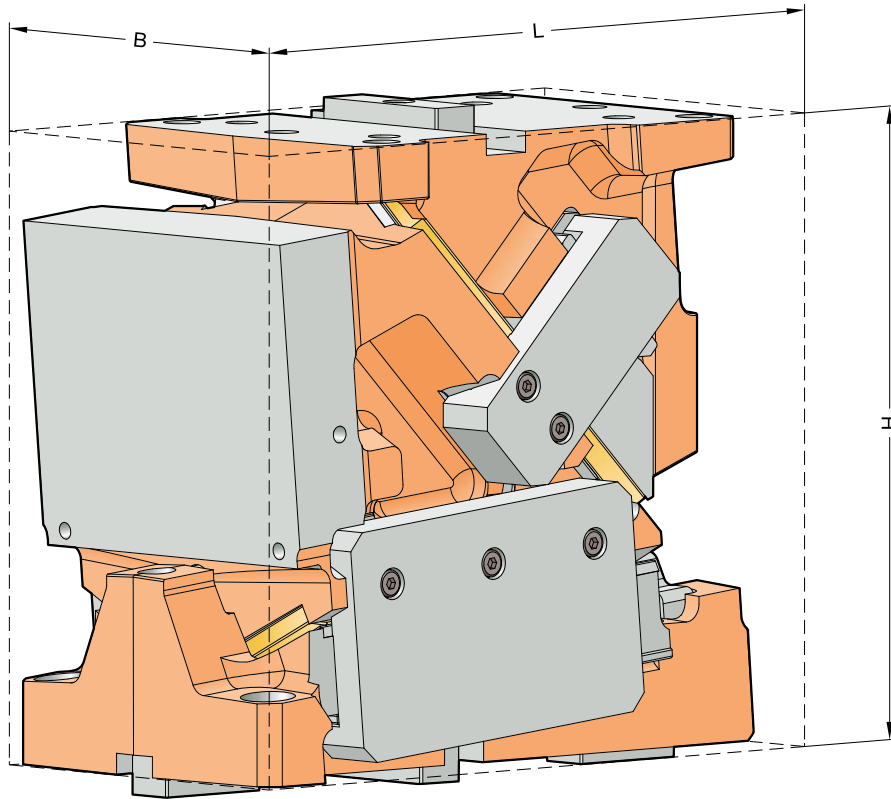
25°		Width 160 mm						
		17.5	25	25	25	25	17.5	
Height 130 mm	26	27	33	42	50	42	33	27
	26	29	35	46	52	46	35	29
	26	28	35	47	55	47	35	28
	26	24	30	42	53	42	30	24
	26	21	26	38	47	38	26	21

DIE MOUNT CAM FCC-HV
2016.15.018./022.

Working width: 185/220 mm
Performance class: 450 kN

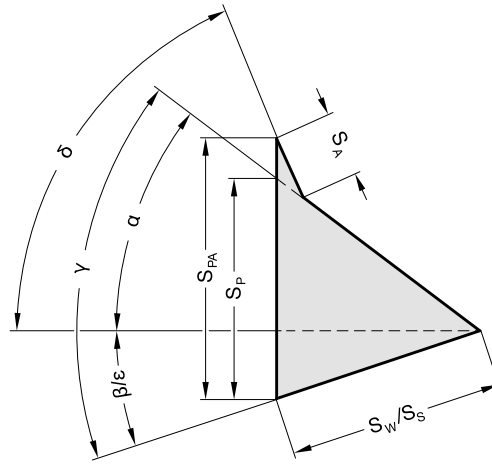


DIE MOUNT CAM FCC-HV 2016.15.018./022.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.018./022.

SIZE TABLE



Order No	L	B	H	H ₁	H _w	L ₁	L ₂	L ₃	L ₄	D	β	α	δ	S _w	S _p *	S _{PA} *
2016.15.	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]	[°]	[mm]	[mm]	[mm]
2016.15.018.00.□00□.00	352	185	300	117,5	140	250	230	295	352	295,0	0	50	75	70,0	83,4	93,3
2016.15.022.00.□00□.00		220														
2016.15.018.05.□00□.00	347	185	300	137,58	140	260	230	295	347	306,0	5	45	70	70,0	75,8	84,8
2016.15.022.05.□00□.00		220														
2016.15.018.10.□00□.00	352	185	300	158,03	140	270	230	295	352	316,0	10	40	65	70,0	70,0	78,3
2016.15.022.10.□00□.00		220														
2016.15.018.15.□00□.00	364	185	300	177,45	140	285	240	280	343	324,0	15	35	60	70,0	65,5	73,2
2016.15.022.15.□00□.00		220														
2016.15.018.20.□00□.00	371	185	300	194,48	140	295	240	280	347	321,0	20	30	55	70,0	61,9	69,2
2016.15.022.20.□00□.00		220														
2016.15.018.25.□00□.00	383	185	300	212,04	140	305	240	280	339	323,0	25	25	50	70,0	59,2	66,2
2016.15.022.25.□00□.00		220														

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

Cam base:

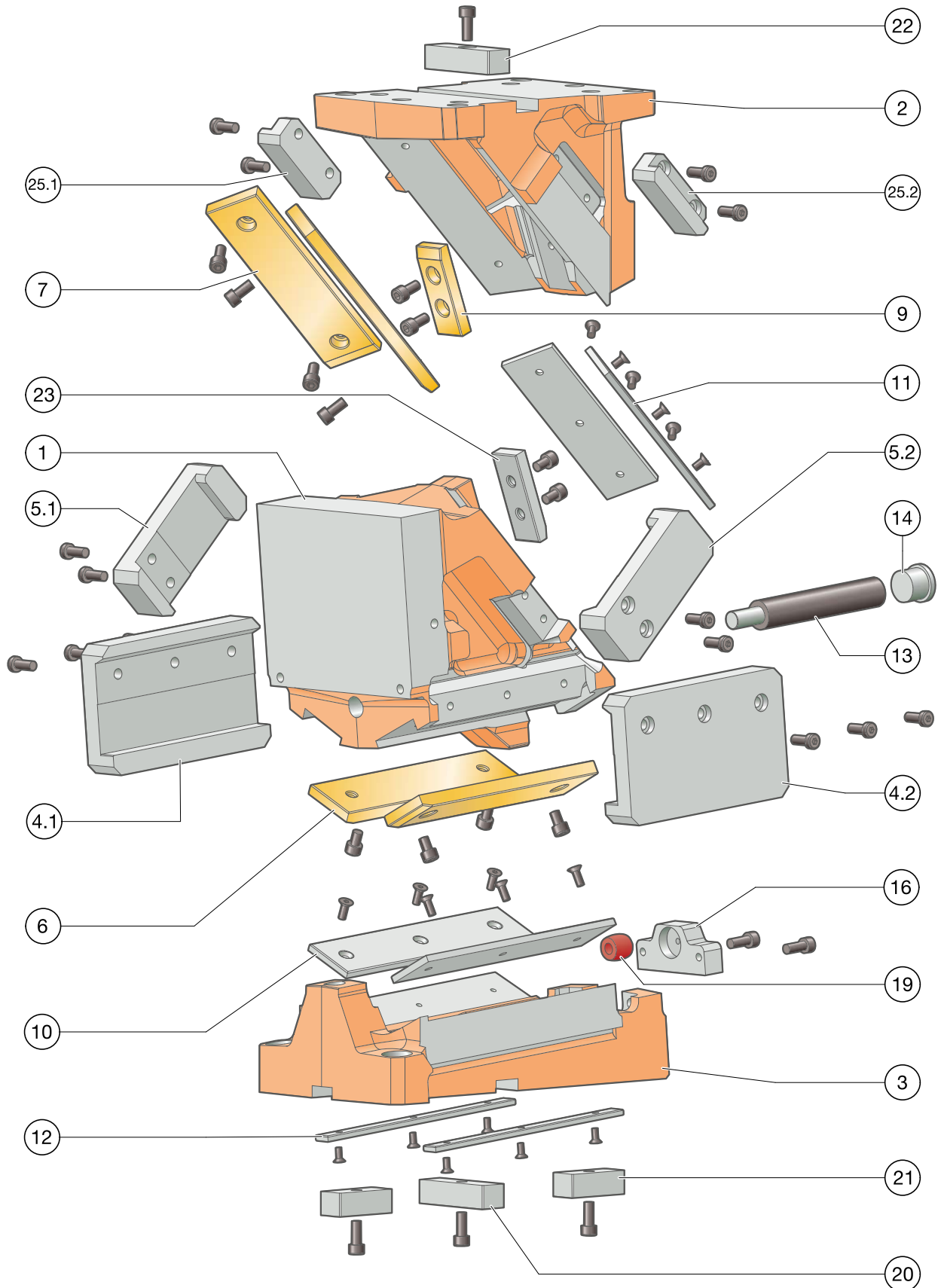
4 × M16
2 × ø16

Driver:

4 × M16
2 × ø16

DIE MOUNT CAM FCC-HV 2016.15.018./022.

EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.018./022.

PARTS LIST



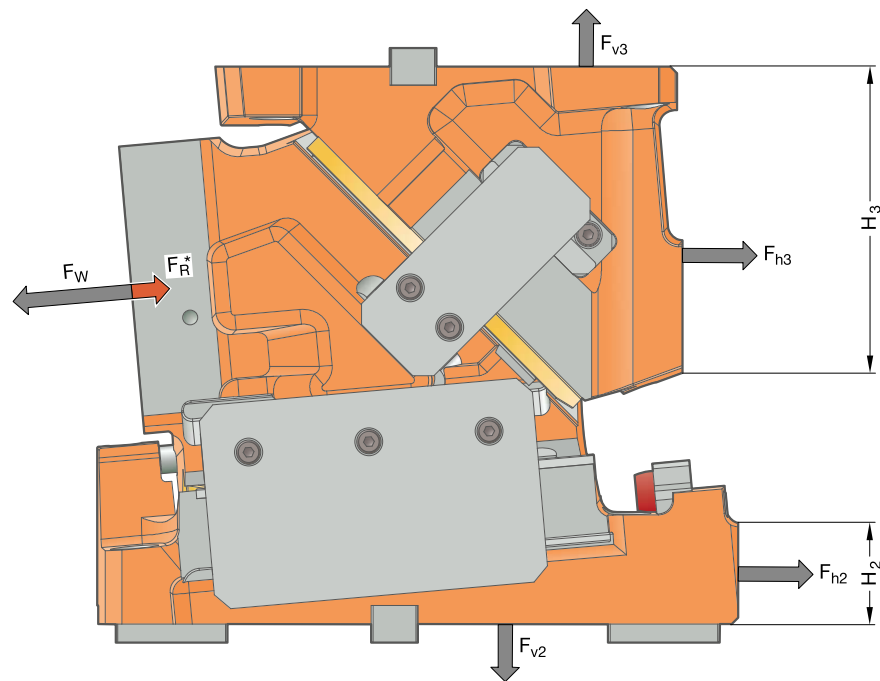
Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1.	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8					
9	1	Sliding plate	Bronze with solid lubricant	--	x
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12	2	Sliding plate	1.2379	--	x
13	1	Gas spring	2487.12.00320.100	--	x
14	1	Locking tappet	1.7131	--	x
15 (not shown)	1	Locking tappet pin			x
16	1	Slide stop	1.1191	--	x
17 (not shown)	1	Spacer			x
18 (not shown)	1	Lockout	1.1191	--	x
19	1	Damper	2452.10.022.019.2	--	x
20	1	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	1	Feather key (T-nut)	1.1191	--	x
23	1	pre-acceleration	1.2379	--	x
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

* Feather key (slot stone) only with order option .1002 (positioning of cam unit base via feather key)

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.018./022. SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_w [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.0□□.00.□00□.00	0	493	40	-36	511	529	511	30	175
2016.15.0□□.05.□00□.00	5	430	40	8	446	421	484	50	160
2016.15.0□□.10.□00□.00	10	430	40	47	444	377	519	70	135
2016.15.0□□.15.□00□.00	15	422	40	84	430	324	539	95	120
2016.15.0□□.20.□00□.00	20	430	40	123	429	281	576	115	110
2016.15.0□□.25.□00□.00	25	430	40	160	417	230	599	140	95

* Identified retraction force F_R can only be achieved with mounted mechanical retractions

.0□□. = 185 mm (.018.) or 220 mm (.022.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_w .

DIE MOUNT CAM FCC-HV 2016.15.018./022.

FORCE DIAGRAM



Support via cast shoulder

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	0°	28	116	145	234	305	234	145	116
		28	121	158	270	352	270	158	121
		28	127	178	305	446	305	178	127
		28	138	191	305	493	305	191	138
		28	121	158	246	399	246	158	121

Support via feather key

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	0°	28	40	48	70	96	70	48	40
		28	43	53	75	101	75	53	43
		28	45	56	80	102	80	56	45
		28	48	61	85	104	85	61	48
		28	53	64	88	106	88	64	53

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	5°	28	122	151	196	303	196	151	122
		28	116	145	189	364	189	145	116
		28	109	137	176	430	176	137	109
		28	103	126	169	430	169	126	103
		28	94	118	169	239	169	118	94

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	5°	28	35	43	61	80	61	43	35
		28	38	46	66	84	66	46	38
		28	40	49	71	87	71	49	40
		28	43	54	75	89	75	54	43
		28	47	58	79	92	79	58	47

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	10°	28	103	129	203	303	203	129	103
		28	97	121	189	374	189	121	97
		28	91	113	176	430	176	113	91
		28	81	102	162	430	162	102	81
		28	75	94	162	239	162	94	75

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	10°	28	36	44	61	79	61	44	36
		28	39	47	67	85	67	47	39
		28	41	51	73	89	73	51	41
		28	45	56	79	94	79	56	45
		28	49	62	85	100	85	62	49

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	15°	28	100	129	203	287	203	129	100
		28	94	118	189	343	189	118	94
		28	87	110	169	398	169	110	87
		28	81	97	155	422	155	97	81
		28	72	89	149	239	149	89	72

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	15°	28	36	43	60	77	60	43	36
		28	39	47	66	83	66	47	39
		28	41	51	72	89	72	51	41
		28	45	57	80	95	80	57	45
		28	50	63	87	101	87	63	50

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	20°	28	116	143	210	263	210	143	116
		28	109	137	216	414	216	137	109
		28	103	129	203	430	203	129	103
		28	94	118	182	335	182	118	94
		28	87	105	182	231	182	105	87

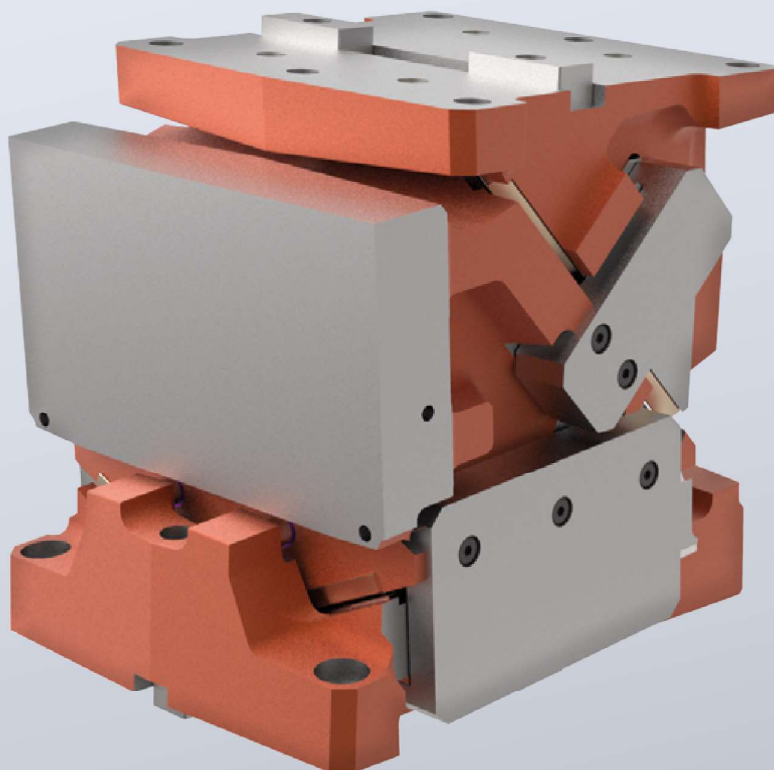
		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	20°	28	36	43	59	77	59	43	36
		28	39	46	66	84	66	46	39
		28	42	51	72	90	72	51	42
		28	46	57	80	97	80	57	46
		28	50	64	88	104	88	64	50

		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	25°	28	122	145	203	247	203	145	122
		28	122	153	230	311	230	153	122
		28	112	143	216	414	216	143	112
		28	106	126	196	430	196	126	106
		28	91	110	196	223	196	110	91

