



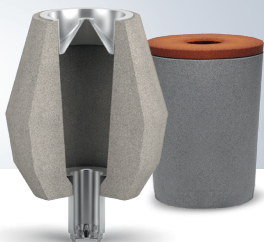
Risers

EXACTCAST

Application Guide



EXACTCAST™



ASKCHEMICALS



EXACTCAST

Riser solutions

Mini-risers and riser caps from ASK Chemicals Feeding Systems stand for innovative solutions and the highest process reliability in the foundry. Our patented exothermic technology is unique in terms of its efficiency – in conjunction with developments increasing productivity, it can even be considered a leader in the industry. The following overview presents the principal riser solutions, their technological and environmental benefits, and their most common dimensions.

General advantages of the riser systems from ASK Chemicals Feeding Systems:

EXACTCAST

Mini-riser

- Improved yield
- Lower reworking costs due to reduction in riser contact areas
- Lower fettling and blasting costs
- Very little riser residue in reclaimed sand due to improved separation
- Available as cold box or sodium-silicate-bonded highly exothermic mini-risers for GJL, GJS, GJV and GS

EXACTCAST

Riser sleeves and caps

- Exothermic or insulating
- Available as cold box or sodium-silicate-bonded risers for GJL, GJS, GJV, GS and non-ferrous metals

EXACTCAST

Potential environmental benefits

Fibre-free risers

The fibre-free microsphere technology sets new standards for occupational health and safety.

Fluorine-free risers

Improved quality of reclaimed sand and prevention of surface defects. Reduction in disposal costs for the removal of reclaimed sand and in graphite degeneration in GJS due to patented composition.

Riser bonded with sodium silicate

Free of organic binders. Ensures protection of employees and the environment by means of extremely low gas emissions, and helps to prevent gas defects in casting.

Labelling of the binder system used:



inorganic

Symbol for sodium-silicate-bonded risers



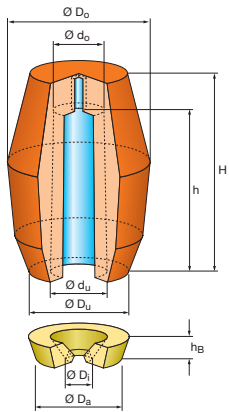
organic

Symbol for organically bonded risers

Labelling of composition:

Ex = exothermic, low-fluorine In = insulating

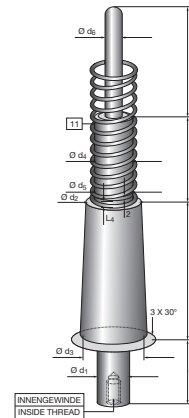
ExF = exothermic, fluorine-free



EXACTCAST ADS Mini-Riser (Ex/ExF)



- Specially made for high-performance moulding machines
- Riser geometry helps prevent shadows of poorly compacted sand during moulding and compression.
- Small contact area if used with spring pins
- Also available with breaker core*

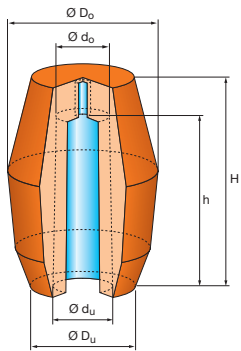


EXACTCAST Spring Pins for ADS Mini-Riser

- The spring pin creates a separating layer of sand between the mini-riser and the casting, which in its turn produces a perfect casting surface in this area.
- At the same time it protects the mini-riser from being destroyed by the compaction processes on the moulding line.

Type	Module	Riser content		Riser dimensions						Breaker core dimensions*			Packaging
		exoth. cm	Volume dm ³	Weight kg	Ø D _o mm	Ø D _u mm	H mm	h mm	Ø d _u mm	Ø d _o mm	Ø D _a mm	Ø D _i mm	
ADS 5 (E10*)	0.75	0.01	0.06	50	28	57	50	16	13	26	10	8	4,356
ADS 12 (E15*)	0.85	0.01	0.10	60	40	60	50	21	18	35	15	10	2,520
ADS 16 (E15*)	1.20	0.02	0.16	70	40	85	66	21	18	35	15	10	1,620
ADS 19 (E15*)	0.95	0.03	0.20	60	40	80	70	25	20	35	15	10	2,520
ADS 20 (E15*)	1.20	0.03	0.18	78	36	100	85	21	18	36	15	10	1,216
ADS 27 (E15*)	1.30	0.04	0.27	78	50	100	85	25	23	50	15	13	1,216
ADS 32 (E15*)	1.30	0.05	0.33	78	50	100	92	27	24	50	15	13	1,216
ADS 61 (E18*)	1.70	0.09	0.61	87	60	107	97	36	32	45	18	15	960
ADS 85 (E18*)	1.90	0.12	0.85	104	65	135	110	40	35	53	18	15	560
ADS 86 (E18*)	1.90	0.12	0.85	100	70	135	110	40	35	60	18	15	560
ADS 111 (E20*)	2.20	0.16	1.11	122	99	122	100	60	40	75	20	15	392
ADS 133 (E20*)	2.50	0.19	1.34	140	100	140	120	50	40	85	20	15	288
ADS 164 (E20*)	2.20	0.24	1.64	122	90	122	100	60	50	75	20	15	392
ADS 193 (E30*)	2.80	0.28	1.93	140	100	140	125	58	48	85	30	15	288
ADS 237 (E30*)	3.20	0.34	2.38	145	95	145	120	65	55	85	30	15	220
ADS 425 (E30*)	3.50	0.59	4.13	143	112	150	127	80	76	85	30	15	168
ADS 540 (E30*)	4.20	0.75	5.25	170	110	210	175	80	70	95	30	15	140
ADS 550 (E30*)	4.20	0.78	5.46	193	128	210	175	80	175	128	30	15	120

