



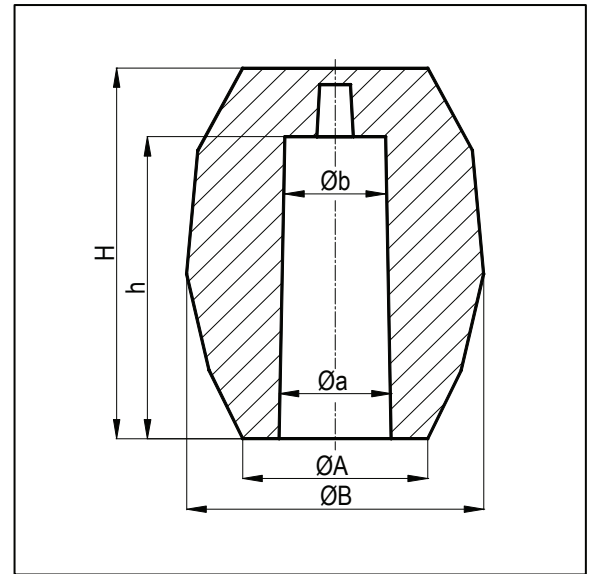
THERMO-RISERS TG for optimum moulding

Characteristics

- highly-exothermic
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron, ductile iron and cast steel



Ref.-No.	Type		Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
340234	TG	49	0,75	8	16	13	50	30	44	60
340340	TG	50	0,75	8	16	13	50	30	52	60
340640	TG	120	0,85	16	21	19	50	38	60	65
340940	TG	190	0,95	28	25	20	70	38	60	85
340960	TG	195 (+)	0,95	28	25	20	70	45	60	85
341360	TG	150	1,20	22	21	18	70	38	66	85
341365	TG	155 (+)	1,20	22	21	18	68	45	66	85
341366	TG	170	1,20	25	21	18	85	38	66	100
341367	TG	175	1,20	25	21	18	85	45	66	100
341540	TG	200	1,30	25	21	18	85	38	78	100
341840	TG	270	1,30	38	25	23	85	38	78	100
341860	TG	275 (+)	1,30	38	25	23	81	50	78	100
341390	TG	302	1,30	44	27	24	86	50	70	107
341393	TG	303 L	1,30	28	21	18	94	50	70	107
341941	TG	320 L	1,30	48	27	24	92	38	78	100
342140	TG	400	1,40	56	32	28	80	60	90	100
342440	TG	541	1,40	81	40	37	70	60	88	90
342634	TG	600	1,50	82	36	32	97	60	84	110
342650	TG	607 (+)	1,50	82	36	32	93	70	84	110
342061	TG	385 L (+)	1,70	54	26	24	110	60	90	117
342740	TG	610	1,70	88	36	32	97	60	88	117
342750	TG	617 (+)	1,70	89	36	32	94	70	88	117
343305	TG	728	1,90	128	43	38	99	82	94	124
343340	TG	740	1,92	125	40	36	110	66	106	135
343360	TG	747 (+)	1,92	125	40	36	110	70	106	135
343537	TG	930	2,00	136	52	48	69	82	117	95
343540	TG	990	2,10	159	49	46	90	82	117	110
343636	TG	1110	2,30	159	50	40	100	90	125	125

Standard products are fat printet. "L" = open hole in the cover. (+) = bigger Diameter (ØA)



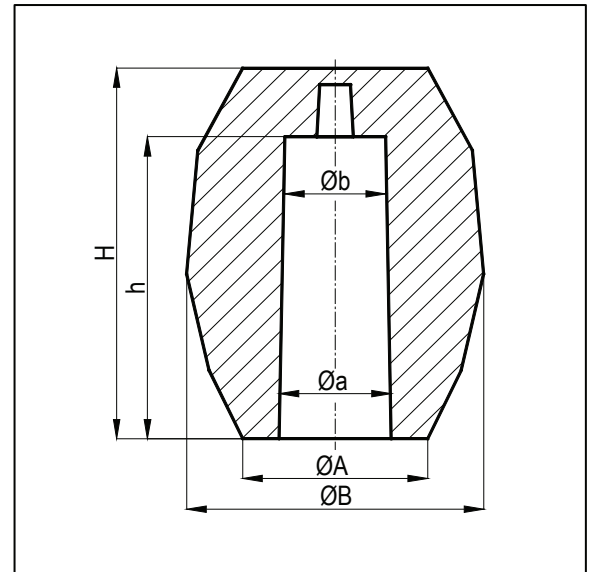
THERMO-RISERS TG for optimum moulding

Characteristics

- highly-exothermic
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
343660	TG 1111	2,20	159	50	40	100	82	117	125
343662	TG 1111 L	2,20	159	50	40	100	82	117	125
343940	TG 1640	2,20	238	60	50	100	90	125	125
343965	TG 1645 L	2,20	238	60	50	100	95	125	115
343970	TG 1650	2,20	270	65	60	88	95	125	115
344240	TG 1330	2,50	191	50	40	120	90	138	140
344265	TG 1332	2,50	191	50	40	120	90	131	140
344540	TG 1930	2,80	276	58	48	125	90	138	140
344620	TG 2339	3,20	339	65	55	120	95	133	145
344840	TG 2370	3,20	339	65	55	120	95	150	145
344440	TG 2370 -133L	3,20	191	50	40	120	95	150	145
344865	TG 2920	3,00	383	70	66	105	110	150	125
344860	TG 2380 (+)	3,20	339	60	57	120	110	150	145
344863	TG 2600 (+)	3,30	590	80	76	125	110	150	145
345140	TG 1660	3,30	232	45	37	175	65	138	200
345143	TG 1666	3,30	232	45	37	175	60	138	200
345440	TG 2860	3,40	415	60	50	175	82	150	205
345550	TG 2800 (+)	3,30	680	80	75	145	110	150	175
345540	TG 2870 (+)	3,40	408	60	50	175	110	150	205
345832	TG 3101	3,50	340	65	55	120	110	170	150
345840	TG 3200	3,50	456	70	66	125	110	170	150
345843	TG 4200	3,50	590	80	76	125	110	170	150
345844	TG 4240 (+)	3,50	590	80	76	125	140	170	150
346020	TG 4700	4,00	670	80	76	140	130	195	165
345949	TG 5477	4,20	771	80	76	165	110	170	195
345935	TG 5400	4,20	771	80	70	175	110	170	210
345951	TG 5440 (+)	4,20	771	80	75	165	140	170	210
346135	TG 6550	4,20	935	90	70	185	110	170	210

Standard products are fat printet. "L" = open hole in the cover. (+) = bigger Diameter (ØA)



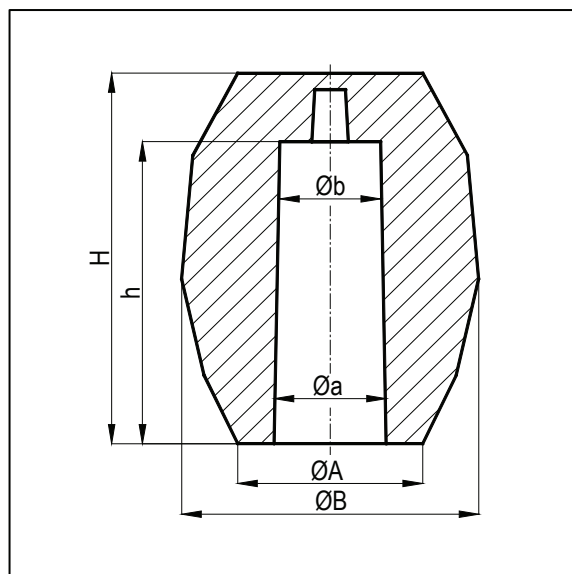
THERMO-RISERS TG for optimum moulding

Characteristics

- highly-exothermic
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
345972	TG 7240 (+)	4,20	1040	90	84	175	140	170	210
346041	TG 5519 L	4,4	771	80	70	175	130	195	195
346040	TG 5500	4,5	771	80	70	175	130	195	210
346366	TG 7300	4,4	1040	90	84	175	130	195	210
346866	TG 11900	5,0	1650	75	120	187	160	235	240
346875	TG 17400	5,2	2500	120	125	210	160	235	240
346877	TG 25000 W	5,2	3600	120	165	210	160	235	240
347206	TG 22000	6,5	3140	125	120	250	205	290	290
347230	TG 19000	6,8	2800	105	100	295	160	280	370



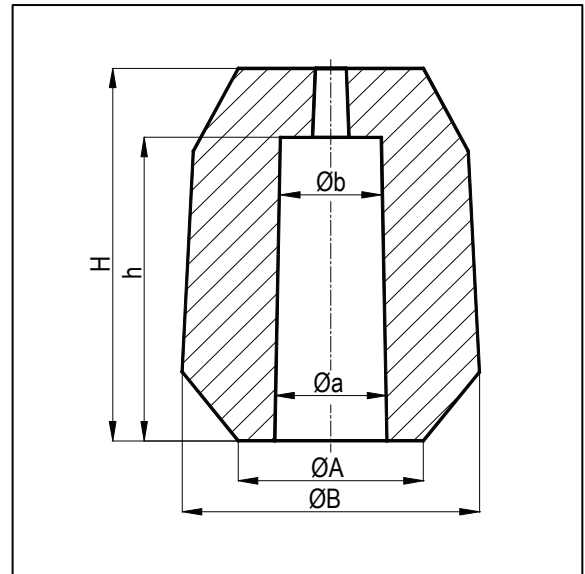
THERMO-RISER T

Characteristics:

- highly-exothermic
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
340334	T 50	0,75	8	16	13	50	28	50	57
340634	T 120	0,85	14	21	19	50	40	60	62
340934	T 190	0,95	27	25	20	70	40	60	80
341534	T 200	1,30	25	21	18	85	36	78	100
341250	T 305 (+)	< 1,30	45	25	23	84	50	53	100
341234	T 310 oL	< 1,30	45	25	23	100	45	53	115
342033	T 380	1,30	54	26	24	110	36	78	120
342034	T 384 H/oL	1,30	88	33	31	110	50	78	130
342035	T 384	1,30	54	26	24	110	45	78	120
342134	T 400	1,40	56	32	28	80	60	88	90
342434	T 541	1,40	77	40	37	70	60	88	90
342534	T 580	1,60	88	36	32	97	60	78	110
342734	T 610	1,70	88	36	32	97	60	88	110
343306	T 729 (+)	1,90	130	40	36	110	84	98	125
343334	T 740	1,92	120	40	35	110	65	107	135
344834	T 2370	3,20	339	65	55	120	95	150	145
345150	T 1669 (+)	3,30	231	44	37	154	90	140	187
345833	T 3101	3,50	340	65	55	120	110	170	150
345836	T 4100	3,50	582	80	77	120	110	170	150
346010	T 4700	4,00	670	80	76	140	130	195	170
346011	T 4740 (+)	4,00	670	80	76	140	140	195	170
345945	T 5430 (+)	4,20	771	80	70	165	130	170	200
346050	T 5540 (+)	4,50	771	80	70	175	140	195	210
346802	T 11200	4,60	1650	120	117	150	160	228	192
346842	T 11900	4,80	1700	75	125	187	160	234	237
347201	T 22920 W	5,00	3274	110	150	310	160	236	360
347205	T 46920 W	6,00	6605	110	191	280	160	294	330

Standard products are fat printet. (+) = bigger Diameter (ØA)



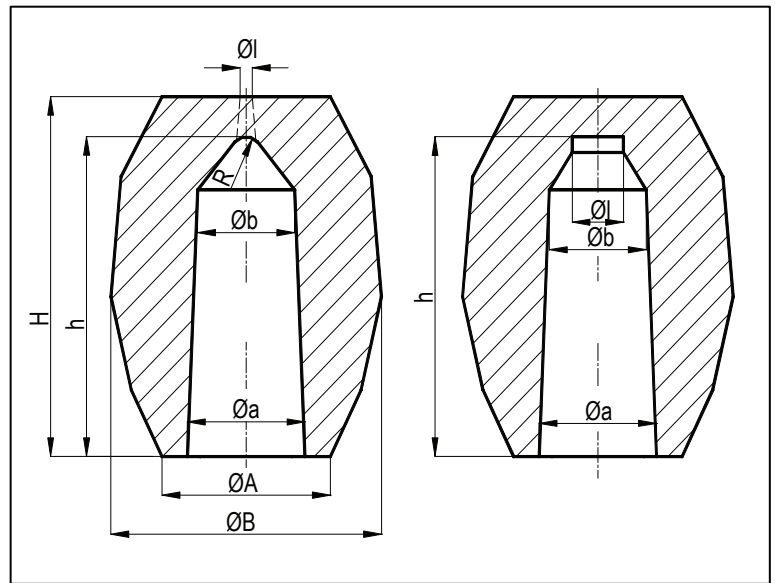
THERMO-RISER TG/Z and T/Z with selfcentering pin

Characteristics:

- easy positioning support for the riser
- highly-exothermic reaction
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	R [mm]	ØI [mm]	Form
340434	T 60 Z	0,90	16	21	20	66	38	54	70		5	2
380938	TG 105 Z	0,85	14	16	15	80	38	60	85	6		1
340670	TG 120 Z	0,85	14	21	19	50	38	60	65	4		1
341380	TG 295 Z (L)	1,20	39	28	27	70	45	66	85	4	5	1
341251	T 305 Z	< 1,30	36	25	23	84	50	53	100	5		1
341845	TG 274 Z (L)	1,30	50	31	29	80	50	78	100	6	6	1
341870	TG 275 Z	1,30	36	25	23	85	50	78	100	5		1
342105	T 390 Z	1,30	32	32	28	55	60	88	70	6		1
342141	TG 400 Z	1,40	50	32	28	80	60	90	100	6		1
342142	TG 401 Z	1,40	50	32	28	85	60	90	100	6		1
342442	TG 541 Z (L)	1,40	75	40	35	80	60	88	90	6	7	1
342538	T 581 Z	1,60	117	41	38	102	60	78	110	6		1
342651	TG 600 Z (L)	1,50	85	36	31	101	60	84	110	6	10	1
343036	TG 670 Z	1,60	97	40	36	103	70	84	110		11	2
342741	TG 610 Z (L)	1,70	85	36	32	104	60	88	117	6	7	1
342751	TG 617 Z	1,70	85	36	32	104	70	88	117	7		1
343034	TG 640 Z	1,80	134	40	36	132	60	88	140		8	2
343045	TG 695 Z	1,80	87	45	40	80	82	94	95		20	2
343049	TG 699 Z	1,80	87	45	43	80	82	94	95		5	2
343308	T 729 Z	1,90	120	42	38	110	82	98	125		10	2
343234	TG 730 Z	1,80	95	40	33	102	66	106	116	6		1
343326	TG 740 Z	1,92	114	40	33	120	66	106	135	6		1
343346	TG 742 Z	1,92	108	40	35	115	70	106	127	6		1
343344	TG 744 Z	1,92	108	40	35	115	70	106	135	6		1

Standard products are fat printet. "L" = Riser aviable with ventinghole in the cover.



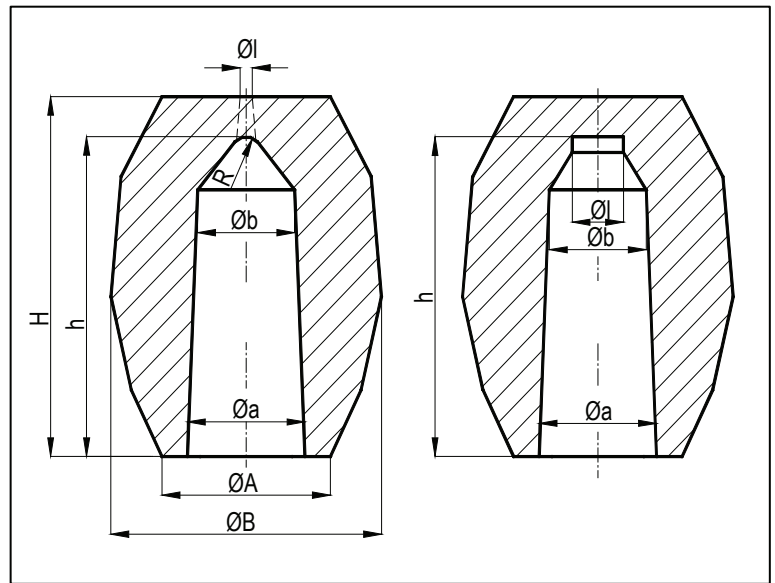
THERMO-RISER TG/Z and T/Z with selfcentering pin

Characteristics:

- easy positioning support for the riser
- highly-exothermic reaction
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	R [mm]	ØI [mm]	Form
343459	TG 809 Z	1,90	101	40	36	103	66	106	116		11	2
343460	TG 810 Z (L)	1,90	117	41	38	102	66	106	116	6	7	1
353371	TG 819 Z	1,85	97	45	43	80	82	105	87	6		1
343373	TG 820 Z	1,90	117	41	38	102	82	106	116	6		1
343536	TG 930 Z	2,00	140	54	50	77	82	117	95		10	2
343545	TG 950 Z	2,00	145	50	42	100	82	112	110	8		1
343542	TG 990 Z	2,10	145	50	42	100	82	117	110	8		1
343630	TG 1109 Z L	2,20	140	50	42	97	90	125	125		12	1
343650	TG 1110 Z (L)	2,20	141	50	42	100	90	125	125	8	12	1
343670	TG 1111 Z (L)	2,20	141	50	42	100	82	117	128	8	12	1
343677	TG 1119 Z	2,20	145	50	42	108	90	117	120		10	2
343679	TG 1179 Z	2,40	179	50	42	130	82	117	140		12	2
343680	TG 1240 Z	2,70	240	60	51	128	90	117	140		12	2
343685	TG 1283 Z	3,10	283	65	56	128	90	117	140		12	2
343971	TG 1650 Z	2,20	208	59	55	100	90	125	115	6		1
343977	TG 1651 Z	2,20	208	59	55	94	95	125	115		20	2
343960	TG 1640 Z	2,20	208	59	55	100	90	125	125	6		1
343955	TG 1619 Z	2,20	270	58	54	120	90	125	130	6		1
344266	TG 1332 Z	2,50	178	50	42	120	90	131	140	6		1
344242	TG 1330 Z	2,50	178	50	42	120	90	138	140	6		1
344261	TG 1520 Z	2,50	217	59	48	110	90	138	140		32	2
343980	TG 1850 Z	2,40	260	65	62	105	95	125	115		10	2
344541	TG 1930 Z	2,80	270	58	54	120	90	138	140	6		1
348889	TG 1934 Z	2,80	240	60	51	128	90	138	140		12	2

Standard products are fat printet. "L" = Riser aviable with ventinghole in the cover.



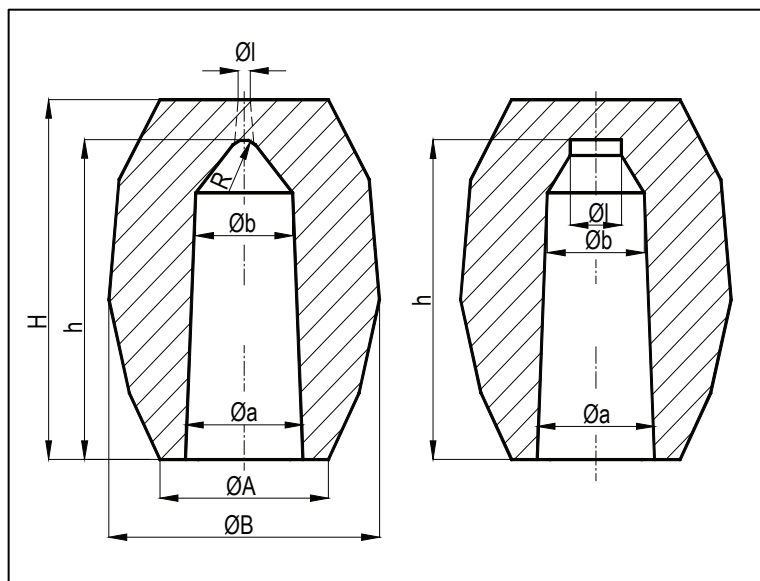
THERMO-RISER TG/Z and T/Z with selfcentering pin

Characteristics:

- easy positioning support for the riser
- highly-exothermic reaction
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	R [mm]	ØI [mm]	Form
344830	TG 2313 Z	2,90	200	59	48	100	95	150	125		32	2
344866	TG 2925 Z	3,00	350	70	66	113	95	150	125	12		1
345820	TG 3620 Z	3,00	520	88	83	113	110	150	125		12	2
344611	TG 2339 Z (L)	3,20	297	65	57	120	95	133	145	6	12	1
344846	TG 2372 Z	3,10	299	65	57	118	95	150	130		21	2
344848	TG 2373 Z	3,20	178	50	42	120	95	150	145	6		1
344841	TG 2370 Z (L)	3,20	297	65	57	120	95	150	145	6	12	1
344870	TG 2377 Z	3,20	373	70	68	120	95	150	145	6		1
345141	TG 1660 Z	3,30	232	45	37	180	65	138	200	8		
344864	TG 2600 Z	3,30	450	80	75	130	110	150	145		10	2
345445	TG 2860 Z	3,40	390	58	53	186	82	150	205		26	2
345835	TG 3101 Z	3,50	297	65	57	120	110	170	150	6		1
345834	TG 3201 Z	3,50	340	70	65	130	110	170	150		20	2
345841	TG 3200 Z	3,50	480	78	74	132	110	170	150	10		
345848	TG 4380 Z	3,70	590	80	75	148	110	150	160		12	2
345850	TG 4500 Z	3,80	645	80	75	150	110	170	170		26	2
346021	TG 4700 Z	4,00	600	80	75	148	130	195	165		12	2
345952	TG 5477 Z	4,20	720	80	75	165	110	170	195		26	2
345954	TG 5477 Z /ME	4,20	720	80	75	180	110	170	195		14	2
346053	TG 5500 Z L	4,50	780	80	75	185	130	195	210		12	2



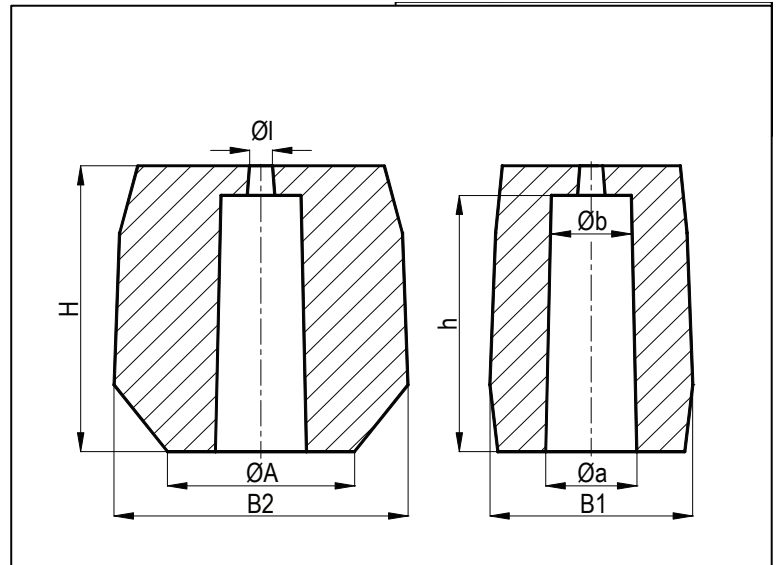
THERMO-RISER OT for small space requirement

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	Øl [mm]	hl [mm]	ØA [mm]	B1 [mm]	B2 [mm]	H [mm]	Form
348002	OT 740 - 302	1,8	45	27	24	86	6	15	65	74	98	135	0
348003	OT 740	1,8	125	40	36	110	11	21	65	74	98	135	0
348004	OT 850	2,1	125	40	35	110	10	10	82	89	129	120	0
348006	OT 1111 Z	2,1	141	50	42	100	R 8		82	89	129	120	1
348016	OT 1112 Z	2,1	143	50	42	108	10	8	71 x 90	90	125	120	2
348009	OT 1110	2,1	159	50	40	100	12	10	82	89	129	120	0
348017	OT 1300 Z	2,4	185	50	44	128	10	8	71 x 90	100	125	140	2
348005	OT 850 - 1339	2,5	120	40	35	110	11	20	90	106	156	140	0
348010	OT 1339	2,5	191	50	40	120	10	20	90	106	156	140	0
348015	OT 1930	2,5	276	58	48	125	11	15	90	106	156	140	0
348014	OT 1940 Z	2,5	276	58	54	120	R 6		90	106	156	140	1
348018	OT 2380 - 1339	2,5	339	60	57	120	10	13	90	106	156	140	0
348012	OT 1700 Z	2,9	236	22	48	139	12	15	69 x 104	110	150	150	2
348030	OT 3102	3,1	339	65	55	120	10	20	110	130	190	160	0
3480	OT 2900	3,4	415	64	60	155	R 8	26	84 x 120	135	170	170	1
3480	OT 3200	3,4	470	78	74	132	R 10	42	110	130	190	160	1



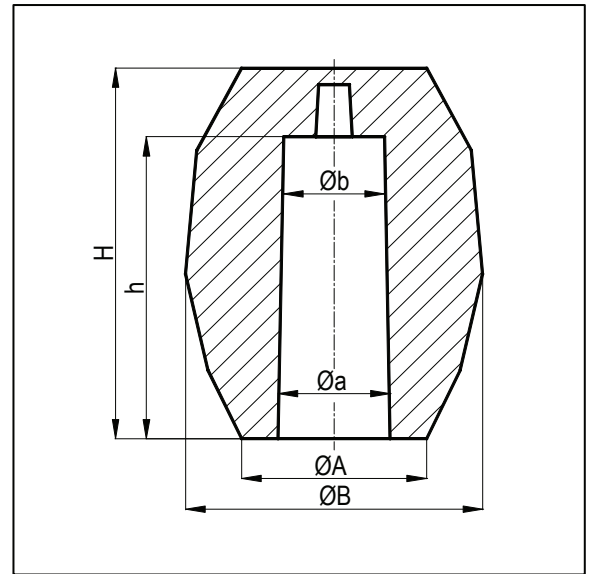
THERMO-RISERS TGC COLD-BOX bound for optimum moulding

Characteristics

- exothermic-insulating
- modulus controlled ignition
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding

Applications

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	Øa [mm]	Øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
	TGC 120 Z	0,85	14	21	19	50	38	60	65
	TGC 190 Z	0,95	27	28	27	70	40	60	85
	TGC 195 Z	0,95	27	25	20	70	45	60	85
	TGC 310	1,2	45	25	23	100	45	53	115
	TC 581 Z	1,6	117	41	38	102	60	78	110
	TC 591 Z	1,6	117	41	38	102	60	78	118
347105	TGC 610 Z	1,7	83	36	32	104	60	88	117
347106	TGC 820 Z	1,9	117	41	38	102	82	106	116
	TGC 1113 Z	2,2	210	59	55	100	85	117	125
347111	TGC 2339 Z	3,2	297	65	57	120	95	133	145
	TGC 2377 Z	3,2	380	70	68	120	95	150	145
347166	TGC 6640	4,5	940	90	70	185	130	190	210
347167	TGC 6641	4,5	940	90	70	185	130	190	210
347174	TGC 17.400	5,2	2500	120	125	210	160	235	240
347175	TGC 17.400 W	5,2	2500	120	125	210	160	235	240
	TGC 25.000 W	5,2	3600	120	165	210	160	235	240
347238	TGC 47.000 W	6,5	6680	135	226	250	200	290	290
347240	TGC 55.000 W	6,6	7800	148	237	275	183	315	300
	TGC 59.000 W	7,0	8790	150	258	250	225	340	290
347251	TGC 74.000 W	7,7	10970	170	286	250	270	390	290
347253	TGC 79.000 W	7,7	11320	170	230	360	250	330	400



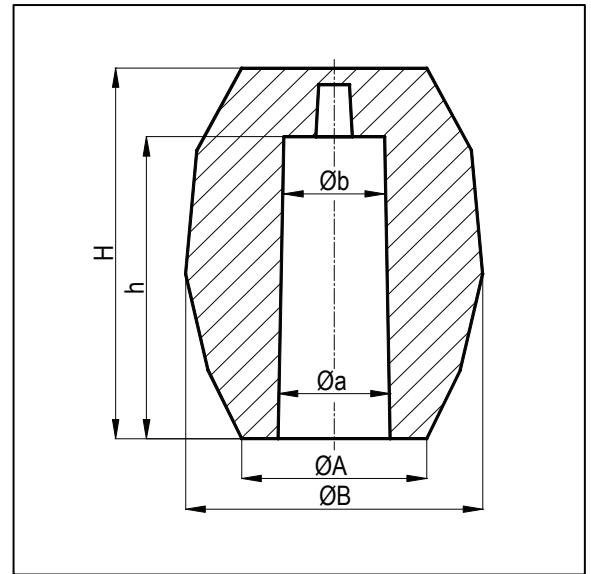
THERMO-RISERS TGI COLD-BOX bound for optimum moulding

Characteristics

- insulating
- thick-walled
- feed metal utilisation up to 70%
- good mould compaction
- high strength for machine moulding

Applications

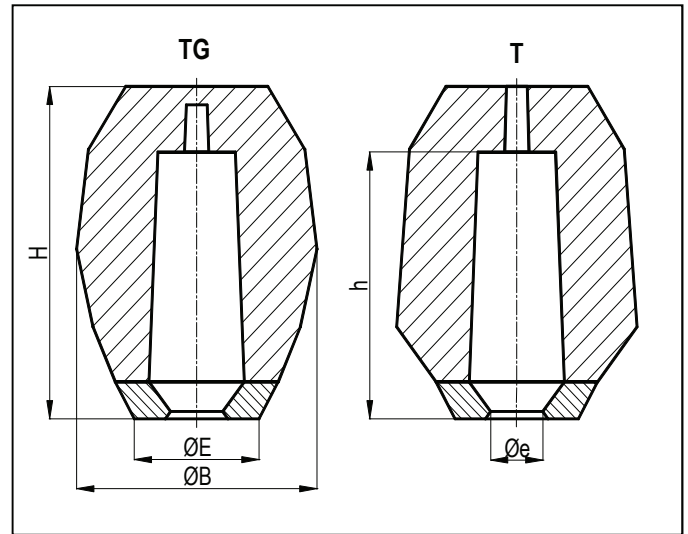
gray & ductile cast iron , steel castings,
light and heavy metal castings



Ref.-No.	Type		Modulus [cm]	Vol. [cm³]	Øa [mm]	Øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
341005	TGI	120 Z	0,80	14	21	19	50	38	60	65
340942	TGI	190 Z	0,90	27	28	27	70	40	60	85
340952	TGI	195 Z	0,90	27	25	20	70	45	60	85
341232	TGI	310	1,10	45	25	23	100	45	53	115
342537	TI	581 Z	1,50	117	41	38	102	60	78	110
342546	TI	591 Z	1,50	117	41	38	102	60	78	118
	TGI	610 Z	1,60	83	36	32	104	60	88	117
	TGI	820 Z	1,85	117	41	38	102	82	106	116
343674	TGI	1113 Z	2,00	210	59	55	100	85	117	125
344871	TGI	2377 Z	2,80	380	70	68	120	95	150	145



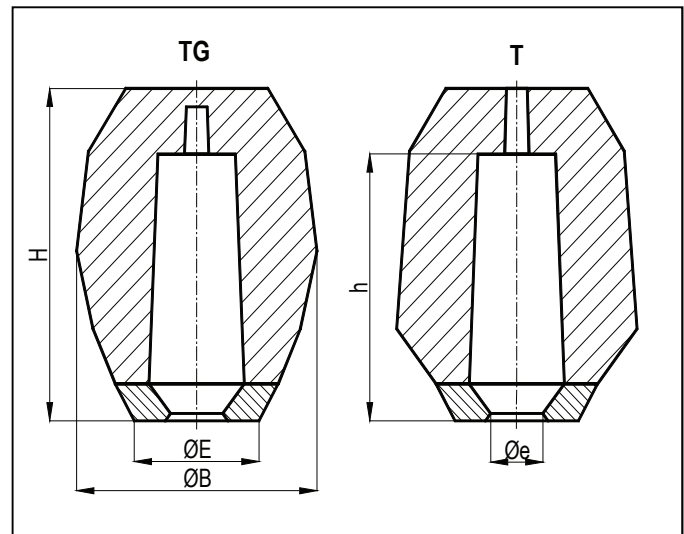
THERMO-RISER TG/EQ and T/EQ with round contact area



Ref.No.	Type		H	ØB	ØE	øe	h	Riser		Breaker	
			[mm]	[mm]	[mm]	[mm]	[mm]	Type	[cm]	Core	Cores
350305	TG	50 EQ 10	67	52	26	10	57	TG	50	0,75	EQ 30-10
350606	TG	120 EQ 15	75	60	34	15	60	TG	120	0,85	EQ 38-15
350906	TG	190 EQ 15	95	60	34	15	80	TG	190	0,95	EQ 38-15
350908	TG	195 EQ 15	95	60	34	15	80	TG	195	0,95	EQ 45-15
351310	TG	155 EQ 15	95	66	34	15	80	TG	155	1,20	EQ 45-15
351510	TG	205 EQ 15	113	78	34	15	94	TG	205	1,30	EQ 50-15
351808	TG	275 EQ 15	113	78	34	15	94	TG	275	1,30	EQ 50-15
351207	T	305 EQ 15	113	53	34	15	97	T	305	<1,30	EQ 50-15
351203	T	310 EQ 15 oL	125	53	34	15	110	T	310 oL	<1,30	EQ 45-15
351206	T	310 EQ 16 oL	122	53	42	16	107	T	310 oL	<1,30	EQ 45-16
352108	TG	400 EQ 16	110	90	56	17	90	TG	400	1,40	EQ 60-16
352110	TG	400 EQ 18	115	90	45	18	95	TG	400	1,40	EQ 60-18
352410	T	541 EQ 18	105	88	45	18	85	T	541	1,40	EQ 60-18
352612	TG	600 EQ 18	125	84	45	18	112	TG	600	1,50	EQ 60-18
352620	TG	607 EQ 18	125	84	58	18	108	TG	607	1,50	EQ 68-18
352712	TG	610 EQ 18	132	88	45	18	112	TG	610	1,70	EQ 60-18
352717	TG	610 EQ 19	132	88	55	18	107	TG	610	1,70	EQ 60-19
352720	TG	617 EQ 18	132	88	58	18	109	TG	617	1,70	EQ 68-18
353324	TG	740 EQ 18	150	106	50	18	125	TG	740	1,92	EQ 65-18
353325	TG	740 EQ 19	145	106	62	18	120	TG	740	1,92	EQ 65-19
353430	TG	747 EQ 18	150	106	58	18	125	TG	747	1,92	EQ 68-18
	TG	990 EQ 20	125	117	68	20	105	TG	990	2,10	EQ 82-20
353628	TG	1111 EQ 20	140	117	68	20	115	TG	1111	2,20	EQ 82-20



