



**SEEIF**  
Ceramic, a.s.

# GRAPHITE STOPPERS AND NOZZLES GRAPHIT-STOPFEN UND -AUSGÜSSE ГРАФИТОВЫЕ ПРОБКИ И СТАКАНЫ GRAFITOVÉ ZÁTKY A VÝLEVKY

## SCOPE OF USE

The graphite stoppers and nozzles are shaped refractory products forming a part of the closing mechanism of casting ladles in a metal casting in foundries and smelting plants.

Formerzeugnisse für Absperrmechanismen von Gießpfannen. In Gießereien und Hüttenwerken dienen sie als Bestandteile von Gießpfannen-Absperrmechanismen für Gießverfahren.

Графитовые пробки и стаканы – фасонные жаростойкие продукты, образующие составную часть стопорного механизма литейных ковшей в литейной и металлургической промышленности.

Grafitové zátky a výlevky jsou tvarové žárovzdorné výrobky, které tvoří součást uzavíracího ústrojí lících pánví při odlévání kovu ve slévárenském a hutním průmyslu.

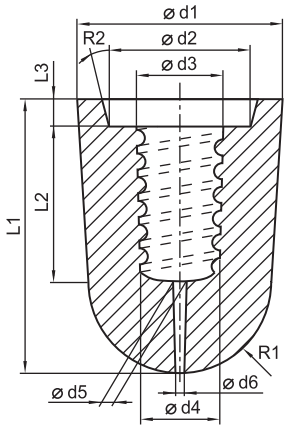


Specifications / Eigenschaften / Свойства / Vlastnosti		GS35	GK65
Refractoriness / Feuerfestigkeit / Жаростойкость / Žárovzdornost	(min.) (мин.)	1 650 °C	1 750 °C
Apparent porosity / Scheinbare Porosität / Вторичная пористость / Zdánlivá pórovitost	[%]	23	25
Bulk density / Rohdichte / Объемный вес / Objemová hmotnost	[kg/m <sup>3</sup> ] [кг/м <sup>3</sup> ]	1 850	2 150
Service temperature / Verwendungstemperatur / Рабочая температура / Teplota použití		1 550 °C	1 730 °C
Al <sub>2</sub> O <sub>3</sub> Content / Al <sub>2</sub> O <sub>3</sub> - Gehalt / Содержание Al <sub>2</sub> O <sub>3</sub> / Obsah Al <sub>2</sub> O <sub>3</sub>	(max.) (макс.)	35 %	65 %
Fe <sub>2</sub> O <sub>3</sub> Content / Fe <sub>2</sub> O <sub>3</sub> - Gehalt / Содержание Fe <sub>2</sub> O <sub>3</sub> / Obsah Fe <sub>2</sub> O <sub>3</sub>	(max.) (макс.)	3 %	2 %

Al<sub>2</sub>O<sub>3</sub> Content / Gehalt / Содержание / Obsah  
**GS 35/5-18** C Content / Gehalt / Содержание / Obsah  
GS – Graphite-fireclay for less demanding casting

Al<sub>2</sub>O<sub>3</sub> Content / Gehalt / Содержание / Obsah  
**GK 65/6-16** C Content / Gehalt / Содержание / Obsah  
GK – Graphite-corundum for more demanding casting of high alloy and special steels with prolonged casting time

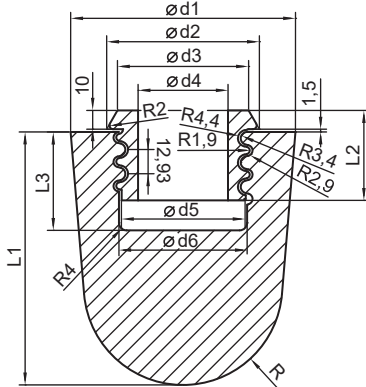
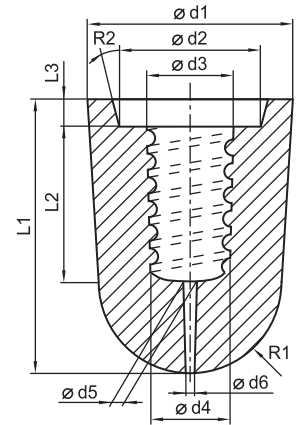
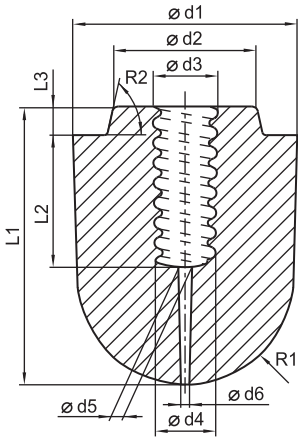
**GRAPHITE STOPPERS**  
**GRAPHIT-SCHAMOTTE-STOPFEN**  
**ГРАФИТОВЫЕ ПРОБКИ**  
**ГРАФИТОВÉ ZÁTKY**