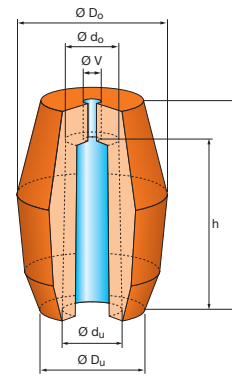
Type	Spring pin dimensions												Spring DIN	Thread
	Ø d ₁ mm	Ø d ₂ mm	Ø d ₃ mm	Ø d ₄ mm	Ø d ₅ mm	Ø d ₆ mm	L ₃ mm	L ₄ mm	L ₆ mm	L ₇ mm				
S-5	10	12	14	8	10.0	5.0	30	3	15	42	1.00x10.0x39.0	M 4x25		
S-12	10	17	19	10	12.0	5.0	30	3	15	46	1.25x12.5x40.0	M 4x25		
S-16	10	17	20	14	15.0	5.0	50	3	25	50	1.60x16.0x51.1	M 4x25		
S-19	10	21	24	14	15.0	5.0	50	3	25	50	1.60x16.0x51.1	M 4x25		
S-20	10	17	20	10	11.5	5.0	50	4	35	60	1.50x12.5x65.0	M 4x25		
S-27	10	22	24	10	11.5	5.0	50	4	35	57	1.50x12.5x65.0	M 4x25		
S-32	10	23	26	15	16.0	10.0	60	4	30	35	1.50x17.0x59.5	M 4x25		
S-61	20	33	35	22	23.5	10.0	50	4	55	50	2.00x25.0x88.5	M 8x25		
S-85	20	34	39	22	23.5	10.0	60	5	55	70	2.00x25.0x88.5	M 8x30		
S-86	20	34	39	22	23.5	10.0	60	5	55	70	2.00x25.0x88.5	M 8x30		
S-111	20	44	49	28	29.0	10.0	52	7	48	75	3.20x35.2x88.5	M 8x25		
S-133	20	44	49	28	29.0	10.0	65	7	55	58	3.00x25.0x97.0	M 8x25		
S-164	20	54	59	28	29.0	10.0	52	7	58	67	3.20x35.2x88.5	M 8x25		
S-193	20	53	57	29	30.0	10.0	55	7	70	53	2.50x32.0x110.0	M 8x25		
S-237	20	61	64	35	36.5	10.0	55	7	65	70	4.00x40.0x105.0	M 8x25		
S-425	20	61	64	35	36.5	10.0	55	7	65	70	4.00x40.0x105.0	M 8x25		
S-540	20	68	75	51	53.0	10.0	99	6	92	115	3.50x59.0x125.0	M 8x30		
S-550	20	68	75	51	53.0	10.0	99	6	92	115	3.50x59.0x125.0	M 8x30		



EXACTCAST KMV Mini-Riser (EX / EXF)



- Specially made for high-performance moulding machines
- Low weight
- Spring pins enable use on any automated moulding machine



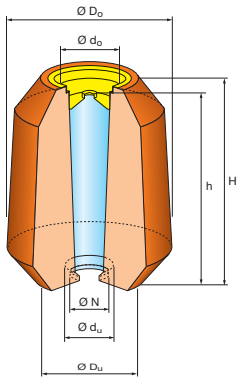
EXACTCAST KMV XL Mini-Riser (EX / EXF)



- High efficiency riser, especially for steel casting applications
- Small contact area and reduced riser neck diameter compared to traditional riser types
- Also available with breaker cores

Type	Module	Riser content		Riser dimensions						Packag- ing
		exoth. cm	Volume dm ³	Weight kg	Ø D ₀ mm	Ø D _U mm	H mm	h mm	Ø d _U mm	
KMV 40	1.30	0.040	0.280	76	42	100	85	26	24	45/1,620
KMV 88	1.70	0.088	0.616	84	60	122	97	36	32	34/816
KMV 121	1.90	0.121	0.847	98	66	128	110	40	35	24/576
KMV 159	2.20	0.159	1.113	115	82	120	100	50	40	18/576
KMV 238	2.20	0.238	1.666	115	82	120	100	60	50	18/576
KMV 191	2.50	0.191	1.337	120	98	145	120	50	40	18/360
KMV 339	2.80	0.339	2.373	120	98	145	120	68	55	18/360
KMV 339-B	3.20	0.339	2.373	140	98	145	120	68	55	12/288
KMV 590	3.80	0.590	4.130	142	110	150	125	80	75	12/288
KMV 780	4.20	0.780	5.460	170	128	205	165	80	75	8/128

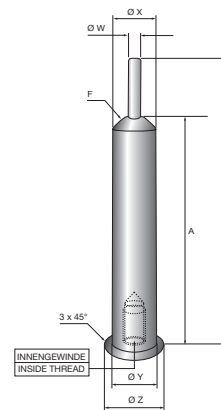
Type	Riser content		Riser dimensions						Vent dimensions	Packag- ing
	Volume dm ^{3*}	Weight kg	Ø D ₀ mm	Ø D _U mm	H mm	h mm	Ø d _U mm	Ø d ₀ mm	Ø V mm	
KMV 1140	1.140	7.980	173	150	200	160	100	90	–	112
KMV 1480	1.480	10.360	245	186	195	155	115	105	–	60
KMV 1650	1.650	11.550	235	150	260	210	105	95	–	45
KMV 2025	2.025	14.175	245	186	195	155	140	118	–	60
KMV 2565	2.565	17.955	280	150	340	295	110	100	–	33
KMV 3100	3.100	21.700	290	160	345	300	120	110	–	33
KMV 4300	4.300	30.100	310	232	345	300	140	130	50	24
KMV 6800	6.800	47.600	360	290	345	300	175	165	50	18
KMV 9300	9.300	65.100	411	262	455	390	184	164	75	10



EXACTCAST KMV-QT Mini-Riser (EX / EXF)



- Low weight
- Lower fettling costs thanks to reduced riser neck diameter
- Reduced feeder contact areas, surface defects and pattern wear if used pins
- Patented cap keeps inclusions and exothermic material out of the mold.