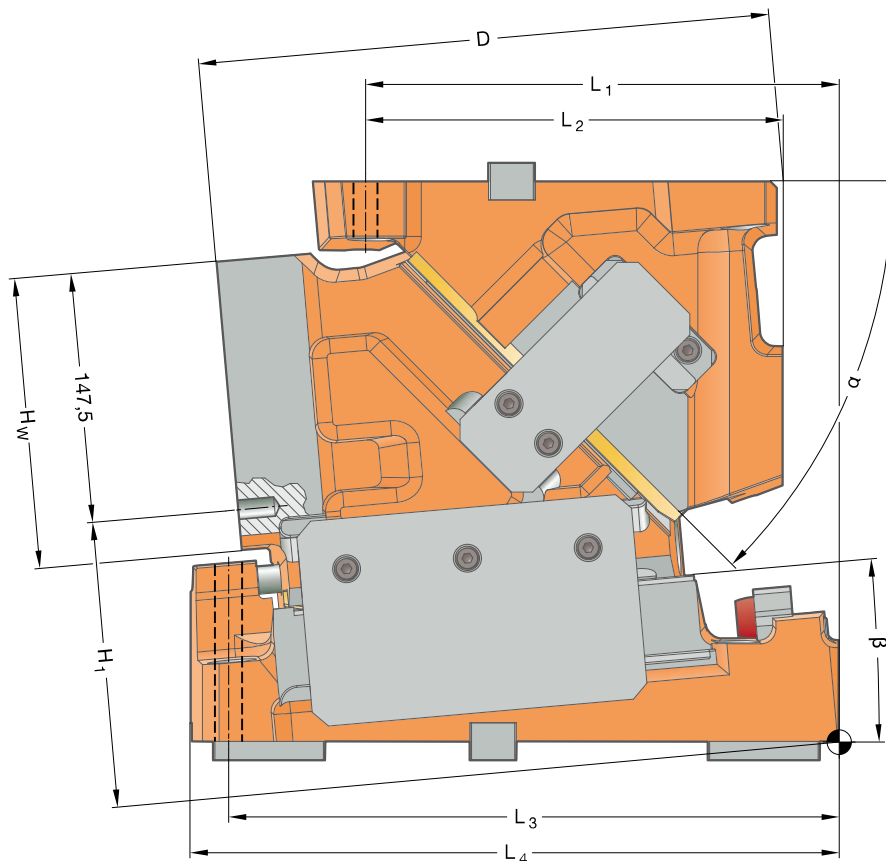
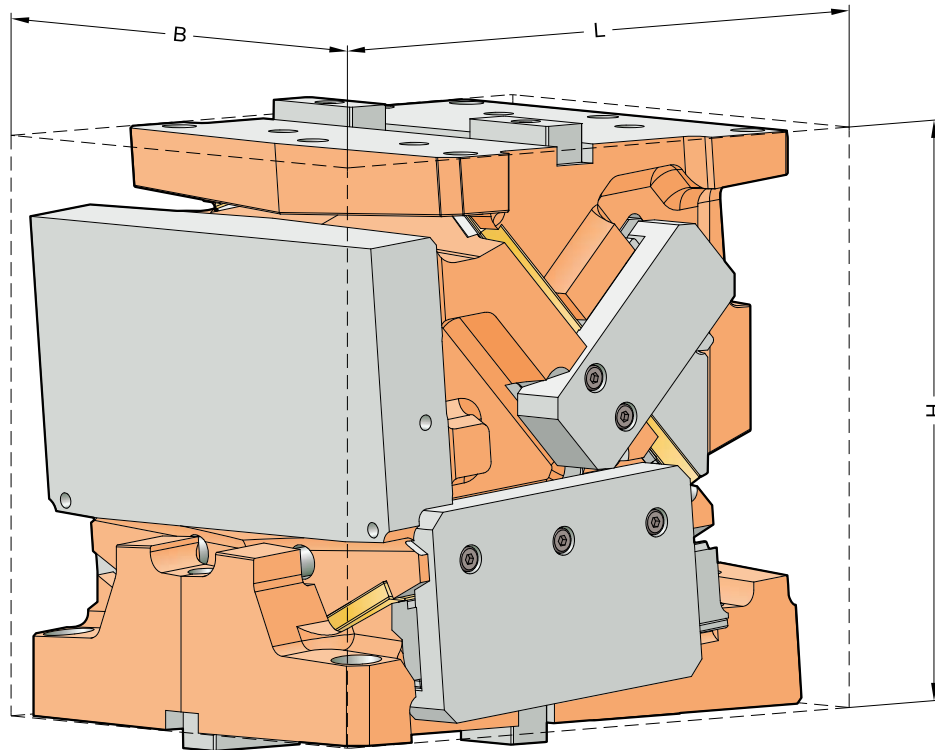
		Width 220 mm							
		17.5	40	40	25	40	40	17.5	
Height 140 mm	25°	28	38	45	61	76	61	45	38
		28	40	49	68	84	68	49	40
		28	44	54	75	92	75	54	44
		28	48	60	84	100	84	60	48
		28	53	67	92	110	92	67	53

DIE MOUNT CAM FCC-HV
2016.15.026./031.

Working width: 260/310 mm
Performance class: 550 kN

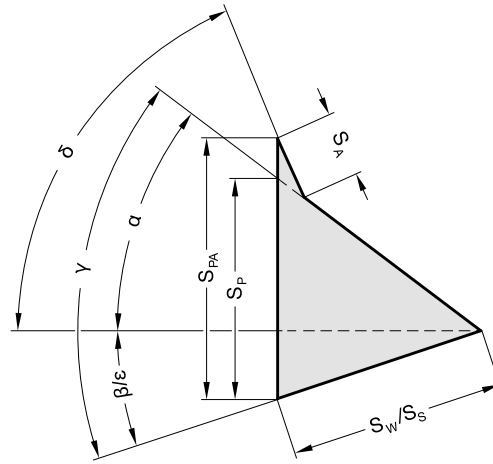


DIE MOUNT CAM FCC-HV 2016.15.026./031.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.026./031.

SIZE TABLE



Order No	L	B	H	H ₁	H _W	L ₁	L ₂	L ₃	L ₄	D	β	α	δ	S _W	S _P *	S _{PA} *
2016.15.	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]	[°]	[mm]	[mm]	[mm]
2016.15.026.00.□00□.00	352	260	300	117,5	145	240	220	300	352	295,0	0	50	75	70,0	83,4	93,3
2016.15.031.00.□00□.00		310														
2016.15.026.05.□00□.00	347	260	300	137,58	145	250	220	300	347	306,0	5	45	70	70,0	75,8	84,8
2016.15.031.05.□00□.00		310														
2016.15.026.10.□00□.00	356	260	300	158,03	145	280	240	300	356	316,0	10	40	65	70,0	70,0	78,3
2016.15.031.10.□00□.00		310														
2016.15.026.15.□00□.00	364	260	300	177,45	145	285	240	300	347	324,0	15	35	60	70,0	65,5	73,2
2016.15.031.15.□00□.00		310														
2016.15.026.20.□00□.00	376	260	300	196,19	145	300	240	290	348	321,0	20	30	55	70,0	61,9	69,2
2016.15.031.20.□00□.00		310														
2016.15.026.25.□00□.00	388	260	300	214,15	145	310	240	290	340	323,0	25	25	50	70,0	59,2	66,2
2016.15.031.25.□00□.00		310														

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

Cam base:

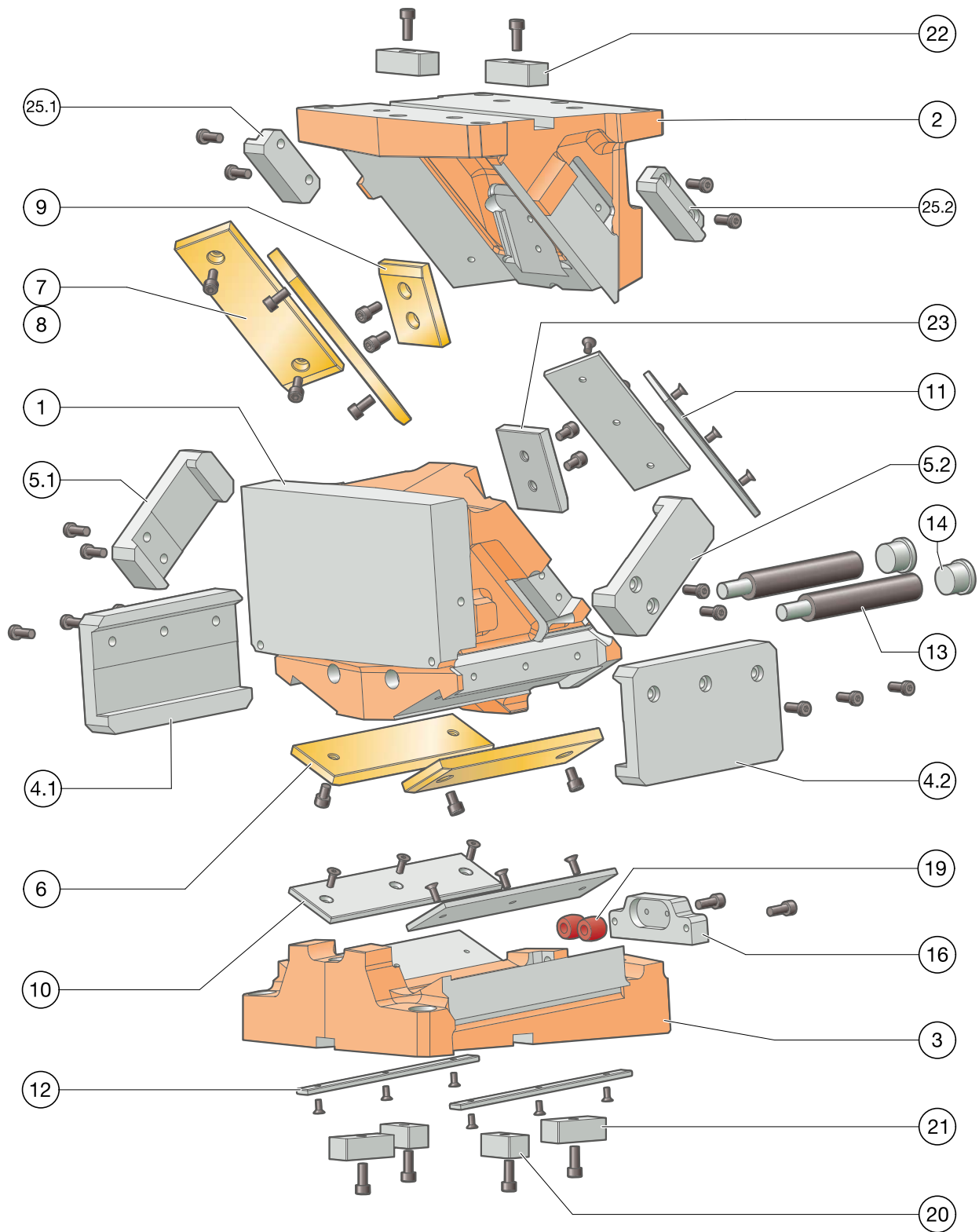
4 × M16
2 × ø16

Driver:

4 × M16
2 × ø16

DIE MOUNT CAM FCC-HV 2016.15.026./031.

EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.026./031.

PARTS LIST



Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8** (not shown)	2	Sliding plate	Bronze with solid lubricant	--	x
9	1	Sliding plate	Bronze with solid lubricant	--	x
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12	2	Sliding plate	1.2379	--	x
13	2	Gas spring	2487.12.00320.100	--	x
14	2	Locking tappet	1.7131	--	x
15 (not shown)	2	Locking tappet pin			x
16	1	Slide stop	1.1191	--	x
17 (not shown)	1	Spacer			x
18 (not shown)	1	Lockout system	1.1191	--	x
19	2	Damper	2452.10.022.019.2	--	x
20	2	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	2	Feather key (T-nut)	1.1191	--	x
23	1	pre-acceleration	1.2379	--	
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

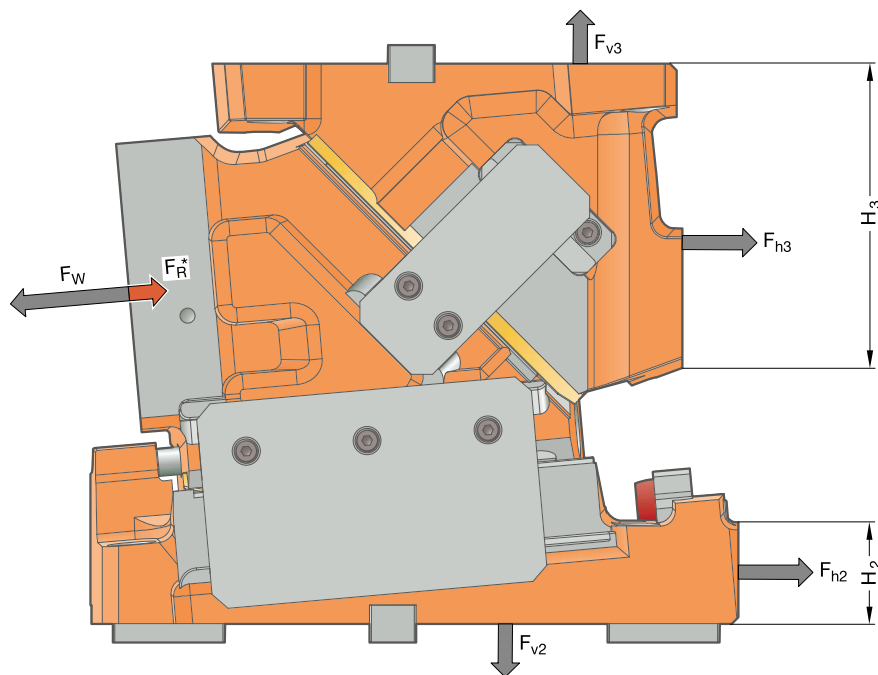
* Feather key (slot stone) only with order option .1002 (positioning of cam unit base via feather key)

** Only at angles of 0°-15°

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.026./031. SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_W [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.000.00.0000.00	0	560	70	-41	580	601	580	30	170
2016.15.000.05.0000.00	5	600	70	11	623	587	675	50	155
2016.15.000.10.0000.00	10	600	70	65	620	526	724	70	145
2016.15.000.15.0000.00	15	600	70	119	612	461	767	90	125
2016.15.000.20.0000.00	20	528	70	151	527	345	708	100	115
2016.15.000.25.0000.00	25	528	70	196	512	282	735	120	95

Identified retraction force F_R can only be achieved with mounted mechanical retractions
 .000. = 260 mm (.026.) or 310 mm (.031.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_W .

DIE MOUNT CAM FCC-HV 2016.15.026./031.

FORCE DIAGRAM



Support via cast shoulder

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	0°	29	64	78	168	250	312	250	168	78	64
	29	67	85	182	285	380	285	182	85	67	
	29	72	92	210	340	460	340	210	92	72	
	29	77	101	238	400	560	400	238	101	77	
	29	81	105	238	330	480	330	238	105	81	

Support via feather key

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	0°	29	22	26	33	42	53	42	33	26	22
	29	23	28	35	45	54	45	35	28	23	
	29	24	29	36	47	56	47	36	29	24	
	29	26	31	38	48	56	48	38	31	26	
	29	28	32	40	48	56	48	40	32	28	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	5°	29	68	86	176	270	336	270	176	86	68
	29	72	92	200	300	408	300	200	92	72	
	29	78	101	224	350	492	350	224	101	78	
	29	86	111	252	415	600	415	252	111	86	
	29	82	109	240	340	516	340	240	109	82	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	5°	29	22	27	33	44	50	44	33	27	22
	29	23	27	35	46	55	46	35	27	23	
	29	24	28	36	48	55	48	36	28	24	
	29	26	30	40	48	57	48	40	30	26	
	29	27	32	40	48	57	48	40	32	27	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	10°	29	70	86	184	270	336	270	184	86	70
	29	74	94	200	313	408	313	200	94	74	
	29	78	101	232	356	504	356	232	101	78	
	29	86	113	259	430	600	430	259	113	86	
	29	86	113	256	370	576	370	256	113	86	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	10°	29	23	27	35	49	60	49	35	27	23
	29	24	29	38	52	63	52	38	29	24	
	29	26	31	40	56	65	56	40	31	26	
	29	28	33	43	60	68	60	43	33	28	
	29	30	36	46	61	72	61	46	36	30	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	15°	29	68	86	176	270	336	270	176	86	68
	29	74	90	200	300	408	300	200	90	74	
	29	78	101	224	351	504	351	224	101	78	
	29	86	111	282	420	600	420	282	111	86	
	29	90	113	258	373	552	373	258	113	90	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	15°	29	23	27	35	49	57	49	35	27	23
	29	24	29	38	52	63	52	38	29	24	
	29	26	31	41	57	66	57	41	31	26	
	29	28	33	44	60	70	60	44	33	28	
	29	30	36	47	64	72	64	47	36	30	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	20°	29	68	86	176	270	360	270	176	86	68
	29	72	92	200	300	432	300	200	92	72	
	29	78	101	224	350	528	350	224	101	78	
	29	84	109	252	393	504	393	252	109	84	
	29	80	101	232	323	420	323	232	101	80	