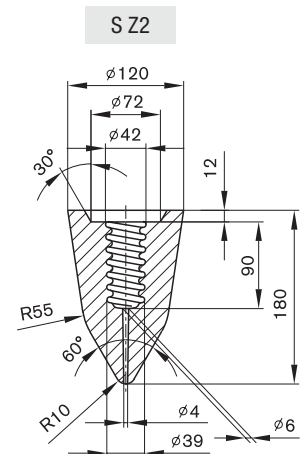
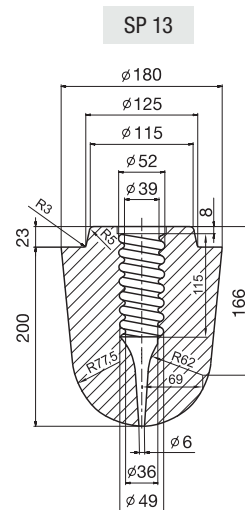
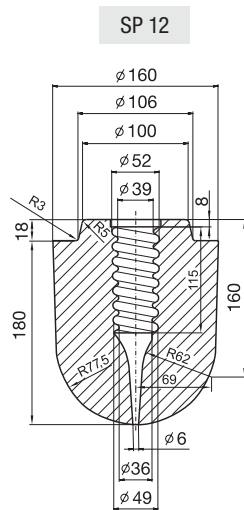
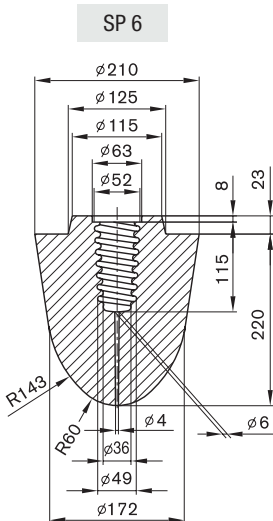
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S 0	120	80	12	90	62	38	35	6	4	40	15°
S 1	130	95	12	105	72	42	39	6	4	45	15°
S 2	135	95	12	120	72	42	39	6	4	53	30°
S 3	145	95	12	140	72	42	39	6	4	60	30°
S 4/1	155	90	12	155	72	42	39	6	4	65	30°
S 4/2	155	90	12	155	97	42	39	6	4	65	30°
S 5	170	90	12	170	97	42	39	6	4	68	30°

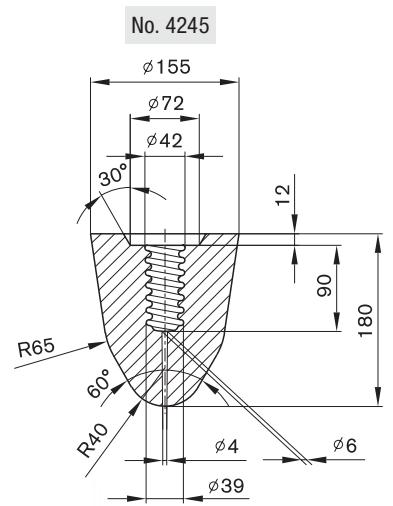
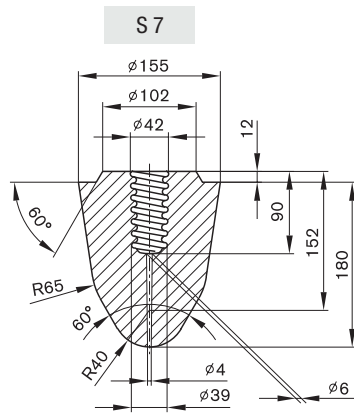
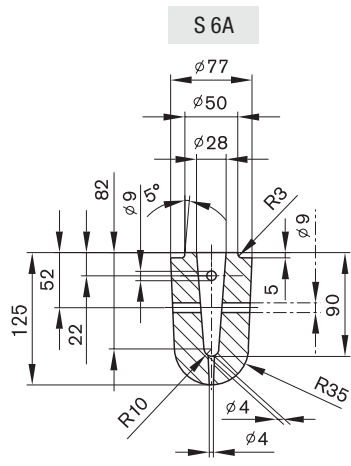
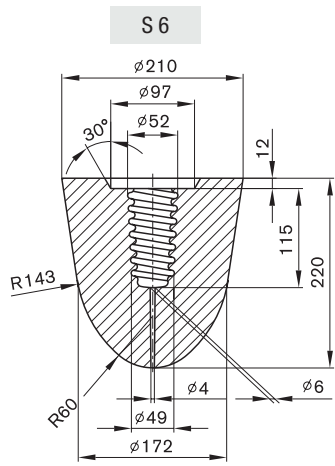
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PR-ST-121	135	95	12	120	78	42	39	6	4	53	30°