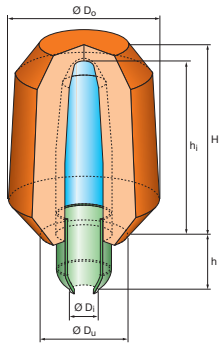


EXACTCAST Spring Pins for KMV-QT Mini-Riser

- No maintenance
- Optimum distance of riser and casting
- Optimum formation of the breaker edge
- Extremely small contact areas

Type	Module	Riser content			Riser dimensions						Packaging
		exoth. cm	Vol. dm ³	Wt. kg	$\varnothing D_o$ mm	$\varnothing D_u$ mm	H mm	h mm	$\varnothing d_o$ mm	N mm	
KMV – 28 Q 15 T	0.95	0.03	0.21	62.5	35	79	74	30	15	3,312	
KMV – 40 Q 16 T	1.30	0.04	0.28	76.0	40	100	89	26	16	1,620	
KMV – 70 Q 20 T	1.60	0.07	0.49	84.0	50	90	80	38	20	1,360	
KMV – 88 Q 20 T	1.70	0.09	0.62	84.0	50	122	111	38	20	816	
KMV – 88 Q 01 T	1.70	0.09	0.62	84.0	50	122	111	38	30x20	816	
KMV – 121 Q 23,5 T	1.90	0.12	0.85	98.0	55	128	114	43	23.5	576	
KMV – 121 Q 01 T	1.90	0.12	0.85	98.0	55	128	114	43	30x20	576	
KMV – 159 Q 20 T	2.20	0.16	1.11	115.0	66	120	112	50	20	576	
KMV – 159 Q 01 T	2.20	0.16	1.11	115.0	66	120	112	50	30x20	432	
KMV – 238 Q 20 T	2.20	0.24	1.67	115.0	66	120	117	60	20	576	
KMV – 238 Q 01 T	2.20	0.24	1.67	115.0	66	120	117	60	30x20	432	
KMV – 339 Q 30 T	3.20	0.34	2.37	120.0	70	145	142	60	30	360	
KMV – 339 Q 01 T	3.20	0.34	2.37	120.0	70	145	142	60	30x20	360	

Type	Spring pin dimensions							
	$\varnothing W$ mm	$\varnothing X$ mm	$\varnothing Y$ mm	$\varnothing Z$ mm	A mm	B mm	F mm	Inside thread
KMV – 28 Q 15 T	6	14.0	14	19	76	130.0	2.5x45°	M 10x30
KMV – 40 Q 16 T	6	15.0	15	24	97	126.5	2.5x45°	M 10x30
KMV – 70 Q 20 T	6	19.0	19	24	87	117.5	2.5x45°	M 10x30
KMV – 88 Q 20 T	6	19.0	19	24	119	148.5	2.5x45°	M 10x30
KMV – 88 Q 01 T	6	19.0	29x19	34x24	119	148.5	2.5x45°	M 10x30
KMV – 121 Q 25 T	6	22.5	22.5	25.5	122	152.0	3.0x45°	M 10x30
KMV – 121 Q 01 T	6	19.0	29x19	35x24	122	151.5	2.5x45°	M 10x30
KMV – 159 Q 20 T	6	19.0	29	35	120	150.0	3.0x45°	M 10x30
KMV – 159 Q 01 T	6	19.0	29x19	35x29	120	150.0	3.0x45°	M 10x30
KMV – 238 Q 20 T	6	19.0	19	25	126	155.0	3.0x45°	M 10x30
KMV – 238 Q 01 T	6	19.0	29x19	35x29	126	155.0	3.0x45°	M 10x30
KMV – 339 Q 30 T	6	19.0	29	25	151	180.0	3.0x45°	M 10x30
KMV – 339 Q 01 T	6	19.0	29x19	35x29	151	180.0	3.0x45°	M 10x30

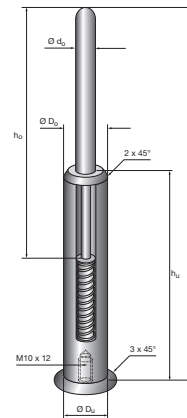


EXACTCAST BKS Mini-Riser (Ex/ExF)



- Ideally suited to high pressure moulding machines
- Precisely defined notches as predetermined breakage points without the use of breaker cores
- Very small contact area
- To be used with spring pins

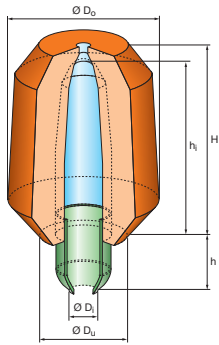
Type	Module	Riser content		Riser dimensions						Packaging	
		exoth. cm	Volume dm ³	Weight kg	Ø D ₀ mm	Ø D _U mm	Ø D _I mm	H mm	h _i mm		h mm
BKS 19**	—	—	—	—	—	—	—	—	—	—	—
BKS 27	1.30	0.11	0.80	78	58	20	110	100	40	840	
BKS 61	1.70	0.11	0.80	87	60	20	107	100	40	600	
BKS 86	1.90	0.14	0.99	100	70	20	135	120	40	400	
BKS 111	2.20	0.14	0.99	122	90	20	135	120	40	288	
BKS 133	2.80	0.15	1.02	140	100	20	140	125	40	180	
BKS 164	2.20	0.29	2.03	122	90	30	135	120	45	288	
BKS 193	2.80	0.30	2.10	140	100	30	140	125	40	180	
BKS 237	3.20	0.31	2.17	145	95	30	145	135	40	160	
BKS 425	3.50	0.31	2.17	143	112	40	150	135	40	220	
BKS 540	4.20	0.48	3.36	170	110	40	210	195	40	96	