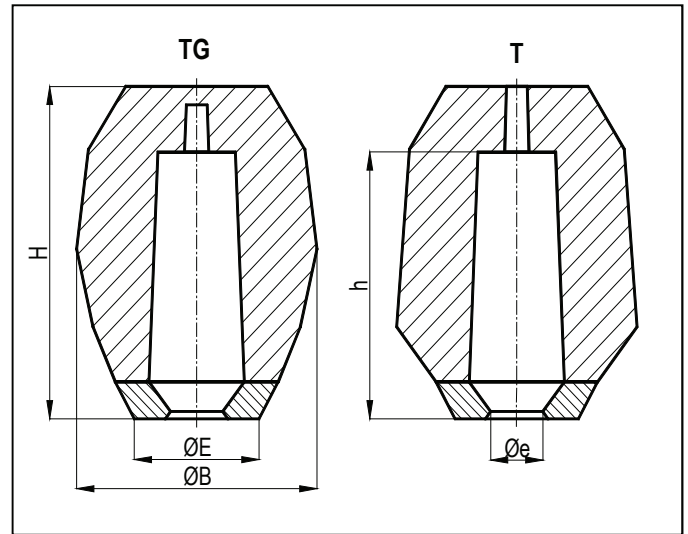
THERMO-RISER TG/EQ and T/EQ with round contact area



Ref.No.	Type		H	ØB	ØE	øe	h	Riser		Breaker	
			[mm]	[mm]	[mm]	[mm]	[mm]	Type	[cm]	Core	Coers
353632	TG	1110 EQ 20	140	125	75	20	115	TG	1110	2,20	EQ 90-20
353931	TG	1640 EQ 20	140	125	75	20	115	TG	1640	2,20	EQ 90-20
355143	TG	1666 EQ 18	215	138	50	18	190	TG	1666	3,30	EQ 65-18
354265	TG	1332 EQ 19	151	132	86	20	131	TG	1332	2,50	EQ 90-19
354266	TG	1332 EQ 20	155	132	75	20	135	TG	1332	2,50	EQ 90-20
354538	TG	1930 EQ 19	151	138	86	20	136	TG	1930	2,80	EQ 90-19
354531	TG	1930 EQ 20	155	138	75	20	140	TG	1930	2,80	EQ 90-20
354634	TG	2339 EQ 21	156	133	75	21	131	TG	2339	3,20	EQ 95-21
354632	TG	2339 EQ 30	160	133	90	30	135	TG	2339	3,20	EQ 90-30
354832	TG	2370 EQ 20	160	150	75	20	135	TG	2370	3,20	EQ 90-20
354836	TG	2370 EQ 30	160	150	75	30	135	TG	2370	3,20	EQ 90-30
354860	TG	2380 EQ 20	165	150	82	20	140	TG	2380	3,20	EQ 110-20
355565	TG	2800 EQ 26	195	150	82	26	165	TG	2800	3,30	EQ 110-26
355556	TG	2870 EQ 26	225	150	82	26	195	TG	2870	3,40	EQ 110-26
355869	TG	4200 EQ 26	170	170	82	26	145	TG	4200	3,50	EQ 110-26
355872	TG	4200 EQ 40	170	170	82	26	145	TG	4200	3,50	EQ 110-40
356013	T	4740 EQ 30	182	195	110	30	152	T	4740	4,00	EQ 140-30
355956	TG	5400 EQ 26	230	170	82	26	195	TG	5400	4,20	EQ 110-26
355967	TG	5477 B 45 Q	228	170	95	26	183	TG	5477	4,20	B/Q 108-45
355969	TG	5477 B 50 Q	228	170	95	26	183	TG	5477	4,20	B/Q 108-50
355959	TG	5477 EQ 26	228	170	95	26	183	TG	5477	4,20	EQ 110-26



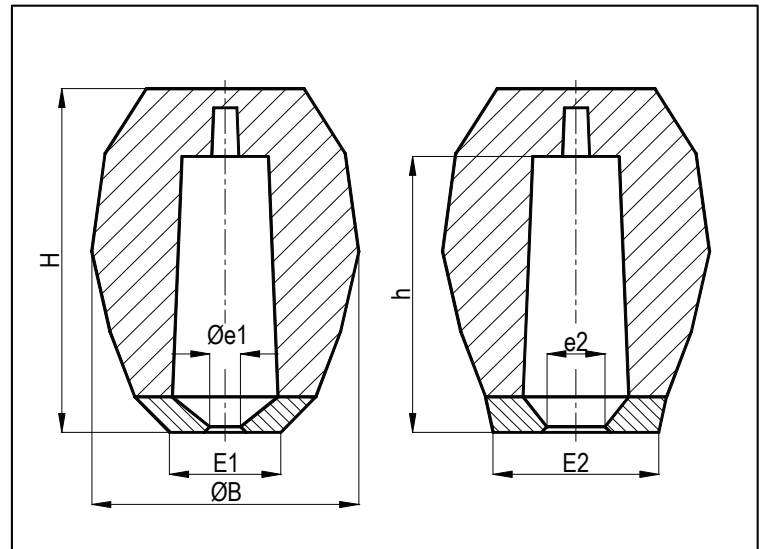
THERMO-RISER TG/EQ and T/EQ with round contact area



Ref.No.	Type		H	ØB	ØE	øe	h	Riser Modulus		Breaker	
			[mm]	[mm]	[mm]	[mm]	[mm]	Type	[cm]	Cores	
355961	TG	5440 EQ 30	231	170	110	26	185	TG	5440	4,20	EQ 140-30
356061	T	5540 EQ 40	230	195	110	40	195	T	5540	4,50	EQ 140-40
356385	TG	11900 ESQ 55	270	235	130	55	217	TG	11900	5,0	ESQ 160-55
356388	TG	11900 ESQ 60	270	235	110	60	217	TG	11900	5,0	ESQ 160-60
356815	TG	17400 B 60 Q	252	235	160	60	222	TG	17400	5,2	B/Q 160-60
356817	TG	17400 ESQ 60	270	235	110	60	240	TG	17400	5,2	ESQ 160-60
356813	TG	25000W B 60 Q	252	235	160	60	222	TG	25000W	5,2	B/Q 160-60
357285	TG	22000 B 80 Q	305	290	195	80	250	TG	22000	6,5	B/Q 198-80
357230	TG	19000 B 85 Q	382	280	160	85	307	TG	19000	6,8	B/Q 160-85



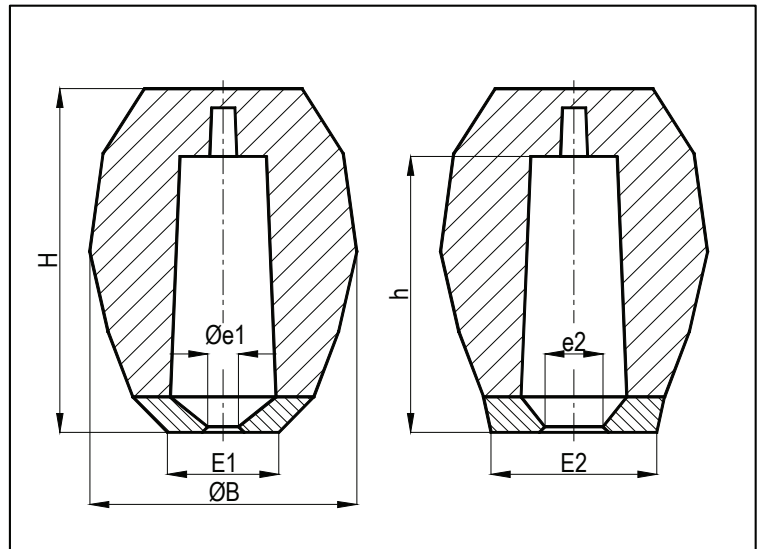
THERMO-RISER TG/EQov and T/EQov with oval contact area



Ref.No.	Type	H [mm]	ØB [mm]	E1 [mm]	E2 [mm]	e1 [mm]	e2 [mm]	h [mm]	Riser / modulus Type [cm]	Breaker Cores
361120	TG 190 EQov	100	60	20	36	8	20	85	TG 190 0,95	EQ 38ov
361320	TG 150 EQov	100	66	20	36	8	20	85	TG 150 1,20	EQ 38ov
361520	TG 205 EQov	118	78	24	48	10	20	103	TG 205 1,30	EQ 50ov
361220	T 305 EQov	117	53	24	48	10	20	102	T 305 < 1,30	EQ 50ov
361230	T 310oL EQov	130	53	20	36	8	20	115	T 310oL < 1,30	EQ 38ov
361820	TG 275 EQov	118	78	24	48	10	20	99	TG 275 1,30	EQ 50ov
362102	TG 400 EQov	120	90	32	57	12	27	100	TG 400 1,40	EQ 60ov
362103	TG 407 EQov	120	90	42	68	15	34	100	TG 407 1,40	EQ 68ov
362420	TG 541 EQov	110	88	32	57	12	27	90	TG 541 1,40	EQ 60ov
362430	TG 547 EQov	120	90	42	68	15	34	90	TG 547 1,40	EQ 68ov
362431	TG 547 EQov1	120	90	34	68	12	29	90	TG 547 1,40	EQ 71ov
362706	TG 610 EQov	137	88	32	57	12	27	117	TG 610 1,70	EQ 60ov
362710	TG 617 EQov	137	88	42	68	15	34	114	TG 617 1,70	EQ 68ov
	TG 740 EQov	155	106	32	57	12	27	130	TG 740 1,92	EQ 60ov
363327	TG 747 EQov	155	106	34	68	12	29	130	TG 747 1,92	EQ 71ov
363332	TG 930 EQov	115	117	43	72	15	34	89	TG 930 2,00	EQ 82ov
363340	TG 990 EQov	130	117	43	72	15	34	110	TG 990 2,10	EQ 82ov
363738	TG 1111 EQov	145	117	42	72	15	35	120	TG 1111 2,20	EQ 82ov
363630	TG 1110 EQov	145	125	50	84	15	35	120	TG 1110 2,20	EQ 90ov
363920	TG 1640 EQov	145	125	44	77	15	35	120	TG 1640 2,20	EQ 89ov
	TG 1666 EQov	220	138	34	68	12	29	195	TG 1666 3,30	EQ 71ov
	T 1669 EQov	207	140	50	84	15	35	174	T 1669 3,30	EQ 90ov
364231	TG 1332 EQov	160	132	44	77	15	35	140	TG 1332 2,50	EQ 89ov
364530	TG 1930 EQov	160	138	44	77	15	35	145	TG 1930 2,80	EQ 89ov

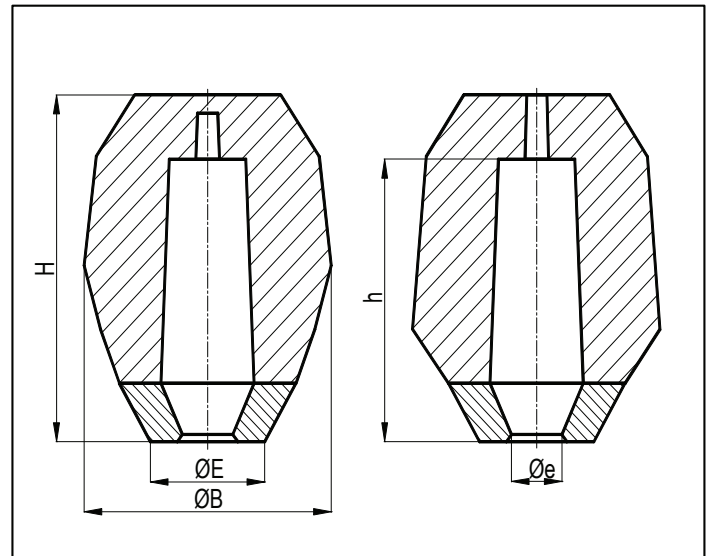


THERMO-RISER TG/EQov and T/EQov with oval contact area



Ref.No.	Type	H	ØB	E1	E2	e1	e2	h	Riser / modulus		Breaker	
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	Type	[cm]	Cores	
364835	TG 2920 EQov	145	150	59	95	16	36	125	TG 2920	3,00	EQ	110ov
364628	TG 2339 EQov	165	133	45	91	15	35	140	TG 2339	3,20	EQ	95ov
364629	TG 2339K EQov6	165	133	60	80	19	35	140	TG 2339K	3,20	EQ	96ov
364828	TG 2370 EQov	165	150	45	91	15	35	140	TG 2370	3,20	EQ	95ov
364832	TG 2380 EQov	165	150	59	95	16	36	140	TG 2380	3,20	EQ	110ov
365533	TG 2870 EQov	225	150	59	95	16	36	196	TG 2870	3,40	EQ	110ov
365871	TG 4200 EQov	170	170	59	95	16	36	145	TG 4200	3,60	EQ	110ov
366020	TG 4700 EQov	190	195	60	117	22	45	165	TG 4700	4,00	EQ	131ov
366010	T 4700 EQov	195	195	60	117	18	40	165	T 4700	4,00	EQ	130ov
365932	TG 5400 EQov	231	170	59	95	16	36	196	TG 5400	4,20	EQ	110ov
365938	TG 5477 EQov1	220	170	50	99	18	40	190	TG 5477	4,20	EQ	111ov
365934	T 5431 EQov	225	170	60	117	22	44	190	T 5430	4,20	EQ	131ov
366040	TG 5500 EQov	230	195	60	117	22	44	195	TG 5500	4,50	EQ	131ov
366110	TG 6550 EQov	230	170	59	95	16	36	205	TG 6550	4,20	EQ	110ov
366363	TG 7300 EQov	235	195	60	117	22	44	200	TG 7300	4,40	EQ	131ov
366370	T 11200 EQov	225	229	55	156	31	71	183	T 11200	4,60	EQ	160ov
366379	TG 11900 EQov	273	235	55	156	31	71	220	TG 11900	5,00	EQ	160ov

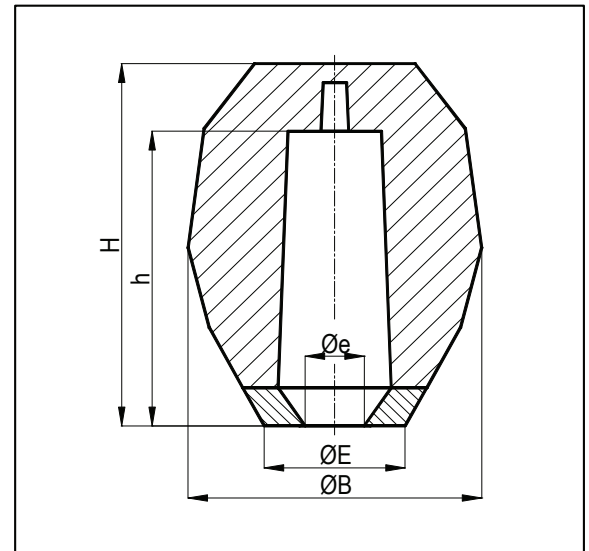
THERMO-RISER TG/ESQ and T/ ESQ with reduced contact area



Ref.No.	Type	H [mm]	ØB [mm]	ØE [mm]	øe [mm]	h [mm]	Riser Modulus Type [cm]	Breaker Cores
(356320)	TG 547 ESQ 25	115	89	45	25	94	TG 547 1,40	ESQ 68-25
(356326)	TG 617 ESQ 25	145	88	45	25	121	TG 617 1,70	ESQ 68-25
356332	TG 740 ESQ 25	160	108	45	25	133	TG 740 1,92	ESQ 68-25
356333	TG 747 ESQ 25	160	106	45	25	133	TG 747 1,92	ESQ 68-25
(356336)	TG 1110 ESQ 32	160	125	60	32	128	TG 1110 2,20	ESQ 90-32
(356342)	TG 1330 ESQ 32	170	138	60	32	138	TG 1330 2,50	ESQ 90-32
356339	TG 1640 ESQ 32	155	125	60	32	128	TG 1640 2,20	ESQ 90-32
356346	TG 1930 ESQ 32	170	138	60	32	143	TG 1930 2,80	ESQ 90-32
356348	TG 2313Z ESQ 32	155	150	60	32	128	TG 2313 2,90	ESQ 90-32
356349	TG 2370 ESQ 32	175	150	60	32	148	TG 2370 3,20	ESQ 90-32
356350	TG 2339 ESQ 40	166	133	65	40	141	TG 2339 3,20	ESQ 90-40
356353	TG 2869 ESQ 40	226	150	65	40	196	TG 2869 3,40	ESQ 90-40
356388	TG 11900 ESQ 60	270	235	110	60	217	TG 11900 5,00	ESQ 160-60
356817	TG 17400 ESQ 60	270	235	110	60	217	TG 17400 5,20	ESQ 160-60
357230	TG 19000 ESQ 81	400	280	130	80	325	TG 19000 6,80	ESQ 160-81
(356335)	T 748 ESQ 28	160	108	59	28	133	T 748 1,92	ESQ 82-28
(356343)	T 1669 ESQ 32	217	140	60	32	186	T 1669 3,30	ESQ 90-32
356379	T 11900 ESQ 54	267	234	110	55	217	T 11900 4,80	ESQ 160-54
356375	T 11900 ESQ 55	267	234	130	55	217	T 11900 4,80	ESQ 160-55
356381	T 11900 ESQ 60	267	234	110	60	217	T 11900 4,80	ESQ 160-60
356378	T 11900 ESQ 61	267	234	130	60	217	T 11900 4,80	ESQ 160-61
357280	T 22920W ESQ 60	390	235	110	60	340	T 22920 5,00	ESQ 160-60
357280	T 22920W ESQ 60	390	235	110	60	340	T 22920 5,00	ESQ 160-60

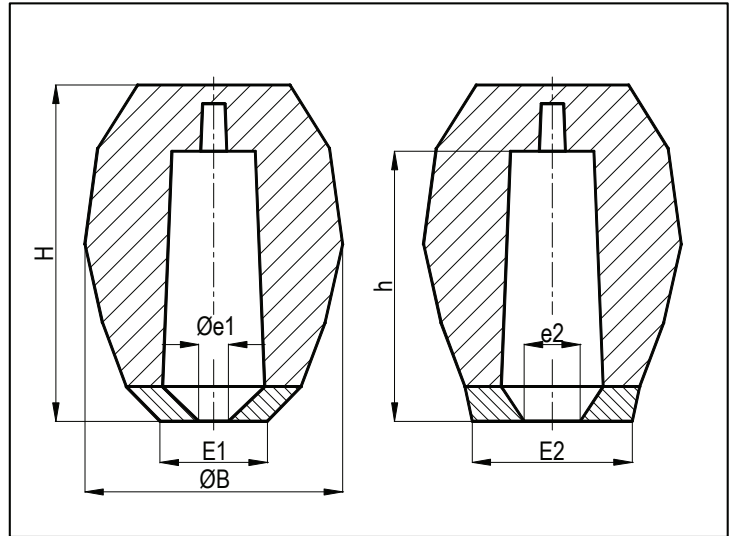


THERMO-RISER TG/EQ/S and T/EQ/S with integral breaker core



Ref.No.	Type			H [mm]	ØB [mm]	ØE [mm]	øe [mm]	h [mm]	Riser Type	Modulus [cm]	Breaker Cores	
350304	TG	50	EQ 10S	67	52	26	10	57	TG 50	0,75	EQ	30-10S
350604	TG	120	EQ 10S	75	60	28	10	60	TG 120	0,85	EQ	38-10S
351312	TG	155	EQ 15S	95	66	34	15	80	TG 155	1,20	EQ	45-15S
350904	TG	190	EQ 10S	95	60	28	10	80	TG 190	0,95	EQ	38-10S
	T	305	EQ 15S	113	53	34	15	97	T 305	< 1,30	EQ	50-15S
351810	TG	275	EQ 15S	113	78	34	15	94	TG 275	1,30	EQ	50-15S
352114	TG	400	EQ 18S	115	90	45	18	95	TG 400	1,40	EQ	60-18S
352415	TG	541	EQ 18S	105	88	45	18	85	TG 541	1,40	EQ	60-18S
352421	TG	547	EQ 18S	115	90	58	18	85	TG 547	1,40	EQ	68-18S
352714	TG	610	EQ 18S	132	88	45	18	112	TG 610	1,70	EQ	60-18S
353334	TG	740	EQ 18S	150	106	50	18	125	TG 740	1,92	EQ	65-18S
353431	TG	747	EQ 18S	150	106	58	18	125	TG 747	1,92	EQ	68-18S
	TG	990	EQ 20S	125	117	68	20	105	TG 990	2,10	EQ	82-20S
	TG	1110	EQ 20S	141	125	75	20	115	T 1110	2,20	EQ	90-20S
353629	TG	1111	EQ 20S	143	117	68	20	115	TG 1111	2,20	EQ	82-20S
354270	TG	1332 K	EQ 19S	151	131	86	20	131	TG 1332 K	2,50	EQ	90-19S
354236	TG	1330	EQ 20S	155	138	75	20	135	TG 1330	2,50	EQ	90-20S
353933	TG	1640	EQ 20S	145	125	75	20	115	TG 1640	2,20	EQ	90-20S
355143	TG	1666	EQ 18S	215	138	45	18	190	TG 1666	3,30	EQ	65-18S
354533	TG	1930	EQ 20S	155	138	75	20	138	TG 1930	2,80	EQ	90-20S
	TG	2339	EQ 20S	160	133	75	20	135	TG 2339	3,20	EQ	90-20S
354833	TG	2370	EQ 20S	160	150	75	20	133	TG 2370	3,20	EQ	90-20S

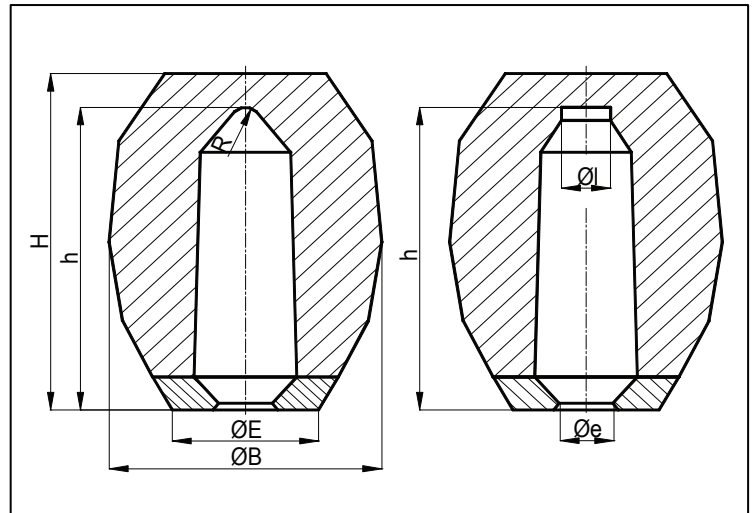
THERMO-RISER TG/EQovS with oval contact area and break edge at the casting part



Ref.No.	Type	H	ØB	E1	E2	e1	e2	h	Riser Modulus		Breaker Cores
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	Type	[cm]	
361230	T 310oL EQovS	130	53	20	36	8	20	115	T 310oL	< 1,30	EQ 38ovS
362104	TG 400 EQovS	120	90	32	57	12	27	100	TG 400	1,40	EQ 60ovS
364221	TG 541 EQovS	110	88	32	57	12	27	90	TG 541	1,40	EQ 60ovS
	TG 610 EQovS	137	88	32	57	12	27	117	TG 610	1,70	EQ 60ovS
362721	TG 617 EQovS	137	88	42	68	15	35	114	TG 617	1,70	EQ 68ovS
	TG 747 EQovS	155	106	34	68	12	29	128	TG 747	1,92	EQ 71ovS
363742	TG 1111K EQovS	148	117	42	72	15	35	120	TG 1111K	2,20	EQ 82ovS
364622	TG 1332K EQovS	160	132	44	77	15	35	138	TG 1332K	2,50	EQ 89ovS
364822	TG 2370K EQovS	165	150	45	91	15	35	140	TG 2370K	3,20	EQ 95ovS

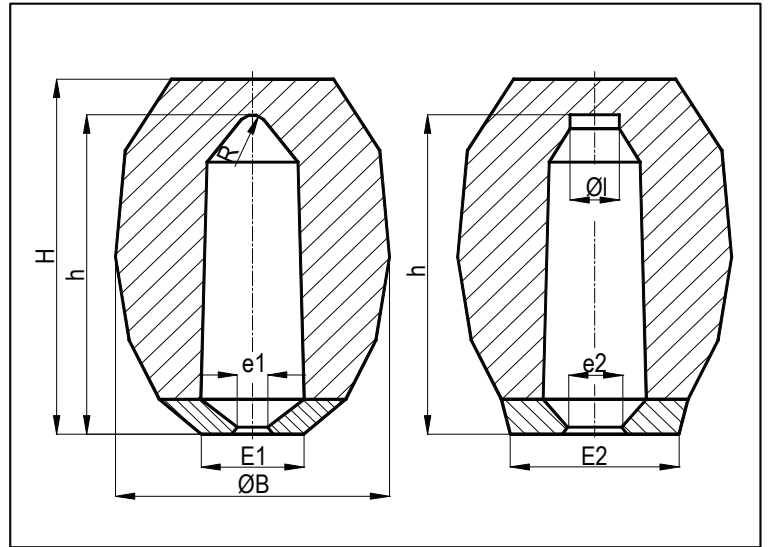


THERMO-RISER TG/Z/EQ and T/Z/EQ with selfcentering pin



Ref.No.	Type	H [mm]	ØB [mm]	ØE [mm]	øe [mm]	h [mm]	R [mm]	ØI [mm]	Form	Riser Modulus Type	Breaker Cores
350608	TG 120 Z EQ 15	75	60	34	15	60	4		1	TG 120 Z 0,85	EQ 38-15
351380	TG 295 Z EQ 15	95	66	34	15	80	4		1	TG 295 Z 1,20	EQ 45-15
351811	TG 275 Z EQ 15	113	78	34	15	98	4		1	TG 275 Z 1,30	EQ 50-15
351210	T 305 Z EQ 15	113	53	34	15	97	5		1	T 305 Z < 1,30	EQ 50-15
352111	TG 400 Z EQ 18	115	90	45	18	95	6		1	TG 400 Z 1,40	EQ 60-18
352419	TG 541 Z EQ 19	110	88	56	18	90	6		1	TG 542 Z 1,40	EQ 60-19
	TG 600 Z EQ 18	125	84	45	18	116	6		1	TG 600 Z 1,50	EQ 60-18
352718	TG 610 Z EQ 25	132	88	45	25	116	6		1	TG 610 Z 1,70	EQ 60-25
353005	TG 610 Z EQ 19	127	88	56	18	111	6		1	TG 611 Z 1,70	EQ 60-19
352721	TG 617 Z EQ 18	132	88	58	18	119	7		1	TG 617 Z 1,70	EQ 68-18
353015	TG 695 Z EQ 19	106	94	66	20	91		20	2	TG 695 Z 1,80	EQ 82-19
353234	TG 730 Z EQ 18	131	106	58	18	117	6		1	TG 730 Z 1,80	EQ 68-18
354428	TG 742 Z EQ 18	142	106	58	18	130	6		1	TG 742 Z 1,90	EQ 68-18
354425	TG 744 Z EQ 18	150	106	58	18	130	6		1	TG 744 Z 1,90	EQ 68-18
353327	TG 740 Z EQ 25	150	106	50	25	123		25	2	TG 740 Z 1,92	EQ 65-25
353626	TG 1111 Z EQ 20	140	117	68	20	115	8		1	TG 1111 Z 2,20	EQ 82-20
353960	TG 1640 Z EQ 32	145	130	60	32	120		32	2	TG 1640 Z 2,20	EQ 90-32
354237	TG 1330 Z EQ 20	155	138	75	20	135	6		1	TG 1330 Z 2,50	EQ 90-20
354238	TG 1330 Z EQ 25	160	138	60	25	140	6		1	TG 1330 Z 2,50	EQ 90-25
354224	TG 1332 Z EQ 19	151	131	86	20	131	6		1	TG 1332 Z 2,50	EQ 90-19
354241	TG 1520 Z EQ 32	160	138	60	32	130		32	2	TG 1520 Z 2,50	EQ 90-32
354710	TG 2313 Z EQ 20	140	150	75	20	115		32	2	TG 2313 Z 2,90	EQ 90-20
354740	TG 2313 Z EQ 32	145	150	60	32	120		32	2	TG 2313 Z 2,90	EQ 90-32
354848	TG 2373 Z EQ 25	165	150	60	25	120	6		1	TG 2373 Z 3,20	EQ 90-25
354838	TG 2370 Z EQ 20	160	150	75	20	135	6		1	TG 2370 Z 3,20	EQ 90-20
	TG 2869 Z EQ 30	216	150	75	30	201		26	2	TG 2869 Z 3,40	EQ 90-30
	TG 3101 Z EQ 26	170	170	82	26	140	6		1	TG 3101 Z 3,50	EQ 110-26

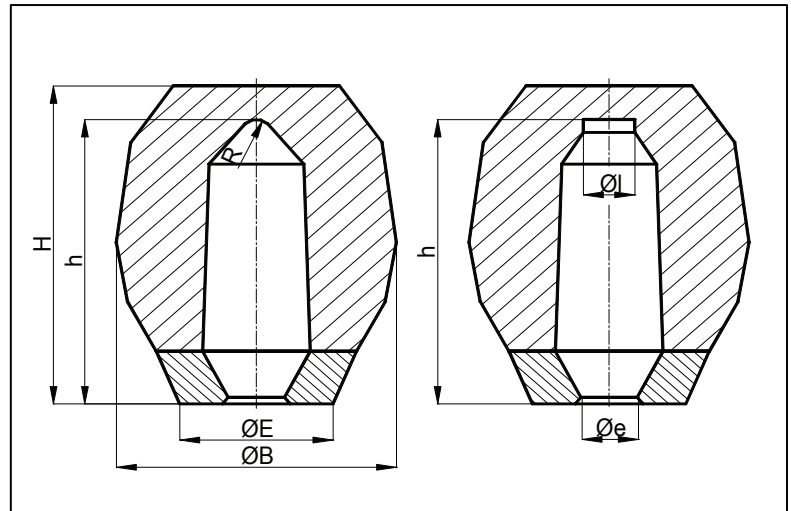
THERMO-RISER TG/Z/EQov and T/Z/EQov easy positioning support and oval contact area



Ref.No.	Type	H	ØB	E1	E2	e1	e2	h	R/ØI	Form	Riser Type	Modulus [cm]	Breaker Cores
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]				
361225	T 305 Z EQov	118	53	24	48	10	20	102	5	1	T 305 Z	< 1,30	EQ 50ov
	TG 400 Z EQov	120	89	32	57	12	26	100	6	1	TG 400 Z	1,40	EQ 60ov
	TG 542 Z EQov	120	89	32	57	12	26	100	6	1	TG 542 Z	1,40	EQ 60ov
	TG 600 Z EQov	130	84	32	57	12	26	124	6	1	TG 600 Z	1,50	EQ 60ov
	TG 610 Z EQov	137	88	32	57	12	26	124	6	1	TG 610 Z	1,70	EQ 60ov
	TG 617 Z EQov	137	88	43	68	15	35	124	6	1	TG 617 Z	1,70	EQ 68ov
362720	TG 618 Z EQov	137	88	34	68	12	29	124	6	1	TG 617 Z	1,70	EQ 71ov
	TG 730 Z EQov	133	106	43	68	15	35	122	6	1	TG 730 Z	1,80	EQ 68ov
	TG 747 Z EQov	155	106	34	68	12	29	140	6	1	TG 740 Z	1,92	EQ 71ov
	T 1060 Z EQov	139	108	42	72	15	35	128	20	2	T 1060 Z	1,80	EQ 82ov
363740	TG 1111 Z EQov	145	117	42	72	15	35	120	6	1	TG 1111 Z	2,20	EQ 82ov
	TG 1640 Z EQov	145	130	50	85	15	35	120	32	2	TG 1640 Z	2,20	EQ 90ov
364226	TG 1330 Z EQov	160	138	44	77	15	35	140	6	1	TG 1330 Z	2,50	EQ 89ov
	TG 1332 Z EQov	160	131	44	77	15	35	140	6	1	TG 1332 Z	2,50	EQ 89ov
364235	TG 1338 Z EQov	160	138	50	85	15	62	140	6	1	TG 1330 Z	2,50	EQ 88ov
364236	TG 1339 Z EQov	160	138	50	85	15	35	140	6	1	TG 1330 Z	2,50	EQ 90ov
	TG 1520 Z EQov	160	138	50	85	15	35	130	32	2	TG 1520 Z	2,50	EQ 90ov
364810	TG 2313 Z EQov	145	150	50	85	15	35	120	32	2	TG 2313 Z	2,90	EQ 90ov
	TG 2373 Z EQov	165	150	50	85	15	35	140	6	1	TG 2373 Z	3,20	EQ 90ov
364825	TG 2370 Z EQov	165	150	50	85	15	35	140	6	1	TG 2370 Z	3,20	EQ 90ov
	T 2860 Z EQov	218	150	50	85	15	35	193	26	2	T 2860 Z	3,40	EQ 90ov
	TG 3101 Z EQov	170	170	59	95	16	36	140	6	1	TG 3101 Z	3,50	EQ 110ov



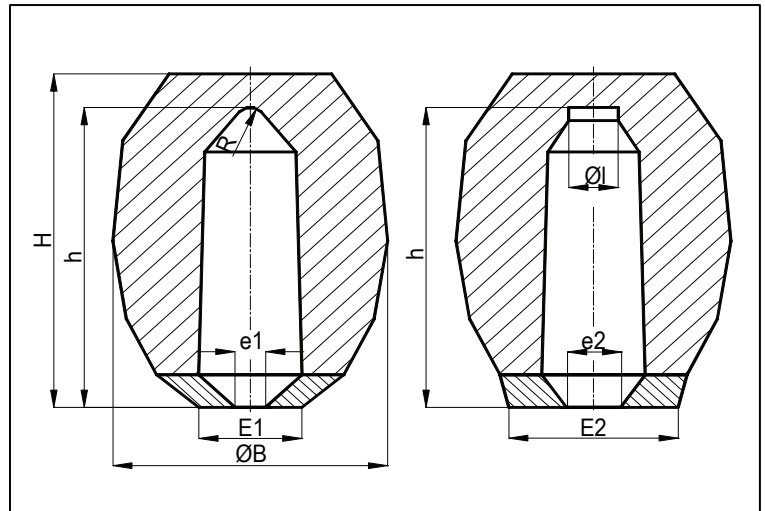
THERMO-RISER TG/Z/ESQ and T/Z/ESQ with easy positioning support with reduced contact area