type Typ тип	L1 (mm) (mm)	L2 (mm) (mm)	L3 (mm) (mm)	d1 (mm) (mm)	d2 (mm) (mm)	d3 (mm) (mm)	d4 (mm) (mm)	d5 (mm) (mm)	d6 (mm) (mm)	R1 (mm) (mm)	R2
1 Z	145	80	10	120	70	42	39	10	7	55	60°
2 Z	165	80	10	155	70	42	39	6	4	65	60°
3 Z	165	80	10	155	95	42	39	6	4	65	60°

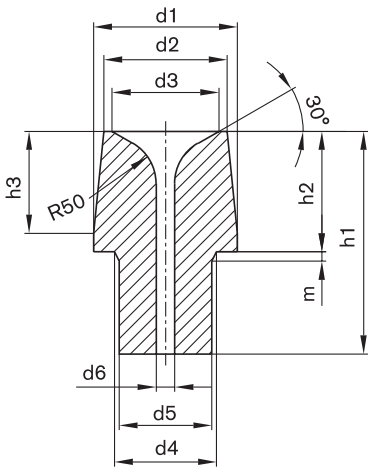


type Typ тип	L1 (mm) (mm)	L2 (mm) (mm)	L3 (mm) (mm)	d1 (mm) (mm)	d2 (mm) (mm)	d3 (mm) (mm)	d4 (mm) (mm)	d5 (mm) (mm)	d6 (mm) (mm)	R (mm) (mm)
CL0	120	48	52,5	90	66	60	40	58	60	40
CL1	130	48	52,5	105	74	70	48	63	65	45
CL2	135	48	52,5	120	81,5	70	48	63	65	53
CL3	145	48	52,5	140	81,5	70	48	63	65	60
CL4/1	155	48	52,5	155	81,5	70	48	63	65	65
CL4/2	155	60	64,5	155	105	94	62	84	86	65
CL5	170	60	64,5	155	105	94	62	84	86	68

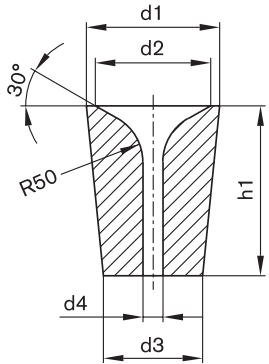
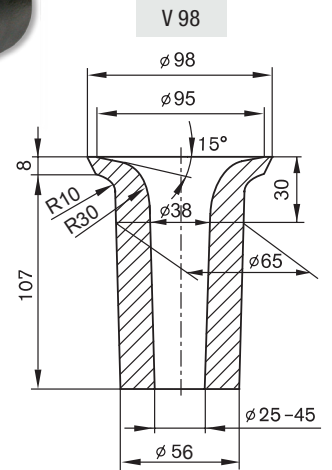




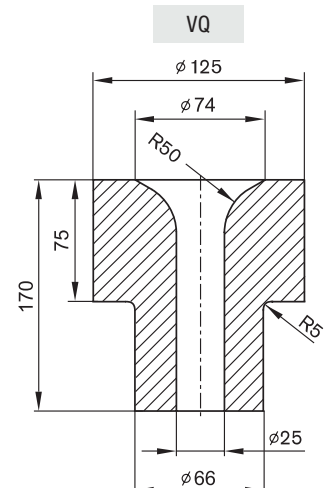
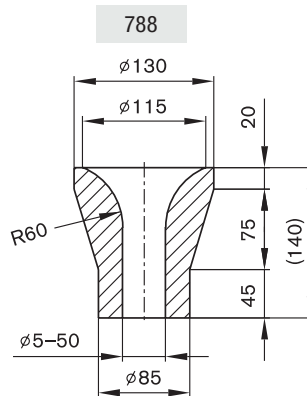
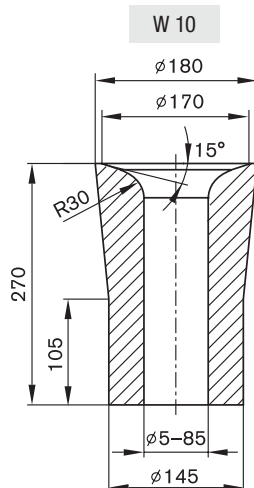
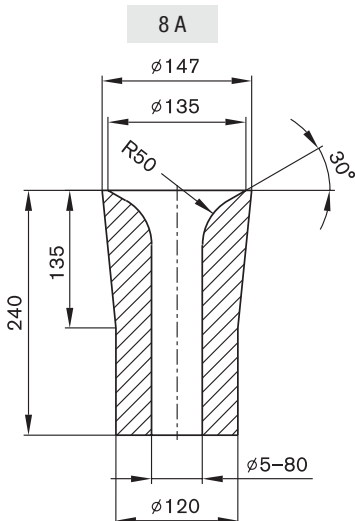
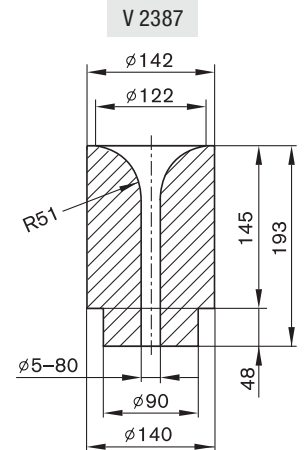
**GRAPHITE NOZZLES**  
**GRAPHIT-SCHAMOTTE-AUSGÜSSE**  
**ГРАФИТОВЫЕ РАЗЛИВОЧНЫЕ СТАКАНЫ**  
**ГРАФИТОВÉ VÝLEVKY**



