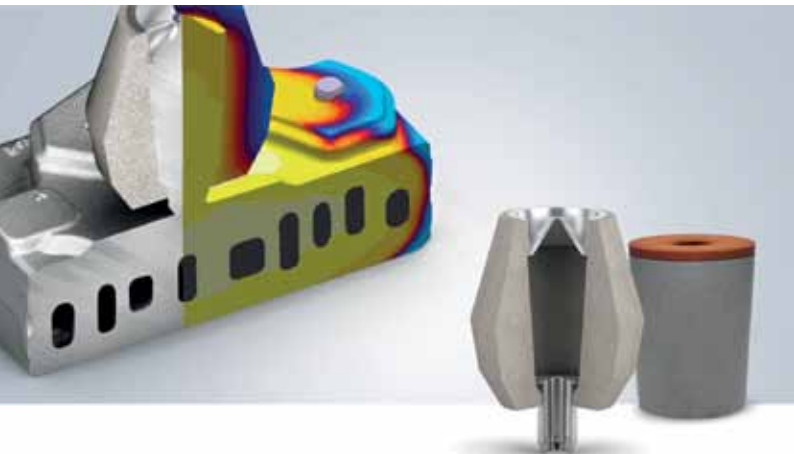




# Risers

EXACTCAST

Application Guide



**ASK**CHEMICALS  
We advance your casting



# 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 patented 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



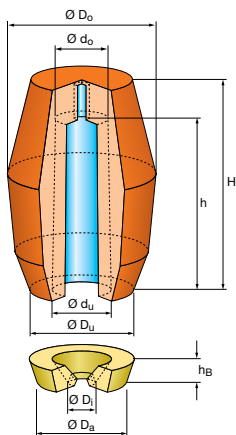
organic

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\*.

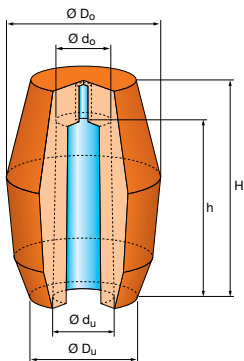
Type	Module	Riser content		Riser dimensions						Breaker core dimensions*			Packag- ing
	exoth. cm	Volume dm <sup>3</sup>	Weight kg	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	H mm	h mm	Ø d <sub>u</sub> mm	Ø d <sub>o</sub> mm	Ø D <sub>a</sub> mm	Ø D <sub>i</sub> mm	h <sub>B</sub> mm	pcs./ pal.**
ADS 5 (E10*)	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



## 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	Spring pin dimensions											
	Ø d <sub>1</sub> mm	Ø d <sub>2</sub> mm	Ø d <sub>3</sub> mm	Ø d <sub>4</sub> mm	Ø d <sub>5</sub> mm	Ø d <sub>6</sub> mm	L <sub>3</sub> mm	L <sub>4</sub> mm	L <sub>6</sub> mm	L <sub>7</sub> mm	Spring DIN	Thread
S-5	10	12	14	8	10.0	5.0	30	3	15	42	1.00 x 10.0 x 39.0	M 4 x 25
S-12	10	17	19	10	12.0	5.0	30	3	15	46	1.25 x 12.5 x 40.0	M 4 x 25
S-16	10	17	20	14	15.0	5.0	50	3	25	50	1.60 x 16.0 x 51.1	M 4 x 25
S-19	10	21	24	14	15.0	5.0	50	3	25	50	1.60 x 16.0 x 51.1	M 4 x 25
S-20	10	17	20	10	11.5	5.0	50	4	35	60	1.50 x 12.5 x 65.0	M 4 x 25
S-27	10	22	24	10	11.5	5.0	50	4	35	57	1.50 x 12.5 x 65.0	M 4 x 25
S-32	10	23	26	15	16.0	10.0	60	4	30	35	1.50 x 17.0 x 59.5	M 4 x 25
S-61	20	33	35	22	23.5	10.0	50	4	55	50	2.00 x 25.0 x 88.5	M 8 x 25
S-85	20	34	39	22	23.5	10.0	60	5	55	70	2.00 x 25.0 x 88.5	M 8 x 30
S-86	20	34	39	22	23.5	10.0	60	5	55	70	2.00 x 25.0 x 88.5	M 8 x 30
S-111	20	44	49	28	29.0	10.0	52	7	48	75	3.20 x 35.2 x 88.5	M 8 x 25
S-133	20	44	49	22	23.0	10.0	65	7	55	58	3.00 x 25.0 x 97.0	M 8 x 25
S-164	20	54	59	28	29.0	10.0	52	7	58	67	3.20 x 35.2 x 88.5	M 8 x 25
S-193	20	53	57	29	30.0	10.0	55	7	70	53	2.50 x 32.0 x 110.0	M 8 x 25
S-237	20	61	64	35	36.5	10.0	55	7	65	70	4.00 x 40.0 x 105.0	M 8 x 25
S-425	20	61	64	35	36.5	10.0	55	7	65	70	4.00 x 40.0 x 105.0	M 8 x 25
S-540	20	68	75	51	53.0	10.0	99	6	92	115	3.50 x 59.0 x 125.0	M 8 x 30
S-550	20	68	75	51	53.0	10.0	99	6	92	115	3.50 x 59.0 x 125.0	M 8 x 30