Ref.No.	Type	H [mm]	ØB [mm]	ØE [mm]	øe [mm]	h [mm]	R/ØI [mm]	Form	Riser Type	Modulus [cm]	Breaker Cores
356337	TG 547 Z ESQ 25	125	89	45	25	105	6	1	TG 542 Z	1,40	ESQ 68-25
	TG 617 Z ESQ 25	142	88	45	25	129	6	1	TG 617 Z	1,70	ESQ 68-25
	TG 740 Z ESQ 25	160	106	45	25	145	6	1	TG 740 Z	1,92	ESQ 68-25
	T 1060 Z ESQ 28	144	108	59	28	133	20	2	T 1060 Z	1,80	ESQ 82-28
	TG 1111 Z ESQ 28	150	117	59	28	125	6	1	TG 1111 Z	2,20	ESQ 82-28
	TG 1640 Z ESQ 32	155	130	60	32	130	32	2	TG 1640 Z	2,20	ESQ 90-32
	TG 1330 Z ESQ 32	170	138	60	32	150	6	1	TG 1330 Z	2,50	ESQ 90-32
356348	TG 1332 Z ESQ 32	170	131	60	32	150	6	1	TG 1332 Z	2,50	ESQ 90-32
	T 1520 Z ESQ 32	170	138	60	32	140	32	2	T 1520 Z	2,50	ESQ 90-32
	TG 2313 Z ESQ 32	155	150	60	32	130	32	2	TG 2313 Z	2,90	ESQ 90-32
	TG 2373 Z ESQ 32	175	150	60	32	150	6	1	TG 2373 Z	3,20	ESQ 90-32
	TG 2370 Z ESQ 32	175	150	60	32	150	6	1	TG 2370 Z	3,20	ESQ 90-32
	T 2869 Z ESQ 32	228	150	60	32	203	26	2	T 2869 Z	3,40	ESQ 90-32
363960	TG 1619 Z EQ 25	150	130	60	25	120	6	2	TG 1640 Z	2,20	EQ 90-25
353960	TG 1640 Z EQ 32	150	130	60	32	120	32	2	TG 1640 Z	2,20	EQ 90-32
354238	TG 1330 Z EQ 25	160	138	60	25	140	6	1	TG 1330 Z	2,50	EQ 90-25
	TG 1332 Z EQ 32	160	131	60	32	140	6	1	TG 1332 Z	2,50	EQ 90-32
354241	TG 1520 Z EQ 32	160	138	60	32	130	32	2	TG 1520 Z	2,50	EQ 90-32
354740	TG 2313 Z EQ 32	145	150	60	32	120	32	2	TG 2313 Z	2,90	EQ 90-32
354849	TG 2373 Z EQ 32	165	150	60	32	140	6	1	TG 2373 Z	3,20	EQ 90-32
354841	TG 2370 Z EQ 32	165	150	60	32	140	6	1	TG 2370 Z	3,20	EQ 90-32
	T 2869 Z EQ 32	218	150	60	32	193	26	2	T 2869 Z	3,40	EQ 90-32



THERMO-RISER TG/Z/EQovS and T/Z/EQovS with easy positioning support with oval contact area and break edge at the casting part



Ref.No.	Type	H	ØB	E1	E2	e1	e2	h	R/ØI	Form	Riser Type	Modulus	Breaker Cores
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]			[cm]	
362105	T 305 Z EQovS	118	53	24	48	10	20	102	5	1	T 305 Z	< 1,30	EQ 50ovS
	TG 400 Z EQovS	120	89	32	57	12	26	100	6	1	TG 400 Z	1,40	EQ 60ovS
	TG 541 Z EQovS	120	89	32	57	12	26	100	6	1	TG 541 Z	1,40	EQ 60ovS
	TG 600 Z EQovS	130	84	32	57	12	26	124	6	1	TG 600 Z	1,50	EQ 60ovS
	TG 610 Z EQovS	137	88	32	57	12	26	124	6	1	TG 610 Z	1,70	EQ 60ovS
	TG 617 Z EQovS	137	88	43	68	15	35	124	6	1	TG 617 Z	1,70	EQ 68ovS
	TG 618 Z EQovS	137	88	34	68	12	29	124	6	1	TG 617 Z	1,70	EQ 71ovS
	TG 730 Z EQovS	133	106	43	68	15	35	122	6	1	TG 730 Z	1,80	EQ 68ovS
	TG 747 Z EQovS	155	106	34	68	12	29	140	6	1	TG 740 Z	1,92	EQ 71ovS
	TG 1111 Z EQovS	145	117	42	72	15	35	120	6	1	TG 1111 Z	2,20	EQ 82ovS
	TG 1332 Z EQovS	160	131	44	77	15	35	140	6	1	TG 1332 Z	2,50	EQ 89ovS
	TG 1330 Z EQovS	160	138	44	77	15	35	140	6	1	TG 1330 Z	2,50	EQ 89ovS
	TG 1338 Z EQovS	160	138	50	85	15	62	140	6	1	TG 1330 Z	2,50	EQ 88ovS
	TG 1339 Z EQovS	160	138	50	85	15	35	140	6	1	TG 1330 Z	2,50	EQ 90ovS
	TG 1520 Z EQovS	160	138	50	85	15	35	130	32	2	TG 1520 Z	2,50	EQ 90ovS
	TG 1640 Z EQovS	145	130	50	85	15	35	120	32	2	TG 1640 Z	2,20	EQ 90ovS
	TG 2313 Z EQovS	145	150	50	85	15	35	120	32	2	TG 2313 Z	2,90	EQ 90ovS
	TG 2370 Z EQovS	165	150	45	91	15	35	140	6	1	TG 2370 Z	3,20	EQ 95ovS
	TG 2373 Z EQovS	165	150	50	85	15	35	140	6	1	TG 2373 Z	3,20	EQ 90ovS
	TG 2860 Z EQovS	218	150	50	85	15	35	193	26	2	TG 2860 Z	3,40	EQ 90ovS
	TG 3101 Z EQovS	170	170	59	95	16	36	140	6	1	TG 3101 Z	3,50	EQ 110ovS



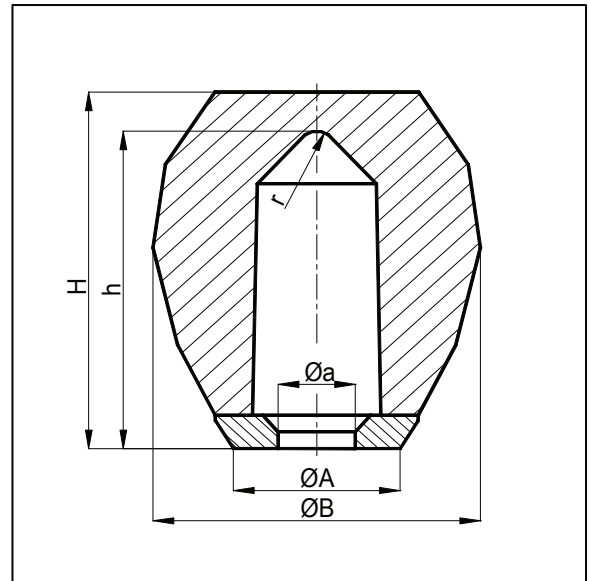
THERMO-RISER TGI/EQ for nonferrus metal castings

Characteristics

- highly-insulating
- riser neck/ reduction plate RP silica sand e.g. -30Q
- feed metal utilisation up to 70%
- high strength for machine moulding

Applications

nonferrus metals



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	Øa	ØA [mm]	ØB [mm]	H [mm]	h [mm]	ØI/ r [mm]
351005	TGI 120Z EQ 10S	0,8	16	10	28	56	72	60	6
350909	TGI 190Z EQ 10S	0,9	27	10	28	60	95	90	6
351204	TGI 310Z EQ 15S	1,1	45	15	34	53	125	121	7
	TI 581Z EQ 19	1,5	117	20	56	78	124	116	R6
	TI 591Z EQ 19	1,5	117	20	56	78	132	116	R6
	TI 591Z EQ 26	1,5	117	25	56	78	132	116	R6
	TI 610Z EQ 26	1,6	83	25	56	88	131	118	R8
348553	TGI 1113Z EQ 30	2,0	210	30	73	117	133	108	R6
	PI 2337Z EQ 35	2,8	380	35	86	133	159	134	R6



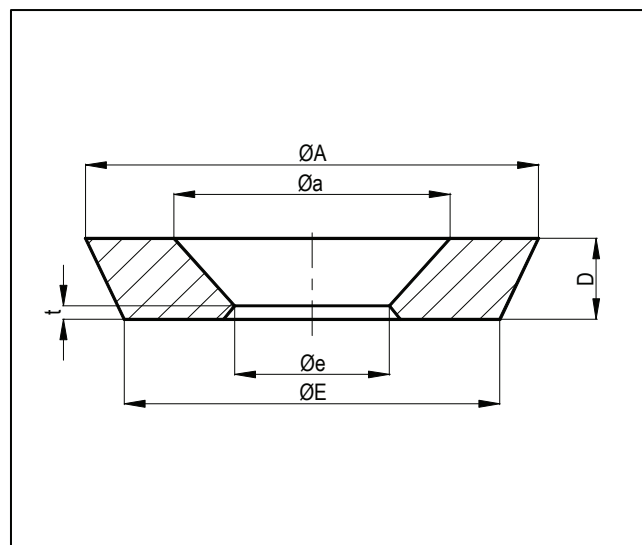
Breaker cores EQ for THERMO-RISERS

Characteristics:

- Crooning sand
- round contact area
- round neck

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]
350001	EQ 30 - 10	10	16	30	26	7	2	0,8
350002	EQ 38 - 15	15	21	38	34	10	2	1,8
350005	EQ 45 - 15	15	21	45	34	10	2	1,8
350066	EQ 45 - 16	16	25	45	42	7	2	2,0
350007	EQ 50 - 15	15	21	50	34	13	2	1,8
350047	EQ 50 - 19	19	27	50	45	10	2	2,8
350081	EQ 50 - 20	20	32	50	34	13	3	3,1
350070	EQ 60 - 17	18	29	60	45	10	3	2,5
350071	EQ 60 - 25 / 2	25	29	60	45	10	3	4,9
350067	EQ 60 - 16	17	30	60	56	10	3	2,3
350069	EQ 60 - 19	18	30	60	56	10	3	2,5
350077	EQ 60 - 26	26	35	60	56	10	3	5,3
350010	EQ 60 - 18	18	36	60	45	15	3	2,5
350017	EQ 60 - 20	20	25	60	45	15	3	2,6
350013	EQ 60 - 25	25	30	60	45	15	3	4,9
350078	EQ 65 - 19	18	30	66	62	10	3	2,5
350014	EQ 65 - 18	18	30	65	50	15	3	2,5
350018	EQ 65 - 25	25	30	65	50	15	3	4,9
350020	EQ 68 - 18	18	36	70	58	15	3	2,5
350019	EQ 68 - 25	25	35	70	58	15	3	4,9



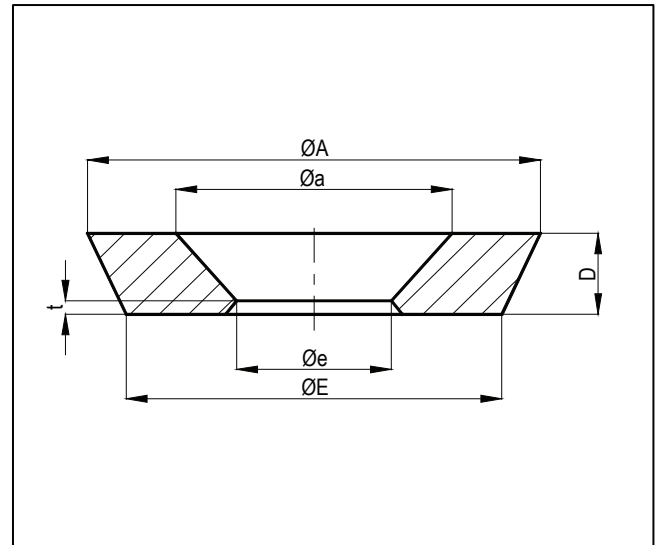
Breaker cores EQ for THERMO-RISERS

Characteristics:

- Croning sand
- round contact area
- round neck

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]
350049	EQ 82 - 19	20	30	82	66	11	3	3,1
350028	EQ 82 - 20	20	50	82	68	15	3	3,1
350029	EQ 82 - 30	30	50	82	68	15	3	7,1
350027	EQ 82 - 27	27	50	82	54	17	3	5,7
350039	EQ 90 - 19	20	36	90	86	11	4	3,1
350052	EQ 90 - 42	42	50	90	86	11	3	13,9
350030	EQ 90 - 20	20	50	90	75	15	3	3,1
350034	EQ 90 - 30	30	50	90	75	15	3	7,1
350037	EQ 90 - 40	40	50	90	75	15	3	12,6
350038	EQ 90 - 45	45	50	90	75	15	3	15,9
350041	EQ 90 - 25	25	50	90	60	20	2	4,9
350043	EQ 90 - 32	32	50	90	60	20	2	8,0
350045	EQ 95 - 21	21	40	95	90	11	4	3,5
350046	EQ 95 - 25 / 2	25	50	95	60	20	2	4,9
350053	EQ 110 - 20	20	50	110	82	20	3	3,1
350055	EQ 110 - 26	26	50	110	82	20	3	5,3
350058	EQ 110 - 40	40	50	110	82	20	3	12,6
350056	EQ 110 - 27	26	45	110	95	18	3	5,3
350060	EQ 140 - 30	30	70	140	110	20	3	7,1
350061	EQ 140 - 40	40	78	140	110	20	3	12,6

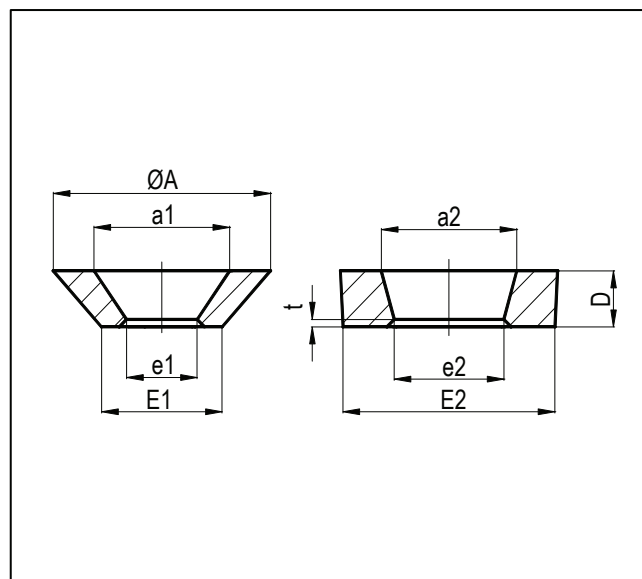
Breaker cores oval EQ/ov for THERMO-RISERS

Characteristics:

- Croning sand
- oval contact area
- oval neck

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	e1 [mm]	e2 [mm]	a1 [mm]	a2 [mm]	ØA [mm]	E1 [mm]	E2 [mm]	D [mm]	t [mm]	Q [cm²]
360018	EQ 38ov	8	20	12	24	38	20	36	15	2	1,5
(360019)	EQ 45ov	10	20	14	24	45	23	42	15	3	1,8
360020	EQ 50ov	10	20	18	28	50	24	48	18	3	1,8
360023	EQ 60ov	12	26	21	35	60	32	57	20	3	2,8
360027	EQ 68ov	15	35	30	40	70	43	68	20	3	4,8
360026	EQ 71ov	12	29	30	40	70	34	68	20	3	3,2
360028	EQ 82ov	15	35	Ø	40	82	42	72	20	3	4,8
360033	EQ 88ov	15	62	42	69	90	50	85	20	3	8,8
360030	EQ 89ov	15	35	Ø	40	90	44	77	20	3	4,8
360029	EQ 90ov	15	35	Ø	42	90	50	85	20	3	4,8
360034	EQ 95ov	15	35	24	40	95	45	91	20	4	4,8
360025	EQ 96ov	19	35	24	40	96	60	80	20	3	5,8
360031	EQ 110ov	16	36	Ø	50	110	60	95	20	3	5,2
360032	EQ 111ov	18	40	Ø	50	110	50	99	25	4	6,5
360035	EQ 130ov	18	40	Ø	69	130	60	117	25	4	6,5
360036	EQ 131ov	22	44	Ø	69	130	60	117	25	4	8,6
360037	EQ 160ov1	50	90	64	104	160	Ø	110	30	5	39,6
360051	EQ 160ov	31	71	42	82	160	55	156	33	5	19,9



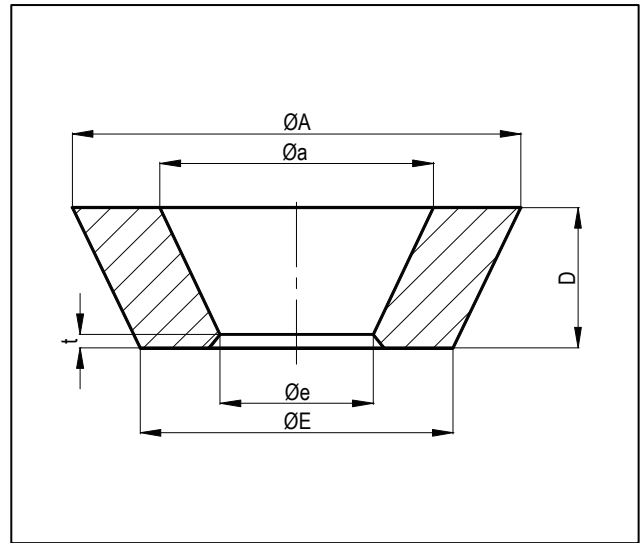
Breaker cores bowl shaped ESQ for THERMO-RISERS

Characteristics:

- Croning sand
- reduced contact area
- round neck

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]
360008	ESQ 68 - 25	25	36	68	45	25	3	4,9
360011	ESQ 82 - 28	28	40	82	59	25	5	6,2
360009	ESQ 90 - 32	32	50	90	60	30	3	8,0
360010	ESQ 90 - 40	40	51	90	65	20	5	12,6
360017	ESQ 160 - 54	55	74	160	110	30	5	23,8
360014	ESQ 160 - 55	55	74	160	130	30	5	28,3
360016	ESQ 160 - 60	60	75	160	110	30	5	28,3
360015	ESQ 160 - 61	60	79	160	130	30	5	28,3
360005	ESQ 160 - 81	80	94	160	130	30	5	50,3



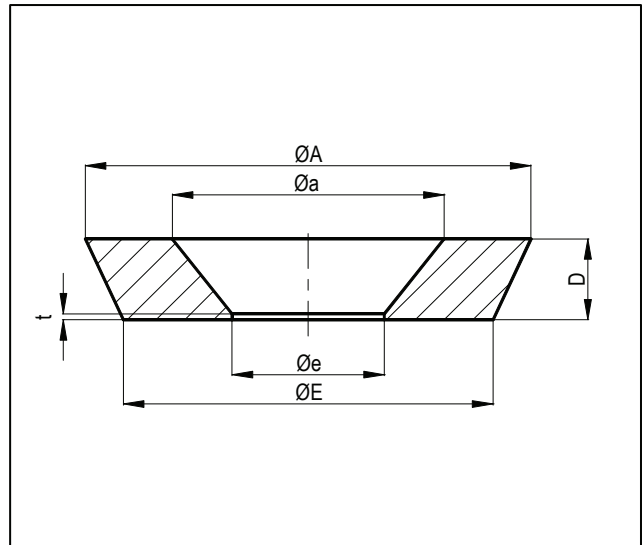
Breaker cores EQ/S for THERMO-RISERS

Characteristics:

- Croning sand
- round contact area
- round neck
- low dressing costs

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]
350065	EQ 30 - 10S	10	16	30	26	7	0	0,8
350003	EQ 38 - 10S	10	20	38	28	10	0	0,8
350004	EQ 45 - 15S	15	20	45	34	10	0	1,8
350009	EQ 50 - 15S	15	21	50	34	13	0	1,8
350048	EQ 50 - 19S	19	27	50	45	10	0	2,8
350075	EQ 60 - 17S	18	29	60	45	10	0	2,5
350011	EQ 60 - 18S	18	26	60	45	15	0	2,5
350072	EQ 65 - 18S	18	35	65	50	15	0	2,5
350021	EQ 68 - 18S	18	29	70	58	15	0	2,5
350050	EQ 82 - 19S	19	40	82	72	11	0	2,8
350082	EQ 82 - 20S	20	50	82	68	15	0	3,1
350042	EQ 90 - 19S	20	36	90	86	11	1	3,1
350051	EQ 90 - 29S	30	46	90	86	11	1	7,1
350031	EQ 90 - 20S	20	50	90	75	15	0	3,1

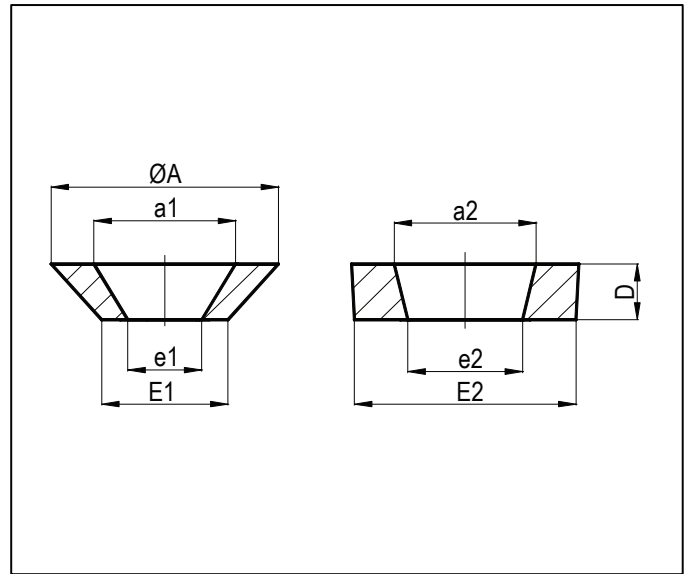
Breaker cores oval EQ/ovS for THERMO-RISERS

Characteristics:

- Croning sand
- oval contact area
- oval neck
- break edge at the casting part
- low fettling costs
- high strength for machine moulding

Applications:

grey cast iron, ductile iron
and cast steel



Ref.-No.	Type	e1 [mm]	e2 [mm]	a1 [mm]	a2 [mm]	ØA [mm]	E1 [mm]	E2 [mm]	D [mm]	Q [cm²]
360038	EQ 38ovS	8	20	12	24	38	20	36	15	1,5
360039	EQ 45ovS	10	20	14	24	45	23	42	15	1,8
360040	EQ 50ovS	10	20	18	28	50	24	48	18	1,8
360041	EQ 60ovS	12	26	21	35	60	32	57	20	2,8
360042	EQ 68ovS	15	35	30	40	70	43	68	20	4,8
360046	EQ 71ovS	12	29	30	40	70	34	68	20	3,2
360048	EQ 82ovS	15	35	ø	40	82	42	72	20	4,8
360047	EQ 89ovS	15	35	ø	40	90	44	77	20	4,8
(360049)	EQ 90ovS	15	35	ø	42	90	50	84	20	4,8
360050	EQ 95ovS	15	35	24	40	95	45	91	20	4,8



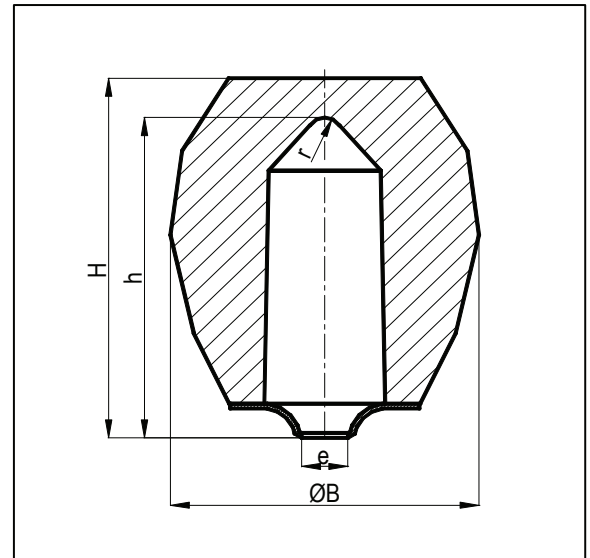
POINT-RISER PX / ME-N with metal plate ME-N

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small point riser neck
- no contact area on the casting
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 70%
- residual material easily removed at shakeout

Applications:

grey cast iron and ductile iron



Ref.-No.	Type			Vol. [cm³]	øe [mm]	ØB [mm]	H [mm]	h [mm]	r [mm]	Riser Modulus	
										Type	[cm]
348702	PX	125	ME15N	14	15	60	77	62	5	TG 125Z	0,85
348785	PX	195	ME15 N	26	15	60	97	92	Ø6	TG 195	1,0
348794	PX	295L	ME15 N	39	15	66	97	82	Ø5	TG 295Z (L)	1,2
348798	PX	274	ME15 N	50	15	78	112	92	r7	TG 274Z	1,3
348796	PX	275	ME15 N	26	15	78	112	97	r4	TG 275Z	1,3
348721	PX	390	ME20 N	32	20	88	84	69	r6	T 390Z	1,3
348713	PX	400	ME15 N	50	15	90	112	92	r7	TG 400Z	1,4
348719	PX	541	ME20 N	75	20	88	104	94	r8	TG 541Z	1,4
348800	PX	581	ME20 N	117	20	78	124	116	r6	TG 581Z	1,6
348722	PX	631	ME20 N	80	20	88	131	118	r6	TG 610Z	1,7
348723	PX	633	ME20 N	81	20	88	131	123	Ø12	TG 633Z	1,7
348724	PX	638	ME20 N	117	20	88	124	116	r6	T 638Z	1,7
348728	PX	640	ME20 N	134	20	88	154	146	r8	TG 640Z	1,8
348737	PX	670	ME20 N	97	20	84	124	117	Ø11	TG 670Z	1,6
348717	PX	699	ME20 N	95	20	94	109	94	r5	TG 699Z	1,7
348729	PX	699	MEov N	95	20x30	94	111	96	r5	TG 699Z	1,7
348730	PX	740	ME20 N	114	20	106	149	134	r6	TG 740Z	1,9
348738	PX	729	MEov N	122	20x30	98	141	126	r9	T 729Z	1,8
348716	PX	809	ME20 N	101	20	106	130	117	Ø11	TG 809Z	1,9
348734	PX	810	ME20 N	117	20	106	130	116	r6	TG 810Z	1,9
348725	PX	819	ME20 N	114	20	105	101	94	Ø5	TG 819Z	1,85
348790	PX	820	MEov N	117	20x30	106	132	118	r6	TG 820Z	1,9
348736	PX	930	ME20 N	140	20	117	109	91	Ø10	TG 930	2,0
348727	PX	934	ME20 N	143	20	94	127	119	Ø11	TG 934Z	ca. 2,0
348881	PX	990	ME25 N	140	25	117	124	114	r8	TG 990Z	2,1
348731	PX	1111	ME20 N	141	20	117	139	114	r8	TG 1111Z	2,2
348739	PX	1111	MEov N	141	20x30	117	141	116	r8	TG 1111Z	2,2
348820	PX	1110	ME30 N	141	30	125	141	116	r8	TG 1110Z	2,3
348791	PX	1119	ME25 N	145	25	117	134	122	Ø10	TG 1119Z	2,2
348741	PX	1240	ME20 N	240	20	117	154	142	Ø12	TG 1240Z	2,7
348787	PX	1240	ME25 N	240	25	117	154	142	Ø12	TG 1240Z	2,7
348751	PX	1240	ME30 N	240	30	117	156	144	Ø12	TG 1240Z	2,7



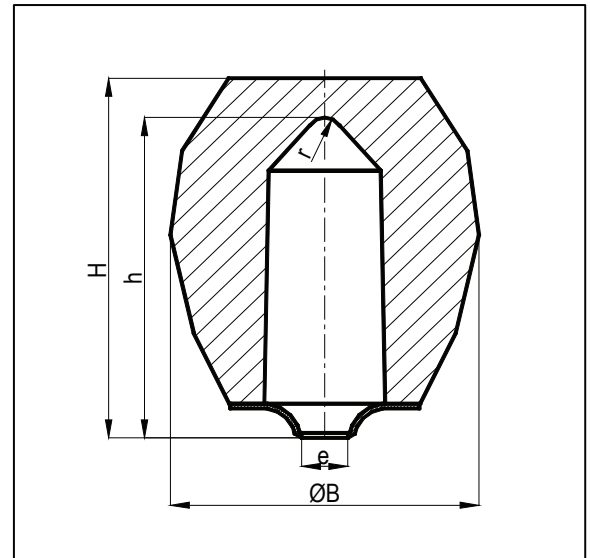
POINT-RISER PX / ME-N with metal plate ME-N

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small point riser neck
- no contact area on the casting
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 70%
- residual material easily removed at shakeout

Applications:

grey cast iron and ductile iron



Ref.-No.	Type			Vol. [cm³]	øe [mm]	ØB [mm]	H [mm]	h [mm]	r [mm]	Riser Modulus	
										Type	[cm]
348745	PX	1283	ME20 N	283	20	117	154	142	Ø12	TG 1283Z	3,1
348877	PX	1331	ME30 N	178	30	131	146	134	Ø21	TG 1331Z	2,5
348733	PX	1332	ME20 N	191	20	131	154	134	r6	TG 1332Z	2,5
348784	PX	1332	ME25 N	191	25	131	154	134	r6	TG 1332Z	2,5
348744	PX	1332	ME30 N	191	30	131	156	136	r6	TG 1332Z	2,5
348835	PX	1332	MEov N	191	20x30	131	156	136	r6	TG 1332Z	2,5
348893	PX	1640	ME25 N	208	25	125	139	114	r6	TG 1640Z	2,2
348749	PX	1651	ME20 N	208	20	125	129	118	Ø9	TG 1651Z	2,2
348747	PX	1651	ME30 N	208	30	125	131	120	Ø9	TG 1651Z	2,2
348887	PX	1850	ME25 N	260	25	125	131	121	Ø10	TG 1850Z	2,4
348748	PX	1930	ME30 N	270	30	138	156	136	r6	TG 1930Z	2,8
348894	PX	1934	ME30 N	240	30	138	156	144	Ø12	TG 1934Z	2,8
348753	PX	2339	ME20 N	297	20	133	159	134	r6	TG 2339Z	3,2
348754	PX	2339	ME30 N	297	30	133	161	136	r6	TG 2339Z	3,2
348750	PX	2339	MEov N	297	20x30	133	161	136	r6	TG 2339Z	3,2
348757	PX	2370	ME20 N	297	20	150	159	134	r6	TG 2370Z	3,2
348758	PX	2370	ME30 N	297	30	150	161	136	r6	TG 2370Z	3,2
348783	PX	2600	ME30 N	450	30	150	161	146	Ø10	TG 2600Z	3,3
348767	PX	2925	ME30 N	360	30	150	141	129	r12	TG 2925Z	3,0
348768	PX	2925	MEov N	350	20x30	150	141	129	r12	TG 2925Z	3,0
348825	PX	3620	ME30 N	520	30	150	141	129	Ø12	TG 3620Z	3,0
348762	PX	2860	ME30 N	444	30	150	217	202	Ø26	TG 2869Z	3,4
348774	PX	3103	MEov N	297	20x30	170	146	136	r6	T 3103Z	3,5
348766	PX	3200	ME30 N	470	30	170	166	148	r10	TG 3200Z	3,5
348777	PX	4380	ME30 N	590	30	150	176	164	Ø12	TG 4380Z	3,7
348761	PX	2800	ME30 N	680	30	150	191	181	Ø10	TG 2800Z	3,8
348775	PX	4700	ME40 N	600	40	195	184	167	Ø12	TG 4700Z	4,0
348779	PX	5477	ME40 N	720	40	170	214	199	Ø14	TG 5477Z	4,1
348869	PX	5407	ME30 N	770	30	170	226	211	Ø10	TG 5407Z	4,2
348782	PX	5500	ME40 N	780	40	195	229	192	Ø34	TG 5500Z	4,5
348780	PX	11200	ME30 N	1580	30	228	241	196	Ø24	T 11200	4,6

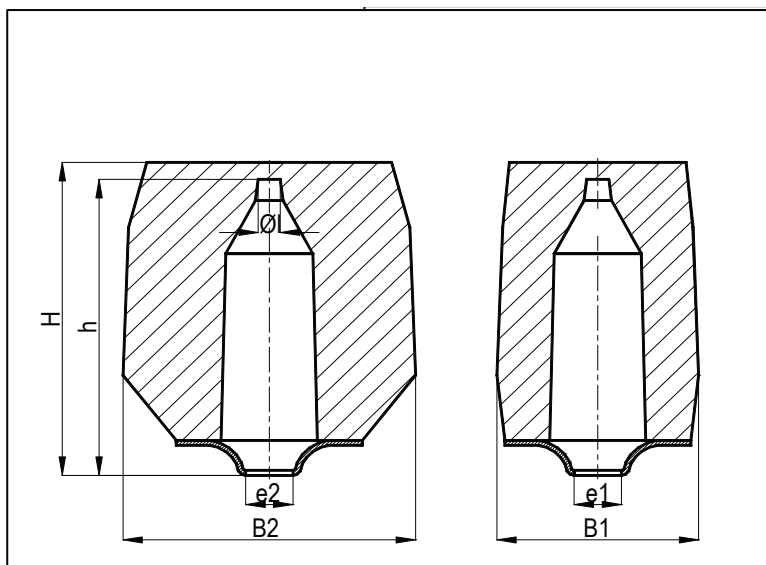
POINT-RISER OPX / MEov N with metal plate MEov N

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small oval point riser neck
- oval external corners
- no contact area on the casting
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 70%
- residual material easily removed at shakeout

Applications:

grey cast iron and ductile iron



Ref.-No.	Type		Vol. [cm ³]	e1 [mm]	e2 [mm]	B1 [mm]	B2 [mm]	H [mm]	h [mm]	r/ ØI [mm]	Form [mm]	Riser Modulus	
												Type	[cm]
348639	OPX	1111 MEovN	141	20	30	89	129	136	116	R8	1	OT 1111Z	2,1
348640	OPX	1112 MEovN	143	20	30	90	125	136	124	10	2	OT 1112Z	2,1
348643	OPX	1300 MEovN	185	20	30	100	125	156	144	10	2	OT 1300Z	2,4
348641	OPX	1700 MEovN	236	20	30	110	150	167	155	12	2	OT 1700Z	2,9
348645	OPX	1940 MEovN	276	20	30	106	156	156	136	R6	1	OT 1940Z	2,5
3486__	OPX	2900 MEovN	415	25	35	135	170	189	174	R8	1	OT 2900Z	3,4
3486__	OPX	3200 MEovN	470	25	35	130	190	179	151	R10	1	OT 3200Z	3,4

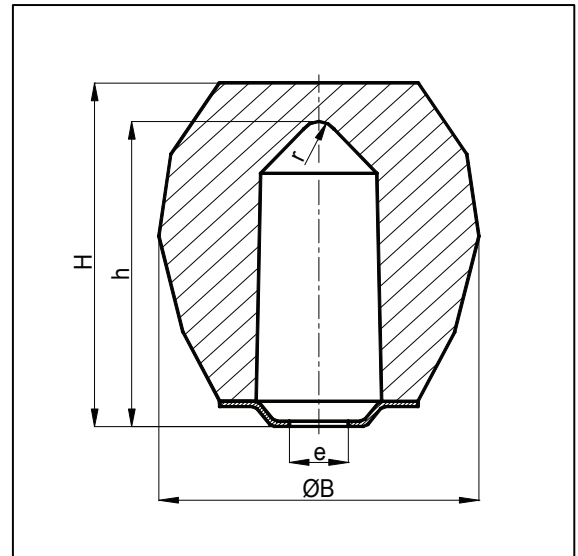
POINT-RISER PX / ME-A with metal plate ME-A