type	d1	d2	d3	d4	d5	d6	h1	h2	h3	m
Тип	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
тип	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)	(MM)
0 A	135	120	105	100	90	5-50	160	90	75	10
1 A	155	139	115	110	100	5-60	210	100	80	10
2 A	155	133	115	110	100	5-60	240	130	110	10
3 A	180	153	135	140	120	5-60	285	155	135	20
1 AK	155	139	115	110	100	5-60	165	95	75	10



type	d1	d2	d3	d4	h1
Тип	(mm)	(mm)	(mm)	(mm)	(mm)
тип	(MM)	(MM)	(MM)	(MM)	(MM)
6 A	133	115	99	5-50	170
7 A	139	115	99	5-50	200





# MONOBLOCK STOPPERS GRAPHIT-SCHAMOTTE-STOPFEN UND -AUSGÜSSE СТОПОРА-МОНОБЛОКИ MOONBLOKOVÉ ZÁTKY

Mono block stoppers are shaped products based on graphite and highly refractory grog, bonded with a ceramic binding agent. They are part of the closing mechanism used during long-lasting casting.

Die Monoblockstopfen sind keramisch gebundene Formsteine auf Basis von Graphit und hochfeuerfestem Magerungsmittel. Die Stopfen sind Bestandteile des Absperrmechanismus bei langfristigem Gießen.

Al<sub>2</sub>O<sub>3</sub> Content / Al<sub>2</sub>O<sub>3</sub> - Gehalt / Содержание Al<sub>2</sub>O<sub>3</sub> / Obsah Al<sub>2</sub>O<sub>3</sub>

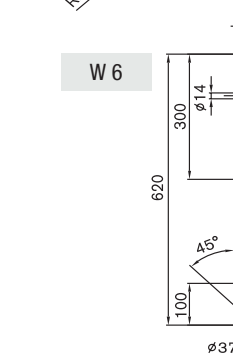
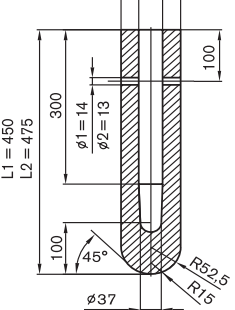
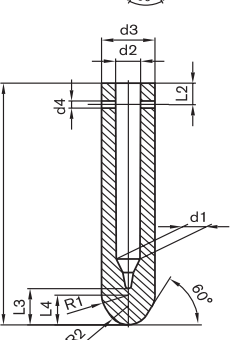
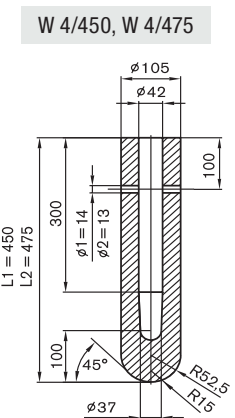
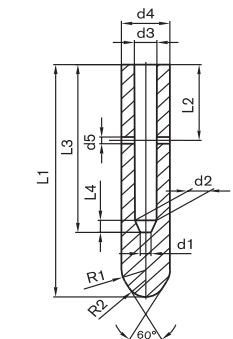
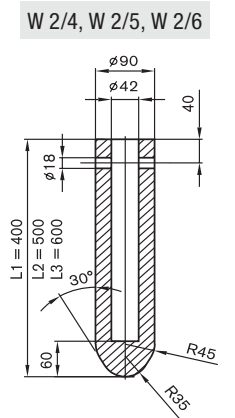
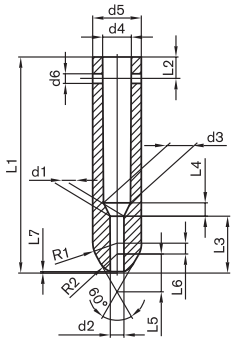
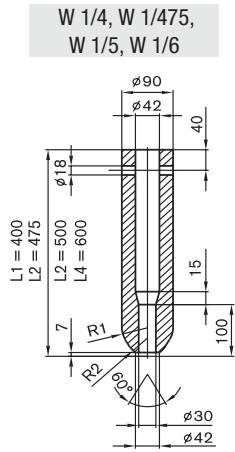
GK 65/22-25 C Content / C - Gehalt / Содержание C / Obsah C