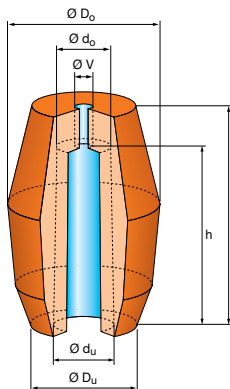


## EXACTCAST KMV Mini-Riser (EX/EXF)



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

Type	Module	Riser content		Riser dimensions						Packaging
		Volume dm <sup>3</sup>	Weight kg	Ø D <sub>0</sub> mm	Ø D <sub>U</sub> mm	H mm	h mm	Ø d <sub>U</sub> mm	Ø d <sub>0</sub> mm	
KMV 40	1.30	0.040	0.280	76	42	100	85	26	24	1,620
KMV 88	1.70	0.088	0.616	84	60	122	97	36	32	952
KMV 121	1.90	0.121	0.847	98	66	128	110	40	35	672
KMV 159	2.20	0.159	1.113	115	82	120	100	50	40	504
KMV 238	2.20	0.238	1.666	115	82	120	100	60	50	504
KMV 191	2.50	0.191	1.337	120	98	145	120	50	40	432
KMV 339	2.80	0.339	2.373	120	98	145	120	68	55	432
KMV 339-B	3.20	0.339	2.373	140	98	145	120	68	55	288
KMV 590	3.80	0.590	4.130	142	110	150	125	80	75	288
KMV 780	4.20	0.780	5.460	170	128	205	165	80	75	128



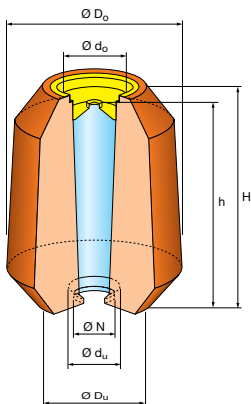
## EXACTCAST KMV XL Mini-Riser (EX/EXF)



- 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	Riser content		Riser dimensions						Vent dimensions	Packaging
	Volume dm <sup>3</sup> *	Weight kg	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	H mm	h mm	Ø d <sub>u</sub> mm	Ø d <sub>o</sub> mm		
KMV 1140	1.140	7.980	173	150	200	160	100	90	–	7 / 112
KMV 1480	1.480	10.360	245	186	195	155	115	105	–	15 / 60
KMV 1650	1.650	11.550	235	150	260	210	105	95	–	15 / 45
KMV 2025	2.025	14.175	245	186	195	155	140	118	–	15 / 60
KMV 2565	2.565	17.955	280	150	340	295	110	100	–	11 / 33
KMV 3100	3.100	21.700	290	160	345	300	120	110	–	11 / 33
KMV 4300	4.300	30.100	310	232	345	300	140	130	50	8 / 24
KMV 6800	6.800	47.600	360	290	345	300	175	165	50	6 / 18
KMV 9300	9.300	65.100	411	262	455	390	184	164	75	5 / 10
KMV 11400	11.400	79.800	442	282	484	415	198	176	75	– / –
KMV 13800	13.800	96.600	464	348	518	450	210	185	75	– / –
KMV 18400	18.400	128.800	514	380	569	495	230	205	100	4 / 4
KMV 26000	26.000	182.000	572	448	605	518	270	235	100	3 / 3
KMV 34500	34.500	241.500	630	440	640	540	300	270	100	2 / 2