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small point riser neck
- no contact area on the casting
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 70%
- residual material easily removed at shakeout

Applications:

grey cast iron and ductile iron



Ref.-No.	Type			Vol. [cm ³]	øe [mm]	ØB [mm]	H [mm]	h [mm]	r [mm]	Riser Modulus Type	[cm]
348872	PX	990	ME30 A	140	30	117	122	112	r8	TG 990Z	2,1
348823	PX	1111	ME30 A	141	30	117	137	112	r8	TG 1111Z	2,2
348821	PX	1111L	ME30 A	141	30	117	137	109	ø 12	TG 1111Z L12	2,2
348825	PX	1650	ME30 A	208	30	125	136	121	r6	TG 1650Z	2,2
348836	PX	1651	ME30 A	208	30	125	136	121	r6	TG 1651Z	2,2
348845	PX	1930	ME30 A	270	30	140	152	132	r6	TG 1930Z	2,8
348842	PX	2313	ME30 A	200	30	150	137	112	ø48	TG 2313Z	2,9
348755	PX	2339	ME30 A	297	30	133	157	132	r6	TG 2339Z	3,2
348844	PX	2339L	ME30 A	297	30	133	157	128	ø 12	TG 2339Z L12	3,2

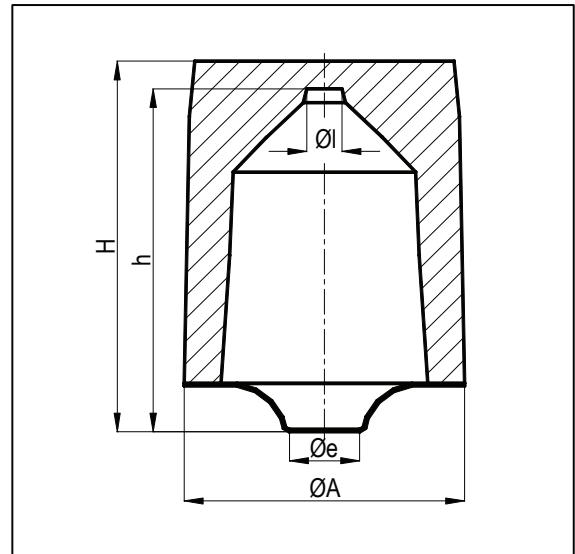
SPOT-RISER PK.. / ME-N on sleeve basis

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small point riser neck
- no contact area on the casting
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 60%
- residual material easily removed at shakeout
- EXO- /EXO-ISO- silica- or coldboxbound

Applications:

grey cast iron and ductile iron



Ref.-No. PKX..	Ref.-No. ME..	Type PKCX ME..	Vol. [cm³]	øe [mm]	ØA [mm]	H [mm]	h [mm]	øl [mm]	Riser Modulus Type	[cm]
348905	404701	PK... 40 ME15 N	40	15	63	92	87	8	PK.. 40Z	1,3
348910	404702	PK... 50 ME15 N	53	15	63	117	111	8	PK.. 50Z	1,4
348915	404703	PK... 80 ME20 N	75	20	74	101	96	8	PK.. 80Z	1,6
348920	404704	PK... 90 ME20 N	94	20	74	121	116	8	PK.. 90Z	1,7
348925	404709	PK... 100 ME20 N	99	20	80	119	112	8	PK.. 100Z	1,9
348930	404710	PK... 100 ME25 N	99	25	80	119	112	8	PK.. 100Z	1,9
348934	404730	PK... 120 ME20 N	99	20	93	119	112	8	PK.. 120Z	2,2
348933	404731	PK... 120 ME25 N	99	25	93	119	112	8	PK.. 120Z	2,2
348935	404711	PK... 180 ME20 N	152	20	80	147	139	10	PK.. 180Z	2,0
348940	404712	PK... 180 ME25 N	152	25	80	147	139	10	PK.. 180Z	2,0
348945	404714	PK... 220 ME25 N	290	25	104	140	132	12	PK.. 220Z	2,3
348950	404715	PK... 220 ME30 N	290	30	104	142	134	12	PK.. 220Z	2,3
348955	404718	PK... 280 ME25 N	333	25	104	168	160	12	PK.. 280Z	2,4
348960	404719	PK... 280 ME30 N	333	30	104	170	162	12	PK.. 280Z	2,4
348965	404706	PK... 290 ME30 N	470	30	128	141	129	12	PK.. 290Z	2,8
348970	404705	PK... 290 ME40 N	470	40	128	144	132	12	PK.. 290Z	2,8
348975	404722	PK... 300 ME30 N	484	30	128	161	153	12	PK.. 300Z	3,0
348980	404723	PK... 300 ME40 N	484	40	128	164	156	12	PK.. 300Z	3,0
348985	404727	PK... 850 ME30 N	870	30	154	179	169	12	PK.. 850Z	3,7
348986	404728	PK... 850 ME40 N	880	40	154	182	172	12	PK.. 850Z	3,7

For Ordering, please specify: PKX for water glass or PKCX for coldbox-binding.

Example: PKX 40 ME15 N = silica-bound, PKCX 40 ME15 N = coldbox-bound.

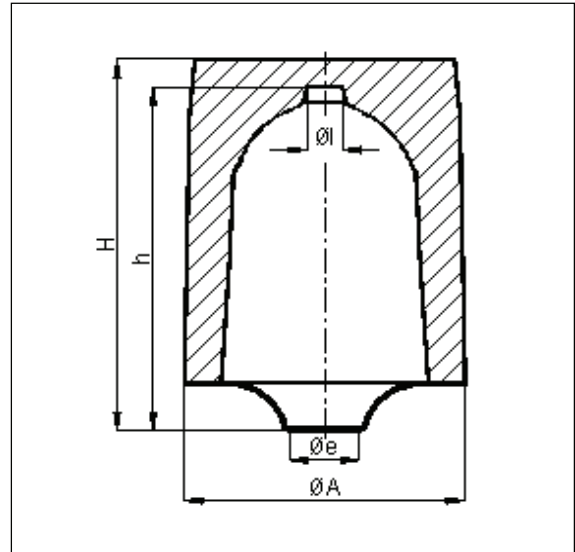
POINT-RISER PKX.. R ME-N on sleeve basis

Characteristics:

- highly-exothermic reaction
- very good moulding sand compression under the riser
- small point riser neck
- no contact area on the casting
- fluoride-reduced or fluoride-free exothermic material
- feed metal utilisation up to 60%
- residual material easily removed at shakeout

Applications:

grey cast iron and ductile iron



Ref.-No.	Type	Vol. [cm³]	øe [mm]	ØA [mm]	H [mm]	h [mm]	øl [mm]	Riser Modulus	
								Type	[cm]
348911	PKX 50R ME20 N	120	20	82	104	94	8	KX 50- 90 R	1,6
348909	PKX 55R ME25 N	170	25	90	116	106	8	KX 55-100 R	1,8
348912	PKX 60R ME25 N	225	25	90	126	116	8	KX 60-110 R	1,9
348913	PKX 70R ME31 N	310	30	95	141	131	8	KX 70-120 R	2,2
348914	PKX 80R ME40 N	430	40	112	149	139	9	KX 80-130 R	2,5



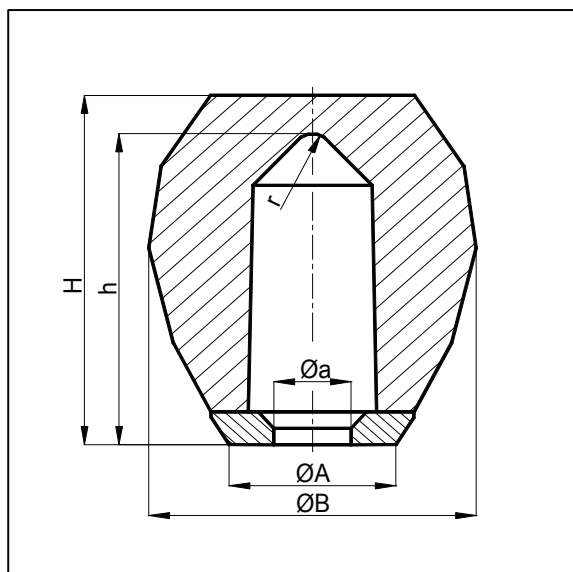
round POINT-RISER PX with round riser neck

Characteristics

- highly-exothermic reaction
- modulus controlled ignition
- point riser neck/ reduction plate RP exothermic e.g. -30
- point riser neck/ reduction plate RP silica sand e.g. -30Q
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus	Vol.	øa	ØA	ØB	H	h	ØI/ r
EXO -RP Q-RP		[cm]	[cm³]		[mm]	[mm]	[mm]	[mm]	[mm]
348505	PX 295 -15	1,2	39	15	40	66	95	80	r5
348504	PX 274 -20	1,3	50	20	40	78	110	90	r6
348506	PX 401 -20	1,4	50	20	50	90	112	97	r6
348508	PX 541 -20	1,4	78	20	50	88	102	92	r6
348510	PX 630 -20	1,6	90	20	50	84	122	113	r6
348503	PX 631 -20	1,7	90	20	50	88	129	113	r6
348540	PX 730 -20	1,9	105	20	46	106	128	114	r6
	PX 740 -20	1,9	106	20	46	106	147	132	r6
348619	PX 810 -20	1,9	117	20	46	106	128	114	r6
	PX 819 -24	1,9	97	24	62	105	99	92	r5
	PX 990 -20	2,1	160	20	62	117	122	108	r6
	PX 990 -24	2,1	160	24	62	117	122	108	r6
348512	PX 1111 -30	2,2	159	30	62	117	140	112	r8
	PX 1110 -30	2,3	159	30	67	125	144	114	r8
	PX 1630 -30 (Q)	2,3	180	30	75	125	145	135	r6
348516	PX 1332 -30	2,5	180	30	67	131	154	134	r6
348515	PX 1330 -30	2,5	162	30	67	138	154	134	r6
348525	PX 1930 -30 (Q)	2,8	238	30	67	138	154	134	r6
	PX 2925 -30	3,0	360	30	67	150	139	127	r12
348519	PX 2339 -30	3,2	297	30	70	133	159	134	r6
348520	PX 2370 -30 (Q)	3,2	297	30	70	150	159	134	r6
	PX 2371 -30 (Q)	3,2	374	30	70	150	159	150	Ø20*8
348526	PX 2860 -30 Q	3,4	444	30	75	150	213	188	Ø26*5
348528	PX 3101 -30 (Q)	3,5	339	30	85	170	170	145	Ø26*5

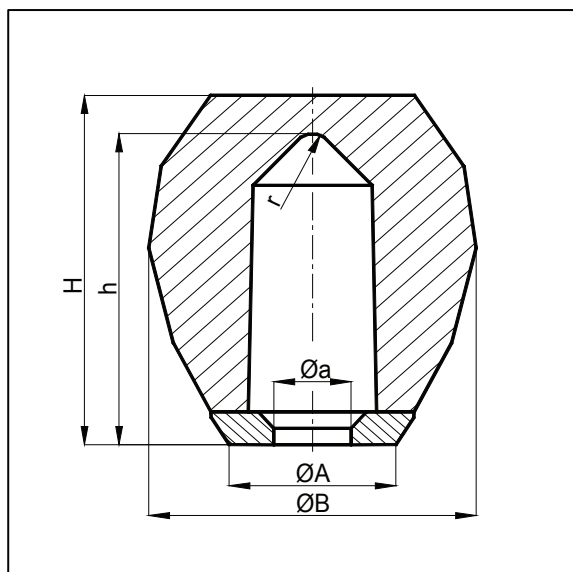
round POINT-RISER PX with round riser neck

Characteristics

- highly-exothermic reaction
- modulus controlled ignition
- point riser neck/ reduction plate RP exothermic e.g. -30
- point riser neck/ reduction plate RP silica sand e.g. -30Q
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus	Vol.	Øa	ØA	ØB	H	h	Ø/ r
EXO-RP Q-RP		[cm]	[cm³]		[mm]	[mm]	[mm]	[mm]	[mm]
	PX 3800 -34 (Q)	3,5	540	34	82	170	170	155	Ø10*3
	PX 4200 -30 (Q)	3,5	600	30	82	170	170	150	Ø26*1
348580	PX 4380 -30	3,7	590	30	82	150	180	168	Ø12*6
348531	PX 4500 -30 Q	3,8	645	30	82	170	190	170	Ø26*1
348529	PX 4740 -40 (Q)	4,0	669	40	100	195	202	177	Ø35*5
348530	PX 4740 -65 (Q)	4,0	669	65	100	195	202	177	Ø35*5
	PX 5440 -40 (Q)	4,2	740	40	100	170	242	205	Ø34*12
348532	PX 5477 -30 Q	4,0	720	30	82	170	215	185	Ø26*1
348534	PX 5540 -40 (Q)	4,5	770	40	110	195	230	193	Ø34*12
348535	PX 5540 -65 (Q)	4,5	770	65	100	195	242	207	Ø10
	PX 11900 -60 Q	4,8	1700	60	110	234	267	217	Ø20*39



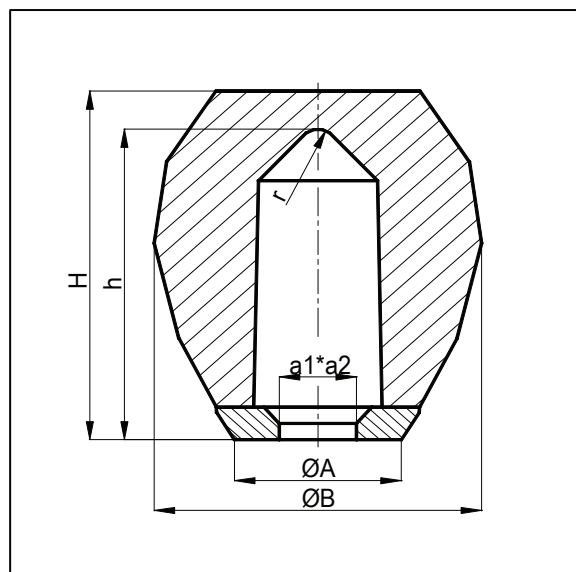
round POINT-RISER PX/ ov with oval riser neck

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- point riser neck/ reduction plate RP exothermic e.g. PX 810ov
- point riser neck/ reduction plate RP silica sand e.g. PX 810ovQ
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus	Vol.	a1*a2	ØA	ØB	H	h	Ø/ r
EXO -RP Q-RP		[cm]	[cm³]		[mm]	[mm]	[mm]	[mm]	[mm]
	PX 274ov	1,3	50	20*30	40	78	110	90	r6
348606	PX 401ov	1,4	50	20*30	50	90	112	97	r6
	PX 541ov	1,4	78	20*30	50	88	112	92	r6
348610	PX 630ov	1,6	90	20*30	50	84	122	113	r6
348612	PX 631ov	1,7	90	20*30	45	88	129	113	r6
348613	PX 730ov	1,9	105	20*30	46	106	128	114	r6
348614	PX 810ov	1,9	117	20*30	46	106	128	114	r6
348611	PX 990ov	2,1	141	20*30	62	117	122	108	r6
348632	PX 1111ov	2,2	159	20*30	62	117	140	112	r6
348616	PX 1332ov	2,5	191	20*30	67	131	154	134	r6
348625	PX 1930ov	2,8	238	20*30	67	138	154	134	r6
348328	PX 2339ov	3,2	297	20*30	70	133	159	134	r6
348627	PX 2370ov	3,2	339	20*30	70	150	159	134	r6
348629	PX 4200ov Q	3,5	600	20*30	82	170	170	150	Ø26*1



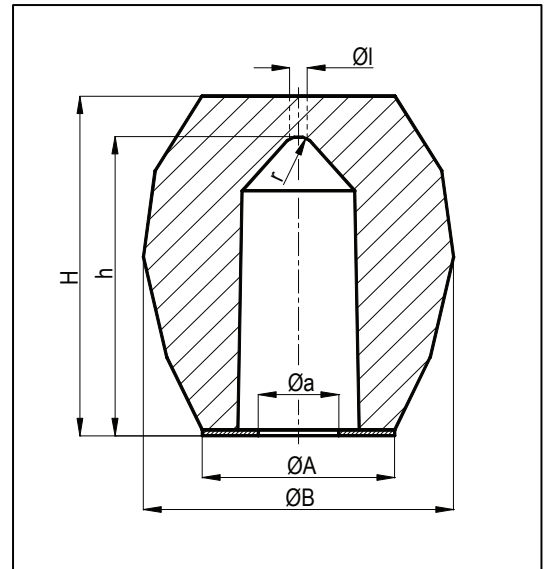
round POINT-RISER PX/ MS with round hole in the metal plate MS

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- round external corners
- point riser neck, reduction plate MS
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	ØA [mm]	ØB [mm]	H [mm]	h [mm]	ØI [mm]	/ r [mm]
348795	PX 295 L MS 15	1,2	39	15	45	66	86	71	5	r6
348797	PX 274 L MS 20	1,3	50	20	45	78	101	81	6	r6
348801	PX 401 MS 20	1,4	50	20	60	90	101	86		r6
348802	PX 541 L MS 20	1,4	78	20	60	88	91	81	7	r6
348803	PX 541 MS 20	1,4	78	20	60	88	91	81		r6
348807	PX 631 L MS 20	1,7	90	20	60	88	118	102	7	r6
348805	PX 631 MS 20	1,6	90	20	60	88	118	102		r6
348870	PX 729 MS 27,5	1,9	120	27,5	60	98	126	110		Ø10
	PX 730 MS 20	1,9	105	20	66	106	117	103		r6
	PX 744 MS 27,5	1,9	115	40	66	106	136	115		r6
348812	PX 810 L MS 20	1,9	117	20	66	106	117	103	7	r6
348810	PX 810 L MS 27,5	1,9	117	27,5	66	106	117	103	7	r6
348808	PX 810 MS 27,5	1,9	117	27,5	66	106	117	103		r6
	PX 990 L MS 27,5	2,1	160	27,5	66	117	111	102	7	r6
348815	PX 1111 MS 30	2,2	159	30	82	117	129	101		r8
348813	PX 1110 L MS 30	2,3	159	30	90	125	131	101	12	r8
	PX 1650 MS 30	2,2	204	30	90	125	116	101		r6
348838	PX 1332 MS 30	2,5	180	30	90	131	141	121		r6
	PX 1930 MS 30	2,8	238	30	90	138	141	121		r6
348846	PX 2339 MS 30	3,2	297	30	98	133	146	121		r6
	PX 2370 MS 30	3,2	339	30	95	150	146	121		r6
348873	PX 2600 MS 30	3,2	590	30	95	150	146	133		r10
348854	PX 2860 MS 30	3,4	444	30	90	150	202	170		Ø26*18
348856	PX 3200 MS 30	3,5	456	30	110	170	152	134		r10
348857	PX 4200 MS 40	3,5	600	40	110	170	152	122		r3,5
348865	PX 5400 L MS 40	4,2	740	40	110	170	212	187	12	Ø34*24
348864	PX 5540 MS 40	4,5	770	40	140	195	212	187		Ø34*24



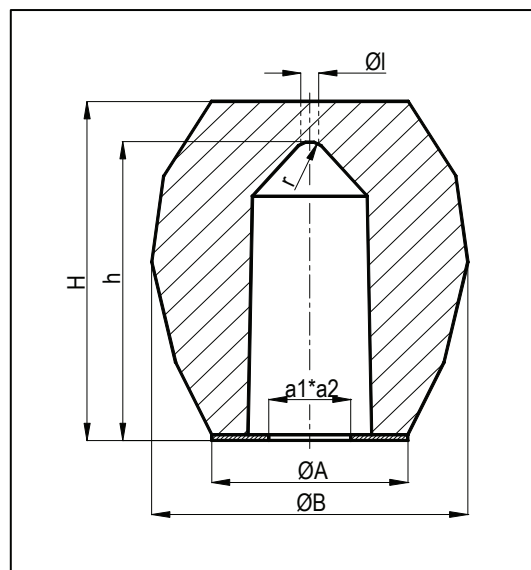
round POINT-RISER PX/ MSov with oval hole in the metal plate MS

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- round external corners
- point riser neck, reduction plate MS
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1*a2 [mm]	ØA [mm]	ØB [mm]	H [mm]	h [mm]	ØI [mm]	/ r [mm]
	PX 400 MSov	1,4	50	20*30	60	90	101	86		r6
	PX 541 MSov	1,4	78	20*30	60	88	91	81		r6
	PX 630 MSov	1,6	90	20*30	60	84	111	102		r6
	PX 631 MSov	1,7	90	20*30	60	88	118	102		r6
	PX 730 MSov	1,9	105	20*30	66	106	117	103		r6
348871	PX 810 MSov	1,9	117	20*30	66	106	117	103		r6
348816	PX 1111 MSov	2,2	159	20*30	82	117	129	101		r6
	PX 1110 MSov	2,3	159	20*30	90	125	131	101		r6
348819	PX 1332 MSov	2,5	180	20*30	90	131	141	121		r6
	PX 1930 MSov	2,8	238	20*30	90	138	141	121		r6
348847	PX 2339 MSov	3,2	297	20*30	98	133	146	121		r6
	PX 2370 MSov	3,2	339	20*30	95	150	146	121		r6

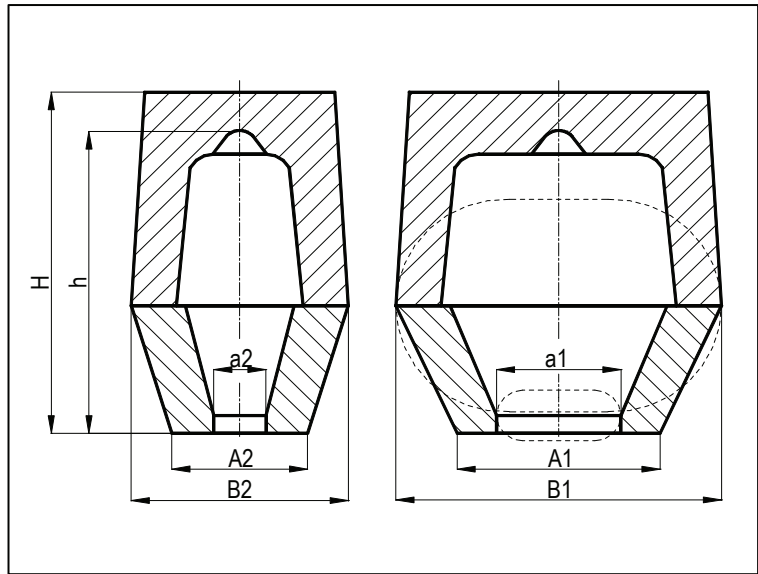
oval POINT-RISER OPX/ov with low residual riser weight

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- thick-walled
- oval external corners
- oval riser neck
- feed metal utilisation up to 70%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1 [mm]	a2 [mm]	h [mm]	A1 [mm]	A2 [mm]	B1 [mm]	B2 [mm]	H [mm]
348609	OPX 900 ov	1,7	129	29	19	115	65	45	98	68	130
348633	OPX 1111 ov	2,1	141	30	20	112	90	90	129	89	132
348634	OPX 1111 L ov	2,1	141	30	20	112/132	90	90	129	89	132
348620	OPX 1320 ov	2,1	188	29	19	115	77	47	115	85	131
348636	OPX 1320 ovN	2,1	188	29	19	116	76	46	113	83	130
348622	OPX 1420 ov	2,3	190	29	19	115	80	58	122	100	131
348637	OPX 1420 ovN	2,3	190	29	19	116	80	58	118	96	130
	OPX 1940 ov	2,5	253	30	20	134	Ø	67	156	106	154
348635	OPX 3050 ov	3,1	426	58	48	125	Ø	90	156	106	140

round POINT-RISER PX/ ... and PX/ ov with low residual riser weight

Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1 [mm]	a2 [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
	PX 610 -25	1,5	86	Ø	25	115	60	88	130
348308	PX 610 ov	1,5	86	29	19	115	60	88	130
348570	PX 2330 -30	3,1	277	Ø	30	134	65	134	149
348653	PX 2330 ov	3,1	277	30	20	134	65	134	149



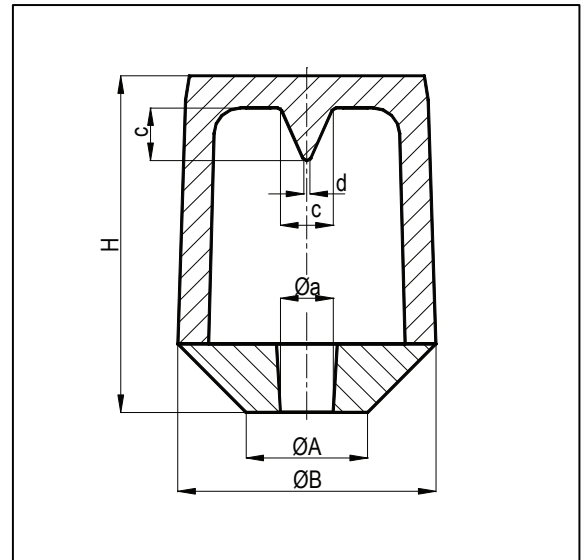
POINT-RISER PX with high feed metal utilisation

Characteristics:

- highly-exothermic reaction
- modulus controlled ignition
- rounded external corners
- round neck
- high feed metal utilisation
- residual material easily removed at shakeout

Applications

grey cast iron and ductile iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	Øa [mm]	ØA [mm]	ØB [mm]	H [mm]	c [mm]	d [mm]
315267	PX 50-15 C	1,5	130	15	35	74	101	16	2
315571	PX 80-18 C	2,2	420	18	50	103	140	22	3
315773	PX 100-22 C	2,7	800	20	60	127	175	26	3
315775	PX 120-30 C	3,1	1350	30	52	154	201	26	3

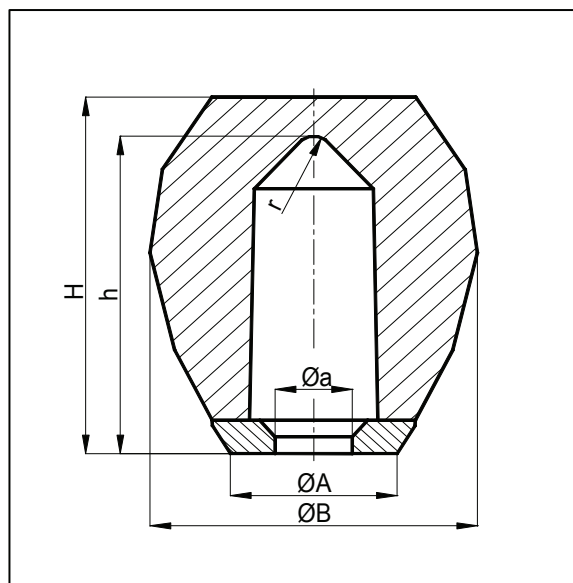
POINT-RISER PI for nonferrus metal castings

Characteristics

- highly-insulating
- point riser neck/ reduction plate RP insulating e.g. -30
- point riser neck/ reduction plate RP silica sand e.g. -30Q
- feed metal utilisation up to 70%
- high strength for machine moulding

Applications

nonferrus metal



Ref.-No.	Type	Modulus	Vol.	Øa	ØA	ØB	H	h	ØI/ r
ISO -RP Q-RP		[cm]	[cm³]		[mm]	[mm]	[mm]	[mm]	[mm]
TGI 190Z EQ10S	PI 190 -10Q	0,9	27	10	28	60	95	90	6
TGI 310Z EQ15S	PI 310 -15Q	1,1	45	15	34	53	125	121	7
348537	PI 581 -21	1,5	117	20	57	78	124	116	R6
348536	PI 591 -21	1,5	117	20	57	78	132	116	R6
348538	PI 591 -25	1,5	117	25	57	78	132	116	R6
348539	PI 591 -30	1,5	117	30	57	78	132	116	R6
	PI 610 -25	1,6	83	25	57	88	131	118	R8
348553	PI 1113 -30Q	2,0	210	30	73	117	133	108	R6
348557	PI 2337 -30	2,8	380	30	70	133	159	134	R6

DUPLO-Riser[®] DX with round riser neck

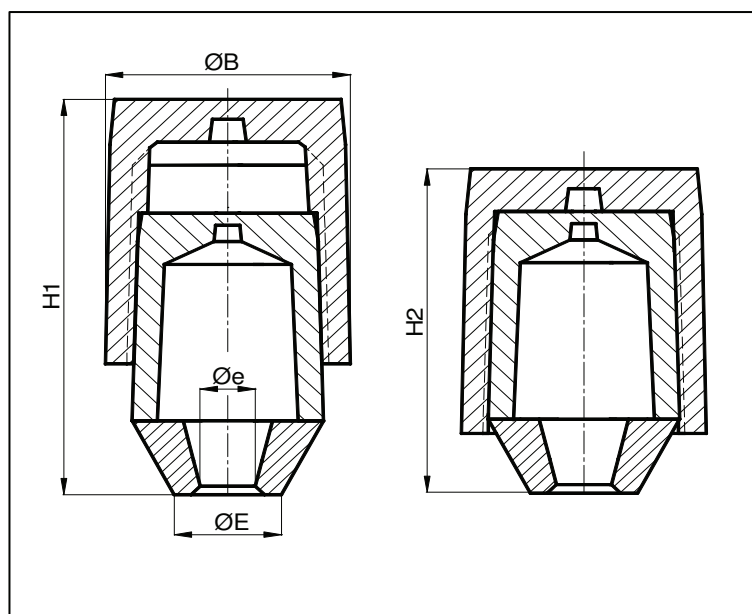
(DE 101 56 571 C1)

Characteristics

- exothermic insulating
- COLD-BOX- bound
- exact riser volume
- with round riser neck
- feed metal utilisation up to 70%
- high strength for machine moulding
- low in fluor / fluorfree
- easy moulding techniques

Applications

iron-, steel- and malleable cast iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm ³]	a [mm]	A [mm]	B [mm]	H 1 [mm]	H 2 [mm]
470200	DX 80 E17	1,6	62	17	28	73	115	100
470250	DX 90 E17	1,7	80	17	28	73	120	135
470300	DX 100 E18	1,9	96	18	35	79	139	119
470320	DX 100 E25	1,9	99	25	35	79	139	119
470350	DX 180 E18	2,1	136	18	35	79	164	142
470370	DX 180 E25	2,1	140	25	35	79	164	142
470450	DX 220 E20	2,4	178	20	40	104	167	141
470470	DX 220 E25	2,4	196	25	40	104	167	141
470480	DX 220 E30	2,4	204	30	40	104	167	141
470500	DX 280 E25	2,6	290	25	40	104	192	166
470520	DX 280 E30	2,6	298	30	40	104	192	166
470550	DX 290 E41	2,8	305	41	70	127	148	123
470600	DX 300 E30	3,2	430	30	52	127	178	157
470620	DX 300 E40	3,2	438	40	52	127	178	157
470650	DX 850 E30	3,7	613	30	62	153	199	174
470660	DX 850 E40	3,7	630	40	62	153	199	174
470670	DX 850 E60	3,7	670	60	80	153	199	174
470700	DX 1200 E30	4,0	970	30	62	153	250	225
470710	DX 1200 E40	4,0	997	30	62	153	250	225
470720	DX 1200 E50	4,0	1005	50	80	153	250	225
470730	DX 1200 E60	4,0	1027	60	80	153	250	225

DUPLO-Riser[®] DX with oval riser neck

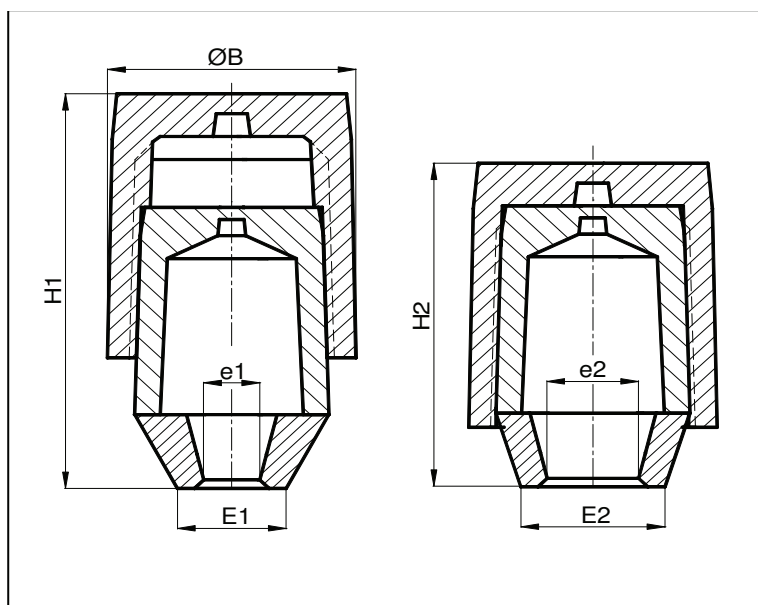
(DE 101 56 571 C1)

Characteristics

- exothermic insulating
- COLD-BOX- bound
- exact riser volume
- with oval riser neck
- feed metal utilisation up to 70%
- high strength for machine moulding
- low in fluor / fluorfree
- easy moulding techniques

Applications

iron-, steel- and malleable cast iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	e1*e2 [mm]	A1*A2 [mm]	B [mm]	H 1 [mm]	H 2 [mm]
471600	DX 300 Eov	3,2	430	40 * 20	52 * 32	127	178	157
471650	DX 850 Eov	3,7	613	45 * 20	70 * 45	153	199	174
471700	DX 1200 Eov	4,0	990	45 * 20	70 * 45	153	250	225

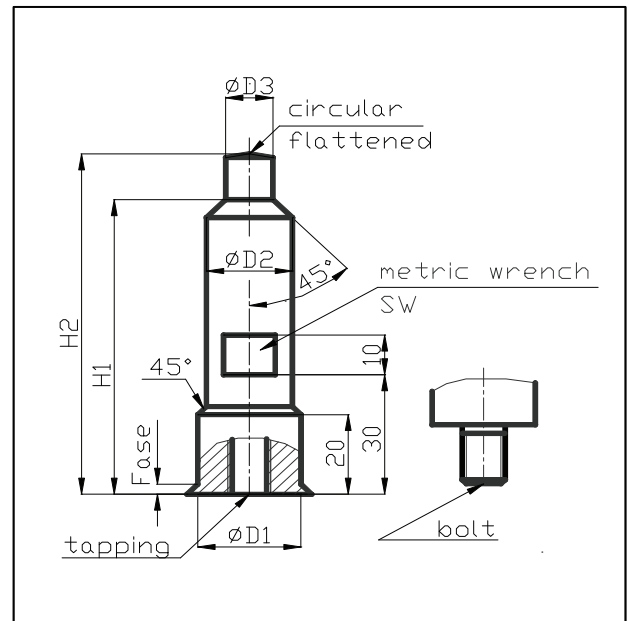
Pin for DUPLO-RISER with closed hole in riserlid