EXACTCAST Spring Pins for BKS Mini-Riser

- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

Type		Spring pin dimensions					
Riser	Pin	Ø D ₀ mm	Ø D _U mm	Ø d _s mm	h _U mm	h ₀ mm	H mm
BKS 19*)	—	—	—	—	—	—	—
BKS 27	BKS 1	16	19	12	105	71.5	136
BKS 61	BKS 1	16	19	12	105	71.5	136
BKS 86	BKS 2	16	19	12	105	92.5	157
BKS 110	BKS 1	16	19	12	105	71.5	136
BKS 111	BKS 2	16	19	12	105	92.5	157
BKS 133	BKS 2	16	19	12	105	92.5	157
BKS 164	BKS 2	26	29	12	105	92.5	157
BKS 193	BKS 4	26	29	12	105	100.5	165
BKS 237	BKS 5	26	29	12	105	110.5	175
BKS 425	BKS 6	36	39	12	105	110.5	175
BKS 540	BKS 7	36	39	12	155	120.5	237

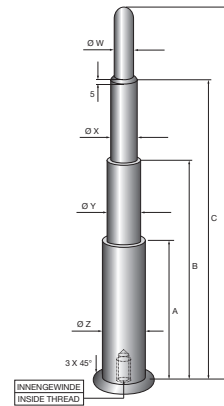


EXACTCAST BKS C Mini-Riser (Ex/ExF)



- Ideally suited to high pressure moulding machines
- Precisely defined notches as predetermined breakage points without the use of breaker cores
- Very small contact area
- To be used with rigid pin

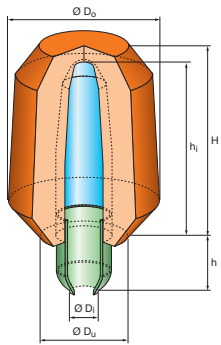
Type	Module	Riser content		Riser dimensions						Packaging
		exoth. cm	Volume dm ³	Weight kg	$\varnothing D_0$ mm	$\varnothing D_1$ mm	$\varnothing D_2$ mm	H mm	h_i mm	
BKS 19 C	0.95	0.03	0.18	60	40	15	80	70	25	1,320
BKS 27 C	1.30	0.11	0.80	78	58	20	110	100	40	840
BKS 61 C	1.70	0.11	0.80	87	60	20	107	100	40	600
BKS 86 C	1.90	0.14	0.99	100	70	20	135	120	40	400
BKS 111 C	2.20	0.14	0.99	122	90	20	135	120	40	288
BKS 133 C	2.80	0.15	1.02	140	100	20	140	125	40	180
BKS 164 C	2.20	0.29	2.03	122	90	30	135	120	45	288
BKS 193 C	2.80	0.30	2.10	140	100	30	140	125	40	180
BKS 237 C	3.20	0.31	2.17	145	95	30	145	135	40	160
BKS 425 C	3.50	0.31	2.17	143	112	40	150	135	40	220
BKS 540 C	4.20	0.48	3.36	170	110	40	210	195	40	96



EXACTCAST Rigid Pins for BKS C Mini-Riser

- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

Type		Pin dimensions								
Riser	Pin	$\varnothing W$ mm	$\varnothing X$ mm	$\varnothing Y$ mm	$\varnothing Z$ mm	A mm	B mm	C mm	D mm	Inside thread
BKS 19	BKS A	7	9.5	14	-	-	80	95	120	M 8 x 20
BKS 27	BKS B	9	13.0	18	-	-	103	132	159	M 8 x 20
BKS 61	BKS B	9	13.0	18	-	-	103	132	159	M 10 x 25
BKS 86	BKS C	9	13.0	18	-	-	134	162	190	M 10 x 25
BKS 110	BKS B	9	13.0	18	-	-	103	132	159	M 10 x 25
BKS 111	BKS C	9	13.0	18	-	-	134	162	190	M 10 x 25
BKS 133	BKS D	9	13.0	18	-	-	139	167	195	M 10 x 25
BKS 164	BKS C	9	13.0	18	28	90	134	162	190	M 10 x 25
BKS 193	BKS E	9	13.0	18	28	90	139	167	195	M 10 x 25
BKS 237	BKS F	9	13.0	18	28	90	144	172	200	M 10 x 25
BKS 425	BKS G	9	13.0	18	38	90	144	172	200	M 10 x 25
BKS 540	BKS H	9	13.0	18	38	90	209	237	265	M 10 x 25



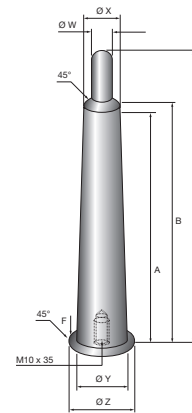
EXACTCAST KMV-QM Mini-Riser (EX / EXF)



- Precisely defined notches as predetermined breakage points without the use of breaker cores
- Very small contact area
- Low weight

Type	Module	Riser content		Riser dimensions							Packaging
		exoth. cm	Volume dm ³	Weight kg	$\varnothing D_0$ mm	$\varnothing D_1$ mm	$\varnothing D_2$ mm	$\varnothing d_0$ mm	H mm	h_1 mm	
KMV – 100 Q 20 M	1.60	0.10	0.70	84	60	20	40	90	85	35	952
KMV – 140 Q 20 M	1.70	0.14	0.98	84	60	20	40	122	117	35	816
KMV – 150 Q 20 M	1.90	0.15	1.05	98	66	20	40	128	123	35	576
KMV – 210 Q 25 M	2.30	0.21	1.47	115	82	25	50	120	115	35	432
KMV – 360 Q 30 M	2.80	0.36	2.52	120	98	30	60	145	140	35	300
KMV – 360 B Q 30 M	3.20	0.36	2.52	140	98	30	60	145	140	35	240
KMV – 590 Q 40 M	3.50	0.63	4.41	142	110	40	80	150	145	35	220
KMV – 590 Q 30 M	3.50	0.63	4.41	142	110	30	80	150	145	35	220
KMV – 780 Q 40 M	4.20	0.87	6.09	170	128	40	80	205	200	35	128
KMV – 780 Q 30 M	4.80	0.87	6.09	170	128	30	80	205	200	35	128