\* For optimum feeding results, the feeding solution volume should not fall under 20 % of the total casting volume



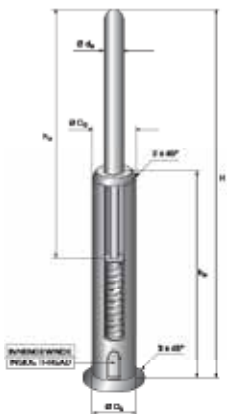
## EXACTCAST KMV-QT Mini-Riser (EX/EXF)



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

Type	Module	Riser content			Riser dimensions						Packaging
	exoth. cm	Vol. dm <sup>3</sup>	Wt. kg	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	H mm	h mm	Ø d <sub>o</sub> mm	N mm		pcs./ pal.*
KMV – 28 Q 15 T	0.95	0.03	0.21	62.5	35	79	70	30	15		3,312
KMV – 40 Q 16 T	1.30	0.04	0.28	76.0	40	100	93	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	113	38	20		952
KMV – 88 Q 01 T	1.70	0.09	0.62	84.0	50	122	113	38	30 x 20		952
KMV – 121 Q 23,5 T	1.90	0.12	0.85	98.0	55	128	113	43	23,5		672
KMV – 121 Q 01 T	1.90	0.12	0.85	98.0	55	128	113	43	30 x 20		672
KMV – 159 Q 20 T	2.20	0.16	1.11	115.0	66	120	110	50	20		504
KMV – 159 Q 01 T	2.20	0.16	1.11	115.0	66	120	110	50	30 x 20		504
KMV – 238 Q 20 T	2.20	0.24	1.67	115.0	66	120	110	60	20		504
KMV – 238 Q 01 T	2.20	0.24	1.67	115.0	66	120	110	60	30 x 20		504
KMV – 339 Q 30 T	3.20	0.34	2.37	120.0	70	145	135	60	30		432
KMV – 339 Q 01 T	3.20	0.34	2.37	120.0	70	145	135	60	30 x 20		432

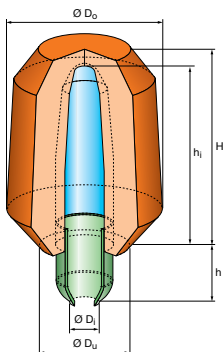




## EXACTCAST Spring Pins for KMV-QT Mini-Riser

- Low-maintenance.
- Optimum distance of riser and casting.
- Optimum formation of the breaker edge.
- Extremely small contact areas.