Characteristics:

- fast pin up with dueto self centering geometry
- maintenance free locatorpin
- safe moulding
- available with tapping or bolt
- specify thread when you order
- locatorpin materials "ST52-3K", "C45 K" or "42CrMo4V"
- metric thread

Applications:

- assemble with metric wrench



EDV-Nr.	Typ	D ₁ [mm]	D ₂ [mm]	D ₃ [mm]	H ₁ [mm]	H ₂ [mm]	Fase [mm]	SW [mm]
AFD	DX 40 E15	14	13	7,5	74,5	76	ohne	10
AFD	DX 80 E17	16	14	5,5	82,5	86	ohne	10
AFD	DX 90 E17	16	14	5,5	102,5	106,5	ohne	10
AFD	DX 100 E18	17	13	7	90	95	ohne	10
AFD	DX 100 E25	24	20					15
AFD	DX 180 E18	17	13	9	112	118	ohne	10
AFD	DX 180 E25	24	20					15
AFD	DX 220 E20	19	17	11	110,5	114	3,0 * 45°	13
AFD	DX 220 E25	24	20					15
AFD	DX 280 E25	24	20	11	139	142,5	3,0 * 45°	15
AFD	DX 280 E30	29	25					19
AFD	DX 290 E40	40	25	11	94,5	102	3,0 * 45°	19
AFD	DX 300 E30	29	25	11	124	129	3,0 * 45°	19
AFD	DX 300 E40	39	35					30
AFD	DX 850 E30	29	25					19
AFD	DX 850 E40	39	35	11	135,5	139	3,0 * 45°	30
AFD	DX 850 E60	59	38					
AFD	DX 1200 E30	29	25					19
AFD	DX 1200 E40	39	35	14	193,5	200	3,0*45°	
AFD	DX 1200 E50	49	38					34
AFD	DX 1200 E60	59	38					34

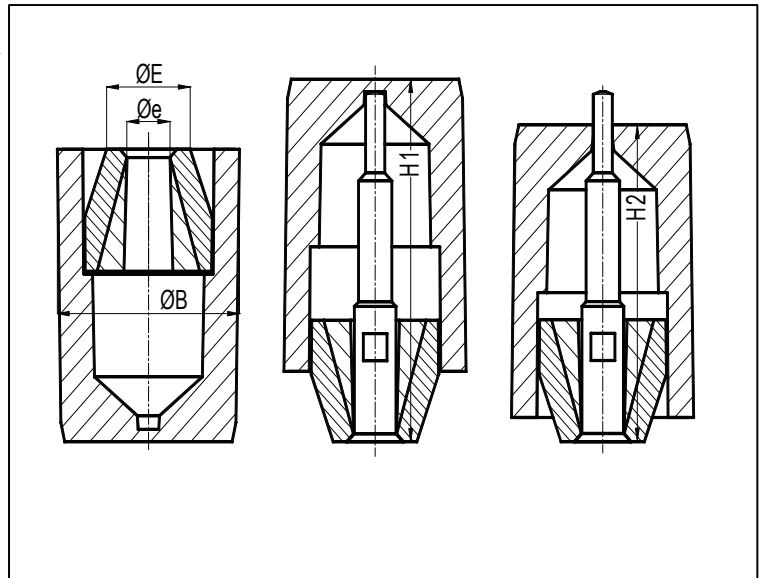
VERDICHTUNGS-Speiser® VKX with round riser neck

Characteristics

- exothermic - isolating
- Cold Box / Silcate bounded
- point-shaped riser neck
- feed metal utilisation 60-70 %
- high strength for machine moulding
- low in fluor / fluorfree
- easy moulding techniques
- compact packaging

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Riser Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]
550401	VKX 40 U15	KX/Z	1,3	33	15	26	59	105	85
550501	VKX 50 U15	KX/Z	1,4	50	15	26	59	129	109
550801	VKX 80 U17	KX/Z	1,6	66	17	28	69	116	91
550901	VKX 90 U17	KX/Z	1,7	90	17	28	70	136	111
550902	VKX 90 U18	KX/Z	1,7	90	18	34	70	136	111
551001	VKX 100 U18	KX/Z	1,9	90	18	35	77	136	105
551003	VKX 100 U25	KX/Z	1,9	90	25	40	77	136	105
551801	VKX 180 U18	KX/Z	2,0	126	18	35	77	163	133
551803	VKX 180 U25	KX/Z	2,0	126	25	40	77	163	133
551951	VKX 195 U22	KX/Z	2,1	170	22	38	89	140	110
552202	VKX 220 U25	KX/Z	2,3	210	25	40	99	160	130
552804	VKX 280 U30	KX/Z	2,4	310	30	40	99	190	160
552807	VKX 280 U40	KX/Z	2,4	310	40	52	99	190	160
552901	VKX 290 U30	KX/Z	2,8	265	30	52	119	158	123
553001	VKX 300 U30	KX/Z	3,0	400	30	52	119	181	145
	VKX 300 U40	KX/Z	3,0	400	40	70	119	181	145
	VKX 450 U40	KX/Z	3,3	410	40	90	126	200	164
558501	VKX 850 U30	KX/Z	3,7	830	30	62	149	200	170
558502	VKX 850 U40	KX/Z	3,7	830	40	62	149	200	170
559001	VKX 1200 U30	KX/Z	4,0	1170	30	62	145	252	222
559002	VKX 1200 U40	KX/Z	4,0	1170	30	62	145	252	222



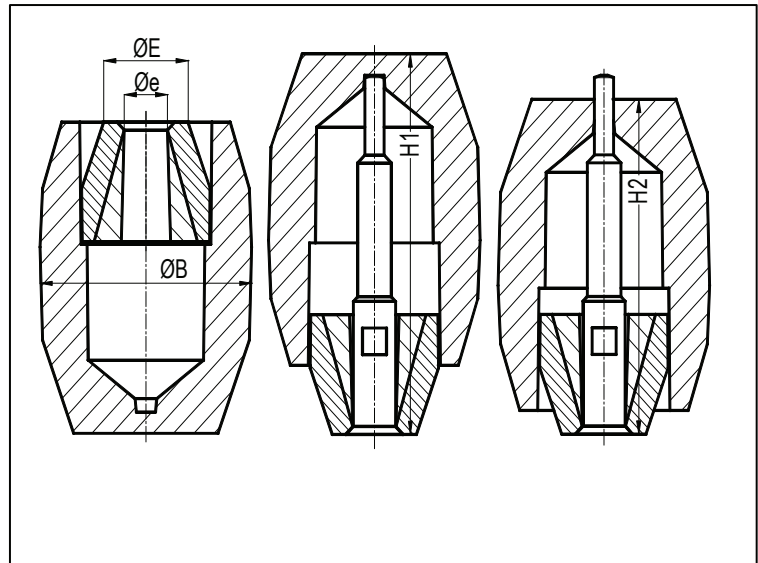
VERDICHTUNGS-Speiser[®] VTX with round riser neck

Characteristics

- exothermic - isolating
- Cold Box / Silcate bounded
- point-shaped riser neck
- feed metal utilisation 60-70 %
- high strength for machine moulding
- low in fluor / fluorfree
- easy moulding techniques
- compact packaging

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Riser Type	Modulus [cm]	Vol.H2 [cm ³]	øe [mm]	ØE [mm]	ØB [mm]	H 1 [mm]	H 2 [mm]
560101	VTX 10 U13S	TG/Z							
560121	VTX 12 U13S	TG/Z	0,9	14	13	25	60	88	68
560241	VTX 24 U13S	TG/Z	1,0	21	13	25	60	108	88
	VTX 29 U13S	TG/Z	1,3	21	13	25	66	108	88
	VTX 42 U13S	TG/Z							
	VTX 275 U15	TG/Z	1,6	61	15	26	78	140	120
560601	VTX 60 U15	TG/Z	1,7	60	15	26	78	140	120
	VTX 600 U15	TG/Z	1,7	60	15	26	84	140	120
560651	VTX 65 U15	TG/Z	1,8	60	15	26	88	141	121
560951	VTX 95 U15	TG/Z							
	VTX 617 U17	TG/Z	1,8	117	17	28	88	141	121
561401	VTX 140 U17	TG/Z	2,4	120	17	28	117	156	131
561701	VTX 170 U18	TG/Z							
561751	VTX 175 U17	TG/Z							
562001	VTX 200 U18	TG/Z	2,7	190	18	35	131,3	187	157
562301	VTX 230 U18	TG/Z	3,2	200	18	35	133	192	162
562303	VTX 230 U25	TG/Z	3,2	200	25	40	133	192	162
563801	VTX 380 U20	TG/Z							
563802	VTX 380 U25	TG/Z							
563806	VTX 380 U40/ø	TG/Z	3,2	350	40	40	133	247	217
253857	VTX 385 U40/ø	TG/Z							
	VTX 540 U40	TG/Z	4,2	930	40	90	170	261	226
569601	VTX 960 U30	TG/Z							
569604	VTX 960 U40	TG/Z	4,3	930	40	90	190	261	226
566605	VTX 660 U40	TG/Z	4,3	680	40	90	190	261	226

Standard products are fat printet.



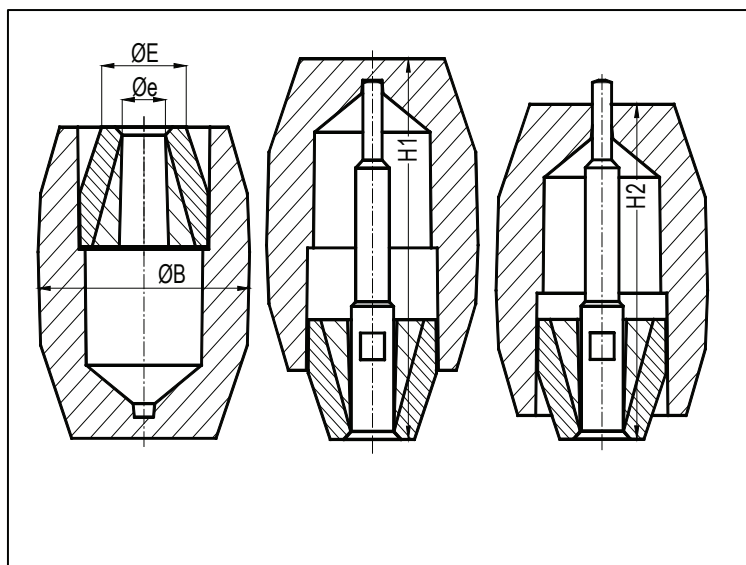
VERDICHTUNGS-Speiser® VTX with round riser neck

Characteristics

- exothermic - isolating
- Cold Box / Silcate bounded
- point-shaped riser neck
- feed metal utilisation 60-70 %
- high strength for machine moulding
- low in fluor / fluorfree
- easy moulding techniques
- compact packaging

Applications:

grey cast iron, ductile iron and cast steel



Ref.-No.	Type	Riser Type	Modulus [cm]	Vol.H2 [cm³]	øe [mm]	ØE [mm]	ØB [mm]	H 1 [mm]	H 2 [mm]
	VTX 1600 U30	TG/Z							
	VTX 1600 U50	TG/Z							
569163	VTX 1600 U60/5	TG/Z	5,0	1500	60	80	225	283	253
	VTX 1600 U60	TG/Z							
569163	VTX 2000 U60	TG/Z	5,4	1900	60	80	225	313	283
	VTX 3200 U65	TG/Z	5,8	3050	65	100	290	306	276



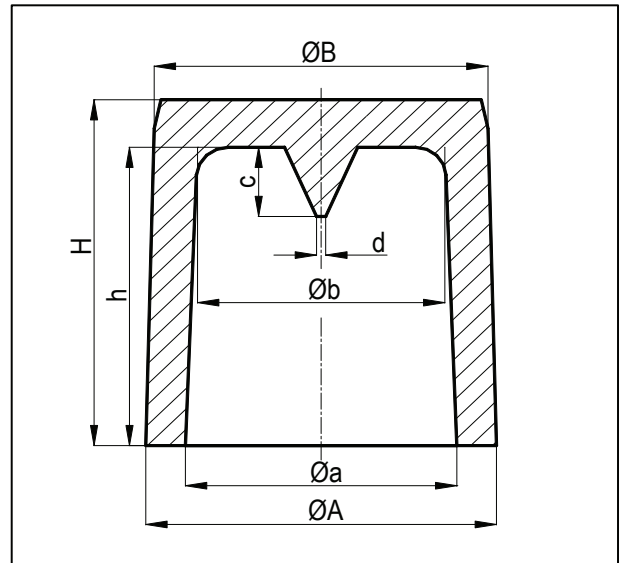
KX/W sleeves with Williams notch

Characteristics:

- exothermic reaction
- modulus controlled ignition
- rounded external corners
- Williams notch
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type			Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	c [mm]	d [mm]
310132	KX	30- 50	W	0,95	30	36	31	39	47	43	49	13	3
310232	KX	35- 50	W	0,95	30	36	31	39	53	49	50	13	3
310532	KX	40- 70	W	1,16	70	41	35	63	62	58	73	15	3
310632	KX	40- 95	W	1,25	100	42	36	85	63	59	97	15	3
310732	KX	50- 80	W	1,50	130	52	48	69	73	69	80	17	3
310830	KX	60- 85	W	1,60	180	58	52	76	81	75	87	18	2
310832	KX	60- 90	W	1,65	180	57	52	78	80	77	93	18	2
310932	KX	60- 120	W	1,70	250	58	50	105	79	74	116	21	3
311032	KX	70- 100	W	1,95	300	69	65	87	93	89	99	21	4
311132	KX	80- 110	W	2,20	420	79	71	96	104	99	110	23	4
311232	KX	90- 120	W	2,40	580	89	81	103	115	109	122	25	4
311432	KX	100- 130	W	2,70	800	97	91	117	127	119	133	28	4
311632	KX	120- 150	W	3,10	1350	118	112	130	154	148	150	30	4
311641	KX	120- 150d	W	3,30	1350	118	112	130	165	161	150	30	4
311664	KX	120- 200	W	3,40	1900	121	110	182	157	145	200	30	4
311732	KX	140- 140	W	3,40	1850	141	139	120	185	180	140	30	4
311734	KX	140- 200	W	3,80	2700	141	135	180	185	178	200	30	4
311832	KX	160- 140	W	3,60	2200	161	155	115	205	200	140	30	4
311833	KX	160- 200	W	4,10	3400	161	155	175	205	197	200	30	4
311835	KX	200- 200	W	4,80	5400	200	190	180	250	240	200	30	10



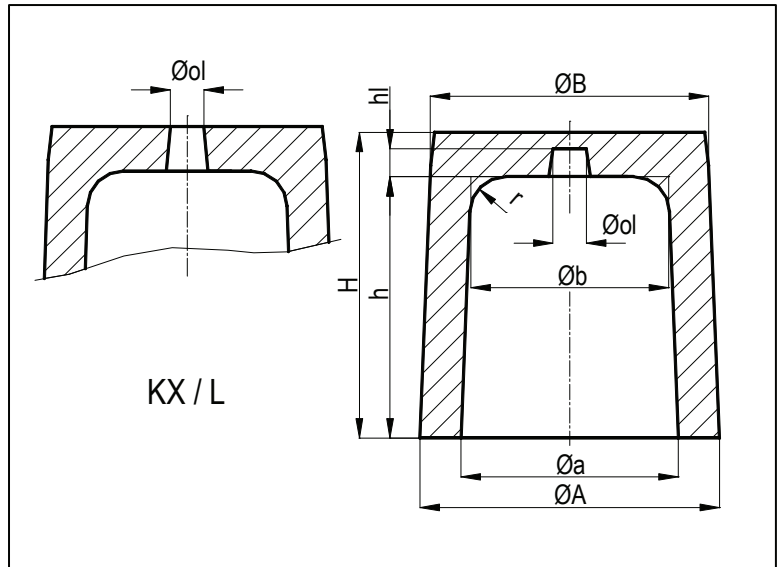
KX sleeves with centre hole for mandrel location

Characteristics:

- exothermic reaction
- modulus controlled ignition
- rounded external corners
- with centre hole for mandrel location
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.-Nr.	Type	Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	ØI [mm]	hI [mm]
310124	KX 25- 90	1,00	29	25	20	73	54	48	89	5	15
310134	KX 30- 50	0,95	30	30	30	39	47	43	49	8	8
310234	KX 35- 50	0,95	30	35	30	39	53	49	50	8	8
310432	KX 40- 50	0,95	40	41	37	37	59	56	52	6	10
310540	KX 40- 70	1,16	70	41	35	63	62	58	73	10	7
310634	KX 40- 95	1,25	100	42	36	85	63	59	97	10	8
310640	KX 40- 100	1,30	100	42	36	91	66	62	105	10	8
310740	KX 50- 80	1,50	130	52	48	69	73	69	80	10	8
310840	KX 60- 90	1,65	180	57	52	77	80	77	93	10	8
311040	KX 70- 100	1,95	300	69	65	87	93	89	99	10	9
311140	KX 80- 110	2,20	420	79	71	96	103	98	110	10	9
311240	KX 90- 120	2,40	580	89	81	103	115	109	120	10	15
311440	KX 100- 130	2,70	800	97	91	117	127	119	133	12	9
311640	KX 120- 150	3,10	1350	118	112	130	154	148	150	12	14
310541	KX 40- 70 L	1,16	70	41	35	63	62	58	73	10	10
	KX 50- 80 L	1,50	130	52	48	69	73	69	80	10	11
310841	KX 60- 90 L	1,65	180	57	52	77	80	77	93	10	15
310940	KX 60- 120 L	1,70	240	58	50	105	79	74	116	10	8
311041	KX 70- 100 L	1,95	300	69	65	87	93	89	99	10	12
311141	KX 80- 110 L	2,20	420	79	71	96	104	99	110	11	13
311441	KX 100- 130 L	2,70	800	97	91	117	127	119	133	13	16
	KX 120- 150 L	3,10	1350	118	112	130	153	148	150	12	20



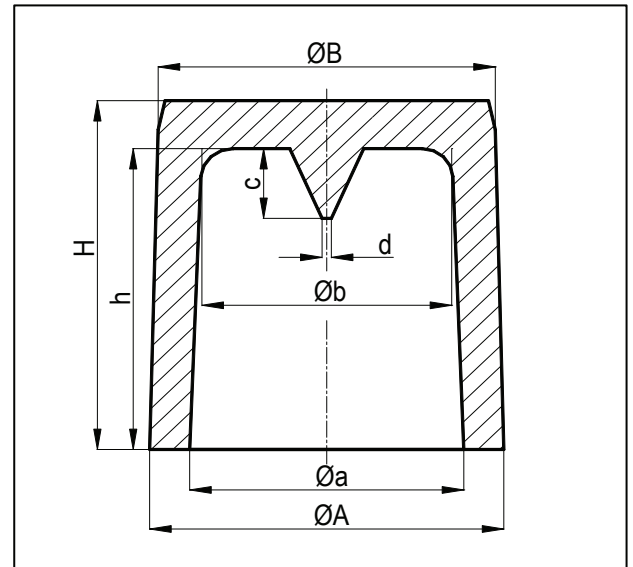
EXO-ISO- sleeves KCX/W with Williams notch

Characteristics:

- exothermic - insulating
- modulus controlled ignition
- rounded external corners
- Williams notch
- with big Williams notch (...GW)
- feed metal utilisation 40-50%
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type			Modulus [cm]	Vol. [cm³]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	c [mm]	d [mm]
402050	KCX	30- 50	W	0,95	30	36	31	40	47	43	49	12	2
402100	KCX	35- 50	W	0,95	30	36	31	40	53	49	50	12	2
402150	KCX	40- 70	W	1,16	70	41	35	63	62	58	73	14	2
402200	KCX	40- 95	W	1,25	100	42	36	85	62	59	97	14	4
402250	KCX	50- 80	W	1,50	130	52	48	70	73	69	80	16	2
402252	KCX	50- 80	GW	1,50	130	52	48	69	73	69	80	25	5
402300	KCX	60- 90	W	1,65	180	57	52	78	80	77	93	18	2
402320	KCX	60- 90	GW	1,65	180	58	52	78	80	76	93	30	5
402350	KCX	60- 120	W	1,70	250	58	50	106	79	73	116	21	3
402400	KCX	70- 100	W	1,95	300	69	65	87	93	89	100	17	6
402420	KCX	70- 100	GW	1,95	300	70	63	87	93	89	100	40	5
402450	KCX	80- 110	W	2,20	420	79	71	96	103	99	110	22	3
402500	KCX	90- 120	W	2,40	580	89	81	109	115	109	122	23	3
402550	KCX	100- 130	W	2,70	800	97	91	117	127	119	133	26	3
402600	KCX	120- 150	W	3,10	1350	118	112	130	154	148	150	30	4



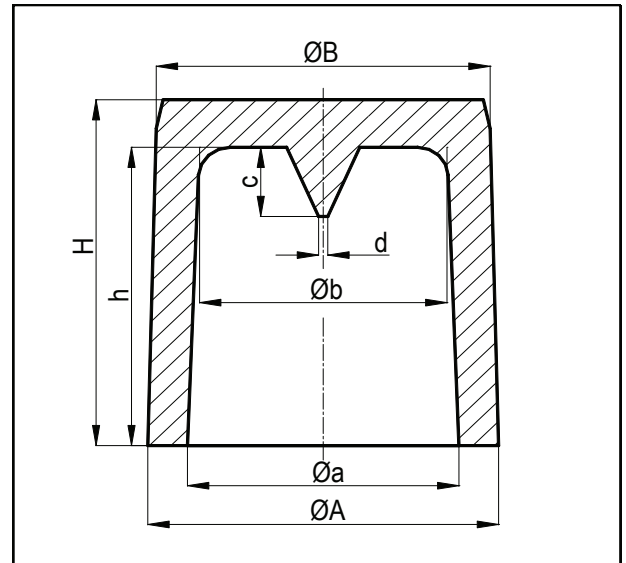
ISO- sleeves KCI/W with Williams notch

Characteristics:

- Insulating, with no reaction
- rounded external corners
- Williams notch
- feed metal utilisation 30-50%
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron, cast steel
and nonferrous metals

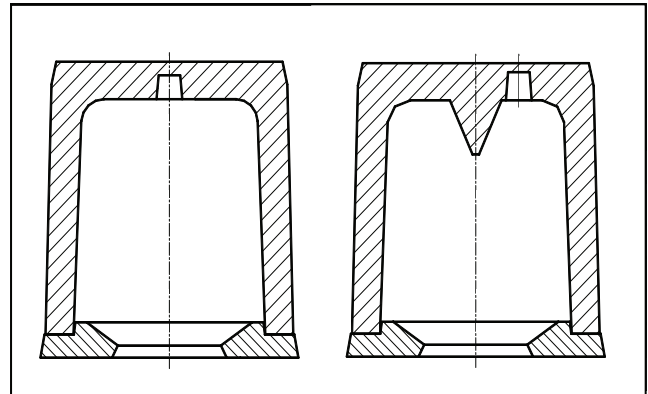


Ref.-No.	Type			Modulus [cm]	Vol. [cm³]	Gew. [kg]	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	c [mm]	d [mm]
412050	KCI	30- 50	W	0,90	30	0,21	36	31	40	47	43	49	12	2
412100	KCI	35- 50	W	0,90	30	0,21	36	31	40	53	49	50	12	2
412130	KCI	40- 50		0,90	40		39	37	35	60	57	50	-	-
412150	KCI	40- 70	W	1,10	70	0,49	41	35	63	62	58	73	14	2
412200	KCI	40- 95	W	1,20	100	0,70	42	36	85	62	59	97	14	4
412210	KCI	40- 150		1,30	200		42	38	140	61	57	150	-	-
	KCI	40- 150	W	1,30	200		42	38	140	61	57	150	14	2
412250	KCI	50- 80	W	1,40	130	0,91	52	48	70	73	69	80	16	2
412300	KCI	60- 90	W	1,55	180	1,26	57	52	78	80	77	93	18	2
412350	KCI	60- 120	W	1,60	250	1,75	58	50	106	79	73	116	21	3
412310	KCI	60- 150		1,80	440	3,08	62	58	135	85	81	150	-	-
412311	KCI	60- 150	W	1,80	440	3,08	62	58	135	85	81	150	18	2
412400	KCI	70- 100	W	1,80	300	2,10	69	65	87	93	89	100	17	6
412450	KCI	80- 110	W	2,05	420	2,94	79	71	96	103	99	110	22	3
412500	KCI	90- 120	W	2,25	580	4,06	89	81	109	115	109	122	23	3
412550	KCI	100- 130	W	2,55	800	5,60	97	91	117	127	119	133	26	3
412600	KCI	120- 150	W	2,90	1350	9,45	118	112	130	154	148	150	30	4

EXO-ISO- sleeves KCX & KCX/W with breaker core BQ

Characteristics:

- exothermic - insulating
- modulus controlled ignition
- rounded external corners
- Williams notch
- breaker core with approx. 50% feeder diameter
- feed metal utilisation 40-50%
- residual material easily removed at shakeout



Applications:

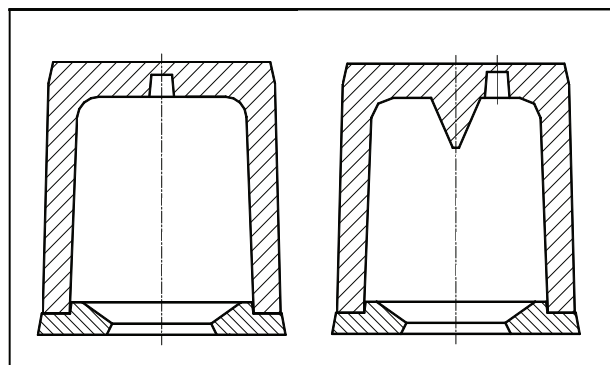
- grey iron, ductile iron, cast steel and nonferrous metals
- inserted into the mould or positioned on the pattern plate

Ref.No.	Type	Ref.No.	Riser Type	Modulus [cm]	Vol. [cm³]	Ref.No.	Breaker Cores
404060	KCX 35- 50 W BQ14	402100	KCX 35- 50 W	0,95	30	312003	BQ 56-14
	KCX 30- 50 W BQ20	402100	KCX 35- 50 W	0,95	30	312002	BQ 48-20
404150	KCX 40- 70 W BQ25	402150	KCX 40- 70 W	1,16	70	312006	BQ 67-25
404250	KCX 50- 80 W BQ30	402250	KCX 50- 80 W	1,50	130	312007	BQ 77-30
404300	KCX 60- 90 W BQ30	402300	KCX 60- 90 W	1,65	180	312008	BQ 84-30
404330	KCX 60- 120 W BQ30	402350	KCX 60- 120 W	1,70	250	312008	BQ 84-30
404400	KCX 70-100 W BQ35	402400	KCX 70-100 W	1,95	300	312010	BQ 98-35
404451	KCX 80-110 W BQ40	402450	KCX 80-110 W	2,20	420	312011	BQ 108-40
	KCX 90-120 W BQ45	402500	KCX 90-120 W	2,40	580	312012	BQ 120-45
404550	KCX 100-130 W BQ50	402550	KCX 100-130 W	2,70	800	312013	BQ 132-50
	KCX 120-150 W BQ60	402600	KCX 120-150 W	3,10	1.350	312016	BQ 160-60

EXO-ISO- sleeves KCX & KCX/W with breaker core KQ

Characteristics:

- exothermic - insulating
- modulus controlled ignition
- rounded external corners
- Williams notch
- breaker core with approx. 30-40% feeder diameter
- feed metal utilisation 40-50%
- residual material easily removed at shakeout



Applications:

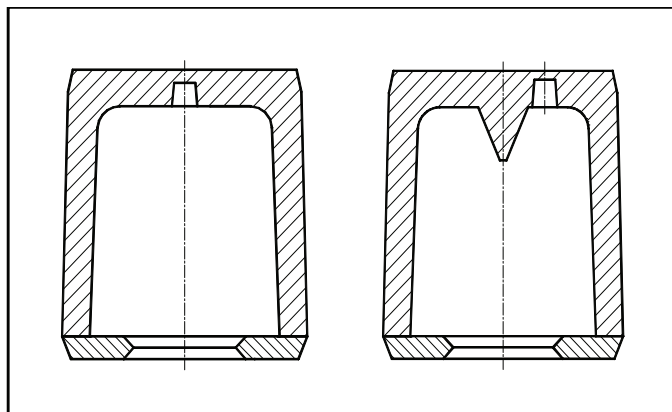
- grey iron, ductile iron, cast steel and nonferrous metals
- inserted into the mould or positioned on the pattern plate

Ref.No.	Type	Ref.No.	Riser Type	Modulus [cm]	Vol. [cm³]	Ref.No.	Breaker Cores
404155	KCX 40- 70 W KQ12	402150	KCX 40- 70 W	1,16	70	312025	KQ 67-12
404156	KCX 40- 70 W KQ20	402150	KCX 40- 70 W	1,16	70	312026	KQ 67-20
404255	KCX 50- 80 W KQ14	402250	KCX 50- 80 W	1,50	130	312029	KQ 77-14
404254	KCX 50- 80 W KQ16	402250	KCX 50- 80 W	1,50	130	312057	KQ 77-16
404258	KCX 50- 80 W KQ22S	402250	KCX 50- 80 W	1,50	130	312039	KQ 77-22S
404308	KCX 60- 90 W KQ17	402300	KCX 60- 90 W	1,65	180	312019	KQ 84-17
404309	KCX 60- 90 W KQ17S	402300	KCX 60- 90 W	1,65	180	312009	KQ 84-17S
404304	KCX 60- 90 W KQ25	402300	KCX 60- 90 W	1,65	180	312028	KQ 84-25
404403	KCX 70-100 W KQ18	402400	KCX 70-100 W	1,95	300	312024	KQ 98-18
404406	KCX 70-100 W KQ27S	402400	KCX 70-100 W	1,95	300	312040	KQ 98-27S
404404	KCX 70-100 W KQ28	402400	KCX 70-100 W	1,95	300	312030	KQ 98-28
404454	KCX 80-110 W KQ20	402450	KCX 80-110 W	2,20	420	312034	KQ 108-20
404453	KCX 80-110 W KQ30	402450	KCX 80-110 W	2,20	420	312031	KQ 108-30
404504	KCX 90-120 W KQ22	402500	KCX 90-120 W	2,40	580	312035	KQ 120-22
404503	KCX 90-120 W KQ32	402500	KCX 90- 120 W	2,40	580	312032	KQ 120-32
	KCX 100-130 W KQ24	402550	KCX 100-130 W	2,70	800	312037	KQ 132-24
404553	KCX 100-130 W KQ35	402550	KCX 100-130 W	2,70	800	312033	KQ 132-35
404605	KCX 120-150 W KQ40	402600	KCX 120-150 W	3,10	1.350	312036	KQ 160-40

EXO-ISO- sleeves KCX & KCX/W with breaker core B_Q and BSQ

Characteristics:

- exothermic - insulating
- modulus controlled ignition
- rounded external corners
- Williams notch
- breaker core with approx. 50% feeder diameter
- feed metal utilisation 40-50%
- residual material easily removed at shakeout



Applications:

- grey iron, ductile iron, cast steel and nonferrous metals
- to mould on the pattern

Ref.No.	Type	Ref.No.	Riser Type	Modulus [cm]	Vol. [cm³]	Ref.No.	Breaker Cores
404050	KCX 30- 50 W B15Q	402050	KCX 30- 50 W	0,95	30	323045	B 47-15 Q
404053	KCX 30- 50 W BSQ15	402050	KCX 30- 50 W	0,95	30	312043	BSQ 47-15
404152	KCX 40- 70 W EQ26	402150	KCX 40- 70 W	1,16	70	350077	EQ 60-26
404252	KCX 50- 80 W B30Q	402250	KCX 50- 80 W	1,50	130	323057	B 74-30 Q
404251	KCX 50- 80 W BSQ30	402250	KCX 50- 80 W	1,50	130	312054	BSQ 73-30
404302	KCX 60- 90 W B30Q	402300	KCX 60- 90 W	1,65	180	323059	B 80-30 Q
404301	KCX 60- 90 W EQ30	402300	KCX 60- 90 W	1,65	180	350029	EQ 82-30
404402	KCX 70-100 W B35Q	402400	KCX 70- 100 W	1,95	300	323061	B 90-35 Q
404434	KCX 80-74 BCX48	480400	DuKi 80- 74	1,90	290	457227	BCX 104-48
404452	KCX 80-110 W B40Q	402450	KCX 80- 110 W	2,20	420	323079	B 104-40 Q
404508	KCX 90-120 W B33SQ	402500	KCX 90- 120 W	2,40	580	323084	B 115-33S Q
404502	KCX 90-120 W B45Q	402500	KCX 90- 120 W	2,40	580	323066	B 115-45 Q
404552	KCX 100-130 W B50Q	402550	KCX 100- 130 W	2,70	800	323065	B 132-50 Q
404551	KCX 100-130 W BSQ45	402550	KCX 100- 130 W	2,70	800	312053	BSQ 126-45
404603	KCX 120-150 W B60Q	402600	KCX 120- 150 W	3,10	1.350	323068	B 160-60 Q
404604	KCX 120-150 W BSQ60	402600	KCX 120- 150 W	3,10	1.350	312056	BSQ 160-60

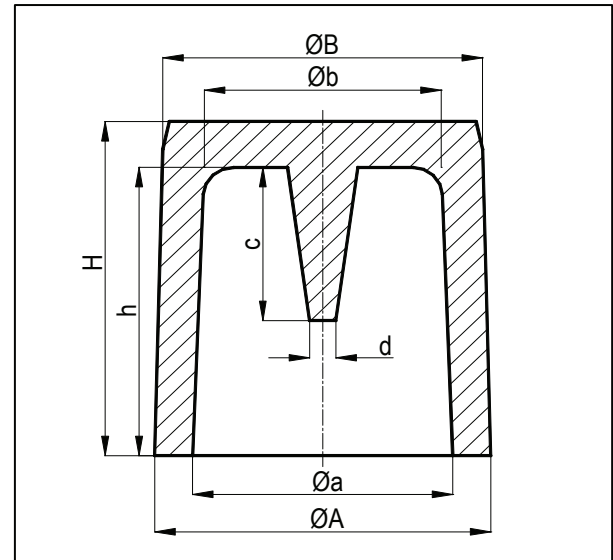
TK TURBO-sleeves with big Williams notch

Characteristics

- larger module
- modulus controlled ignition
- rounded external corners
- long Williams notch in the cover
- feed metal utilisation up to 60%
- smaller breaker core constrictions
- high strength for machine moulding
- residual material easily removed at shakeout

Applications

- grey iron and ductile iron



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	Øa [mm]	Øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]	c [mm]	d [mm]
310560	TK 40 - 70	1,25	60	41	35	63	62	59	73	38	8/15
310660	TK 40 - 95	1,35	75	42	36	85	62	60	97	60	8/18
310760	TK 50 - 80	1,65	105	52	48	69	73	69	80	42	12/19
310860	TK 60 - 90	1,80	140	57	52	78	80	77	93	51	12/21
310960	TK 60 - 120	1,90	170	58	50	105	79	73	116	78	14/22
311060	TK 70 - 100	2,20	230	69	65	87	93	89	99	56	16/26
311160	TK 80 - 110	2,45	330	79	71	96	104	99	110	63	16/27
311260	TK 90 - 120	2,65	480	89	81	103	115	109	122	68	16/23
311460	TK 100 - 130	3,00	660	97	91	117	127	119	133	77	15/28
311660	TK 120 - 150	3,50	1150	118	112	130	154	148	150	86	16/31
311750	TK 150 - 200	4,20	2600	151	140	184	185	180	200	114	22/34



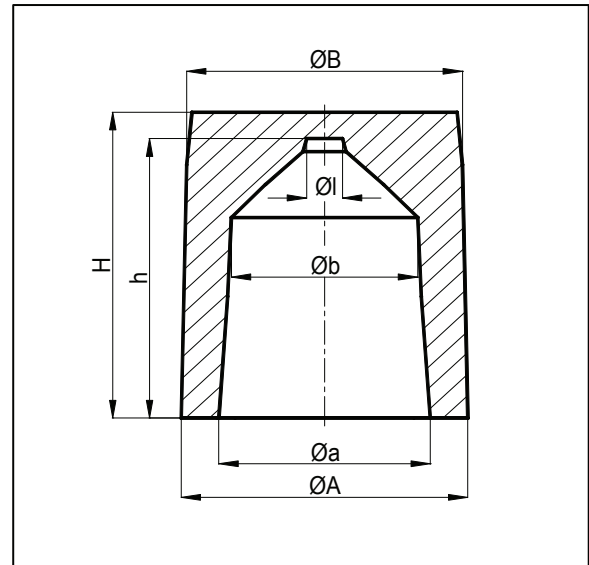
EXO- / EXO-ISO- Sleeves selfcentering

Characteristics:

- highly-exothermic reaction with modulus controlled ignition#
- easy positioning support for the riser
- fluorine-poor or fluorine-free exotherm material
- feed metal utilisation up to 60%
- residual material easily removed at shakeout
- EXO- /EXO-ISO- silica- or coldbox- bound

Applications:

grey iron and ductile iron, cast steel
and nonferrous metals



Ref.-No.		Type		Vol.	øe	ØA		H	h	øI	Riser	Modulus
				[cm³]	[mm]	[mm]		[mm]	[mm]	[mm]	Type	[cm]
318904	403844	PK...	40Z	1,3	40	32	29	75	63	59	80	8
318905	403845	PK...	50Z	1,4	53	32	28	99	63	59	105	8
318908	403848	PK...	80Z	1,6	75	42	38	82	74	70	87	8
318909	403849	PK...	90Z	1,7	94	42	38	102	74	70	107	8
318910	403850	PK...	100Z	1,9	99	44	40	98	80	77	105	8
318915	403855	PK...	180Z	2,0	152	48	42	125	80	73	133	10
318920	403860	PK...	220Z	2,3	289	65	60	118	104	100	126	12
318928	403868	PK...	280Z	2,4	333	64	57	146	104	95	154	12
318929	403869	PK...	290Z	2,8	470	88	83	113	128	119	125	12
318930	403870	PK...	300Z	3,0	484	78	72	137	128	119	145	12
318950	403880	PK...	850Z	3,7	870	102	95	153	154	149	163	12

For Ordering, please specify: PKX for water glass or PKCX for coldbox-binding.