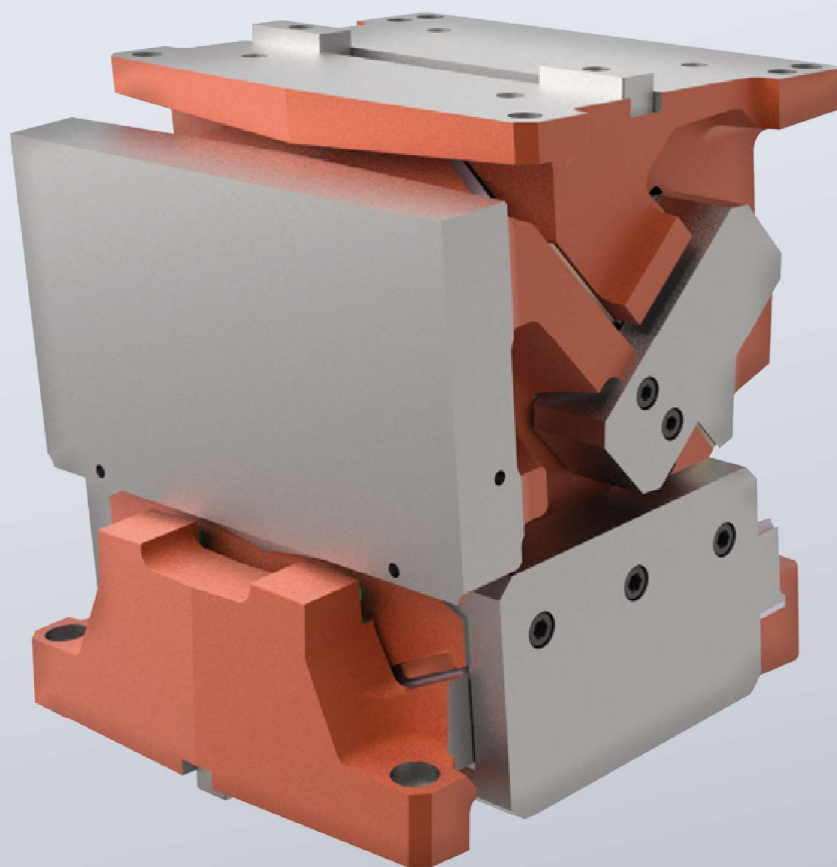
		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	20°	29	23	28	34	59	60	59	34	28	23
	29	25	30	38	54	65	54	38	30	25	
	29	28	32	40	59	70	59	40	32	28	
	29	30	34	45	64	75	64	45	34	30	
	29	32	38	49	68	80	68	49	38	32	

		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	25°	29	62	76	160	240	312	240	160	76	62
	29	64	82	176	280	396	280	176	82	64	
	29	72	90	204	315	480	315	204	90	72	
	29	74	98	232	362	528	362	232	98	74	
	29	70	90	200	290	408	290	200	90	70	

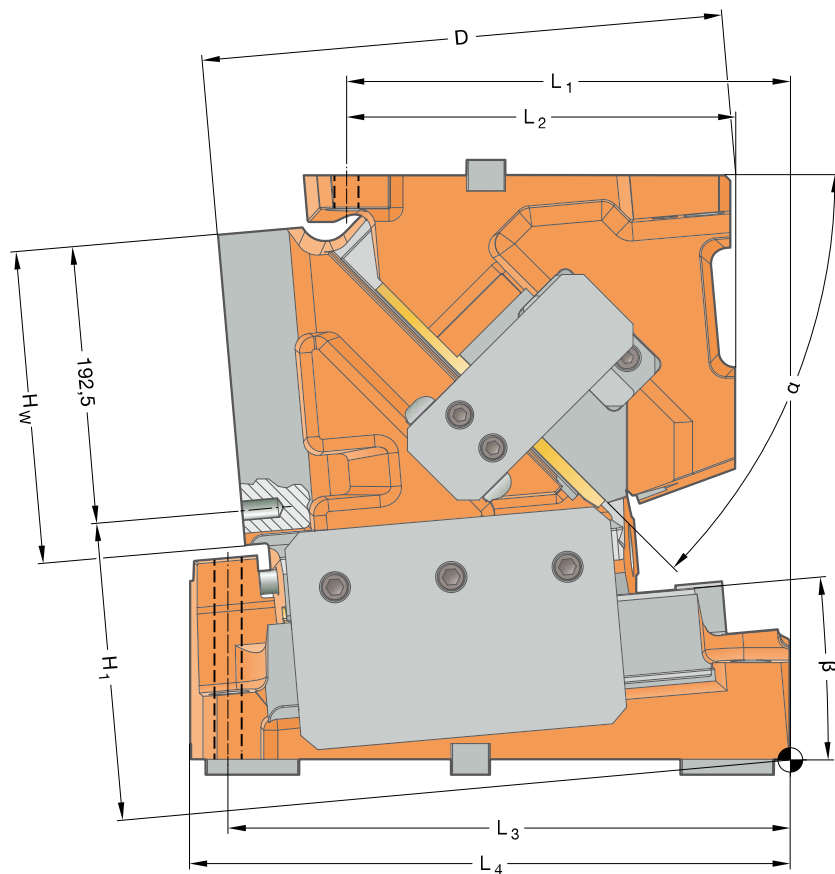
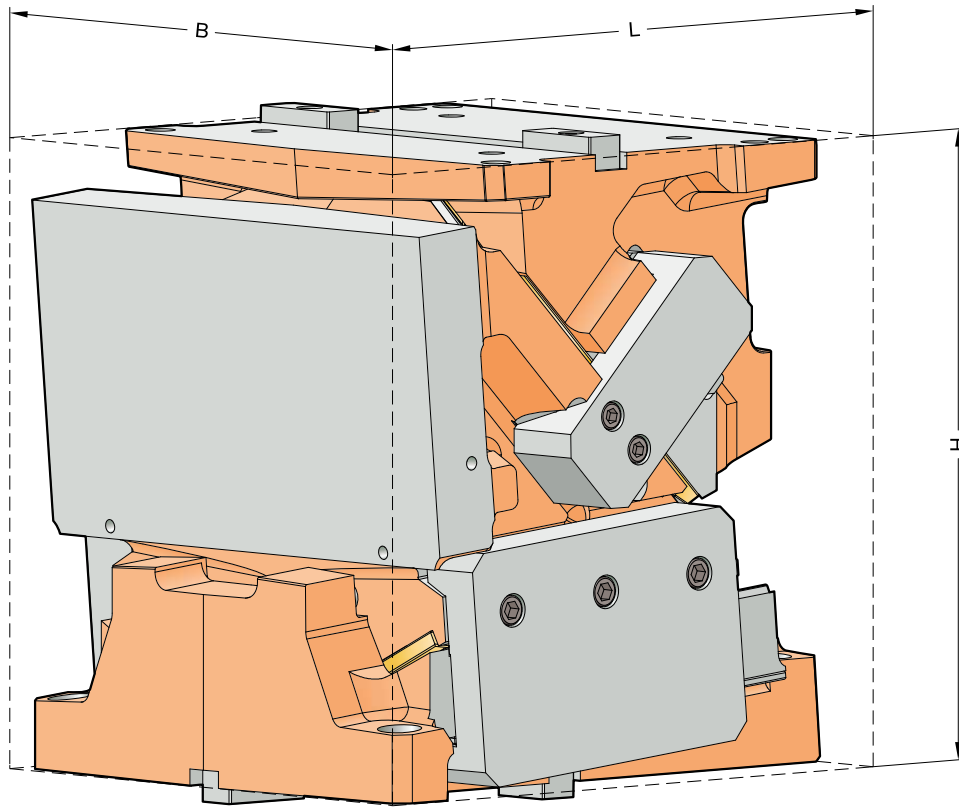
		Width 310 mm									
		25	35	40	40	30	40	40	35	25	
Height 145 mm	25°	29	26	31	39	52	58	52	39	31	26
	29	28	32	42	57	65	57	42	32	28	
	29	30	34	45	62	70	62	45	34	30	
	29	32	38	50	68	75	68	50	38	32	
	29	36	42	54	72	82	72	54	42	36	

DIE MOUNT CAM FCC-HV
2016.15.034./040.

Working width: 340/400 mm
Performance class: 800 kN

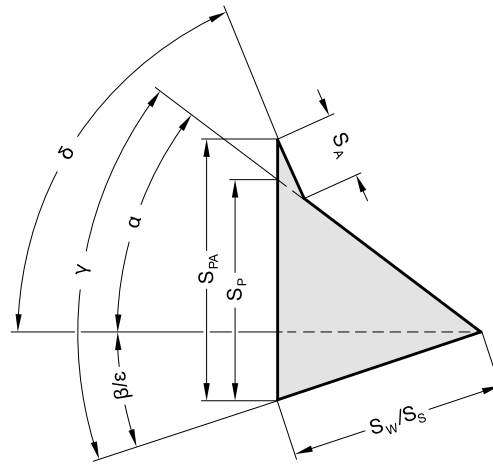


DIE MOUNT CAM FCC-HV 2016.15.034./040.
SIZE TABLE



DIE MOUNT CAM FCC-HV 2016.15.034./040.