Specifications / Eigenschaften / Свойства / Vlastnosti		GK65
Refractoriness / Feuerfestigkeit / Жаростойкость / Žárovzornost	(min.) (МИН.)	1 750 °C
Al <sub>2</sub> O <sub>3</sub> Content / Al <sub>2</sub> O <sub>3</sub> - Gehalt / Содержание Al <sub>2</sub> O <sub>3</sub> / Obsah Al <sub>2</sub> O <sub>3</sub>	(max.) (МАКС.)	65 %
Fe <sub>2</sub> O <sub>3</sub> Content / Fe <sub>2</sub> O <sub>3</sub> - Gehalt / Содержание Fe <sub>2</sub> O <sub>3</sub> / Obsah Fe <sub>2</sub> O <sub>3</sub>	(max.) (МАКС.)	1,3 %
Apparent porosity / Scheinbare Porosität / Вторичная пористость / Zdnávná pórovitost		28 %
Bulk density / Rohdichte / Объемный вес / Objemová hmotnost	(max.) (МАКС.)	2,05 g/cm <sup>3</sup> г/см <sup>3</sup>
Service temperature / Verwendungstemperatur / Рабочая температура / Teplota použití		1 500 °C

Пробки типа моноблок – это фасонные изделия, основывающиеся на графите и высокожаростойком основном формовочном материале, связанных керамической связью. Моноблочные пробки образуют составную часть стопорного механизма при длительной отливке.

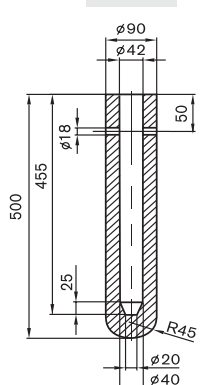
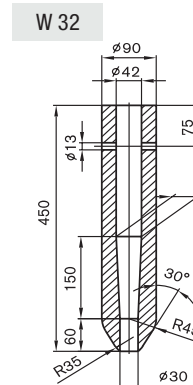
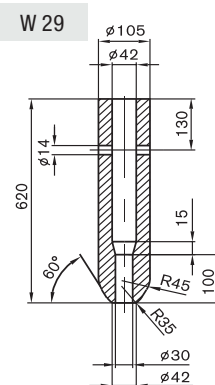
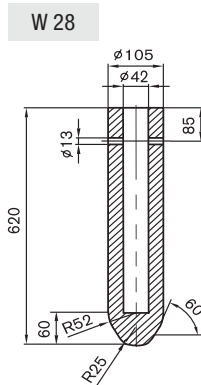
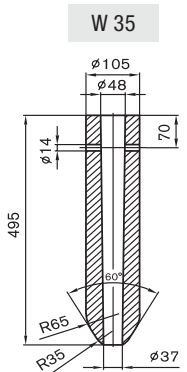
Monoblokové zátky jsou tvarové výrobky na bázi grafitu a vysoce žárovzdroneho ostřiva, pojených keramickou vazbou. Monoblokové zátky tvoří součást uzavíracího ústrojí při dlouhodobém odlévání.