Type	Spring pin dimensions							
	$\varnothing D_o$ mm	$\varnothing D_u$ mm	$\varnothing d_o$ mm	$\varnothing h_u$ mm	$\varnothing h_o$ mm	H mm	Spring DIN	Inside thread
KMV – 28 Q 15 T	13.0	14.5	10.0	70	57.5	97.5	0.9 x 9.8 x 35	M 8 x 12
KMV – 40 Q 16 T	14.0	15.5	10.0	85	63.0	115.0	1.2 x 9.0 x 45	M 8 x 14
KMV – 70 Q 20 T	17.0	19.5	11.9	82	55.5	107.0	1.4 x 11.5 x 40	M 10 x 14
KMV – 88 Q 20 T	17.0	19.5	11.8	105	76.5	142.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 88 Q 01 T	15.5	19 x 29	12 H9	100	85.0	150.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 121 Q 25 T	22.0	24.5	11.8	105	84.5	150.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 121 Q 23.5 T	22.0	23.0	11.8	105	84.5	150.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 121 Q 01 T	15.5	19 x 29	12 H9	100	85.0	150.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 159 Q 20 T	17.0	19.5	11.8	105	76.5	142.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 159 Q 01 T	15.5	19 x 29	12 H9	100	85.0	150.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 238 Q 20 T	17.0	19.5	11.8	105	76.5	142.0	1.2 x 11.5 x 65	M 10 x 14
KMV – 238 Q 01 T	15.5	19 x 29	12 H9	100	85.0	150.0	1.4 x 12.8 x 65	M 10 x 14
KMV – 191 Q 30 T	26.0	29.5	13.9	105	105.0	170.0	1.4 x 12.8 x 65	M 12 x 14
KMV – 339 Q 30 T	26.0	29.5	13.9	105	105.0	170.0	1.4 x 12.8 x 65	M 12 x 14

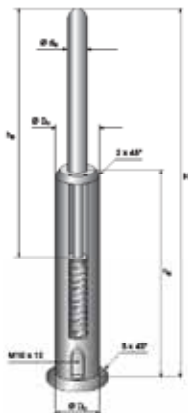


## EXACTCAST BKS Mini-Riser (Ex / ExF)



- Ideally suited to high pressure moulding machines.
- Precisely defined notches as predetermined breakage points without the use of breaker cores.
- Very small contact area.

Type	Module	Riser content		Riser dimensions						Packaging
	exoth. cm	Volume dm³	Weight kg	Ø D <sub>0</sub> mm	Ø D <sub>U</sub> mm	Ø D <sub>i</sub> mm	H mm	h <sub>i</sub> mm	h mm	Box pcs./
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

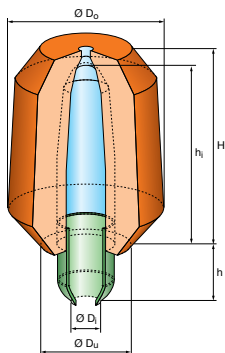


## EXACTCAST

### 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	$\varnothing D_0$ mm	$\varnothing D_U$ mm	$\varnothing d_0$ 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

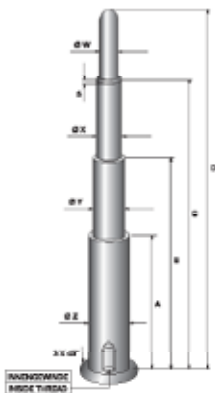


## EXACTCAST BKS C Mini-Riser (Ex / ExF)



- Ideally suited to high pressure moulding machines.
- Precisely defined notches as predetermined breakage points without the use of breaker cores.
- Very small contact area.

Type	Module	Riser content		Riser dimensions						Packaging
	exoth. cm	Volume dm³	Weight kg	Ø D <sub>0</sub> mm	Ø D <sub>U</sub> mm	Ø D <sub>i</sub> mm	H mm	h <sub>i</sub> mm	h mm	Box pcs./
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

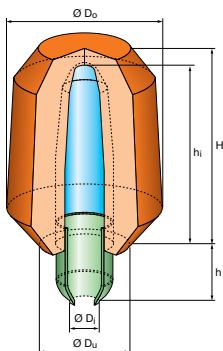


## EXACTCAST

### 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	Ø W mm	Ø X mm	Ø Y mm	Ø 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.