SIZE TABLE



Order No	L	B	H	H ₁	H _W	L ₁	L ₂	L ₃	L ₄	D	β	α	δ	S _W	S _P *	S _{PA} *
2016.15.	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]	[°]	[mm]	[mm]	[mm]
2016.15.034.00.□00□.00	387	340	375	147,5	190	60	45	320	387	325,0	0	50	75	70,0	83,4	93,3
2016.15.040.00.□00□.00		400														
2016.15.034.05.□00□.00	385	340	375	175,07	190	80	45	320	385	335,0	5	45	70	70,0	75,8	84,8
2016.15.040.05.□00□.00		400														
2016.15.034.10.□00□.00	394	340	375	197,71	190	80	45	320	394	372,0	10	40	65	70,0	70,0	78,3
2016.15.040.10.□00□.00		400														
2016.15.034.15.□00□.00	400	340	375	222,56	190	95	45	310	377	367,0	15	35	60	70,0	65,5	73,2
2016.15.040.15.□00□.00		400														
2016.15.034.20.□00□.00	427	340	375	245,75	190	135	45	310	391	366,0	20	30	55	70,0	61,9	69,2
2016.15.040.20.□00□.00		400														
2016.15.034.25.□00□.00	437	340	375	258,55	190	145	45	310	375	367,0	25	25	50	70,0	59,2	66,2
2016.15.040.25.□00□.00		400														

* Values rounded

Fastening

Hexagon socket head cap screws DIN EN ISO 4762 / Strength class min. 8.8
Dowel pins DIN EN ISO 8735

Cam base:

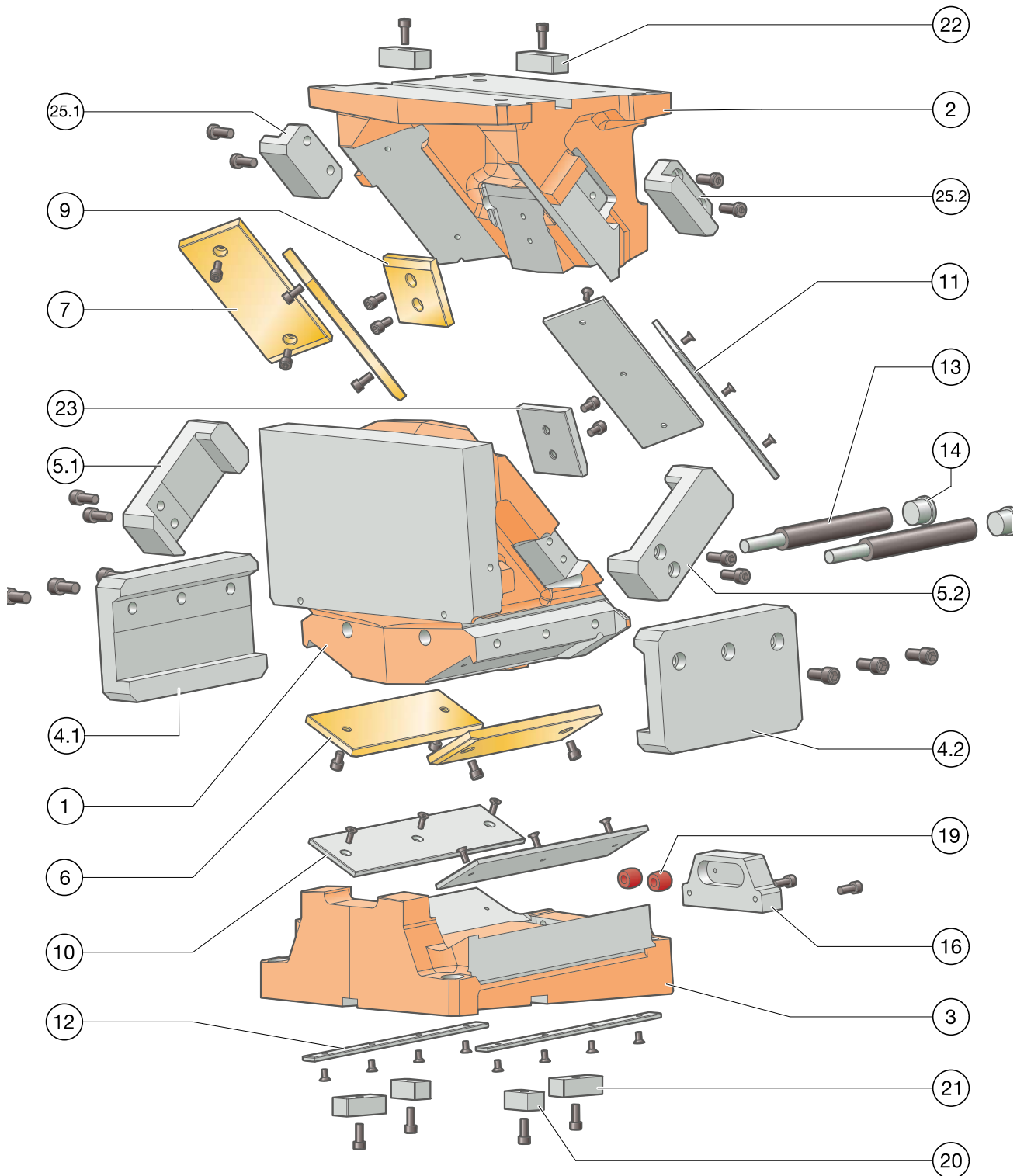
4 × M16
2 × ø16

Driver:

4 × M16
2 × ø16

DIE MOUNT CAM FCC-HV 2016.15.034./040.

EXPLODED VIEW



DIE MOUNT CAM FCC-HV 2016.15.034./040.

PARTS LIST



Item No.	Pcs.	Designation	Material	tuned	Spare part
1	1	Cam slider	EN-JS-1060	--	--
2	1	Driver	EN-JS-1060	--	--
3	1	Cam base	EN-JS-1060	--	--
4.1	1	Clamp, left	1.1191 with sinter layer	x	x
4.2	1	Clamp, right	1.1191 with sinter layer	x	x
5.1	1	mechanical retraction, left	1.1191 with sinter layer	x	x
5.2	1	mechanical retraction, right	1.1191 with sinter layer	x	x
6	2	Sliding plate	Bronze with solid lubricant	--	x
7	2	Sliding plate	Bronze with solid lubricant	--	x
8					
9	1	Sliding plate	Bronze with solid lubricant	--	x
10	2	Sliding plate	1.2379	--	x
11	2	Sliding plate	1.2379	--	x
12	2	Sliding plate	1.2379	--	x
13	2	Gas spring	2487.12.00320.125	--	x
14	2	Locking tappet	1.7131	--	x
15 (not shown)	2	Locking tappet pin			x
16	1	Slide stop	1.1191	--	x
17 (not shown)	1	Spacer			x
18 (not shown)	1	Lockout system	1.1191	--	x
19	2	Damper	2452.10.022.019.2	--	x
20	2	Feather key (T-nut)	1.1191	--	x
21*	2	Feather key (T-nut)	1.1191	--	x
22	2	Feather key (T-nut)	1.1191	--	x
23	1	pre-acceleration	1.2379	--	x
24					
25.1	1	mechanical retraction, sliding pad	1.2379	--	x
25.2	1	mechanical retraction, sliding pad	1.2379	--	x
26 (not shown)	1	Pallet Carrier Plate	1.7225	--	x

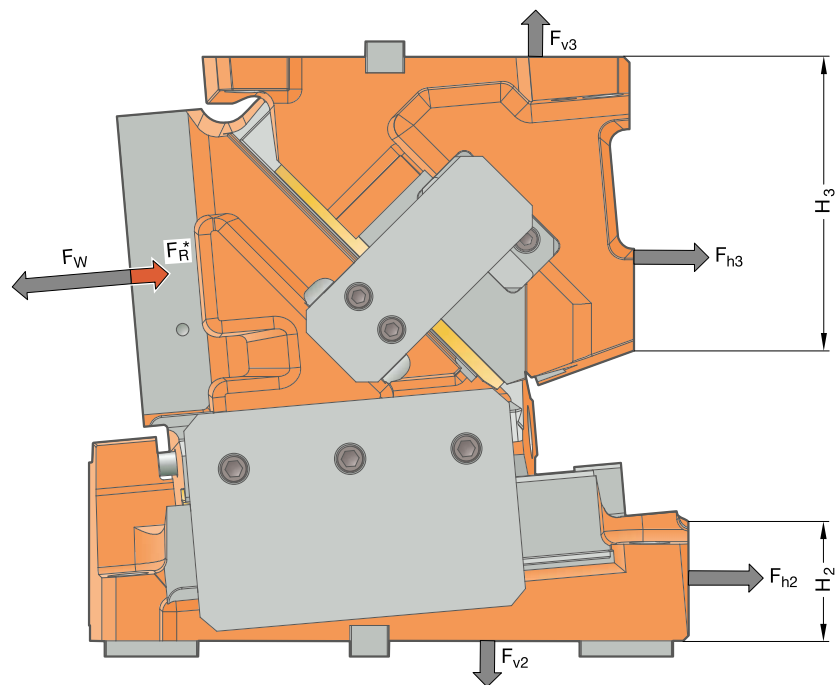
* Feather key (slot stone) only with order option .1002 (positioning of cam unit base via feather key)

For inquiries or when ordering spare parts (x), we require the following data:

- Cam unit order no.
- Cam unit serial number
- Item No. / Designation / Spare part

DIE MOUNT CAM FCC-HV 2016.15.034./040.