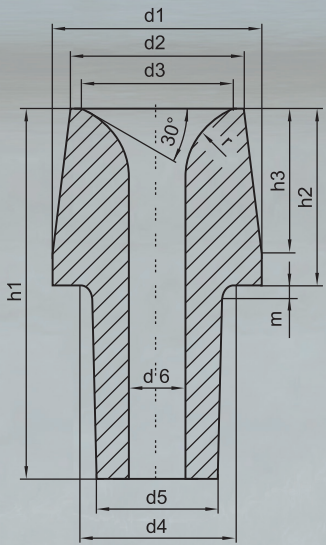
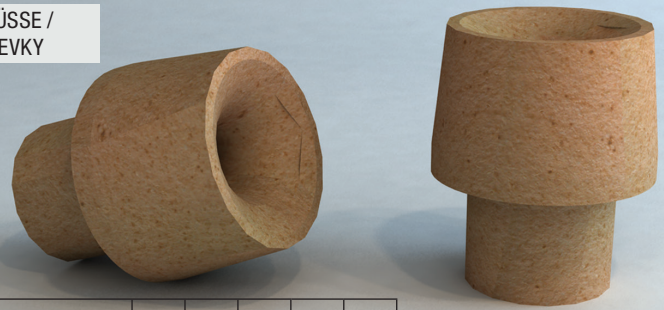
type Тип тип	L1 (mm) (MM)	L2 (mm) (MM)	L3 (mm) (MM)	L4 (mm) (MM)	L5 (mm) (MM)	L6 (mm) (MM)	L7 (mm) (MM)	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	d5 (mm) (MM)	d6 (mm) (MM)	R1 (mm) (MM)	R2 (mm) (MM)
W 9	450	76	100	25	70	20	0	23	22	40	42	90	13	45	35
W 10/1	400	40	105	25	70	20	2,5	26	25	50	53	90	18	45	35
W 10/2	400	40	105	25	70	20	2,5	31	30	50	53	90	18	45	35
W 10/3	400	40	105	25	70	20	2,5	36	35	50	53	90	18	45	35
W 10/4	400	40	105	25	70	20	2,5	41	40	50	53	90	18	45	35
W 10/5	500	40	105	25	70	20	2,5	42	41	50	53	90	18	45	35
W 10/6	400	40	105	25	70	20	2,5	42	41	50	53	90	18	45	35
W 10/7	500	40	105	25	70	20	2,5	42	38	50	53	90	18	45	35
W 10/8	500	40	105	25	70	20	2,5	36	35	50	53	90	18	45	35

type Тип тип	L1 (mm) (MM)	L2 (mm) (MM)	L3 (mm) (MM)	L4 (mm) (MM)	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	R1 (mm) (MM)	R2 (mm) (MM)
W 36	400	40	65	55	40	42	90	13	45	35
W 37	450	80	65	55	40	42	90	13	45	35
W 31	450	80	65	55	40	42	90	13	45	35
W 30	480	100	66	85	40	42	120	13	60	35
W 7	450	75	65	65	40	42	90	13	-	15

type Тип тип	L1 (mm) (MM)	L2 (mm) (MM)	L3 (mm) (MM)	L4 (mm) (MM)	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	d5 (mm) (MM)	R1 (mm) (MM)	R2 (mm) (MM)
W 34	475	80	345	25	20	40	42	90	14	45	35
W 11/4	400	40	295	25	20	50	53	90	13	45	35
W 11/5	500	40	395	25	20	50	53	90	18	45	35
W 8	450	75	160	25	20	40	42	90	13	45	35
W 3	400	40	295	25	20	40	42	90	13	45	35

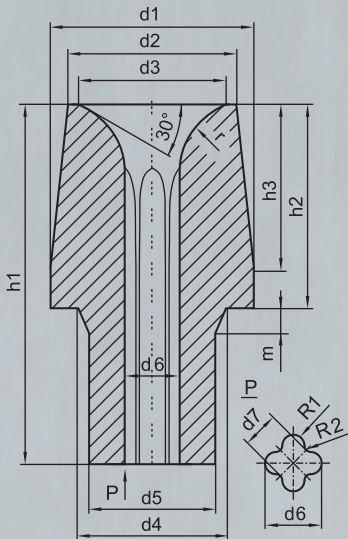
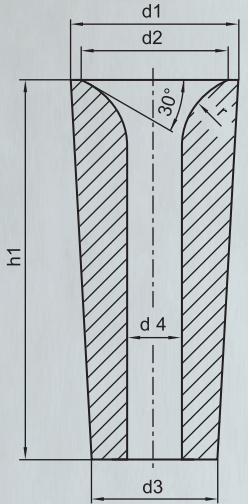


FIRECLAY AND HIGH ALUMINA NOZZLES / SCHAMOTTE UND HOCHTONERDEHALTIGE AUSGÜSSE / ШАМОТНЫЕ И ВЫСОКОГЛИНОЗЕМИСТЫЕ СТАКАНЫ / ŠAMOTOVÉ A VYSOCEHLINITÉ VÝLEVKY