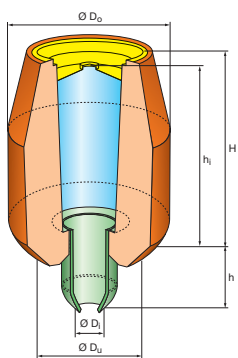
* in cardboard trays



EXACTCAST Rigid Pins for KMV-QM Mini-Riser

- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

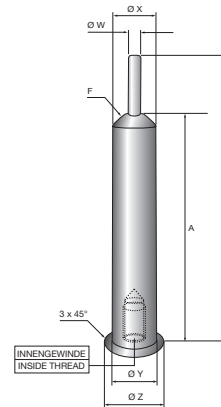
Type	Pin dimensions							
	$\varnothing W$ mm	$\varnothing X$ mm	$\varnothing Y$ mm	$\varnothing Z$ mm	A mm	B mm	C mm	F mm
KMV – 100 Q 20 M	7	19	19	24	84	94	120	2.5 x 45°
KMV – 140 Q 20 M	7	19	19	24	116	126	152	2.5 x 45°
KMV – 150 Q 20 M	10	19	19	224	122	132	158	2.5 x 45°
KMV – 210 Q 20 M	10	19	19	24	122	132	151	3.0 x 45°
KMV – 210 Q 25 M	10	20	24	30	121	126	151	3.0 x 45°
KMV – 360 Q 30 M	11	22	29	35	144	151	177	3.0 x 45°



EXACTCAST OPTIMA KL Riser (Ex / ExF)



- Ideally suited to high pressure moulding machines
- Precisely defined notches as predetermined breakage points without the use of breaker cores
- Very small contact area
- Patented cap keeps inclusions and exothermic material out of the mold

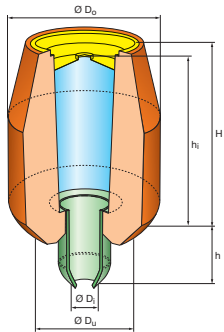


EXACTCAST Rigid Pins for OPTIMA KL Riser

- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

Type	Module	Riser content		Riser dimensions						Packaging
		exoth. cm	Volume dm ³	Weight kg	$\varnothing D_0$ mm	$\varnothing D_1$ mm	$\varnothing D_2$ mm	H mm	h mm	
KL 19	0.95	0.043	0.04	60	40	16	80	35	77	2,520
KL 27	1.30	0.055	0.30	78	50	16	100	35	97	1,216
KL 40	1.50	0.094	0.66	88	65	20	90	38	87	1,200
KL 61	1.60	0.155	1.08	84	50	20	122	36	119	1,088
KL 80	1.70	0.140	0.99	98	60	20	100	36	97	768
KL 86	1.80	0.164	1.15	98	55	20	128	36	125	768
KL 90	1.90	0.160	1.18	105	60	20	105	36	102	640
KL 111	2.10	0.190	1.33	118	66	20	120	36	117	480
KL 115	2.20	0.277	1.94	122	80	20	135	36	132	392
KL 193	2.70	0.299	2.09	134	88	30	140	36	137	336
KL 197	2.80	0.354	2.48	136	90	30	140	36	137	336
KL 237	3.10	0.312	2.18	136	88	30	145	36	142	336
KL 239	3.20	0.369	2.58	145	95	30	145	36	142	264
KL 430	3.50	0.399	2.79	150	90	30	155	35	151	220
KL 540	4.20	0.562	3.93	170	120	30	210	35	206	140

Type		Pin dimensions							
Riser	Pin	$\varnothing W$ mm	$\varnothing X$ mm	$\varnothing Y$ mm	$\varnothing Z$ mm	A mm	B mm	F mm	Inside thread
KL 19	Pin KL AC	5.5	15	15	21	86	110	6 x 27°	M 8 x 30
KL 27	Pin KL AD	5.5	15	15	21	106	130	6 x 27°	M 8 x 30
KL 40	Pin KL A	6	19	19	25	92	119	6 x 45°	M 10 x 30
KL 61	Pin KL B	6	19	19	25	123	152	6 x 45°	M 10 x 30
KL 80	Pin KL BB	6	19	19	24	101	129	6 x 45°	M 10 x 30
KL 86	Pin KL C	6	19	19	25	128	156	6 x 45°	M 10 x 30
KL 90	Pin KL BC	6	19	19	24	112	139	6 x 45°	M 10 x 30
KL 111	Pin KL CA	6	19	19	25	125	152	6 x 45°	M 10 x 30
KL 115	Pin KL D	6	19	19	25	137	169	6 x 45°	M 10 x 30
KL 193	Pin KL E	6	23	29	35	146	176	6 x 45°	M 10 x 30
KL 197	Pin KL EB	6	23	29	35	146	176	6 x 45°	M 10 x 30
KL 237	Pin KL F	6	23	29	35	150	178	6 x 45°	M 10 x 30
KL 239	Pin KL G	6	23	29	35	152	179	6 x 45°	M 10 x 30
KL 430	Pin KL I	6	23	29	35	161	189	6 x 45°	M 10 x 30
KL 540	Pin KL J	6	25	29	35	218	243	6 x 45°	M 10 x 30

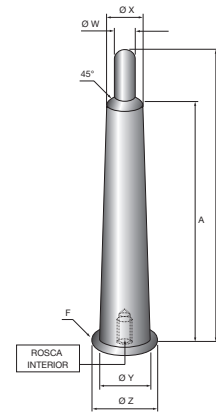


EXACTCAST OPTIMA Riser KMV-CC (EX/EXF)



- Ideally suited to high pressure moulding machines
- Precisely defined notches as predetermined breakage points without the use of breaker cores
- Very small contact area
- Patented cap keeps inclusions and exothermic material out of the mold