SYSTEM AND SURROUNDING FORCES



Order No	β [°]	F_W [kN]	F_R^* [kN]	F_{h2} [kN]	F_{v2} [kN]	F_{h3} [kN]	F_{v3} [kN]	H_2 [mm]	H_3 [mm]
2016.15.000.00.0000.00	0	800	90	-58	829	858	829	30	200
2016.15.000.05.0000.00	5	750	90	14	779	734	844	60	180
2016.15.000.10.0000.00	10	800	90	87	826	701	965	85	175
2016.15.000.15.0000.00	15	800	90	158	815	614	1023	90	150
2016.15.000.20.0000.00	20	760	90	217	759	497	1019	95	150
2016.15.000.25.0000.00	25	800	90	298	776	427	1114	115	135

* Identified retraction force F_R can only be achieved with mounted mechanical retractions
 .000. = 340 mm (.034.) or 400 mm (.040.)

The forces F_{h2} , F_{v2} as well as F_{h3} , F_{v3} act on the tool environment at maximum working force F_W .

DIE MOUNT CAM FCC-HV 2016.15.034./040.

FORCE DIAGRAM



Support via cast shoulder

		Width 400 mm								
0°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	118	139	294	315	344	315	294	139	118
	38	127	156	374	400	446	400	374	156	127
	38	151	188	504	540	608	540	504	188	151
	38	188	238	546	760	800	760	546	238	188
	38	194	224	504	700	760	700	504	224	194

Support via feather key

		Width 400 mm								
0°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	38	44	56	77	114	77	56	44	38
	38	39	46	59	79	118	79	59	46	39
	38	40	47	61	82	120	82	61	47	40
	38	42	48	62	82	122	82	62	48	42
	38	43	49	62	82	122	82	62	49	43

		Width 400 mm								
5°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	99	119	280	315	325	315	280	119	99
	38	104	134	350	399	425	399	350	134	104
	38	119	153	434	525	625	525	434	153	119
	38	144	184	460	656	750	656	460	184	144
	38	139	168	406	546	650	546	406	168	139

		Width 400 mm								
5°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	51	60	75	103	137	103	75	60	51
	38	52	62	79	109	137	109	79	62	52
	38	52	62	81	109	138	109	81	62	52
	38	53	62	82	109	138	109	82	62	53
	38	53	62	82	109	139	109	82	62	53

		Width 400 mm								
10°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	85	108	260	340	400	340	260	108	85
	38	90	116	299	420	520	420	299	116	90
	38	96	127	364	520	680	520	364	127	96
	38	100	131	390	600	800	600	390	131	100
	38	89	112	312	440	640	440	312	112	89

		Width 400 mm								
10°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	49	60	78	112	143	112	78	60	49
	38	52	62	82	114	156	114	82	62	52
	38	55	62	82	120	156	120	82	62	55
	38	55	65	82	120	156	120	82	65	55
	38	55	65	82	114	156	114	82	65	55

		Width 400 mm								
15°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	77	96	247	320	360	320	247	96	77
	38	81	104	280	400	500	400	280	104	81
	38	89	116	325	500	620	500	325	116	89
	38	89	131	364	600	800	600	364	131	89
	38	96	116	299	450	650	450	299	116	96

		Width 400 mm								
15°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	60	72	94	137	189	137	94	72	60
	38	60	72	95	137	189	137	95	72	60
	38	60	72	95	137	189	137	95	72	60
	38	61	72	94	135	176	135	94	72	61
	38	61	72	91	127	176	127	91	72	61

		Width 400 mm								
20°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	77	94	240	320	380	320	240	94	77
	38	79	100	273	400	480	400	273	100	79
	38	85	112	312	520	760	520	312	112	85
	38	92	122	338	560	640	560	338	122	92
	38	89	108	278	428	640	428	278	108	89

		Width 400 mm								
20°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	65	78	104	146	202	146	104	78	65
	38	65	78	104	148	208	148	104	78	65
	38	65	78	104	148	202	148	104	78	65
	38	65	78	98	140	195	140	98	78	65
	38	65	78	98	135	186	135	98	78	65

		Width 400 mm								
25°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	77	96	240	320	360	320	240	96	77
	38	81	100	273	400	480	400	273	100	81
	38	85	112	318	520	640	520	318	112	85
	38	96	128	357	590	800	590	357	128	96
	38	94	113	292	450	660	450	292	113	94

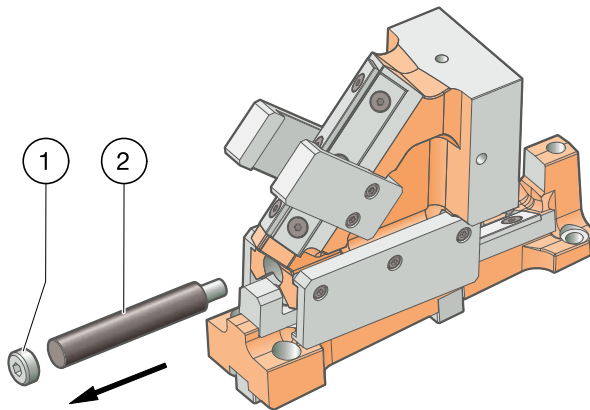
		Width 400 mm								
25°		30	50	50	50	40	50	50	50	30
Height 190 mm	38	75	91	121	172	189	172	121	91	75
	38	75	91	121	172	176	172	121	91	75
	38	75	91	121	172	176	172	121	91	75
	38	75	88	113	166	176	166	113	88	75
	38	75	88	113	151	165	151	113	88	75

ASSEMBLY INSTRUCTIONS



DIE MOUNT CAM FCC-HV 2016.15.

ASSEMBLY INSTRUCTIONS

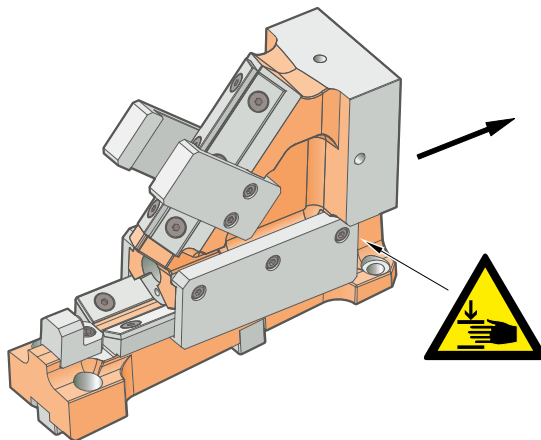


STEP 1

- Remove the locking screw **(1)** and remove the gas spring **(2)** from the hole

Caution

The gas spring may only be removed if the spring itself is released. After removing the locking screw for the gas spring, note that there is a risk of crushing between the cam slide unit body and the cam slide unit bed due to independent movement of the cam slide unit body.

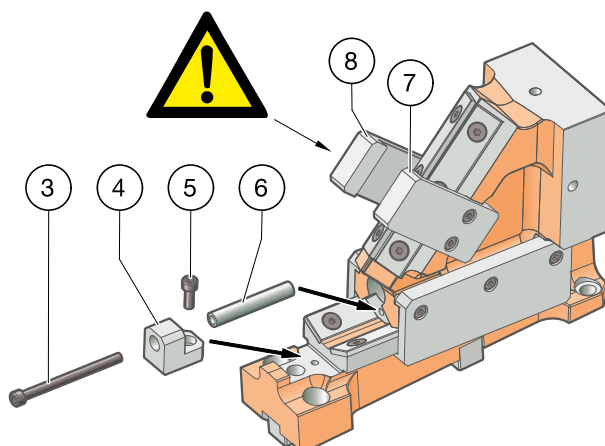


STEP 2

- Slide the cam unit driver into the front position

Caution

Risk of crushing between the cam unit driver and the cam unit base by movement of the cam unit driver.



STEP 3

- Remove the cam stop
- Insert Lock-Out system **(4)** and secure with the screw **(5)**
- Insert Lock-Out sleeve **(6)** and secure the cam slider with the screw **(3)**.

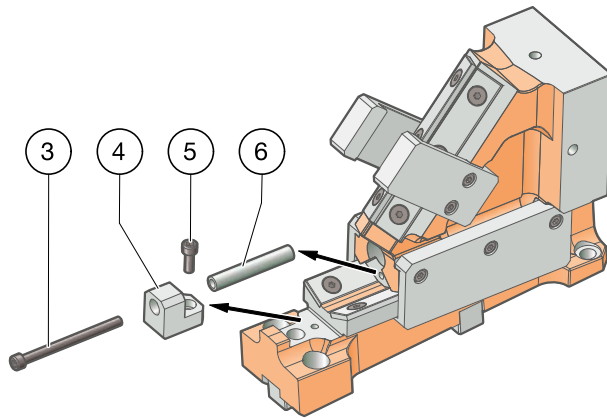
This position corresponds to the closed position (working position) in the tool.