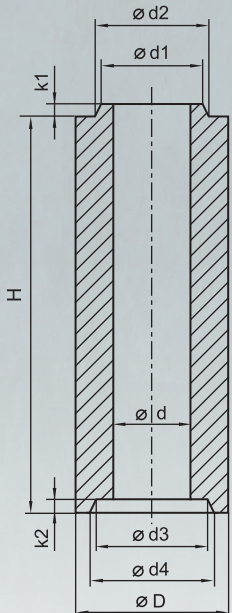
type Typ тип	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	d5 (mm) (MM)	d6 (mm) (MM)	h1 (mm) (MM)	h2 (mm) (MM)	h3 (mm) (MM)	m (mm) (MM)	r (mm) (MM)
0A	135	120	105	100	90	20, 25, 30, 35, 40, 45, 50, 60	160	90	75	10	50
1A	155	139	115	117	99	30, 35, 40, 45, 50, 55, 60	210	100	80	10	50
1A	155	139	115	120	109	70, 80	210	100	80	10	50
2A	155	133	115	117	99	25, 30, 35, 40, 45, 50, 55, 60, 65	240	130	110	10	50
2A	155	133	115	120	109	70, 80	240	130	110	10	50
3A	180	153	135	140	115	30, 40, 50, 60, 70	275	155	135	20	50
3A	180	153	135	164	135	80, 90, 100	275	155	135	20	50

type Typ тип	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	h1 (mm) (MM)	r (mm) (MM)
6A	133	115	99	30, 40, 45, 50, 60, 70	170	50
7A	139	115	99	50	200	50
8A	156	144	117	80, 90	240	50



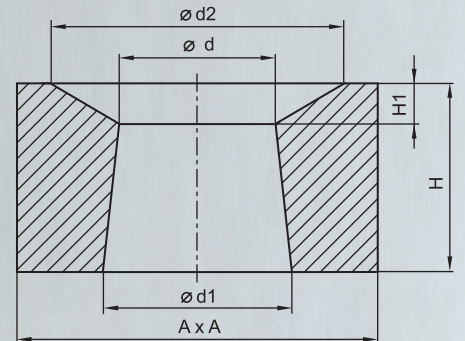
type Typ тип	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	d5 (mm) (MM)	d6 (mm) (MM)	d7 (mm) (MM)	h1 (mm) (MM)	h2 (mm) (MM)	h3 (mm) (MM)	m (mm) (MM)	r (mm) (MM)	R1 (mm) (MM)	R2 (mm) (MM)
0A30K	135	120	102	120	110	35	23	160	96	75	10	50	6,5	4
0A40K	135	120	102	120	110	46	29,6	160	96	75	10	50	9	5
0A60K	135	120	105	120	110	71	44	160	96	75	10	35	13,5	7,5
1A30K	155	139	102	110	100	35	23	210	130	80	10	50	6,5	4
1A40K	155	139	102	110	100	46	29,6	210	130	80	10	50	9	5
1A50K	155	139	115	110	100	58	36	210	130	80	10	50	11	6
1A60K	155	139	115	110	100	71	44	210	130	80	10	50	13	7
3A40K	180	153	135	140	119	46	29,6	275	155	135	20	50	9	5
3A60K	180	153	135	140	119	71	44	275	155	135	20	53	13	7

WELL BLOCKS / LOCHSTEINE / ГНЕЗДОВОЙ КИРПИЧ / VÝTOKOVÉ KAMENY



STOPPER SLEEVES / SCHAMOTTE STOPFENSTANGENROHRE / СТОПОРНЫЕ ТРУБКИ / ZÁTKOVÉ TRUBKY

type Typ тип	d (mm) (MM)	D (mm) (MM)	H (mm) (MM)	d1 (mm) (MM)	d2 (mm) (MM)	d3 (mm) (MM)	d4 (mm) (MM)	k1 (mm) (MM)	k2 (mm) (MM)
SR0/270	40	90	270	60	66	62	69	10	12
SR1/330	47	105	330	70	75,3	72	76,4	10	12
SR2/330	47	120	330	70	81,5	72	84	10	12
SR2/D200	47	120	200	70	81,5	80	95	10	15
SR3/330	47	140	330	70	81,5	72	84	10	12
SR4/1-330	47	155	330	70	82	72	86	10	12
SR4/2-330	60	155	330	95	107	97	109	10	12
SR5/330	60	170	330	95	107	97	111	10	12



type Typ тип	d (mm) (MM)	d1 (mm) (MM)	d2 (mm) (MM)	A (mm) (MM)	H (mm) (MM)	H1 (mm) (MM)
L0	125	143	220	250	107	17
L1	149	169	260	320	123	23
L2	143	169	260	320	165	35
L3	163	194	300	360	190	35
L6	143	123	260	320	123	23



## About us

SEEIF Ceramic, a.s. produces and supplies traditional refractory products and ceramic materials, incl. services and consultancy concerning their use in the customers' plants.