Example: PKX 40Z = silica-bound, PKCX 40Z = coldbox-bound.

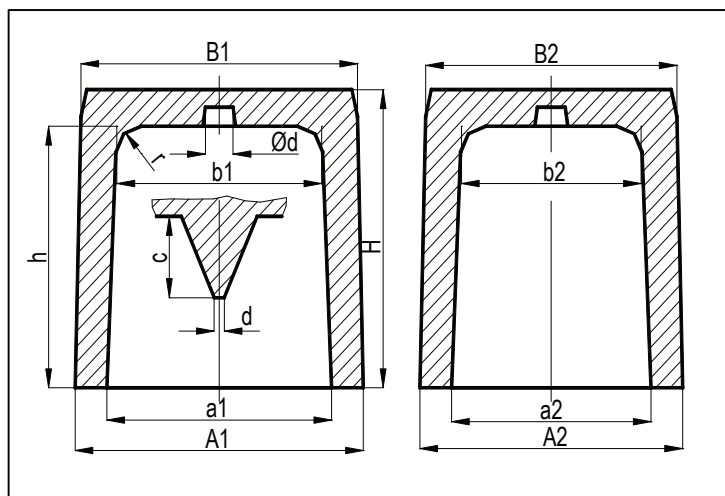
Oval sleeves OKX, OKX/W (parallel conical)

Characteristics:

- exothermic reaction
- modulus controlled ignition
- oval outer contour
- with centre hole or Williams notch (...W)
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1 [mm]	a2 [mm]	b1 [mm]	b2 [mm]	h [mm]	A1 [mm]	A2 [mm]	B1 [mm]	B2 [mm]	H [mm]	d [mm]
316240	OKX 30- 70	1,4	87	53	34	47	28	65	72	53	65	46	75	5
316332	OKX 30- 90	1,5	107	53	34	39	21	80	72	53	65	45	90	5
348403	OKX 30- 90W	1,5	107	53	34	47	28	80	72	53	65	45	90	7
316423	OKX 43- 100W	1,6	230	77	43	69	35	90	95	60	87	51	100	-
316430	OKX 45- 100W	1,9	380	117	46	108	38	86	143	70	135	63	100	-
316432	OKX 45- 128W	2,0	470	118	45	105	33	116	142	70	134	62	128	11
316732	OKX 50- 80	1,75	196	76	46	72	42	69	98	68	93	63	80	4
316733	OKX 50- 80W	1,75	196	76	46	72	42	69	98	68	93	63	80	5
316831	OKX 60- 90	2,1	342	90	60	85	55	78	115	85	108	78	90	13
316832	OKX 60- 90W	2,1	330	90	60	85	55	78	115	85	108	78	90	11
316840	OKX 60- 150W	2,6	1000	144	60	139	55	135	174	90	169	85	150	-
317032	OKX 70- 100	2,4	530	107	72	99	64	88	135	100	128	93	100	13
317033	OKX 70- 100W	2,4	530	107	72	99	64	88	135	100	128	93	100	11
317034	OKX 70- 140W	2,8	1050	145	71	137	63	126	173	99	164	88	140	-
317133	OKX 80- 100	2,6	690	122	80	114	72	89	153	112	144	104	100	5
317133	OKX 80- 100W	2,6	560	122	80	104	62	89	153	112	144	104	100	-
317132	OKX 80- 110	2,7	760	122	80	114	72	98	153	112	144	104	109	-
317131	OKX 80- 110W	2,7	720	122	80	114	72	98	153	112	144	104	110	11

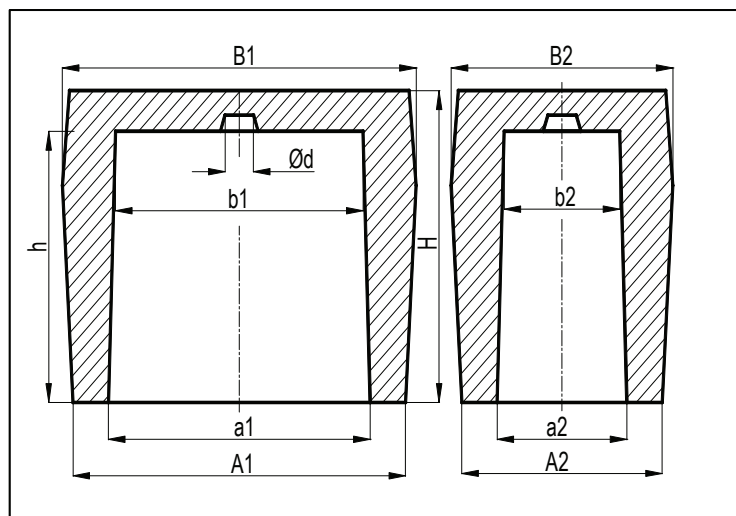
Oval sleeves OGKX, OGKX/W (opposite conical)

Characteristics:

- exothermic reaction
- modulus controlled ignition
- oval outer contour
- with centre hole or Williams notch (...W)
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1 [mm]	a2 [mm]	b1 [mm]	b2 [mm]	h [mm]	A1 [mm]	A2 [mm]	B1 [mm]	B2 [mm]	H [mm]	d [mm]
317134	OGKX 80- 115	2,3	510	111	55	105	49	100	141	85	150	94	115	-



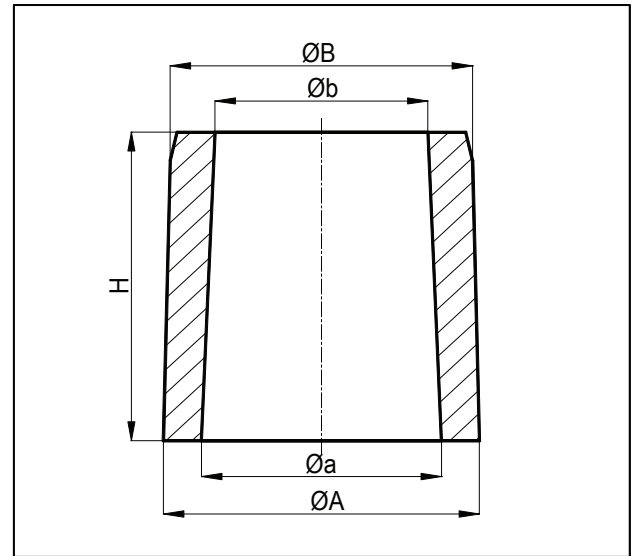
Cylindrical open sleeves ZX

Characteristics:

- exothermic reaction
- modulus controlled ignition
- round external shape
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No..	Type	Modulus [cm]	Vol. [cm³]	Weight [kg]	øa [mm]	øb [mm]	ØA [mm]	ØB [mm]	H [mm]
320532	ZX 40 - 70	1,16	70	0,5	41	35	62	58	73
320632	ZX 40 - 95	1,25	110	0,8	42	36	63	59	97
320732	ZX 50 - 80	1,50	130	0,9	52	48	73	69	80
320832	ZX 60 - 90	1,65	180	1,3	57	52	80	75	92
321032	ZX 70 - 100	1,95	300	2,1	69	65	93	88	99
321232	ZX 80 - 110	2,20	420	2,9	79	71	103	98	110
321430	ZX 90 - 120	2,40	580	4,1	89	81	115	109	120
321630	ZX 100 - 130	2,70	800	5,6	97	91	127	118	133
(321830)	ZX 120 - 150	3,10	1650	11,6	118	112	154	147	150



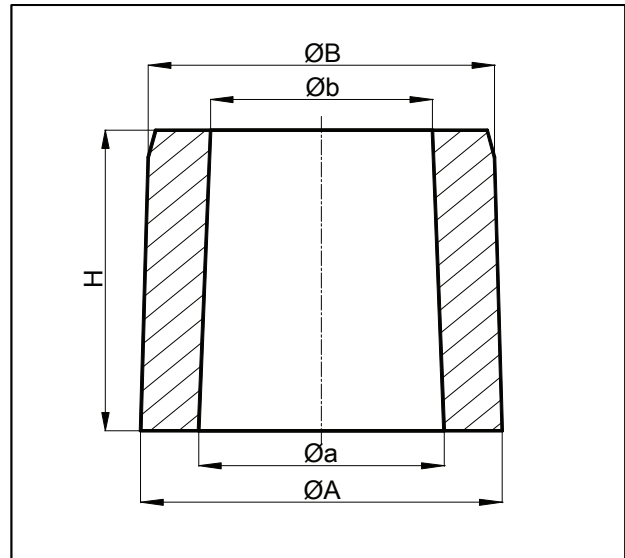
Cylindrical open sleeves ZX/ d

Characteristics:

- exothermic reaction
- modulus controlled ignition
- rounded external corners
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	øa [mm]	øb [mm]	ØA [mm]	ØB [mm]	H [mm]
320732	ZX 50 - 80 d	1,5	0,1	0,9	52	48	74	70	80
321132	ZX 70 - 100 d	2,0	0,3	2,1	72	68	101	96	100
321332	ZX 80 - 100 d	2,0	0,5	3,4	82	79	116	115	100
321432	ZX 90 - 130 d	2,5	0,8	5,5	90	88	139	133	129
321532	ZX 100 - 120 d	2,7	0,9	6,4	100	95	140	135	123
321632	ZX 100 - 140 d	2,8	1,0	7,3	99	95	138	135	140
321732	ZX 120 - 120 d	3,0	1,3	9,1	120	118	164	162	118
321832	ZX 120 - 150 d	3,2	1,6	11,3	120	117	165	161	150
321932	ZX 140 - 140 d	3,5	2,2	15,1	141	139	185	180	140
321934	ZX 140 - 200 d	3,9	3,0	21,0	141	139	185	180	200
322032	ZX 160 - 140 d	3,9	2,7	18,9	161	156	205	200	140
322034	ZX 160 - 200 d	4,3	3,9	27,3	161	155	205	197	200
322211	ZX 180 - 115 d	3,9	3,1	21,8	191	180	294	284	115
322232	ZX 180 - 200 d	4,6	4,8	33,6	183	174	228	225	200
322330	ZX 200 - 200 d	4,8	6,0	41,8	200	190	250	240	200
(322332)	ZX 200- 250 d	5,5	8,0	56,0	200	204	253	250	250
(322380)	ZX 300 - 200 d	6,6	14,1	98,7	300	313	400	400	200

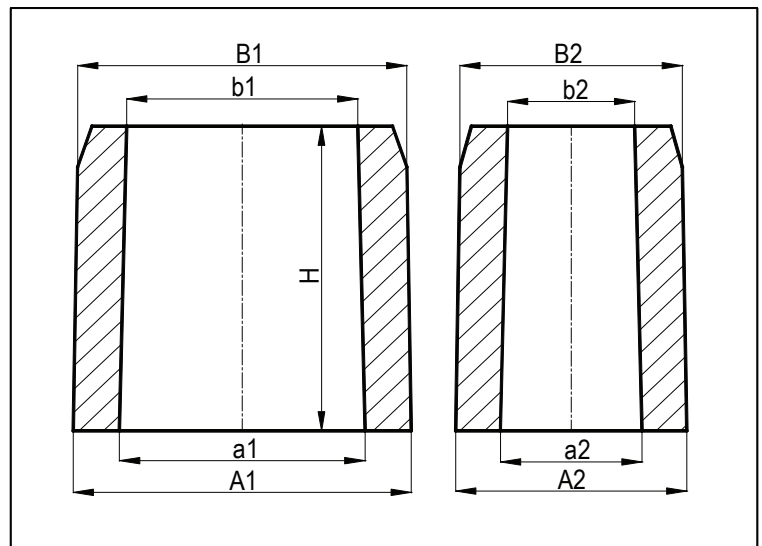
Oval open sleeves OZX

Characteristics:

- exothermic reaction
- modulus controlled ignition
- oval external shape
- feed metal utilisation 40-50%
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey cast iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Modulus [cm]	Vol. [cm³]	a1 [mm]	a2 [mm]	b1 [mm]	b2 [mm]	A1 [mm]	A2 [mm]	B1 [mm]	B2 [mm]	H [mm]
326040	OZX 30 - 90	1,50	120	52	34	47	28	72	52	64	45	89
326043	OZX 43 - 100	1,60	250	77	43	68	34	95	60	87	51	100
	OZX 43 - 200	1,85	500	77	43	68	34	95	60	87	51	200
(326044)	OZX 45 - 100	1,90	420	117	46	107	36	142	70	135	63	100
	OZX 45 - 200	2,25	840	117	46	107	36	142	70	135	63	200
326045	OZX 45 - 128	2,00	510	118	45	104	32	143	70	134	62	128
	OZX 45 - 256	2,35	1020	118	45	104	32	143	70	134	62	256
326050	OZX 50 - 80	1,75	220	76	46	71	41	98	68	93	63	80
326060	OZX 60 - 90	2,10	380	90	60	84	54	114	84	108	78	90
326070	OZX 70 - 100	2,40	650	108	76	104	68	135	100	128	93	100
	OZX 70 - 200	2,90	1300	108	76	104	68	135	100	128	93	200
326080	OZX 80 - 110	2,70	830	122	80	112	70	150	112	144	104	110
	OZX 80 - 220	3,20	1660	122	80	112	70	150	112	144	104	220
326061	OZX 60 - 150	2,60	1.110	144	60	139	55	174	90	169	85	150
326081	OZX 80 - 150	3,00	1.650	160	80	155	75	200	120	195	115	150
326085	OZX 100 - 200	3,90	3.440	200	100	195	95	240	140	235	135	200
	OZX 100 - 300	4,20	5.170	200	100	195	95	240	140	235	135	300
(326086)	OZX 120 - 200	4,40	4.990	240	120	235	115	284	164	279	159	200
	OZX 120 - 300	4,80	7.480	240	120	235	115	284	164	279	159	300
	OZX 120 - 400	5,10	9.990	240	120	235	115	284	164	279	159	400
(326090)	OZX 140 - 200	4,80	6.820	280	140	275	135	328	188	323	183	200
	OZX 140 - 300	5,60	10.230	280	140	275	135	328	188	323	183	300
	OZX 140 - 400	5,90	13.640	280	140	275	135	328	188	323	183	400



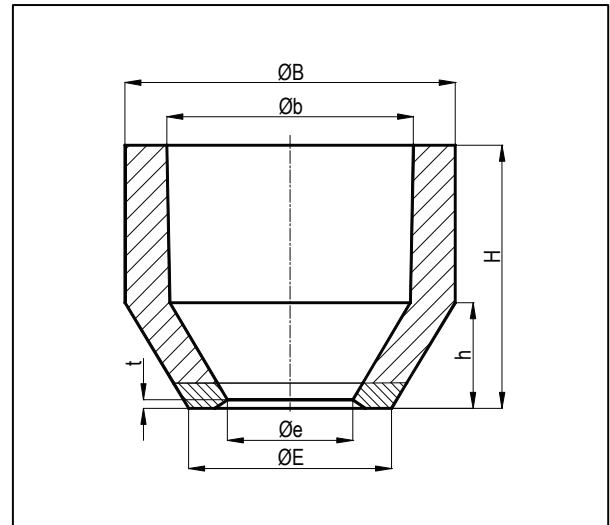
Cylindrical reduced sleeves ZR

Characteristics:

- exothermic reaction
- modulus controlled ignition
- rounded external corners
- feed metal utilisation 30-40%
- high feeding capacity
- constriction gauge **0,5 x b**

Applications:

grey iron, ductile iron, cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	Øb [mm]	Øe [mm]	h [mm]	ØB [mm]	ØE [mm]	H [mm]	t [mm]
323211	ZX 50-80 BSQ 30	1,5	0,18	1,3	52	30	18	74	53	98	4
327013	ZR 1 EQ 32	2,1	0,41	2,9	78	32	35	102	60	105	3
327012	ZR 1 EQ 38	2,1	0,41	2,9	78	38	27	100	69	100	3
327032	ZR 80/38-85 CR	2,1	0,35	2,5	82	38	40	112	73	85	4
327033	ZR 80-38/130 C	2,3	0,58	4,1	82	38	40	110	73	130	4
327041	ZR 2 C	2,3	0,48	3,4	86	45	34	116	74	100	3
327034	ZR 2 EQ 45	2,3	0,48	3,4	86	45	34	116	74	100	3
(327036)	ZR 2H EQ 45	2,6	0,80	5,6	86	45	34	116	74	150	4
327043	ZR 3 C	2,7	0,95	6,7	90	48	44	124	79	150	4
327042	ZR 3 EQ 48	2,7	0,95	6,7	90	48	44	124	79	150	4
327044	ZR 3H C	2,9	1,07	7,5	93	48	44	134	79	175	4
327045	ZR 4 C	3,2	1,39	9,7	117	60	50	158	97	150	4
327052	ZR 4 EQ 60	3,2	1,39	9,7	117	60	50	158	97	150	4
(327062)	ZR 5R C	3,8	2,28	16,0	145	70	68	194	120	166	6
326916	ZR 5 C	4,1	2,99	20,9	145	70	68	194	120	196	6
327064	ZR 5 EQ 70	4,1	2,99	20,9	145	70	68	194	120	196	6
(327072)	ZR 6R C	4,4	3,88	27,2	173	86	90	222	130	201	6
327074	ZR 6 C	4,8	5,12	35,8	176	87	90	222	130	250	6
327082	ZR 7 C	5,1	6,47	45,3	198	99	100	250	150	250	6
327087	ZR 8 C	5,5	7,95	55,7	223	110	110	278	160	250	6

Please specify with your order:

Feeder with breaker core eg: ZR 3 EQ48

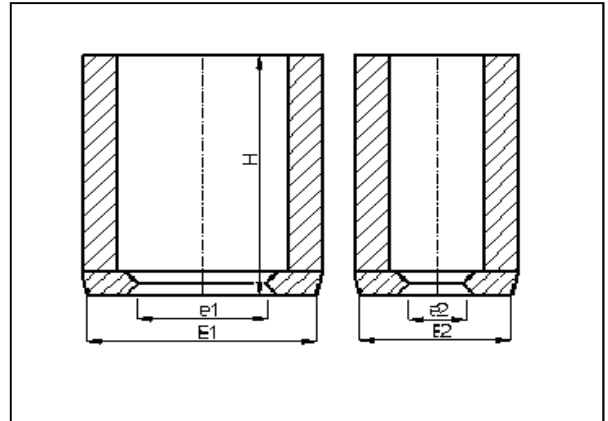
Feeder with coated contact area eg: ZR 3 C



Oval open EXO-ISO sleeves OZXF.. Bov.. with breaker core BovQ / BovCE

Characteristics

- exothermic - insulating
- modulus controlled ignition
- oval external shape
- feed metal utilisation 30-40%
- Croning sand "Q"
- CERATEC sand "CE"



Applications

grey iron, ductile iron
and cast steel

Ref.-No. "Q"	Ref.-No. "CE"	Type	Ref.-No.	Riser Type	Modulus [cm]	Vol. [dm³]	Breaker Cores	e1 [cm]	e2 [cm]
	326023	OZXF 2 Bov (40-150)	326000	OZXF 2	1,9	0,43	BQ 43ov	21	63
	326024	OZXF 3 Bov (41-150)	326001	OZXF 3	2,1	0,66			
	326025	OZXF 4 Bov (60-150)	326002	OZXF 4	2,6	1,20	B 4 ovQ	35	100
	326026	OZXF 5 Bov (80-150)	326003	OZXF 5	3,1	1,38	B 5 ovQ	32	112
	326027	OZXF 6 Bov (100-200)	326004	OZXF 6	3,9	3,50	B 6 ovQ	40	140
	326028	OZXF 7 Bov (120-200)	326005	OZXF 7	4,4	5,10	B 7 ovQ	48	168
	326029	OZXF 8 Bov (140-200)	326006	OZXF 8	4,8	7,00	B 8 ovQ	56	196
	326030	OZXF 9 Bov (160-200)	326007	OZXF 9	5,2	9,10	B 9 ovQ	64	224
	326031	OZXF 10 Bov (180-200)	326008	OZXF 10	5,5	11,60	B 10 ovQ	72	252
	326032	OZXF 11 Bov (200-200)	326009	OZXF 11	5,9	14,30	B 11 ovQ	80	280

Please specify with your order to:

OZXF .. Bov**CE** for breaker core from CERATEC sand eg: OZXF 4 Bov**CE**

OZXF .. Bov**Q** for breaker core from silica sand eg: OZXF 4 Bov**Q**

The dimensions may vary due to production of + -3%.

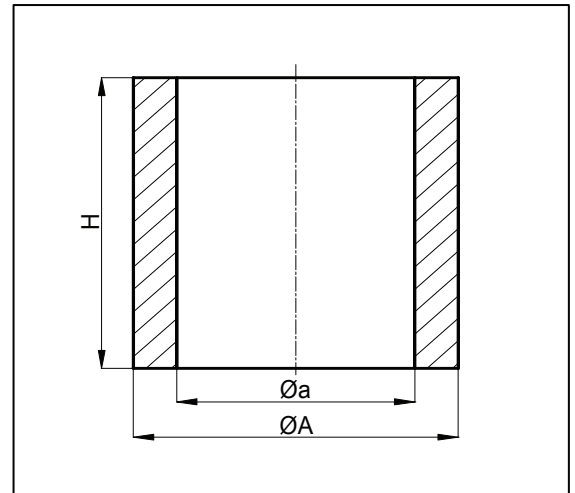
Cylindrical open sleeves ZXF

Characteristics:

- modulus controlled ignition
- exothermic
- good insulation
- rounded external corners
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

grey iron, ductile iron
and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	øa [mm]	ØA [mm]	H [mm]
323303	ZXF 3 (80-150)	2,5	0,8	5,2	80	100	150
323304	ZXF 4 (100-150)	2,9	1,2	8,1	100	120	150
323305	ZXF 5 (120-150)	3,3	1,7	12	120	160	150
323306	ZXF 6 (140-200)	3,9	3,1	21	140	182	200
323307	ZXF 7 (160-200)	4,3	4,0	28	160	206	200
323308	ZXF 8 (180-200)	4,7	5,1	35	180	226	200
323309	ZXF 9 (200-200)	4,8	6,3	43	200	250	200
323318	ZXF 9 -300 (200-300)	5,4	9,4	65	200	250	300
323319	ZXF 9 A (225-200)	5,2	8,0	55	225	275	200
323310	ZXF 10 (250-200)	5,7	9,8	68	250	308	200
323320	ZXF 10 -300 (250-300)	6,5	15	102	250	308	300
323321	ZXF 10 A (270-200)	5,8	12	79	270	328	200
	ZXF 10 A-400	7,2	24	162	270	328	400
323311	ZXF 11 (300-200)		14	97	300	360	200
	ZXF 11 -400	7,9	28	195	300	360	400
323312	ZXF 12 (350-200)		19	132	350	410	200
	ZXF 12 -400	8,8	39	265	350	410	400
323322	ZXF 12 A (370-200)		22	148	370	430	200
	ZXF 12 A-400	8,9	43	293	370	430	400

The dimensions may vary due to the production of + -3%.



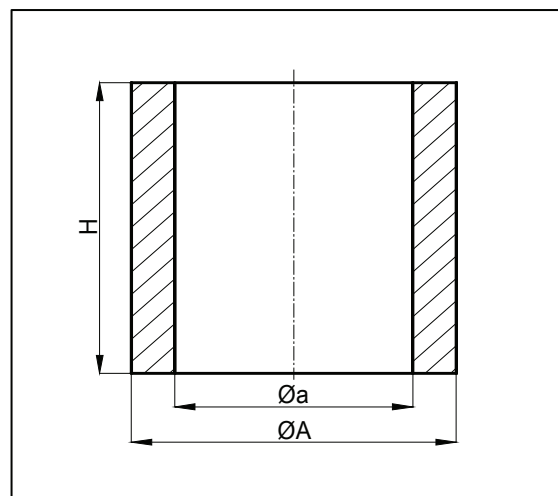
Cylindrical open sleeves ZXF

Characteristics:

- modulus controlled ignition
- exothermic
- good insulation
- rounded external corners
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

grey iron, ductile iron
and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [dm ³]	Weight [kg]	øa [mm]	ØA [mm]	H [mm]
323313	ZXF 13		25	173	400	460	200
	ZXF 13 -500 (400-200)	10,4	63	433	400	460	500
323314	ZXF 14		32	219	450	510	200
	ZXF 14 -500 (450-200)	11,3	80	550	450	510	500
323315	ZXF 15		39	271	500	560	200
	ZXF 15 -500 (500-200)	12,1	100	688	500	560	500
323316	ZXF 16		48	328	550	610	200
	ZXF 16 -600 (550-200)	13,3	143	980	550	610	600
323317	ZXF 17 (600-200)		57	390	600	660	200
	ZXF 17 -600	13,5	170	1170	600	660	600

The dimensions may vary due to the production of + -3%.



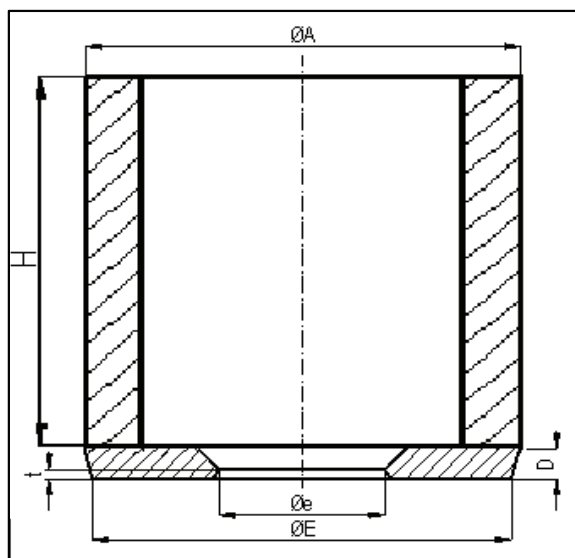
Cylindrical open sleeves ZXF with breaker core B ... for cast iron

Characteristics

- exothermic-insulating
- modulus controlled ignition
- rounded external corners
- feed metal utilisation 30 - 40%
- breaker core with about 50% necking
- chromite sand WG-bound "CR"
- CERATEC sand CB-bound "CE"

Applications

grey iron and ductile iron



Ref.-No. "CR"	Ref.-No. "CE"	Type	Ref.-No.	Type	Vol. [dm³]	Vol. [dm³]	Breaker Cores
		ZXF 3 B45	323303	ZXF 3	2,4	0,75	B 115 - 45
		ZXF 4 B50	323304	ZXF 4	2,8	1,18	B 132 - 50
		ZXF 5 B60	323305	ZXF 5	3,2	1,7	B 160 - 60
323336		ZXF 6 B68	323306	ZXF 6	3,9	3,1	B 185 - 68
		ZXF 7 B80	323307	ZXF 7	4,3	4	B 198 - 80
		ZXF 8 B85	323308	ZXF 8	4,6	5,1	B 220 - 85
		ZXF 9 B90	323309	ZXF 9	4,9	6,3	B 250 - 90
		ZXF 9A B90	323319	ZXF 9A	5,4	8	B 270 - 90
		ZXF 10 B110	323310	ZXF 10	5,7	9,8	B 300 - 110
		ZXF 10A B110	323321	ZXF 10A	6	11,5	B 300 - 110
323385		ZXF 11 B135	323311	ZXF 11	6,2	14,1	B 360 - 135
		ZXF 12 B150	323312	ZXF 12	6,7	19,2	B 410 - 150
		ZXF 12A B150	323322	ZXF 12A		21,5	B 410 - 150
		ZXF 13 B165	323313	ZXF 13		25,1	B 460 - 165
		ZXF 14 B180	323314	ZXF 14		31,8	B 515 - 180

Please specify with your order to:

ZXF .. B..CE for breaker core from CERATEC sand eg: ZXF 4 B50CE

ZXF .. B..Q for breaker core from chromite sand eg: ZXF 4 B50Q

The dimensions may vary due to production of + -3%.

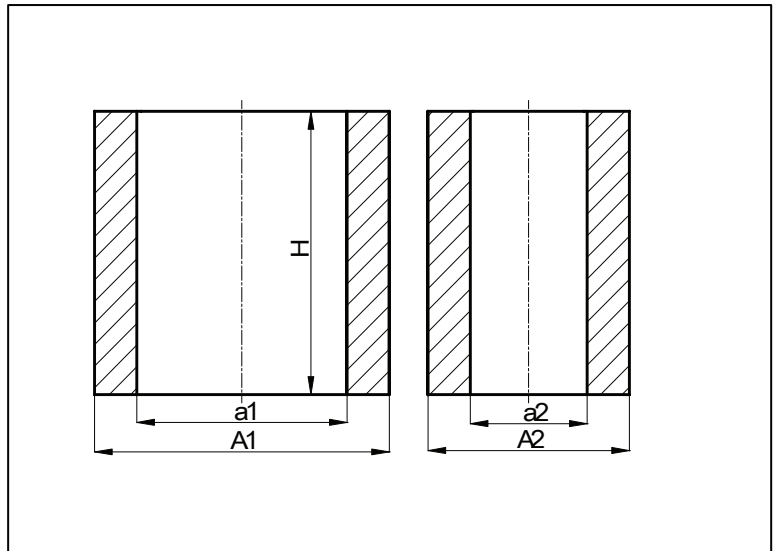
Oval open sleeves OZXF

Characteristics:

- modulus controlled ignition
- exothermic
- good insulation
- oval external shape
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

grey iron, ductile iron
and cast steel



Ref.-No.	Type		Modulus [cm]	Vol. [dm³]	Gew. [kg]	a1 [mm]	a2 [mm]	A1 [mm]	A2 [mm]	H [mm]
326000	OZXF 2	(40-150)	1 : 2	1,9	0,4	3	40	80	58	150
326001	OZXF 3	(41-150)	1 : 3	2,1	0,7	5	40	120	58	150
326002	OZXF 4	(60-150)	1 : 2,4	2,6	1,2	8	60	144	80	150
326003	OZXF 5	(80-150)	1 : 2	3,1	1,4	10	80	160	104	150
326004	OZXF 6	(100-200)	1 : 2	3,9	3,5	25	100	200	142	200
326005	OZXF 7	(120-200)	1 : 2	4,4	5,1	36	120	240	166	200
	OZXF 7 -400		1 : 2	4,9	10,2	70	120	240	166	400
326006	OZXF 8	(140-200)	1 : 2	4,8	7,0	48	140	280	186	200
	OZXF 8 -400		1 : 2	5,7	14,0	96	140	280	186	400
326007	OZXF 9	(160-200)	1 : 2	5,2	9,1	63	160	320	210	200
	OZXF 9 -400		1 : 2	6,4	18,2	125	160	320	210	400
326008	OZXF 10	(180-200)	1 : 2	5,5	11,6	80	180	360	238	200
	OZXF 10 -400		1 : 2	6,8	23,2	160	180	360	238	400
326009	OZXF 11	(200-200)	1 : 2	5,9	14,3	99	200	400	260	200
	OZXF 11 -400		1 : 2	7,4	28,6	197	200	400	260	400
326019	OZXF 22-20	(220-200)	1 : 1,5	5,9	12,4	86	220	330	280	200
	OZXF 22-20 -400		1 : 1,5	7,4	24,9	172	220	330	280	400
326022	OZXF 30-20	(300-200)	1 : 1,5	7,0	23,1	159	300	450	360	200
	OZXF 30-20 - 400		1 : 1,5	9,2	46,2	318	300	450	360	400

Diameter ratio: a1 : a2

The dimensions may vary due to the production of + -3%.