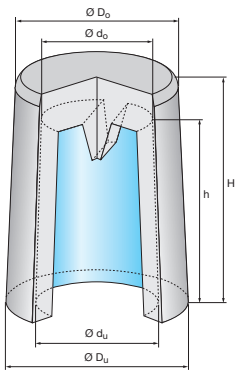
Type	Module	Riser content		Riser dimensions						Packaging
		exoth. cm	Volume dm ³	Weight kg	Ø D ₀ mm	Ø D _U mm	Ø D _i mm	H mm	h _i mm	
KMV – 40 Q 15 CC	1.30	0.040	0.280	76	40	15	100	89	35	1,620
KMV – 70 Q 20 CC	1.60	0.070	0.490	84	50	20	90	79	35	1,360
KMV – 88 Q 20 CC	1.70	0.088	0.620	84	50	20	122	111	35	952
KMV – 121 Q 20 CC	1.90	0.121	0.847	98	55	20	128	114	35	672
KMV – 159 Q 20 CC	2.20	0.159	1.113	115	66	20	120	112	35	576
KMV – 238 Q 30 CC	2.20	0.238	1.666	115	66	30	120	117	35	576
KMV – 238 Q 25 CC	2.20	0.238	1.666	115	66	25	120	117	35	576
KMV – 339 Q 30 CC	2.80	0.339	2.373	120	70	30	145	142	35	360
KMV – 339 B Q 30 CC	3.20	0.339	2.373	140	90	30	145	142	35	288
KMV – 590 Q 30 CC	3.80	0.590	4.130	142	75	30	150	148	40	288
KMV – 780 Q 30 CC	4.20	0.780	5.460	170	120	30	205	203	40	128



EXACTCAST Rigid Pins for OPTIMA Riser KMV-CC

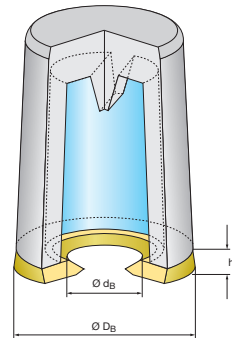
- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

Type	Pin dimensions							
	Ø W mm	Ø X mm	Ø Y mm	Ø Z mm	A mm	B mm	F mm	Inside thread
KMV 40 Q 15 CC	6.0	14	14	18	97	126.5	2.5x45°	M 10x30
KMV 70 Q 20 CC	6.0	19	19	24	87	116.5	2.0x45°	M 10x30
KMV 88 Q 20 CC	6.0	19	19	24	119	148.5	2.5x45°	M 10x30
KMV 121 Q 20 CC	6.0	19	19	24	122	151.5	2.5x45°	M 10x30
KMV 159 Q 20 CC	6.0	19	19	24	120	149.5	2.5x45°	M 10x30
KMV 238 Q 30 CC	6.0	23	29	35	126	155.0	3.0x45°	M 10x30
KMV 238 Q 25 CC	6.0	24	24	29	126	155.0	2.5x45°	M 10x30
KMV 339 Q 30 CC	6.0	23	29	35	151	180.0	3.0x45°	M 10x30
KMV 339 B Q 30 CC	6.0	23	29	35	151	180.0	3.0x45°	M 10x30



EXACTCAST Riser Sleeves KI (EX/EXF/IN)

- Ideally suited to automated moulding machines
- For pre-moulding and post-moulding insertion
- Extreme dimensional accuracy
- Low weight

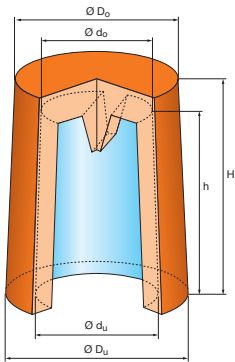


EXACTCAST Breaker Cores for Riser Sleeves KI (Ex/ExF/In)

- The sand breaker core tapers the riser neck considerably
- Easy removal of the riser neck
- Reduced fettling costs

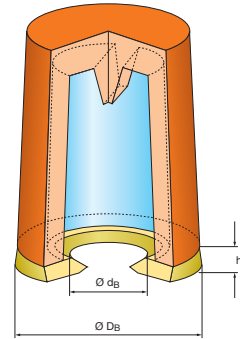
Type	Module		Riser content		Riser dimensions						Packaging
	exoth. cm	geom. cm	Vol. dm ³	Wt. kg	Ø D _o mm	Ø D _u mm	H mm	h mm	Ø d _u mm	Ø d _o mm	pcs./pal.*
KI 3/5	1.00	~ 0.60	0.03	0.21	44.0	47.0	49.0	39.5	35.0	30.5	7,776
KI 3,5/5	1.00	~ 0.60	0.03	0.21	49.0	53.5	49.0	39.5	35.0	30.5	6,048
KI 4/7	1.25	0.75	0.07	0.49	58.5	62.0	72.0	63.0	41.5	35.5	3,024
KI 4/95	1.30	0.80	0.10	0.70	59.0	63.0	97.0	86.0	42.5	36.0	2,268
KI 5/8	1.55	0.95	0.13	0.91	69.5	74.0	80.0	69.5	52.0	48.0	1,980
KI 6/9	1.70	1.05	0.18	0.98	75.5	80.5	92.0	78.0	57.5	52.5	1,260
KI 6/12	1.80	1.10	0.25	1.70	75.5	80.5	116.0	106.0	57.5	52.5	980
KI 7/10	2.00	1.25	0.30	2.10	89.0	94.5	99.5	87.0	69.5	65.0	900
KI 8/11	2.25	1.40	0.42	2.94	96.0	102.0	108.0	95.0	79.0	74.0	704
KI 9/12	2.50	1.55	0.58	4.06	109.5	115.0	120.0	103.5	89.0	81.0	420
KI 10/13	2.80	1.75	0.80	5.60	119.0	127.5	133.0	117.0	97.0	91.0	392
KI 12/15	3.20	2.00	1.35	9.45	147.0	154.5	150.0	130.0	118.0	112.0	216
KI 14/17	3.90	2.40	2.11	14.77	173.0	182.0	170.0	150.0	140.0	133.0	120
KI 16/19	4.65	2.80	3.10	21.70	198.0	208.0	190.0	166.0	161.0	153.0	100