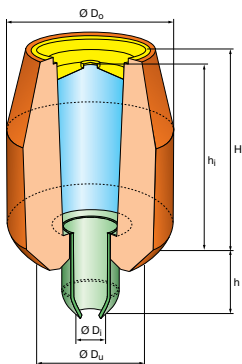
Type	Module	Riser content	Riser dimensions							Packaging
	exoth. cm	Volume dm <sup>3</sup>	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	Ø D <sub>i</sub> mm	Ø d <sub>o</sub> mm	H mm	h <sub>i</sub> mm	h mm	pcs./ pal.*
KMV – 100 Q 20 M	1.60	0.10	84	60	20	40	90	83	35	768
KMV – 140 Q 20 M	1.70	0.14	84	60	20	40	122	115	35	768
KMV – 150 Q 20 M	1.90	0.15	98	66	20	40	128	121	35	552
KMV – 210 Q 25 M	2.30	0.21	115	82	25	50	120	113	35	384
KMV – 360 Q 30 M	2.80	0.360	120	98	30	60	145	140	35	320
KMV – 360 B Q 30 M	3.20	0.360	140	98	30	60	145	140	35	256
KMV – 590 Q 40 M	3.50	0.630	142	110	40	80	150	145	35	–
KMV – 590 Q 30 M	3.50	0.630	142	110	30	80	150	145	35	–
KMV – 780 Q 40 M	4.20	0.870	170	128	40	80	205	200	35	–
KMV – 780 Q 30 M	4.80	0.870	170	128	30	80	205	200	35	–



## 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							
	Ø W mm	Ø X mm	Ø Y mm	Ø 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	24	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.

Type	Module	Riser content		Riser dimensions						Packaging
	exoth. cm	Volume dm³	Weight kg	Ø D <sub>0</sub> mm	Ø D <sub>U</sub> mm	Ø D <sub>i</sub> mm	H mm	h mm	h <sub>i</sub> mm	Box pcs./
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



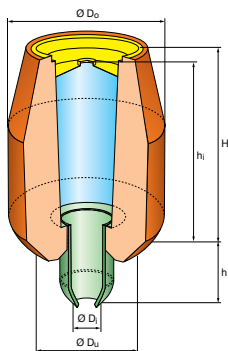


## EXACTCAST

### 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		Pin dimensions							
Riser	Pin	Ø W mm	Ø X mm	Ø Y mm	Ø 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	142	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

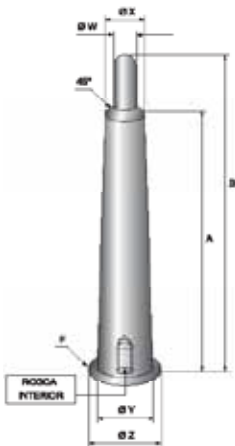


# EXACTCAST OPTIMA Riser KMV-CC (EX/EXF)



- 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 <sup>3</sup>	Ø D <sub>O</sub> mm	Ø D <sub>U</sub> mm	Ø D <sub>i</sub> mm	H mm	h <sub>i</sub> mm	h mm	pcs./pal.*
KMV – 40 Q 15 CC	1.30	0.040	76	40	15	100	93	35	1,620
KMV – 70 Q 20 CC	1.60	0.070	84	50	20	90	80	35	1,320
KMV – 88 Q 20 CC	1.70	0.088	84	50	20	122	112	35	952
KMV – 121 Q 20 CC	1.90	0.121	98	55	20	128	113	35	672
KMV – 159 Q 20 CC	2.20	0.159	115	66	20	120	113	35	504
KMV – 238 Q 30 CC	2.20	0.238	115	66	30	120	117	35	504
KMV – 238 Q 25 CC	2.20	0.238	115	66	25	120	117	35	504
KMV – 339 Q 30 CC	2.80	0.339	120	70	30	145	142	35	432
KMV – 339 B Q 30 CC	3.20	0.339	140	90	30	145	142	35	256
KMV – 590 Q 30 CC	3.80	0.590	142	75	30	150	149	40	12
KMV – 780 Q 30 CC	4.20	0.780	170	120	30	205	204	40	8