Caution

In the traditional tool setup process (pressing the cam driver in the tool), the forced retractors on the left **(8)** and right **(7)** must also be removed to avoid damaging the cam slide unit, cam driver and tool.

DIE MOUNT CAM FCC-HV 2016.15.

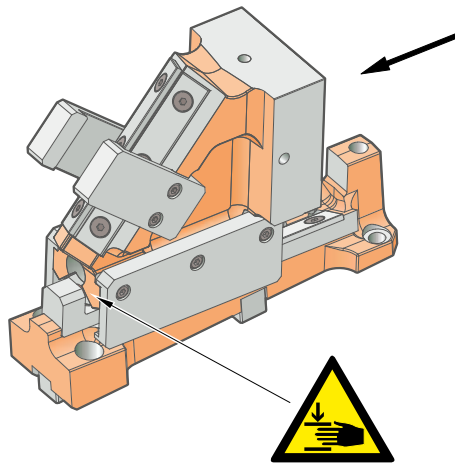
ASSEMBLY INSTRUCTIONS



STEP 4

Restore the cam unit function after completion of the work (setup, work surface machining).

- Remove screw (3)
- Remove Lock-Out sleeve (6)
- Remove screw (5) and dismantle Lock-Out system (4)
- Insert and secure the cam stop

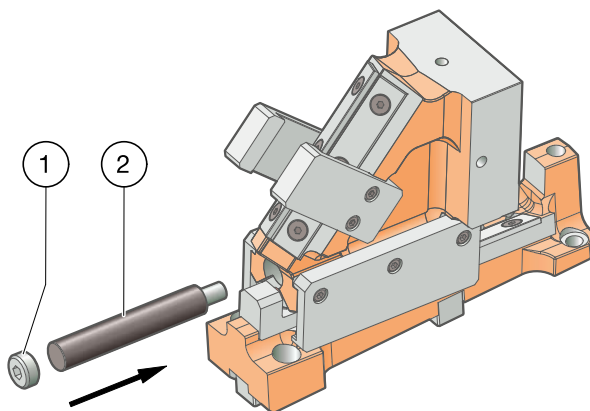


STEP 5

- Slide the cam unit Driver backwards

Caution

Risk of crushing between the cam unit driver and the cam unit base by movement of the cam unit driver.



STEP 6

- Insert gas spring (2) and secure using the locking screw (1)

Screws must be secured against loosening by means of adhesive or suitable lock washers.

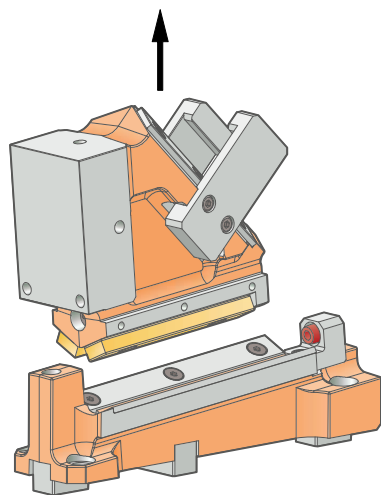
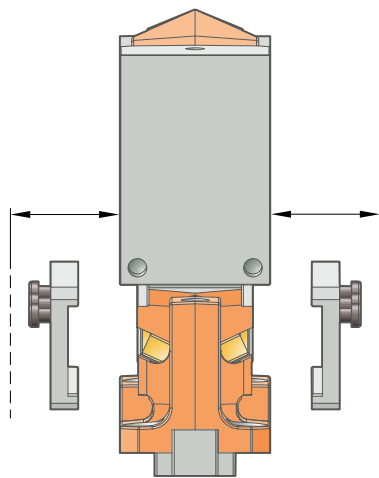
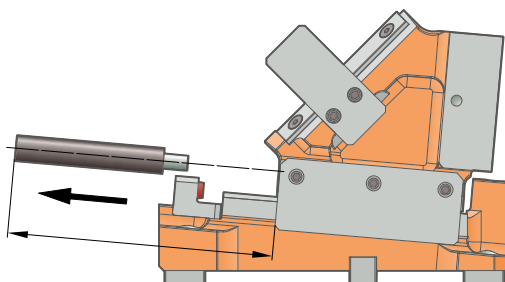
DIE MOUNT CAM FCC-HV 2016.15.

ASSEMBLY IN THE TOOL

Series 2016.15. cam units are designed in a way that the screws and pins for positioning and securing the cam slide unit components in the tool are accessible in the open position of the cam unit (after removing the cam stop, where applicable).

This access can be restricted or completely prevented by constructions on the cam slide unit working surface.

In these cases, the populated cam unit can be disassembled / assembled by dismantling the clamp:



STEP 1

- Remove the gas spring before disassembling the cam unit.
Within the tool, the corresponding constructional clearances must be taken into account at the rear.

Caution

The gas spring may only be removed if the spring itself is released.

After removing the locking tappet for the gas spring, note that there is a risk of crushing between the cam slider and the cam unit base due to independent movement of the cam slider.

STEP 2

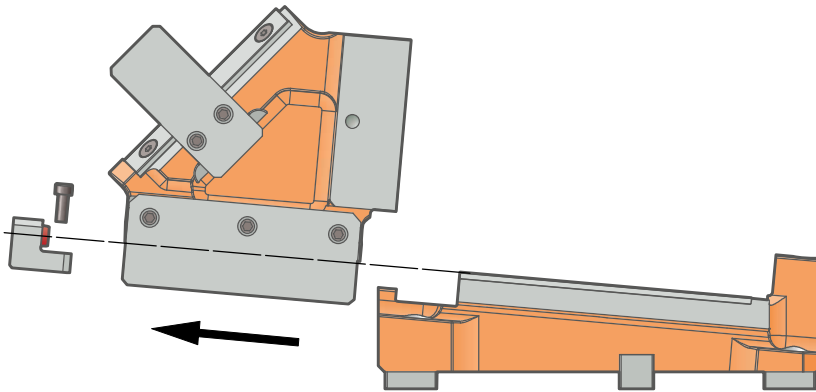
- Unfasten and dismantle the left and right guide clamps.

STEP 3

- Lift the populated cam slide unit upwards. The cam base can remain in the lower die.

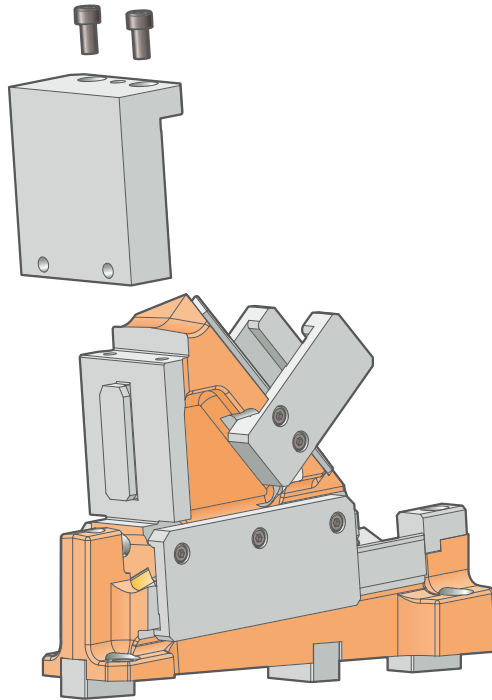
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ASSEMBLY IN THE TOOL



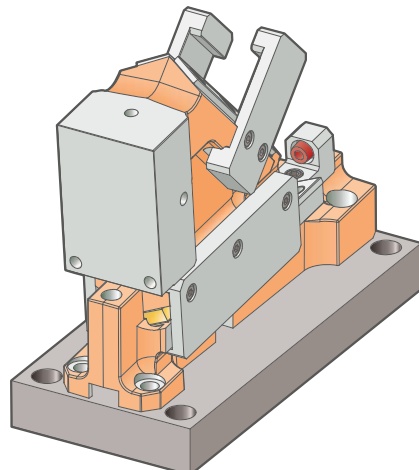
ALTERNATIVE TO STEP 2

- Unfastening and removing the cam stop
- Remove the populated cam slide unit towards the back.
The cam base can remain in the lower die.



MOUNTING PLATE OPTION (ONLY VERSION .300□.)

- Unfasten the screws and the locating pin
- Remove the mounting plate upwards



In the event of installation space problems in the tool, an additional mounting board can be used as an alternative. The cam unit is positioned and fixed on this mounting plate, the options for positioning and fastening to the tool are located outside the compact cam slide unit structure, and are therefore easily accessible from above for the necessary fitting aids. Mounting plates are to be provided by the tool shop if necessary, as they are not included as standard with FIBRO cam units.