Type	Breaker core dimensions			Packaging
	Ø D _B mm	Ø d _B mm	Ø h _B mm	pcs./pal.*
KI 3/5 GP-15	47.0	15	6	7,344
KI 3/5 GP-20	47.0	20	6	7,344
KI 3,5/5 GP-20	56.0	20	6	5,440
KI 4/7 GP-25	66.5	25	6	2,376
KI 4/95 GP-25	66.5	25	6	1,728
KI 5/8 GP-25	76.5	25	8	1,600
KI 5/8 GP-30	76.5	30	8	1,600
KI 6/9 GP-30	84.0	30	8	1,224
KI 6/12 GP-30	84.0	30	8	952
KI 7/10 GP-30	98.0	30	10	768
KI 7/10 GP-35	98.0	35	10	768
KI 8/11 GP-40	106.5	40	10	640
KI 9/12 GP-45	120.0	45	10	420
KI 10/13 GP-50	132.0	50	10	364
KI 12/15 GP-60	159.5	60	12	160
KI 14/17 GP-70	187.0	70	13	120
KI 14/17 GP-90	187.0	90	13	120
KI 16/19 GP-80	213.0	80	13	80



EXACTCAST Riser Sleeves KP (Ex/ExF)

- Ideally suited to automated moulding machines
- Extreme dimensional accuracy
- Available with or without Williams wedge



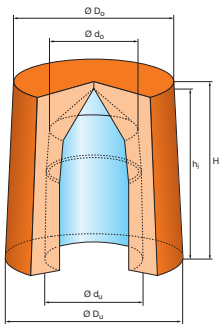
EXACTCAST Breaker Cores for Riser Sleeves KP

- The sand breaker core tapers the riser neck considerably.
- Easy removal of the riser neck
- Reduced fettling costs



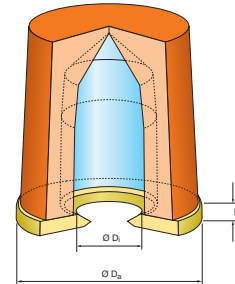
Type	Module	Riser content			Riser dimensions						Packaging
		exoth. cm	Vol. dm ³	Wt. kg	Ø D ₀ mm	Ø D _U mm	H mm	h mm	Ø d _U mm	Ø d ₀ mm	
KP 3/5	0.85	0.03	0.21	40	47	50	38	35	30	4,928	
KP 3.5/5	0.90	0.03	0.21	49	55	50	40	35	30	4,800	
KP 4/5	0.95	0.04	0.30	56	60	50	38	39	37	3,780	
KP 4/7	1.00	0.07	0.49	54	62	75	58	41	35	3,024	
KP 4/9.5	1.20	0.10	0.70	59	63	96	85	43	36	1,944	
KP 5/8	1.40	0.14	0.98	65	73	80	70	52	46	1,804	
KP 6/9	1.50	0.18	1.26	76	80	92	78	58	52	1,280	
KP 7/10	1.80	0.31	2.17	89	93	100	87	69	65	768	
KP 8/11	2.00	0.43	3.01	92	100	110	96	79	75	720	
KP 9/12	2.20	0.42	2.94	110	115	120	104	89	82	420	
KP 10/13	2.50	0.82	5.74	119	127	133	119	97	91	336	
KP 12/15	3.00	1.35	9.45	142	152	150	130	120	114	160	

Type	Breaker core dimensions			Packaging
	Ø D _B mm	Ø d _B mm	Ø h _B mm	
KP 3/5 W E 15	48	15	6	4,800
KP 3/5 W E 20	48	20	6	4,800
KP 3.5/5 W E 20	56	20	6	4,200
KP 4/5 W E 25	63	25	8	3,600
KP 4/7 W E 25	66	25	8	3,024
KP 4/9.5 W E 25	66	25	8	1,944
KP 5/8 W E 30	76	30	8	1,804
KP 6/9 W E 30	84	30	8	1,080
KP 7/10 W E 35	98	35	10	768
KP 8/11 W E 40	107	40	10	576
KP 9/12 W E 45	120	45	10	448
KP 10/13 W E 50	132	50	10	308
KP 12/15 W E 60	160	60	12	160



EXACTCAST KIM Insertable Mini-Riser (EX / EXF / IN)

- Improved yield thanks to lower liquid iron content
- Available in fluorine-free (EXF) and low-fluorine (EX) formulations
- Excellent dimensional accuracy to be inserted



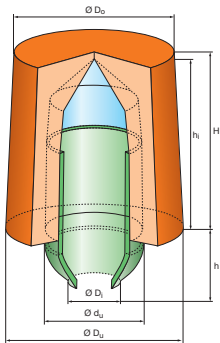
EXACTCAST Sand Breaker Core for KIM Insertable Mini-Riser (EX / EXF)

- The sand breaker core significantly tapers the riser throat.
- Minimizes fettling and blasting costs
- Separation is therefore easier