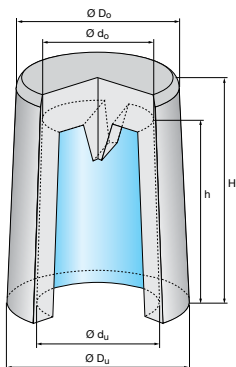


## EXACTCAST

### 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	100.0	130.0	2.5 x 45°	M 10 x 30
KMV 70 Q 20 CC	6.0	19	19	24	87.5	117.5	2.0 x 45°	M 10 x 30
KMV 88 Q 20 CC	6.0	19	19	24	119.5	149.5	2.5 x 45°	M 10 x 30
KMV 121 Q 20 CC	6.0	19	19	24	120.5	150.5	2.5 x 45°	M 10 x 30
KMV 159 Q 20 CC	6.0	19	19	24	120.5	150.5	2.5 x 45°	M 10 x 30
KMV 238 Q 30 CC	6.0	23	29	35	125.0	155.0	3.0 x 45°	M 10 x 30
KMV 238 Q 25 CC	6.0	24	24	29	125.0	155.0	2.5 x 45°	M 10 x 30
KMV 339 Q 30 CC	6.0	23	29	35	150.0	180.0	3.0 x 45°	M 10 x 30
KMV 339 B Q 30 CC	6.0	23	29	35	150.0	180.0	3.0 x 45°	M 10 x 30



## EXACTCAST Riser Sleeves KI (EX/EXF/IN)



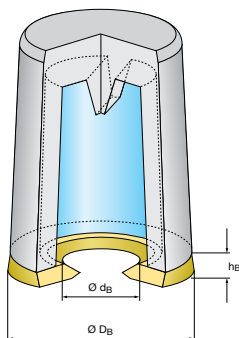
- Ideally suited to automated moulding machines.
- For pre-moulding and post-moulding insertion.
- Extreme dimensional accuracy.
- Low weight.

Type	Module		Riser content		Riser dimensions						Packaging
	exoth. cm	geom. cm	Vol. dm <sup>3</sup>	Wt. kg	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	H mm	h mm	Ø d <sub>u</sub> mm	Ø d <sub>o</sub> 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	72.5	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	80

\* in cardboard trays

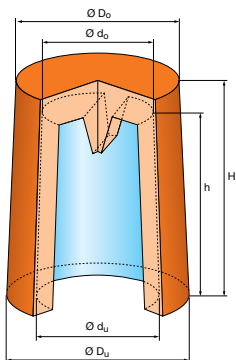
# EXACTCAST

## 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	Breaker core dimensions			Packaging
	Ø D <sub>B</sub> mm	Ø d <sub>B</sub> mm	Ø h <sub>B</sub> mm	
KI 3/5 GP-15	47.0	15	6	6,480
KI 3/5 GP-20	47.0	20	6	6,480
KI 3,5/5 GP-20	56.0	20	6	5,040
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

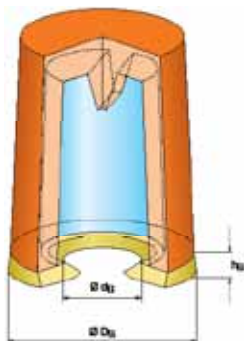
### Riser Sleeves KP (Ex / ExF)



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

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

\* in cardboard trays

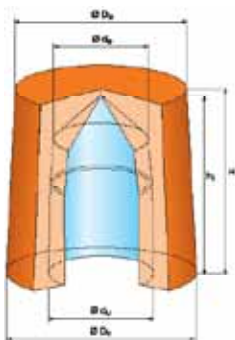


## EXACTCAST Breaker Cores for Riser Sleeves KP



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

Type	Breaker core dimensions			Packaging
	Ø D <sub>B</sub> mm	Ø d <sub>B</sub> mm	Ø h <sub>B</sub> mm	pcs./ pal.*
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)



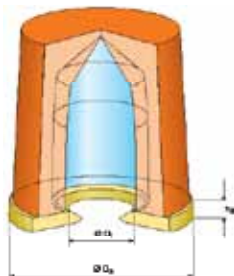
- Improved yield thanks to lower liquid iron content.
- Available in fluorine-free (EXF) and low-fluorine (EX) formulations.
- Excellent dimensional accuracy to be inserted.