Product line:

Ceramic gating system

Fireclay, high-alumina and special refractory ceramic bricks for ingot castings

Graphite and corundum stoppers and nozzles for ladle closing systems

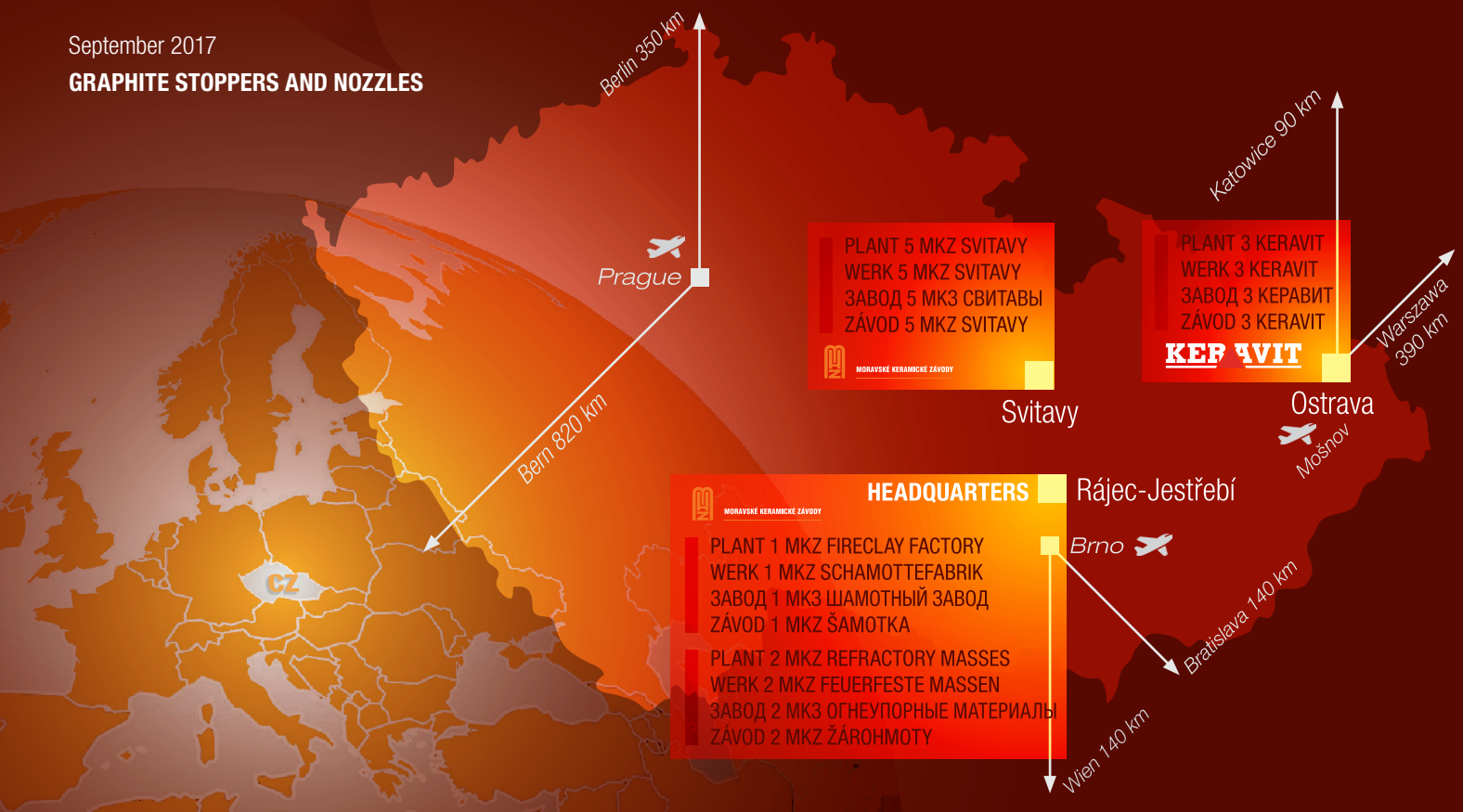
Thermal insulating shapes

Refractory masses

# TECHNICAL CERAMICS OF THE 3rd MILLENNIUM

September 2017

## GRAPHITE STOPPERS AND NOZZLES



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ОГНЕУПОРЫ  
ŽÁROVZDORNÉ MATERIÁLY



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