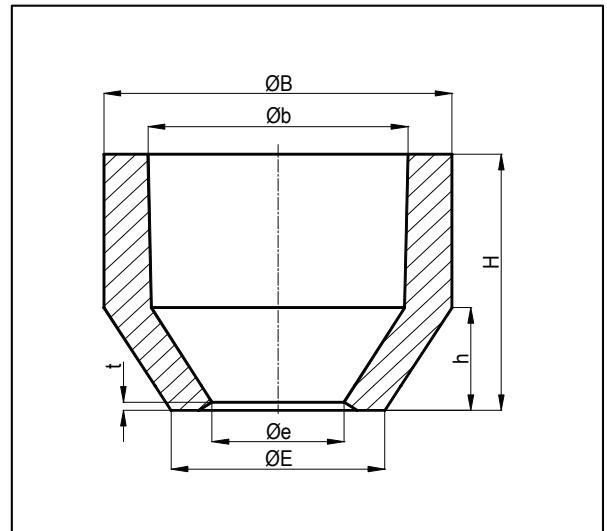
Cylindrical reduced sleeves ZRF

Characteristics:

- modulus controlled ignition
- exothermic
- good insulation
- rounded external corners
- feed metal utilisation 30 - 40%
- high feeding volume
- reduction 0,5x feeder diameter

Applications:

grey iron, ductile iron
and cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	Øb [mm]	Øe [mm]	h [mm]	ØB [mm]	ØE [mm]	H [mm]	t [mm]
326920	ZRF 0	1,5	0,18	1,2	50	30	15	73	50	100	3
326921	ZRF 1	2,1	0,41	2,8	78	38	27	103	69	100	3
326922	ZRF 2	2,3	0,48	3,3	85	45	34	118	74	100	3
326932	ZRF 2/3	2,6	0,80	5,5	87	45	34	118	74	150	3
326923	ZRF 3	2,7	0,93	6,4	94	48	43	133	80	150	4
326933	ZRF 3/4	2,9	1,14	7,8	95	48	40	134	76	175	4
326924	ZRF 4	3,2	1,40	9,4	118	60	50	159	97	150	4
326934	ZRF 4/5	3,8	2,3	16	147	70	68	188	120	165	5
326925	ZRF 5	4,1	3,0	21	147	70	68	194	120	195	6
326935	ZRF 5/6	4,4	3,9	27	175	87	90	222	132	200	6
326926	ZRF 6	4,8	5,1	35	175	87	90	224	132	250	6
326927	ZRF 7	5,1	6,5	45	200	100	100	253	150	250	6
326928	ZRF 8	5,5	8,0	55	225	110	110	280	160	250	6
326929	ZRF 9	6,2	12,0	83	252	124	120	313	180	300	8
326930	ZRF 10	7,0	17,0	117	300	150	140	363	210	300	8
326931	ZRF 11	7,7	22,6	155	355	175	155	418	240	300	8

The dimensions may vary due to the production of + -3%.

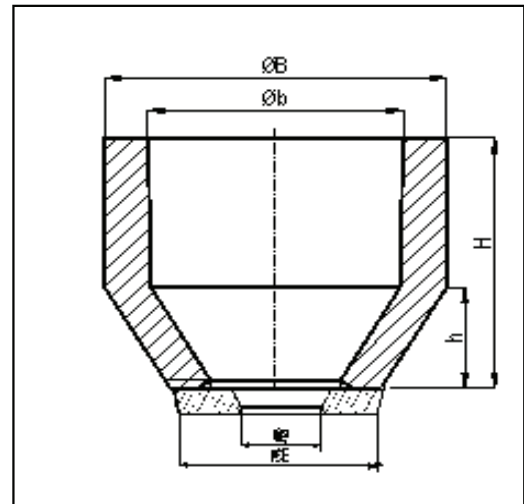
Cylindrical reduced sleeves ZRF with breaker core B ... for cast iron

Characteristics

- exothermic-insulating
- modulus controlled ignition
- rounded external corners
- feed metal utilisation 30 - 40%
- breaker core with about 30-40% necking
- Croning sand or CB-silica sand "Q"
- CERATEC sand CB-bound "CE"

Applications

grey cast iron and
ductile iron



Ref.-No. "Q"	Ref.-No. "CE"	Type	Ref.-No.	Riser Type	Modulus [cm]	Vol. [dm ³]	Breaker Cores	M øe [%]
		ZRF 1 B30	326921	ZRF 1	2,1	0,4	B 67 - 30	34
		ZRF 2 B30	326922	ZRF 2	2,3	0,5	B 74 - 30	33
		ZRF 2/3 B30	326932	ZRF 2/3	2,6	0,8	B 74 - 30	29
		ZRF 3 B39	326923	ZRF 3	2,7	0,9	B 90 - 39	36
		ZRF 3/4 B39	326933	ZRF 3/4	2,9	1,1	B 90 - 39	34
		ZRF 4 B40	326924	ZRF 4	3,2	1,4	B 95 - 40	29
		ZRF 4/5 B45	326934	ZRF 4/5	3,8	2,3	B 115 - 45	30
		ZRF 5 B45	326925	ZRF 5	4,1	3,0	B 115 - 50	30
		ZRF 5/6 B60	326935	ZRF 5/6	4,4	3,9	B 132 - 60	34
326960		ZRF 6 B60	326926	ZRF 6	4,8	5,1	B 132 - 60	31
	326961	ZRF 6 B85	326926	ZRF 6	4,8	5,1	B 160 - 85	44
	326962	ZRF 7 B75	326927	ZRF 7	5,1	6,5	B 160 - 75	36
	326964	ZRF 8 B85	326928	ZRF 8	5,5	8	B 160 - 85	39
326966		ZRF 9 B85	326929	ZRF 9	6,2	12	B 185 - 85	34
326968	326967	ZRF 9 Bov	326929	ZRF 9	6,2	12	B 185 ov	24
		ZRF 9 B86	326929	ZRF 9	6,2	12	B 198 - 85	34
	326969	ZRF 9 B100	326929	ZRF 9	6,2	12	B 198 - 100	40
	326970	ZRF 10 B100	326930	ZRF 10	7,0	17	B 225 - 100	35
326972	326973	ZRF 11 B120	326931	ZRF 11	7,7	23	B 250 - 120	40

Necking module øe in relation to feeder module = **M øe**

Please specify with your order to:

ZRF .. B..**CE** for breaker core from CERATEC sand eg: ZRF 4 B40 **CE**

ZRF .. B..**Q** for breaker core from silica sand eg: ZRF 4 B40 **Q**

The dimensions may vary due to production of + -3%.

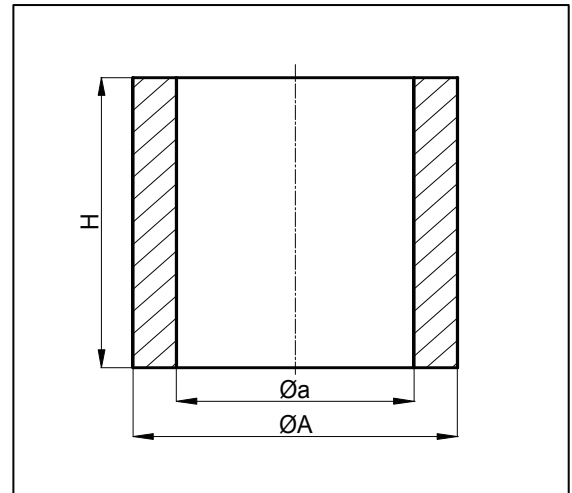
Cylindrical open sleeves ZIF

Characteristics:

- good insulation
- rounded external corners
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

gray & ductile cast iron , steel castings,
light and heavy metal castings



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	øa [mm]	ØA [mm]	H [mm]
	ZIF 1 (40-150)	1,2	0,2	1,3	40	57	150
	ZIF 50 (50-150)	1,5	0,3	2,0	50	67	150
	ZIF 2 (60-150)	1,8	0,4	2,9	60	77	150
	ZIF 70 (70-150)	2,0	0,6	4,1	70	88	150
	ZIF 3 (80-150)	2,2	0,8	5,3	80	98	150
	ZIF 4 (100-150)	2,6	1,2	8,3	100	118	150
	ZIF 5 (120-150)	3,0	1,7	12	120	141	150
	ZIF 6 (140-200)	3,6	3,1	22	140	163	200
	ZIF 7 (160-200)	4,0	4,0	28	160	187	200
	ZIF 8 (180-200)	4,3	5,1	36	180	207	200
	ZIF 9 (200-200)	4,7	6	44	200	231	200
	ZIF 9 -300 (200-300)	5,0	9	66	200	231	300
	ZIF 9 A (225-200)	4,8	8	56	225	256	200
	ZIF 10 (250-200)	5,3	10	69	250	283	200
	ZIF 10 -300 (250-300)	5,9	15	103	250	283	300
	ZIF 10 A (270-200)	5,4	12	81	270	303	200
	ZIF 10 A-400	6,7	24	165	270	303	400
	ZIF 11 (300-200)	5,7	14	99	300	335	200
	ZIF 11 -400	7,5	28	197	300	335	400
	ZIF 12 (330-200)	8,3	20	137	330	367	200
	ZIF 12 -400	8,3	39	273	350	387	400
	ZIF 12/A (370-200)		22	151	370	409	200
	ZIF 12/A-400	8,5	43	301	370	409	400

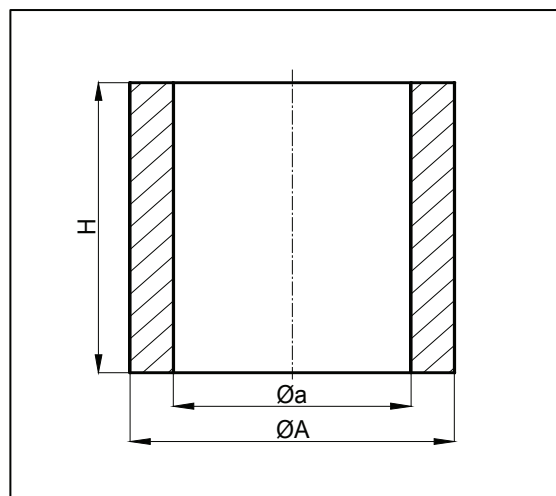
Cylindrical open sleeves ZIF

Characteristics:

- good insulation
- rounded external corners
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

gray & ductile cast iron , steel castings,
light and heavy metal castings



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Weight [kg]	Øa [mm]	ØA [mm]	H [mm]
	ZIF 13 (400-200)		25	176	400	439	200
	ZIF 13 -500	9,6	63	441	400	439	500
	ZIF 14 (450-200)		32	224	450	491	200
	ZIF 14 -500	10,5	80	560	450	491	500
	ZIF 15 (500-200)		40	280	500	543	200
	ZIF 15 -500	11,2	100	700	500	543	500
	ZIF 16 (550-200)		48	333	550	595	200
	ZIF 16 -600	12,6	143	998	550	595	600
	ZIF 17 (600-200)		71	495	600	647	200
	ZIF 17 -600	13,0	212	1484	600	647	600

The dimensions may vary due to the production of + -3%.

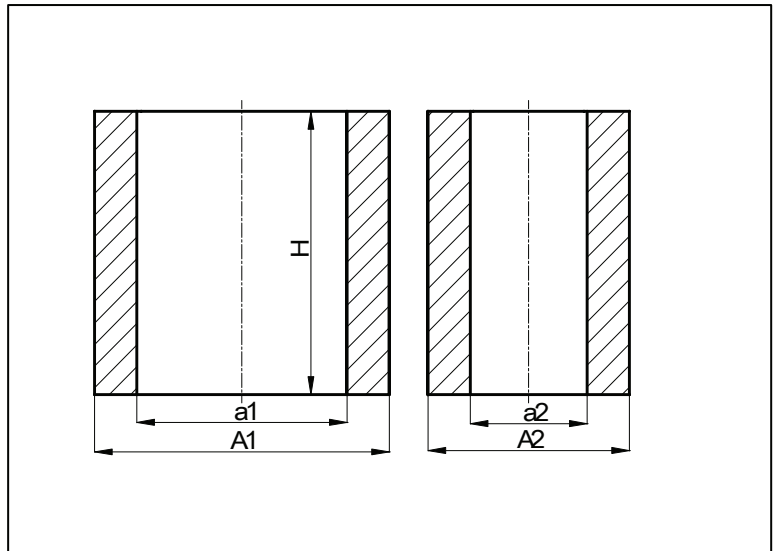
Oval open sleeves OZIF

Characteristics:

- good insulation
- oval external shape
- feed metal utilisation 30 - 40%
- high feeding volume

Applications:

gray & ductile cast iron , steel castings,
light and heavy metal castings



Ref.-No.	Type		Modulus [cm]	Vol. [dm³]	Gew. [kg]	a1 [mm]	a2 [mm]	A1 [mm]	A2 [mm]	H [mm]
	OZIF 2	(40-150)	1,7	0,4	3	80	40	98	58	150
	OZIF 3	(41-150)	1,9	0,7	5	120	40	135	58	150
	OZIF 4	(60-150)	2,4	1,2	8	144	60	164	80	150
	OZIF 5	(80-150)	2,8	1,4	10	160	80	184	104	150
	OZIF 6	(100-200)	3,75	3,5	25	200	100	242	142	200
	OZIF 7	(120-200)	4,27	5,1	36	240	120	286	166	200
	OZIF 7 -400		4,6	10,2	70	240	120	286	166	400
	OZIF 8	(140-200)	4,75	7,0	48	280	140	326	186	200
	OZIF 8 -400		5,3	14,0	96	280	140	326	186	400
	OZIF 9	(160-200)	5,1	9,1	63	320	160	370	210	200
	OZIF 9 -400		5,9	18,2	125	320	160	370	210	400
	OZIF 10	(180-200)	5,1	11,6	80	360	180	418	238	200
	OZIF 10 -400		6,3	23,2	160	360	180	418	238	400
	OZIF 11	(200-200)	5,5	14,3	99	400	200	460	260	200
	OZIF 11 -400		6,9	28,6	197	400	200	460	260	400
	OZIF 22-20	(220-200)	5,5	12,4	86	330	220	390	280	200
	OZIF 22-20 -400		6,9	24,9	172	330	220	390	280	400
	OZIF 30-20	(300-200)	6,5	23,1	159	450	300	510	360	200
	OZIF 30-20- 400		8,5	46,2	318	450	300	510	360	400

Diameter ratio: a1 : a2

The dimensions may vary due to the production of + -3%.



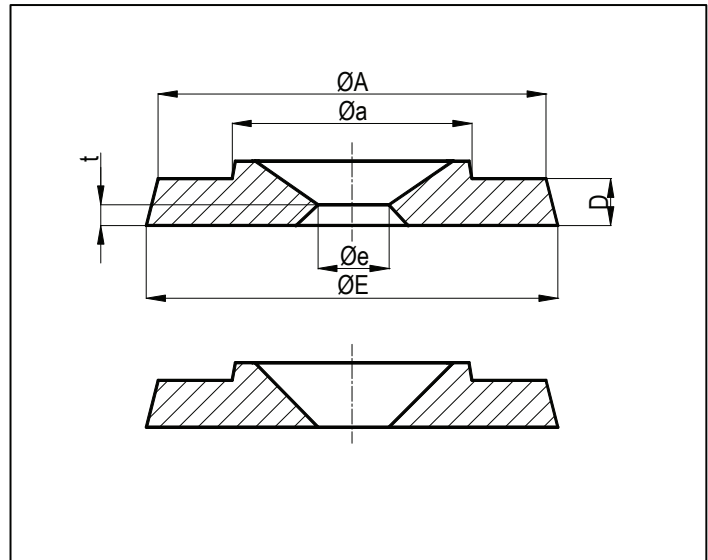
Breaker cores BQ for exothermic risers

Characteristics:

- Crooning sand
- round neck
(0,5-0,6 * feeder diameter)

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm²]	for risers	
312001	BQ 48-11	11	35	47	48	6	2	1,0	KX	30- 50
312021	BQ 48-12	12	35	47	48	6	2	1,1	KX	30- 50
312002	BQ 48-20	20	35	47	48	6	3	3,1	KX	30- 50
312020	BQ 48-20S	20	35	47	48	6	0	3,1	KX	30- 50
312058	BQ 56-10	14	34	56	54	8	2	1,5	KX	25- 90
312003	BQ 56-14	14	35	55	56	6	2	1,5	KX	35- 50
312004	BQ 56-20	20	35	55	56	6	3	3,1	KX	35- 50
312022	BQ 56-20S	20	35	55	56	6	0	3,1	KX	35- 50
312006	BQ 67-25	25	41	66	67	8	4	4,9	KX	40-
312007	BQ 77-30	30	51	76	77	8	4	7,1	KX	50- 80
312008	BQ 84-30	30	57	83	84	8	4	7,1	KX	60-
312010	BQ 98-35	35	69	97	98	10	5	9,6	KX	70- 100
312011	BQ 108-40	40	78	107	108	10	5	12,6	KX	80- 110
312012	BQ 120-45	45	88	119	120	10	5	15,9	KX	90- 120
312013	BQ 132-50	50	95	131	132	10	5	19,6	KX	100- 130
312016	BQ 160-60	60	117	159	160	12	6	28,3	KX	120- 150
	BQ 160-61S	60	117	159	160	12	0	28,3	KX	120- 150



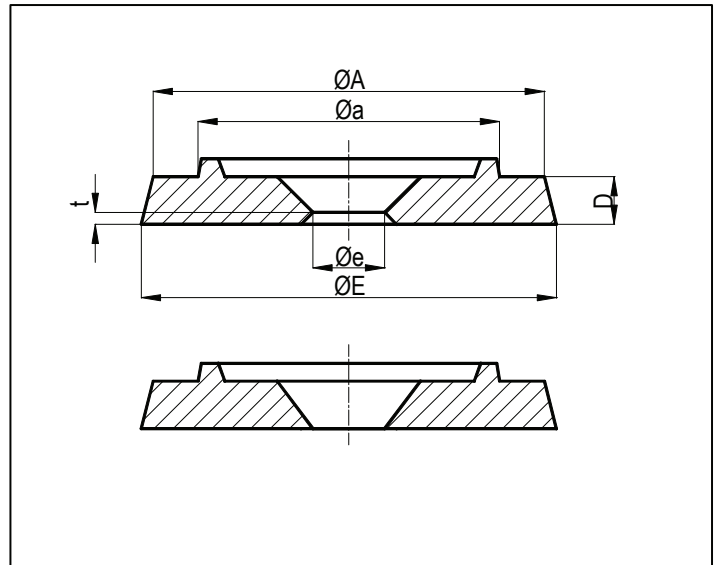
Breaker cores KQ for exothermic risers

Characteristics:

- Crooning sand
- round neck ($0,3 - 0,4 \times$ feeder diameter)

Applications:

grey iron and ductile iron



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]	for risers	
312025	KQ 67 - 12	12	41	66	67	8	3	1,1	KX	40-
312026	KQ 67 - 20	20	41	66	67	8	3	3,1	KX	40-
312029	KQ 77 - 14	14	51	76	77	8	3	1,5	KX	50- 80
312027	KQ 77 - 22	22	51	76	77	8	3	3,8	KX	50- 80
312039	KQ 77 - 22S	22	51	76	77	8	0.5	3,8	KX	50- 80
312023	KQ 84 - 16	16	57	83	84	8	3	2,0	KX	60-
312028	KQ 84 - 25	25	57	83	84	8	3	4,9	KX	60-
312024	KQ 98 - 18	18	69	97	98	10	4	2,5	KX	70- 100
312030	KQ 98 - 28	28	69	97	98	10	4	6,2	KX	70- 100
312034	KQ 108 - 20	20	79	107	108	10	4	3,1	KX	80- 110
312031	KQ 108 - 30	30	79	107	108	10	4	7,1	KX	80- 110
312035	KQ 120 - 22	22	88	119	120	10	4	3,8	KX	90- 120
312032	KQ 120 - 32	32	88	119	120	10	4	8,0	KX	90- 120
312037	KQ 132 - 24	24	97	131	132	10	4	4,5	KX	100- 130
312033	KQ 132 - 35	35	97	131	132	10	4	9,6	KX	100- 130
312036	KQ 160 - 40	40	117	159	160	12	5	12,6	KX	120- 150



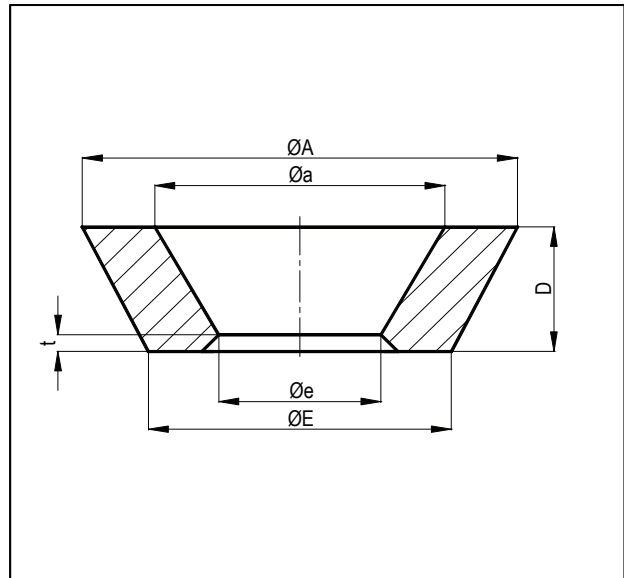
Breaker core bowl shaped BSQ for exothermic risers

Characteristics:

- croning sand Q
- chromite sand CR
- reduced contact area
- round neck

Applications:

grey cast iron, ductile iron, cast steel
and nonferrous metals



Ref-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm²]	for risers
312043	BSQ 47-15	15	36	47	28	13	3	1,8	KX 30-50
(312042)	BSQ 53-20	20	25	53	34	20	3	3,1	KX 25-90
(312044)	BSQ 53-21	20	32	53	37	15	3	3,1	KX 35-50
(312045)	BSQ 58-25	25	38	58	43	15	4	4,9	KX 40-50
(312046)	BSQ 62-25	25	38	62	47	15	4	4,9	KX 40- ...
312055	BSQ 69-29	30	48	70	53	18	4	7,1	ZX / KX 50-80
312047	BSQ 70-30	30	48	70	53	28	4	7,1	ZX / KX 50-80
312054	BSQ 73-30	30	48	73	53	20	4	7,1	ZX / KX 50-80
312048	BSQ 79-33	33	54	79	56	22	4	8,6	ZX / KX 60- ...
350082	BSQ 82-28	28	40	82	59	25	5	6,2	ZX / KX 60- ...
360010	BSQ 90-40	40	51	90	65	21	5	12,6	ZX / KX 70-100
(312049)	BSQ 93-35	35	64	93	70	25	4	9,6	ZX / KX 70-100
312051	BSQ 102-38	38	68	102	71	30	4	11,3	ZX / KX 80-110
(312052)	BSQ 115-40	40	80	115	79	35	4	12,6	ZX / KX 90-120
312053	BSQ 126-45	45	90	126	82	39	4	15,9	ZX / KX 100-130
312056	BSQ 160-60	60	120	160	111	30	5	28,3	ZX / KX 120-150
312059	BSQ 185-90	90	140	185	130	40	8	63,6	ZX / KX 140-...
312061	BSQ 205-90	90	160	205	150	40	8	63,6	ZX / KX 160-...
312062	BSQ 205-105	105	160	205	150	40	8	86,6	ZX / KX 160-...

When order with sleeve, please indicate:

croning sand
chromite sand

KX 50-80 BSQ30
KX 50-80 BSCR31



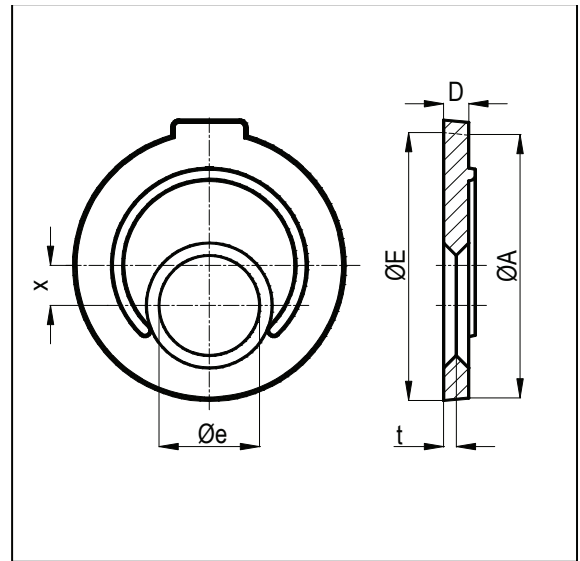
Breaker cores AQ for exothermic risers

Characteristics:

- Croning sand
- round neck
- assymetric feeding (off-centre feeding)

Applications:

grey iron, ductile iron
and nonferrous metals



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	x [mm]	t [mm]	Q [cm ²]	for risers		
	AQ 84 x 1	30	57	83	84	8	10	4	7	KX 60- ...	W	
	AQ 98 x 1	35	69	97	98	10	17	5	10	KX 70-100	W	
	AQ 108 x 1	40	78	106	108	10	16	5	13	KX 80-110	W	
311928	AQ 120 x 1	30	87	118	120	10	23	5	7	KX 90-120	W	
311932	AQ 132 x 1	50	95	130	132	10	18	5	20	KX 100-130	W	
(311938)	AQ 160 x 1	60	115	157	159	11	26	5	28	KX 120-150	W	
311927	A 104 x 1Q	40		104	97	10	17	4	13	KX 80-110	W	
	A 108 x 1Q	40		108	106	10	16	4	13	KX 80-110	W	



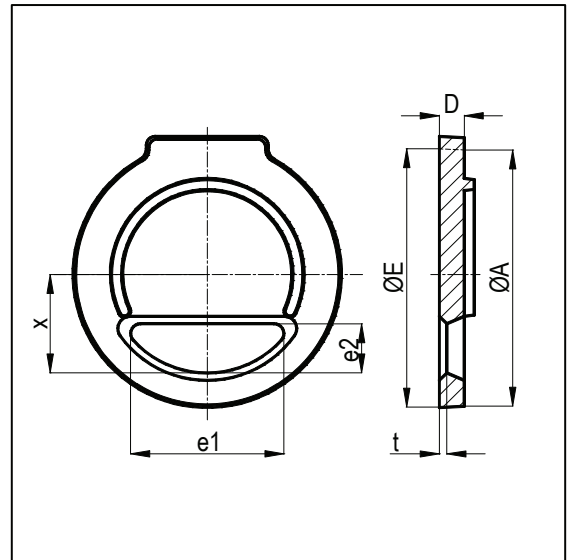
Breaker cores MQ for exothermic risers

Characteristics:

- Croning sand
- moon shaped neck
- assymetric feeding (off-centre feeding)

Applications:

grey iron, ductile iron
and nonferrous metals



Ref.-No.	Type	e1 [mm]	e2 [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	x [mm]	t [mm]	Q [cm ²]	for risers	
(311941)	MQ 67 x 1	35	12	41	65	66	8	19	3	4	KX 40- ...	W
311942	MQ 77 x 1	41	14	51	77	78	8	26	3	5	KX 50-80	W
311943	MQ 84 x 1	43	22	57	82	83	8	28	3	7	KX 60- ...	W
	MQ 84 x 2	40	15	57	83	84	8	25	3	5	KX 60- ...	W
311944	MQ 98 x 1	50	15	69	96	98	10	35	3	7	KX 70-100	W
311945	MQ 108 x 1	61	20	78	106	108	10	40	3	9	KX 80-110	W
	MQ 120 x 1	69	19		119	120	10	41	4	10	KX 90-120	W
311946	MKQ 102x 1	56	14	79	98	102	10	40	1	6	80-110	
	MKQ 102x 2	2*56	2*14	-	98	102	10	2*40	1	2*6	80-110	
311947	MQ 120x 1	2*69	2*19	2*90	2*117	2*118	10	2*45	4	2*10	KX 90-120	W



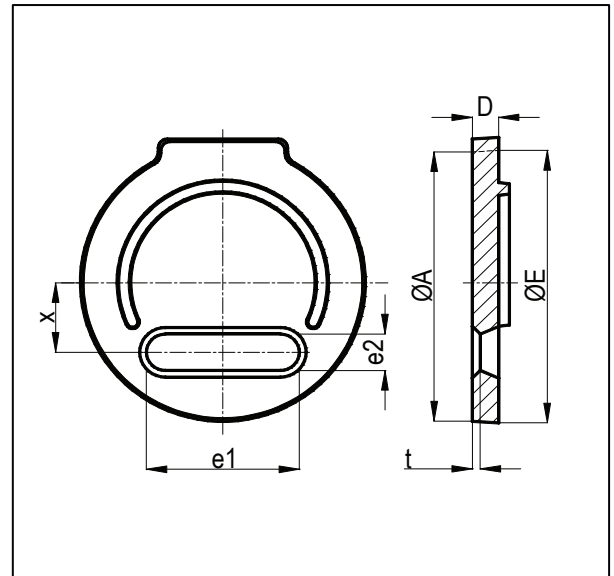
Breaker cores OQ for exothermic risers

Characteristics:

- Croning sand
- oval neck
- assymetric feeding (off-centre feeding)

Applications:

grey iron, ductile iron
and nonferrous metals



Ref.-No.	Type	øe	øa	ØA	ØE	D	x	t	Q	for risers		
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[cm²]			
(311913)	OQ 84 x 1	44	24	57	82	83	8	16	3	9	KX 60- ...	W
(311914)	OQ 84 x 2	45	23	57	83	84	8	18	3	9	KX 60- ...	W
311917	OQ 120 x 1	57	23	89	119	120	10	31	3	12	KX 90-120	W
	OQ 132 x 1	70	28	95	130	132	10	31	4	18	KX 100-130	W



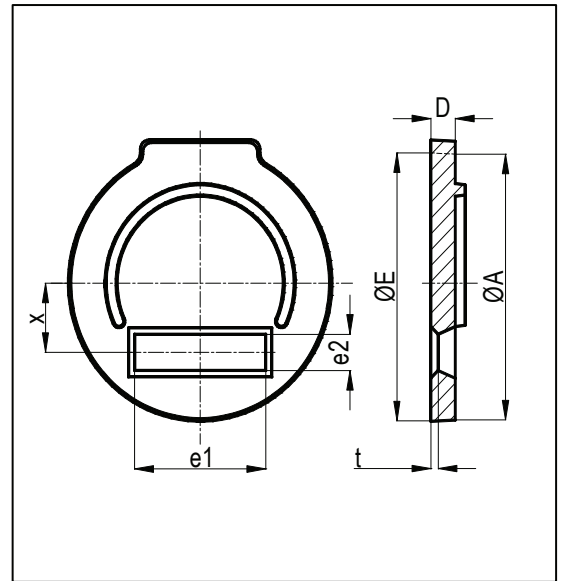
Breaker cores RQ for exothermic risers

Characteristics:

- Croning sand
- rectangular neck
- assymetric feeding (off-centre feeding)

Applications:

grey iron, ductile iron
and nonferrous metals



Ref.-No.	Type	øe [mm]	øa [mm]	ØA [mm]	ØE [mm]	D [mm]	x [mm]	t [mm]	Q [cm ²]	for risers	
(311921)	RQ 67 x 1	26	15	41	64	66	8	8	3,9	KX	40- ... W
	RQ 67 x 2	34	12	41	64	66	8	12	4,1	KX	40- ... W
	RQ 77 x 1	44	15	51	76	77	8	8	6,6	KX	50- ... W
(311923)	RQ 84 x 1	45	16	57	83	84	8	10	7,2	KX	60- ... W
(311924)	RQ 84 x 2	41	16	57	83	84	8	17	6,6	KX	60- ... W
	RQ 108 x 1	70	22	78	107	108	10	16	16,0	KX	80-110 W
	RQ 108 x 2	45	15	78	107	108	10	0	6,8	KX	80-110 W
	RQ 132 x 1	60	15	95	131	132	10	0	9,0	KX	100-130 W
	RQ 160 x 1	25	90	117	159	160	12	0	22,5	KX	120-150 W



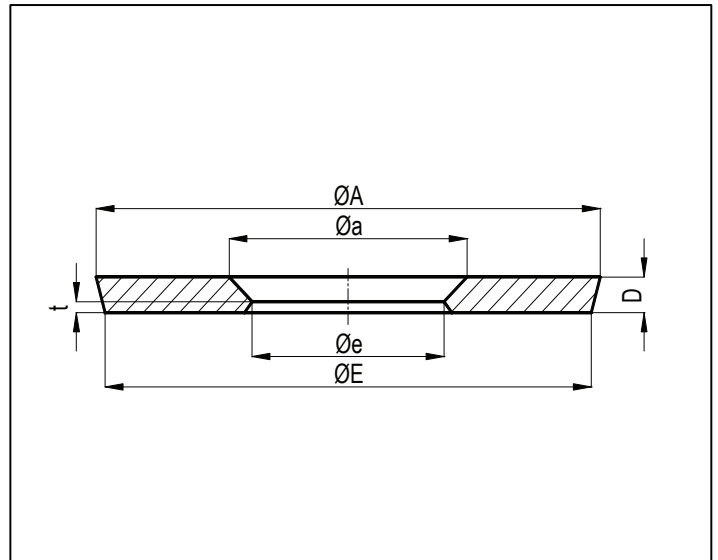
Breaker cores B../Q, B../CR, B../CE for cast iron

Characteristics

- Croning sand **Q**
- chromite sand **CR**
- CERATEC **CE**
- round neck

Applications

grey iron and ductile iron



Ref.-No.	Ref.-No.	Ref.-No.	Type	øe	ØA	ØE	D	t	Q	for risers		
" Q "	" CR "	" CE "		[mm]	[mm]	[mm]	[mm]	[mm]	[cm²]	ZX / KX	ZXF	ZRF
323056	323006		B 67 - 30	30	67	64	8	4	7	50-80		1
323057			B 74 - 30	30	74	72	8	4	7	50-85		2
323059	323009		B 80 - 30	30	80	73	8	4	7	60-90		
323061	323011		B 90 - 35	35	90	86	11	4	10	70-100	2	
323077	360089		B 90 - 39	40	90	86	11	4	13	70-100		3
323075			B 95 - 21	21	96	94	11	4	3	70-100		
323076			B 95 - 40	40	95	94	11	4	13	70-100		4
323079		323044	B 104 - 40	40	104	97	10	5	13	80-110		
323063	323013		B 108 - 40	40	108	105	10	5	13	80-100d		
323064	323014		B 108 - 45	45	108	105	10	5	16	80-100d	3	
323062		323012	B 108 - 50	50	108	105	10	5	20	80-110		
323084			B 115 - 33S	33	115	110	10	1	9	90-120		
323066	323017		B 115 - 45	45	115	110	10	5	16	90-120		4/5
323085			B 115 - 50	50	115	110	10	5	20	90-120		5
323065		323045	B 132 - 50	50	132	131	10	4	20	100-....		
	323015		B 132 - 51	50	136	133	11	4	20	100-....	4	
			B 132 - 60	60	132	131	10	4	28	100-....		6
312066	323019		B 160 - 27	27	164	160	12	5	6	120-....		
312018			B 160 - 40	40	164	160	12	6	13	120-....		
323068	323018	323016	B 160 - 60	60	164	160	12	6	28	120-....	5	
		323093	B 160 - 75	75	164	160	12	6	44	120-....		7 + 8
323086		323042	B 160 - 85	85	164	160	12	6	57	120-....		7 + 8