Type	Module	Riser content			Riser dimensions						Packaging
		exoth. cm	Volume dm ³	Weight kg	$\varnothing D_o$ mm	$\varnothing D_i$ mm	$\varnothing d_u$ mm	$\varnothing d_o$ mm	H mm	h_i mm	
KIM 4 / 7	1.30	0.030	0.210	58.5	62.5	25	22	72	68	3,024	
KIM 4 / 95	1.30	0.038	0.266	59.0	63.0	25	22	97	92	2,268	
KIM 5 / 8	1.60	0.075	0.525	69.5	74.0	40	38	80	75	1,880	
KIM 5 / 10	1.60	0.095	0.665	69.5	74.0	40	38	101	95	1,620	
KIM 6 / 9	1.80	0.135	0.945	75.5	80.5	50	46	92	87	1,260	
KIM 6 / 12	1.85	0.176	1.232	75.5	80.5	50	46	116	111	980	
KIM 7 / 10	2.10	0.200	1.400	89.0	94.5	60	56	99.5	94	900	
KIM 8 / 11	2.30	0.230	1.610	96.0	102.0	60	58	108	103	704	
KIM 9 / 12	2.60	0.430	3.010	109.5	115.0	80	76	120	115	420	
KIM 10 / 13	2.90	0.495	3.465	119.0	127.5	80	76	133	128	392	
KIM 12 / 15	3.30	0.850	5.950	147.0	154.5	100	96	150	145	216	

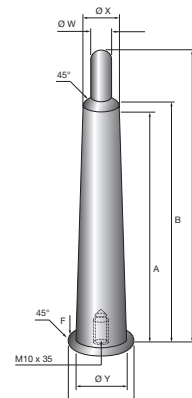
Type	Module	Riser capacity	Riser dimensions			Packaging
			$\varnothing D_a$ mm	$\varnothing D_i$ mm	h_b mm	
KIM 4 / 7 GP-15	1.30	0.030	66.5	15	6	2,376
KIM 4 / 95 GP-15	1.30	0.038	66.5	15	6	1,728
KIM 5 / 8 GP-25	1.60	0.080	76.5	25	8	1,600
KIM 5 / 10 GP-25	1.70	0.100	76.5	25	8	1,280
KIM 6 / 9 GP-30	1.80	0.150	84.0	30	8	1,224
KIM 6 / 12 GP-30	1.90	0.194	84.0	30	8	952
KIM 7 / 10 GP-35	2.10	0.225	98.0	35	10	768
KIM 8 / 11 GP-40	2.30	0.251	106.5	40	10	640
KIM 9 / 12 GP-45	2.60	0.474	120.0	45	10	420
KIM 10 / 13 GP-50	2.90	0.540	132.0	50	10	364
KIM 12 / 15 GP-60	3.30	0.818	159.5	60	12	160



EXACTCAST KIM-QM Mini-Riser (EX / EXF)



- Fix pins
- Very small contact area
- Ideally suited for high-pressure moulding lines
- No contact between casting and exothermic material



EXACTCAST Rigid Pins for KIM-QM

- Optimum distance of riser and casting
- Optimum formation of the breaker edge in conjunction with the metal tube
- No contact of the metal tube with the pattern and therefore no pattern wear
- Extremely small contact areas

Type	Module	Riser content		Riser dimensions							Packaging
		exoth. cm	Volume dm ³	Weight kg	$\varnothing D_o$ mm	$\varnothing D_u$ mm	$\varnothing D_i$ mm	$\varnothing d_u$ mm	H mm	h_i mm	
KIM 4 / 7 Q 15 M	1.30	0.032	0.224	58.5	62.5	15	25	72	68	25	2,016
KIM 4 / 95 Q 15 M	1.30	0.040	0.280	59.0	63.0	15	25	97	92	25	1,764
KIM 5 / 8 Q 20 M	1.60	0.080	0.560	69.5	74.0	20	40	80	75	35	1,440
KIM 5 / 10 Q 20 M	1.70	0.100	0.700	69.5	74.0	20	40	101	95	35	1,080
KIM 6 / 9 Q 25 M	1.80	0.150	1.050	75.5	80.5	25	50	92	87	35	980
KIM 6 / 12 Q 25 M	1.90	0.194	1.358	72.5	80.5	25	50	116	111	35	840
KIM 7 / 10 Q 30 M	2.10	0.225	1.575	89.0	94.5	30	60	99.5	94	35	700
KIM 8 / 11 Q 30 M	2.30	0.251	1.757	96.0	102.0	30	60	108	103	35	528
KIM 9 / 12 Q 40 M	2.60	0.474	3.318	109.5	115.0	40	80	120	115	35	360
KIM 10 / 13 Q 40 M	2.90	0.540	3.780	119.0	127.5	40	80	133	128	35	336
KIM 12 / 15 Q 50 M	3.30	0.818	5.726	147.0	154.5	50	100	150	145	35	160

Type	Riser dimensions								
	$\varnothing W$ mm	$\varnothing X$ mm	$\varnothing Y$ mm	$\varnothing Z$ mm	A mm	B mm	C mm	F mm	Inside thread
KIM 4 / 7 Q 15 M	7	14	14	18	76.0	80.0	95.0	2x45°	M 10x30
KIM 4 / 95 Q 15 M	7	14	14	18	100.0	104.0	119.0	2x45°	M 10x30
KIM 5 / 8 Q 20 M	7	19	19	24	80.5	86.5	111.5	2.5x45°	M 10x30
KIM 5 / 10 Q 20 M	7	19	19	24	101.5	107.5	122.5	2.5x45°	M 10x30
KIM 6 / 9 Q 25 M	7	24	24	29	89.5	99.5	124.5	2.5x45°	M 10x30
KIM 6 / 12 Q 25 M	7	24	24	29	113.5	123.5	148.5	2.5x45°	M 10x30
KIM 7 / 10 Q 30 M	11	29	29	35	97.0	107.0	132.0	3x45°	M 10x30
KIM 8 / 11 Q 30 M	11	29	29	35	106.0	116.0	141.0	3x45°	M 10x30
KIM 9 / 12 Q 40 M	11	39	39	45	113.0	128.0	153.0	3x45°	M 10x30
KIM 10 / 13 Q 40 M	11	39	39	45	126.0	141.0	166.0	3x45°	M 10x30
KIM 12 / 15 Q 50 M	11	49	49	59	150.0	160.0	185.0	5x45°	M 10x30

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