Type	Module	Riser content		Riser dimensions						Packag- ing
		exoth. cm	Volume dm <sup>3</sup>	Weight kg	Ø D <sub>o</sub> mm	Ø D <sub>u</sub> mm	Ø d <sub>u</sub> mm	Ø d <sub>o</sub> mm	H mm	h <sub>i</sub> mm
KIM 4 / 7	1.30	0.030	0.210	58.5	62.5	25	22	73	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	1,980
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	72.5	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



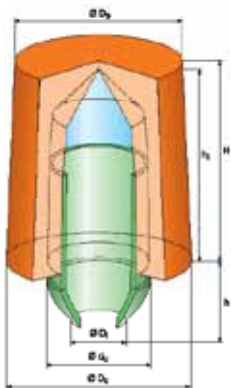
# EXACTCAST

## 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 capacity	Riser dimensions			Packaging
	exoth. cm	Volume dm <sup>3</sup>	$\varnothing D_a$ mm	$\varnothing D_i$ mm	$h_B$ mm	pcs./ pal.*
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	1,600
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.

Type	Module	Riser content	Riser dimensions								Packaging
	exoth. cm	Volume dm <sup>3</sup>	Ø D <sub>0</sub> mm	Ø D <sub>U</sub> mm	Ø D <sub>i</sub> mm	Ø d <sub>U</sub> mm	H mm	h <sub>i</sub> mm	h mm	pcs./ pal.*	
KIM 4 / 7 Q 15 M	1.30	0.032	58.5	62.5	15	25	73	68	25	1,416	
KIM 4 / 95 Q 15 M	1.30	0.040	59.0	63.0	15	25	97	92	25	1,416	
KIM 5 / 8 Q 20 M	1.60	0.080	69.5	74.0	20	40	80	75	35	1,008	
KIM 5 / 10 Q 20 M	1.70	0.100	69.5	74.0	20	40	101	95	35	1,008	
KIM 6 / 9 Q 25 M	1.80	0.150	75.5	80.5	25	50	92	87	35	792	
KIM 6 / 12 Q 25 M	1.90	0.194	72.5	80.5	25	50	116	111	35	—	
KIM 7 / 10 Q 30 M	2.10	0.225	89.0	94.5	30	60	99.5	94	35	576	
KIM 8 / 11 Q 30 M	2.30	0.251	96.0	102.0	30	60	108	103	35	480	
KIM 9 / 12 Q 40 M	2.60	0.474	109.5	115.0	40	80	120	115	35	—	
KIM 10 / 13 Q 40 M	2.90	0.540	119.0	127.5	40	80	133	128	35	312	
KIM 12 / 15 Q 50 M	3.30	0.818	147.0	154.5	50	100	150	145	35	—	



## 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	Riser dimensions								
	Ø W mm	Ø X mm	Ø Y mm	Ø 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	2 x 45°	M 10 x 30
KIM 4 / 95 Q 15 M	7	14	14	18	100.0	104.0	119.0	2 x 45°	M 10 x 30
KIM 5 / 8 Q 20 M	7	19	19	24	80.5	86.5	111.5	2.5 x 45°	M 10 x 30
KIM 5 / 10 Q 20 M	7	19	19	24	101.5	107.5	122.5	2.5 x 45°	M 10 x 30
KIM 6 / 9 Q 25 M	7	24	24	29	89.5	99.5	124.5	2.5 x 45°	M 10 x 30
KIM 6 / 12 Q 25 M	7	24	24	29	113.5	123.5	148.5	2.5 x 45°	M 10 x 30
KIM 7 / 10 Q 30 M	11	29	29	35	97.0	107.0	132.0	3 x 45°	M 10 x 30
KIM 8 / 11 Q 30 M	11	29	29	35	106.0	116.0	141.0	3 x 45°	M 10 x 30
KIM 9 / 12 Q 40 M	11	39	39	45	113.0	128.0	153.0	3 x 45°	M 10 x 30
KIM 10 / 13 Q 40 M	11	39	39	45	126.0	141.0	166.0	3 x 45°	M 10 x 30
KIM 12 / 15 Q 50 M	11	49	49	59	150.0	160.0	185.0	5 x 45°	M 10 x 30

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