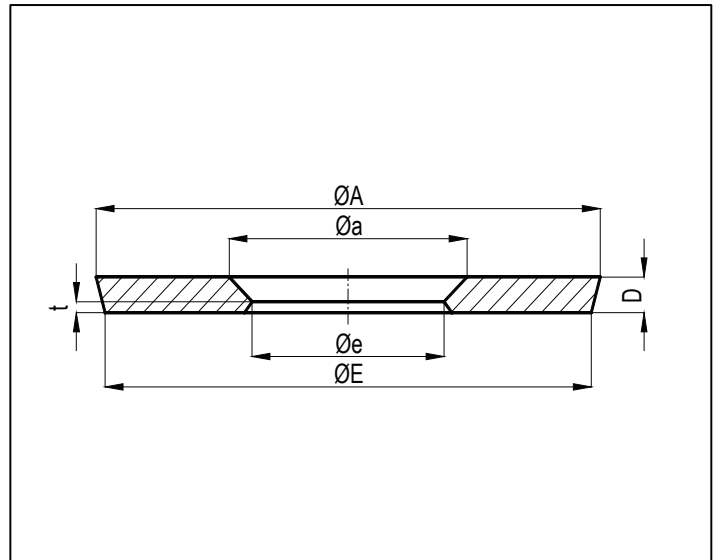
Breaker cores B../Q, B../CR, B../CE for cast iron

Characteristics

- Croning sand **Q**
- chromite sand **CR**
- CERATEC **CE**
- round neck

Applications

grey iron and ductile iron



Ref.-No.	Ref.-No.	Ref.-No.	Type	øe	ØA	ØE	D	t	Q	for risers	
" Q "	" CR "	" CE "		[mm]	[mm]	[mm]	[mm]	[mm]	[cm²]	ZX / KX	ZXF ZRF
323069			B 185 - 50	50	185	171	14	4	20	6	
323070	323020		B 185 - 68	68	185	171	14	7	36	6	
323087			B 185 - 85	85	185	171	14	7	57	6	9
		323047	B 185 ov	40x120	185	171	14	3	45	6	9
		323043	B 185 ovS	40x120	185	171	14	1	45	6	9
323072	323022	323021	B 198 - 80	80	198	195	15	6	50	7	
323088		323046	B 198 - 100	100	198	195	15	7	79	7	10
323073	323023		B 220 - 50	51	220	215	16	9	20	8	
323074	(323024)	323041	B 220 - 85	85	225	215	16	8	57	8	
323081		323029	B 225 - 100	100	225	205	25	8	79	8	
323071	(323026)		B 250 - 90	90	250	240	16	8	64	9	
323082		323031	B 250 - 120	120	250	230	25	8	113		11
		323025	B 250 - 150	150	250	230	25	8	177		11
			B 270 - 100	100	270	250	25	8	79	9 A	
323083			B 270 - 120	120	270	250	25	8	113	9 A	
		323027	B 270 - 150	150	270	250	25	8	177	9 A	
323080	323028		B 300 - 110	110	300	290	16	8	95	10	
		323030	B 360 - 135	135	360	346	20	10	143	11	
		(323032)	B 410 - 150	150	410	400	20	10	177	12	
		(323034)	B 460 - 165	165	460	450	25	12	214	13	
		(323038)	B 515 - 180	180	515	505	30	12	254	14	
		(323040)	B 565 - 250	250	565	550	40	20	491	15	



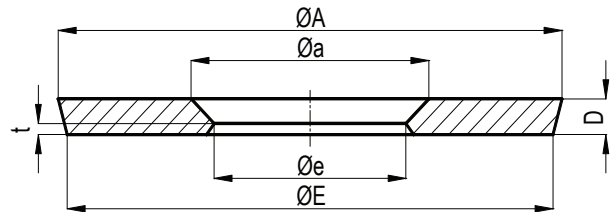
Breaker cores B../Q, B../CR, B../CE for cast steel

Characteristics

- Croning sand **Q**
- chromite sand **CR**
- CERATEC **CE**
- round neck

Applications

cast steel



Ref.-No. " Q "	Ref.-No. " CR "	Ref.-No. " CE "	Type	øe [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm²]	for risers
323056	323006		B 67 - 30	30	67	64	8	4	7	ZX / KX 50-80
323057			B 74 - 30	30	74	72	8	4	7	ZX / KX 50-85
323059	323009		B 80 - 30	30	80	73	8	4	7	ZX / KX 60-90
323061	323011		B 90 - 35	35	90	86	11	4	10	ZX / KX 70-100
323077	360089		B 90 - 39	40	90	86	11	4	13	ZX / KX 70-100
323079		323044	B 104 - 40	40	104	97	10	5	13	ZX / KX 80-110
323063	323013		B 108 - 40	40	108	105	10	5	13	ZX 80-100d
323064	323014		B 108 - 45	45	108	105	10	5	16	ZX 80-100d
323062		323012	B 108 - 50	50	108	105	10	5	20	ZX / KX 80-110
323066	323017		B 115 - 45	45	115	110	10	5	16	ZX / KX 90-120
323065		323045	B 132 - 50	50	132	131	10	4	20	ZX / KX 100-....
	323015		B 132 - 51	50	136	133	11	4	20	ZX / KX 100-....
312064			B 132 - 60	60	132	131	10	4	28	ZX / KX 100-....
323068	323018	323016	B 160 - 60	60	164	160	12	6	28	ZX / KX 120-....
		323093	B 160 - 75	75	164	160	12	6	44	ZX / KX 120-....
323086			B 160 - 85	85	164	160	12	6	57	ZRF 6
323070	323020	323042	B 185 - 68	68	185	171	14	7	36	ZXF 6
323087			B 185 - 85	85	185	171	14	7	57	ZXF 6
323072	323022	323021	B 198 - 80	80	198	195	15	6	50	ZXF 7
323088		323046	B 198 - 100	100	198	195	15	7	79	ZXF 7
323074	(323024)	323041	B 220 - 85	85	225	215	16	8	57	ZXF 8
323081		323029	B 225 - 100	100	225	205	25	8	79	ZXF 8



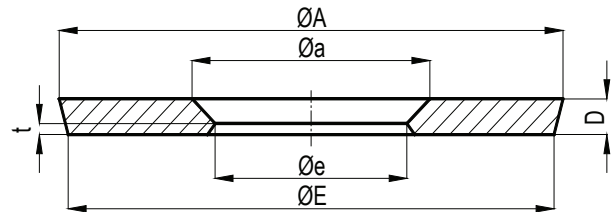
Breaker cores B../Q, B../CR, B../CE for cast steel

Characteristics

- Croning sand **Q**
- chromite sand **CR**
- CERATEC **CE**
- round neck

Applications

cast steel



Ref.-No. " Q "	Ref.-No. " CR "	Ref.-No. " CE "	Type	øe [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm²]	for risers
323071	(323026)		B 250 - 90	90	250	240	16	8	64	ZXF 9
323082		323031	B 250 - 120	120	250	230	25	8	113	ZXF 9
		323025	B 250 - 150	150	250	230	25	8	177	ZXF 9
			B 270 - 100	100	270	250	25	8	79	ZXF 9 A
323083			B 270 - 120	120	270	250	25	8	113	ZXF 9 A
		323027	B 270 - 150	150	270	250	25	8	177	ZXF 9 A
323080	323028		B 300 - 110	110	300	290	16	8	95	ZXF 10
	323030	323035	B 360 - 135	135	360	346	20	10	143	ZXF 11
	(323032)		B 410 - 150	150	410	400	20	10	177	ZXF 12
	(323034)		B 460 - 165	165	460	450	25	12	214	ZXF 13
	(323038)		B 515 - 180	180	515	505	30	12	254	ZXF 14
	(323040)		B 565 - 250	250	565	550	40	20	491	ZXF 15



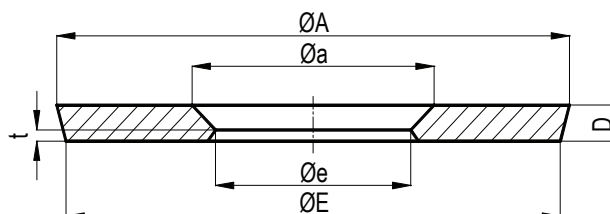
Breaker cores B .. /Q for nonferrous metals

Characteristics:

- Croning sand Q
- round neck
(0,5 - 0,7 * riser diameter)

Applications:

nonferrous metals



Ref.-No.	Type	øe [mm]	ØA [mm]	ØE [mm]	D [mm]	t [mm]	Q [cm ²]	for risers
350066	EQ 45 - 16	16	45	42	7	2	2	ZIF 0 (30-150)
323056	B 67 - 30 Q	30	67	64	8	4	7	ZIF 1 (40-150)
323057	B 74 - 30 Q	30	74	72	8	4	7	ZIF 2 (60-150)
323079	B 104 - 40 Q	40	104	97	10	5	13	ZIF 3 (80-150)
323085	B 115 - 50 Q	50	115	110	10	5	20	ZIF 4 (100-150)
323068	B 160 - 60 Q	60	164	160	12	6	28	ZIF 5 (120-150)
	B 160 - 75 Q	75	164	160	12	6	44	ZIF 6 (140-200)
323087	B 185 - 85 Q	85	185	171	14	7	57	ZIF 7 (160-200)



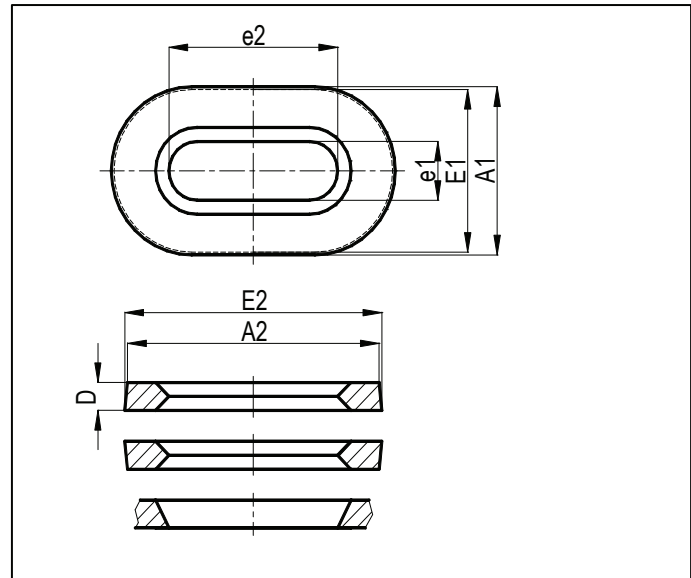
Breaker cores BQ/ ov and Bov/ Q for oval exo. sleeves OKX & OZX

Characteristics:

- Croning sand
- oval neck
- Form 1: Qualified for insetring the risers into the flask
- Form 2: For moulding the risers advantageous
- With option "S" integral breaker core

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref.-No.	Type	Form	e1 [mm]	e2 [mm]	A1 [mm]	A2 [mm]	E1 [mm]	E2 [mm]	D [mm]	t [mm]	Q [cm²]	for oval sleeves for oval risers	
318003	BQ 30ov	1	20	30	53	72	56	75	7	3	6	OZX / OK	30-90
318002	BQ 43ov	1	21	63	58	94	60	96	10	5	13	OZX / OK	43-100
318004	BQ 45ov1	1	22	70	72	143	73	144	10	6	15	OZX / OK	45-128
318005	BQ 45ov2	1	35	70	72	143	73	144	10	5	24	OZX / OK	45-128
318006	B 45ov3Q	2 x	32	25	72	143	73	144	10	7	2x 8	OZX / OK	45-128
318009	BQ 45ovS	1	19	76	73	130	75	132	10	0	14	OZX / OK	45-128
[318007]	BQ 50ov	1	25	50	74	98	75	99	8	4	13	OZX / OK	50-80
318008	BQ 60ov	1	28	56	76	106	80	109	8	4	16	OZX / OK	60-90
318014	B 60ov4Q	2 x	ø	18	76	106	80	109	10	3	2x 3	OZX / OK	60-90
318010	BQ 70ov	1	31	62	100	135	101	136	10	5	19	OZX / OK	70-100
318011	BQ 80ov	1	35	70	112	153	113	154	10	5	24	OZX / OK	80-110
318013	BQ 80ov1	1	16	50	80	110	82	111	4,3	3	8	OZX / OK	80-110
318012	BQ 80ov2	1	22	70	129	180	134	186	15	3	15	OZX / OK	80-100
	BQ 62ov	1	35	100	87	172	90	175	8	5	35	OZX / OK	60-150
318024	BQ 72ov	1	35	100	94	170	98	174	10	5	35	OZX / OK	70-140
318025	BQ 82ov	1	32	112	115	195	120	200	14	8	36	OZX / OK	80-150
318026	BQ 102ov	1	40	140	135	235	140	240	14	8	56	OZX / OK	100-200
	BQ 122ov	1	48	168	159	279	164	284	14	8	81	OZX / OK	120-200
	BQ 142ov	1	56	196	182	322	188	328	16	9	110	OZX / OK	140-200
	BQ 162ov	1	64	224	206	366	212	372	16	9	143	OZX / OK	160-200
	BQ 182ov	1	72	252	230	410	236	416	16	9	181	OZX / OK	180-200
	BQ 202ov	1	80	280	252	452	260	460	20	12	224	OZX / OK	200-200

Standard products are fat printet. (x)= with two riser neck.



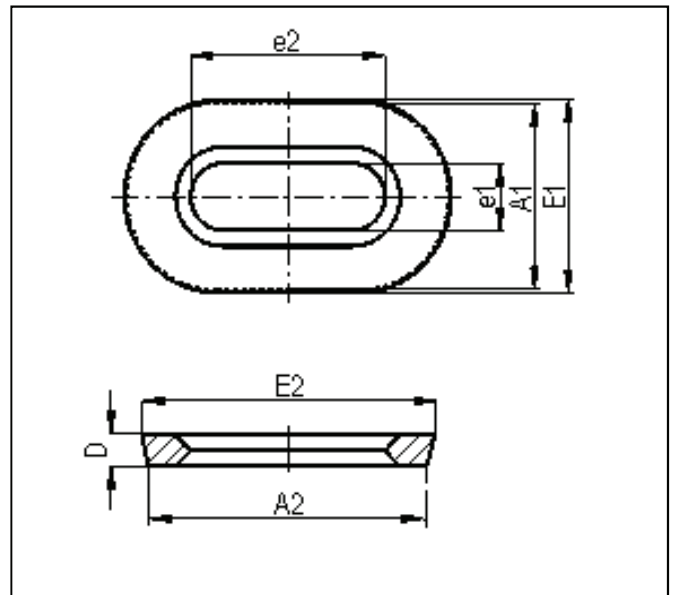
Breaker cores Bov/ Q for oval open sleeve OZX

Characteristics:

- oval neck
- croning-sand (B _ ovQ)
- chromite-sand (B _ ovCR)
- CERATEC-sand (B _ ovCE)

Applications:

grey iron, ductile iron
and cast steel



Ref.-No.	Type	Form	e1 [mm]	e2 [mm]	A1 [mm]	A2 [mm]	E1 [mm]	E2 [mm]	D [mm]	t [mm]	Q [cm ²]	for oval sleeves for oval risers
	B 4 ovQ		35	100	87	172	90	175	8	5	32	OZXF 4
318025	B 5 ovQ		32	112	115	195	120	200	14	8	34	OZXF 5
318026	B 6 ovQ		40	140	135	235	140	240	14	8	53	OZXF 6
	B 7 ovQ		48	168	159	279	164	284	14	8	76	OZXF 7
	B 8 ovQ		56	196	182	322	188	328	16	9	103	OZXF 8
	B 9 ovQ		64	224	206	366	212	372	16	9	135	OZXF 9
	B 10 ovQ		72	252	230	410	236	416	16	9	170	OZXF 10
	B 11 ovQ		80	280	252	452	260	460	20	12	210	OZXF 11
	B 22 ovQ		90	200	272	322	280	330	20	12	163	OZXF 22-20
	B 30 ovQ		120	280	352	442	360	450	20	12	305	OZXF 30-20

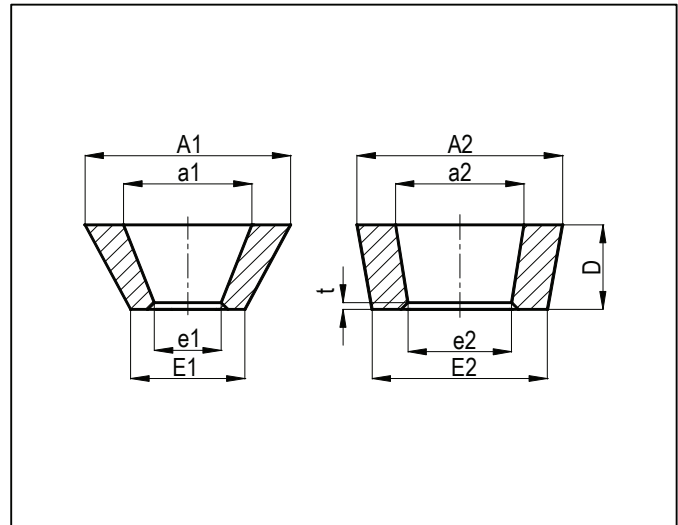
Breaker core bowl shaped BSQov for oval exothermic risers

Characteristics:

- Croning sand
- reduced contact area
- oval neck

Applications:

grey iron, ductile iron, cast steel
and nonferrous metals



Ref-No.	Type	e1 [mm]	e2 [mm]	A1 [mm]	A2 [mm]	E1 [mm]	E2 [mm]	D [mm]	t [mm]	for risers
318041	BSQ 43ov	27	51	60	95	40	75	17	3	OKX / OZX 43 - ...
318042	BSQ 45ov	31	76	70	143	51	124	17	3	OKX / OZX 45 - ...
318027	BSQ 50ov	23	50	64	90	38	82	20	4	OKX / OZX 50-80
318028	BSQ 60ov	28	59	76	109	48	87	25	4	OKX / OZX 60-90
318030	BSQ 70ov	28	60	90	128	48	88	35	6	OKX / OZX 70-100
318043	BSQ 72ov	44	101	98	173	71	146	30	4	OKX 70 - 140
318031	BSQ 80ov	28	60	98	138	50	95	40	6	OKX / OZX 80-110

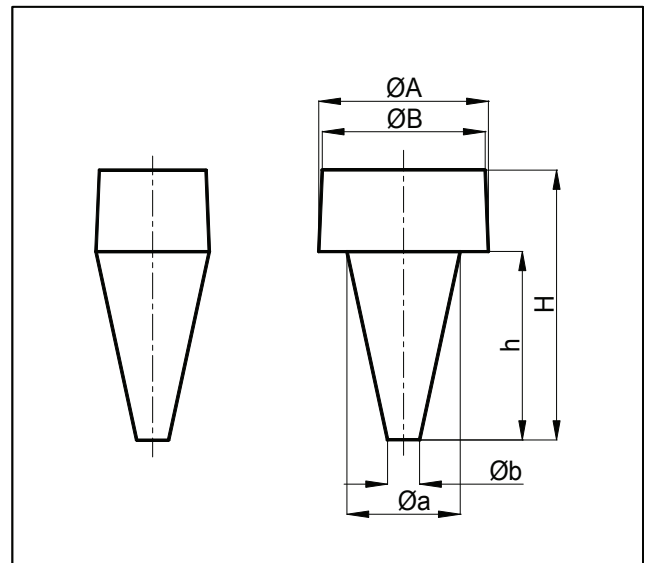
Williams cores WK for insertation and integral moulding

Characteristics:

- exothermic
- high strength for machine moulding

Applications:

grey iron, ductile iron and cast steel



Ref.-No.	Typ	Form	øa [mm]	øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
	WK 6- 22	1	17	6	22	17	15	52
377004	WK 8 - 40	1	28	8	40	28	27	70
377005	WK 10 - 85	2	40	10	85	56	54	125
377003	WK 12 - 40	2	48	12	40	57	54	80
377006	WK 20 - 100	2	60	20	100	70	67	140
377008	WK 20 - 30	3	43	20	30			
377011	WK 23 - 70	3	30	23	70			
377009	WK 25 - 45	3	43	25	45			
377007	WK 27 - 50	3	33	27	50			
377010	WK 48 - 88	3	53	48	88			

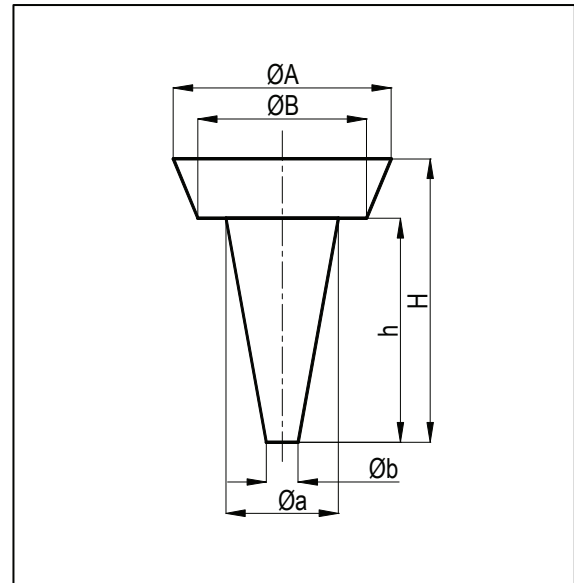
Williams cores WK for integral moulding

Characteristics:

- exothermic
- high strength for machine moulding

Applications:

grey iron, ductile iron and cast steel



Ref.-No.	Type	Øa [mm]	Øb [mm]	h [mm]	ØA [mm]	ØB [mm]	H [mm]
377034	WK 6 - 38	22	6	36	46	42	56
377032	WK 7 - 27	20	7	27	40	33	42
377020	WK 8 - 30	20	8	30	35	30	42
377022	WK 12 - 48	20	12	48	38	36	58
377024	WK 12 - 50	40	12	50	52	50	68
377025	WK 12 - 51	40	12	50	58	57	68
(377026)	WK 22 - 22	38	22	22	50	50	32
(377030)	WK 26 - 32	38	26	32	68	60	52
(377028)	WK 27 - 37	34	27	37	50	46	52
(377031)	WK 35 - 95	40	16	95	70	60	115



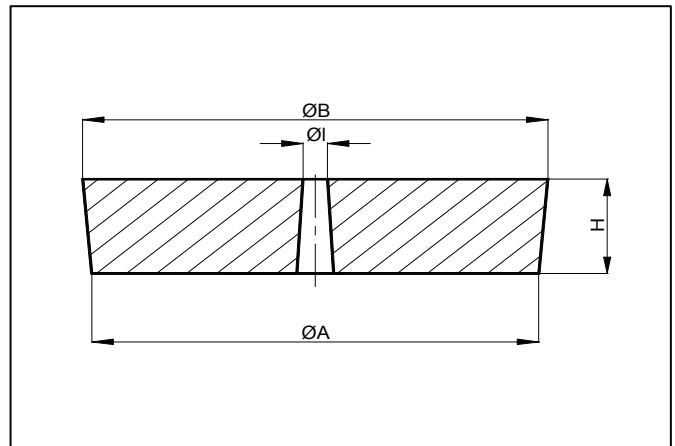
Exothermic pads ASP with round profile

Characteristics:

- exothermic
- high strength for machine moulding

Applications:

grey iron, ductile iron and cast steel



Ref.-No.	Type	A1 [mm]	A2	B1 [mm]	B2 [mm]	H [mm]
377091	ASP 35 G	32		35	20	-
377092	ASP 36	35		37	11	-
377094	ASP 60	64		68	23	6
377093	ASPC 70	70		72	20	4
377097	ASP 80	80		84	35	5
377096	ASPC 90	90		92	20	4
377099	ASP 145	145		150	60	Ø5*35

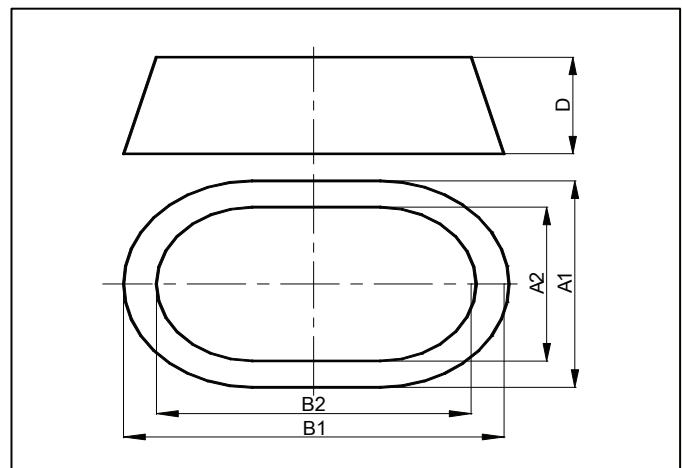
Exothermic pads ASP/ov with oval profile

Characteristics:

- exothermic
- high strength for machine moulding

Applications:

grey iron, ductile iron and cast steel



EDV-Nr.	Typ	A1	A2 [mm]	B1 [mm]	B2 [mm]	H [mm]
377095	ASP 50*20ov	50	40	43	34	20

ASP = silica-bound

ASPC = coldbox-bound

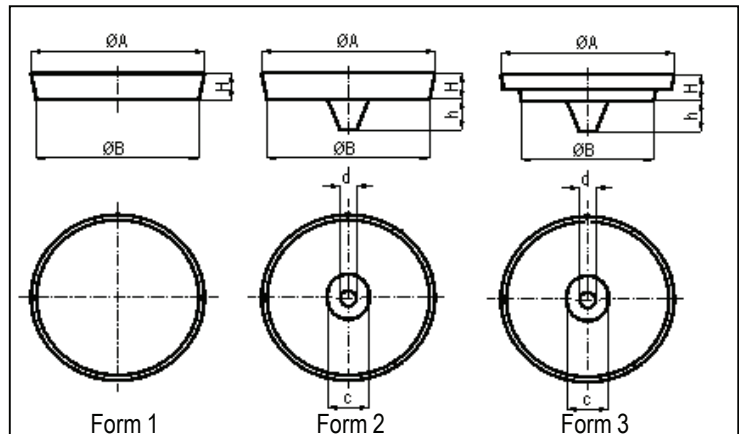
EXO-ISO and ISO cover DXF / DIF

Characteristics:

- DXF exothermic - insulating
- DIF insulating
- high heating ability
- good insulation
- exothermic - expanding
- dustfree

Applications:

- cover open Feeder
- Swimming cover



EDV-Nr.		Typ	Form	ØA	ØB	H	c	d	h	on feeder		in feeder	
										ZRF	ZXF	ZRF	ZXF
		D_F	1	70	65			20		0		2	3
		D_F	2	95	90			20		1		3	4
		D_F	3	110	105			20		2	3	4	5
		D_F	4	130	125			20		3	4	5	6
		D_F	5	145	142			20		4	5	6	7
		D_F	6	170	165			20		5	6	7	8
		D_F	7	195	190			20		6	7	8	9
		D_F	8	220	215			20		7	8	9	9A
		D_F	9	240	235			20		8	9	9	10
		D_F	10	270	267			20		9	9A	10	11
		D_F	11	365	360			20		10	11		12A
		D_F	12	390	385			20		11	12		13

Please specify with your order:

DXF for exothermic - insulating material eg: DXF 3

DIF for insulating material eg: DIF 3

The dimensions may vary due to production of + -3%.



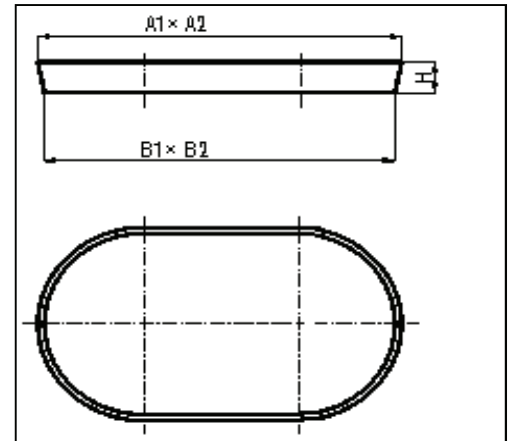
oval EXO-ISO and ISO cover DXF ov / DIF ov

Characteristics:

- DXF exothermic - insulating
- DIF insulating
- high heating ability
- good insulation
- exothermic - expanding
- dustfree

Applications:

- cover open Feeder
- Swimming cover



EDV-Nr.	Typ		A1	A2	B1	B2	H	on feeder	in feeder
DXF ov	DIF ov		[mm]	[mm]	[mm]	[mm]	[mm]	OZXF	OZXF
		D_F 3 ov	150	70			20	3	5
		D_F 4 ov	165	80			20	4	6
		D_F 5 ov	190	110			20	5	
		D_F 6 ov	230	130			20	6	7 & 8
		D_F 7 ov	270	150			20	7	9
		D_F 8 ov	300	170			20	8	10
		D_F 9 ov	360	190			20	9	11
		D_F 10 ov	390	220			20	10	
		D_F 11 ov	440	240			20	11	

Please specify with your order:

DXF for exothermic-insulating material eg: DXF 4ov

DIF for insulating material eg: DIF 4ov

The dimensions may vary due to production of + -3%.

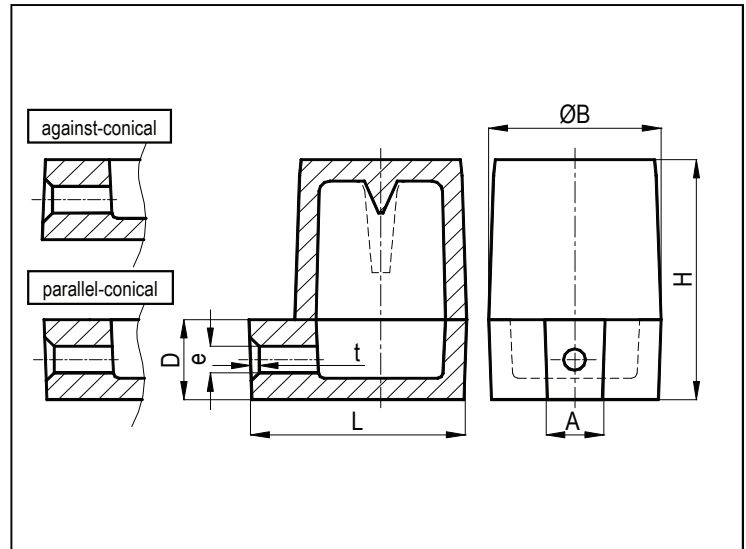
Side riser connections SFX/K for exothermic sleeves

Characteristics:

- exothermic
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel



Ref.-No.	Type	Modulus [cm]	Vol. [dm³]	Wight [kg]	øe [mm]	D [mm]	A [mm]	B [mm]	H [mm]	L [mm]	for sleeve
3770__	SFX 40-15 K	1,4	0,10	15	0	35	30	65	108	77	KX 40-70 W
3770__	SFX 40-15 K	1,5	0,13	15	0	35	30	65	132	77	KX 40-95 W
377041	SFX 50-15 K	1,6	0,19	15	3	45	37	76	125	96	KX 50-80 W
3770__	SFX 50-20 K	1,6	0,19	20	3	45	37	76	125	96	KX 50-80 W
3770__	SFX 65-20 K	1,9	0,38	20	0	55	33	85	171	102	KX 60-120 W
3770__	SFX 65-20 K	2,1	0,38	20	0	55	33	85	154	102	KX 70-100 W
377043	SFX 70-20 K	2,1	0,45	20	3	55	37	93	154	123	KX 70-100 W
377062	SFX 70-20/2 K	2,1	0,44	20	0	50	37	93	149	133	KX 70-100 W
3770__	SFX 80-22 K	2,4	0,61	22	0	60	40	106	170	130	KX 80-110 W
3770__	SFX 90-22 K	2,7	0,88	22	3	65	45	118	187	150	KX 90-120 W
377045	SFX 100-20 K	2,9	1,17	20	0	70	48	130	203	155	KX 100-130 W
377049	SFX 102-40 K	3,2	1,40	40	4	75	68	130	233	178	KX 100-130 W
377047	SFX 120-25 K	3,5	1,93	25	3	75	53	157	225	196	KX 120-150 W
377047	SFX 120-25 K2	3,7	2,48	25	3	75	53	157	275	196	KX 120-200 W
377060	SFX 150-55 K	4,8	3,90	55	0	120	116	185	320	258	KX 140-200 W

SFX 70 Kp: Outer shape parallel-conical to the inner shape

SFX 70 Kg: Outer shape against -conical to the inner shape



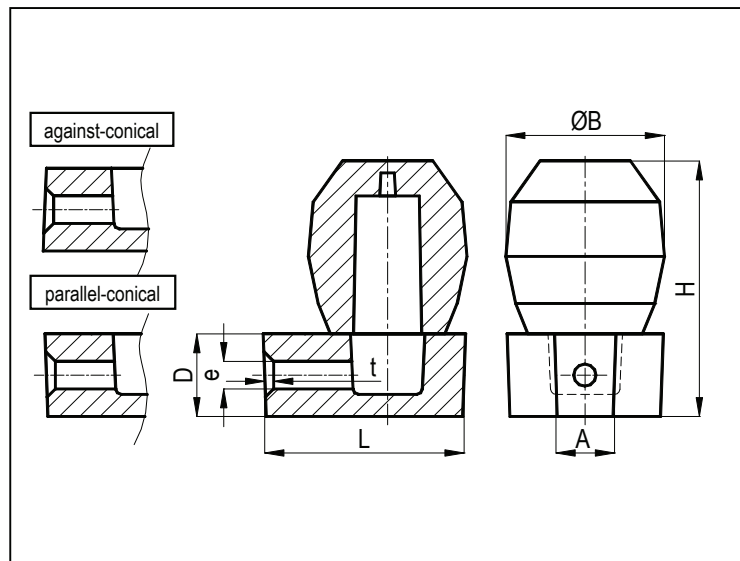
Side riser connections SFX/T for THERMO-RISERS

Characteristics:

- exothermic
- thick-walled
- high strength for machine moulding
- residual material easily removed at shakeout

Applications:

grey iron, ductile iron, cast steel



EDV-Nr.	Typ	Modul [cm]	Vol. [dm³]	Gew. [kg]	øe [mm]	D [mm]	A [mm]	B [mm]	H [mm]	L [mm]	for risers	
377042	SFX 50 T	2,0	0,11	0,77	15	45	37	88	135	96	TG	547
377040	SFX 65 T	2,6	0,25	1,75	20	55	33	117	175	104	TG	1111
377044	SFX 70 T	2,6	0,25	1,75	20	55	37	117	175	123	TG	1111
377046	SFX 100 T	3,5	0,46	3,22	21	70	47	138	210	155	TG	1930
377048	SFX 120 T	4,3	1,27	8,89	25	75	55	170	267	195	TG	5440