

Electric Arc Furnace Treatment Ladle Transfer Ladle





Created in 2009, Trasteel Group has become one of the leading players in the steel industry

Trasteel Group was founded in 2009 as the result of the vision of a group of entrepreneurs and professionals with 40 years of international experience in the steel industry.

Today, Trasteel is a trading and industrial Group active in the steel, energy and metallurgical sectors. Headquartered in Lugano, it has over 900 employees operating in four trading desks and various industrial plants in Europe, Middle East and Asia-Pacific.

Leveraging on the combined experience, the mission of the Group is to provide better, deeper and more flexible services to the whole supply chain.

Since the high quality of the supplied materials is not enough to meet the evermore sophisticated needs of the market, Trasteel Group keeps expanding its horizons by maintaining high dynamism and diversification.

Sustainability and innovation are priorities and key aspects for the Group to focus on. Long-term targets are not an easy challenge to face, but Trasteel is committed to broaden its ESG policies.

+150

products supplied

+1.000

specialists worldwide
and growing



DISCOVER MORE
ABOUT OUR ESG VISION

Trasteel network



+50

markets covered

+4.000

customers



DISCOVER MORE ABOUT
THE STEEL MARKET

● Headquarters

Switzerland, Luxembourg

● Trading Offices

Lugano, Dusseldorf, Dubai, Shanghai, Bayuquan, Buenos Aires, Istanbul, Goma, Singapore, New York, France, Spain, Finland

● Industrial Premises

San Giorgio di Nogaro, Massa, Racconigi, Sesto Al Reghena, Cavallerleone, Lombardore (Italy), Nova Pazova (Serbia), Bayuquan (China), Izmir (Turkey)

● Markets Covered

EU, United Kingdom, Turkey, Israel, Serbia, Ukraine, Kazakhstan, Uzbekistan, Azerbaijan, U.A.E., Saudi Arabia, Oman, Brazil, Chile, Colombia, Argentina, Perù, Bolivia, Mexico, USA, Canada, Japan, South Korea, China, Malaysia, Indonesia, Philippines, Vietnam, Thailand, Taiwan, Australia, South Africa, Congo (DRC), Egypt, India, Algeria, Morocco, Tunisia, Pakistan, Norway

Refractory solutions for EAF and ladle

Trasteel owns an important stake in one of the major Chinese Producer of Magnesite-Carbon and Alumina-MagnesiteCarbon refractory bricks. The established joint venture is incorporated under the name of "Yingkou Liangyu - Trasteel Refractory Co. Ltd."

Trasteel is acting as the exclusive marketing arm of the joint venture on all activities related to overseas marketing, sales, production financing and technology advancement.

The Chinese partner, Liaoning Liangyu Synthetic Refractory Co. Ltd., has conferred to the joint venture their equipment and facilities. The production facilities are located in Dashiqiao City, Liaoning, a province in China close to the highest quality raw material sources for refractory production and major transportation.

The new joint venture integrates production and research facilities and is able to produce, with a capacity of about 70'000 MT/year, the following range of products for EAF and ladle application:

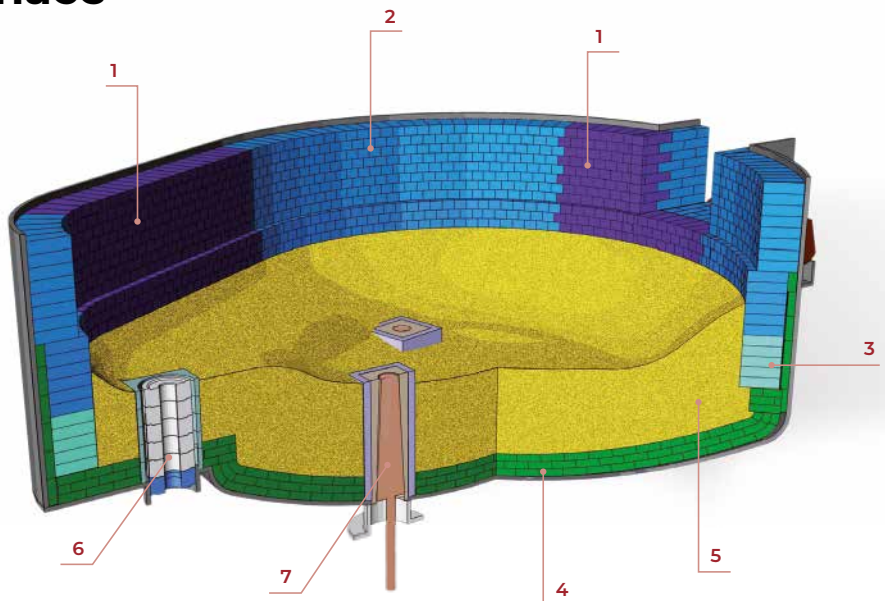
- Magnesite Carbon bricks, blocks and special shapes
- Magnesite Alumina Carbon bricks
- Fired Magnesite bricks
- Various unshaped products for lining installations and maintenance of steel making units

Furthermore, in 2020 Trasteel closed an exclusively supply agreement with an important dolomite producer for the supply of dolomite based bricks and masses for the treatment ladle as:

- Resin or pitch bonded dolomite bricks
- Fired bonded dolomite bricks
- Dolomite based unshaped products for lining installation

Electric Arc Furnace (EAF)

1. Hot spot reinforcement
2. Slag line lining
3. Lower side wall lining
4. Permanent lining
5. Hearth ramming
6. EBT system
7. Purging system



WORKING LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Carbon (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
A10C5	97.86	1.12	0.42	0.48	10	3.10	2.9	52	Burners area
EA14L5	98.17	0.89	0.39	0.39	14	3.05	3	45	Hot spot and slag zone
EI14L5	97.58	1.16	0.56	0.57	14	3.05	3	40	Slag zone
I12C2	97.19	1.33	0.65	0.67	12	3.07	4	42	Slag zone
IP12L2	97.18	1.39	0.68	0.61	12	2.99	4	38	Upper sidewall
O10C2	96.12	1.74	0.88	0.83	10	3.08	4	43	Lower sidewall
I10C2-F3	97.16	1.12	1.04	0.61	10	3.04	4	40	Underbath

SAFETY LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
M95F	95.00	1.90	2.00	0.80	-	2.95	17	60	Safety lining
M93F	93.00	2.60	3.40	1.00	-	2.93	18	60	Safety lining

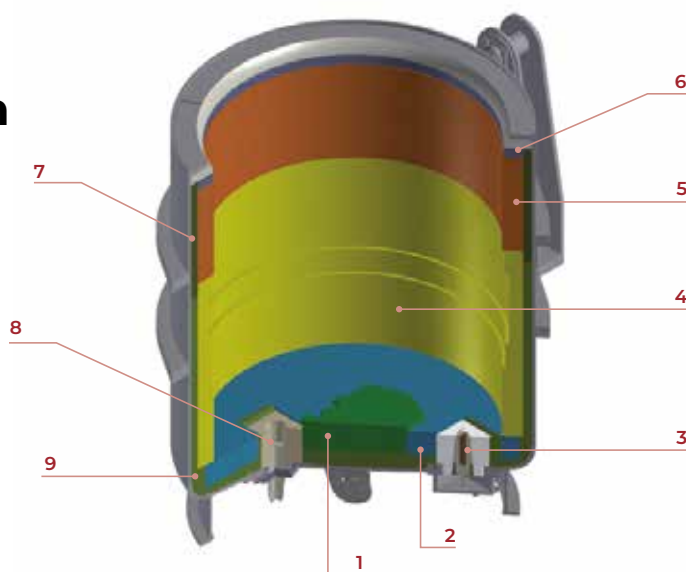
UNSHAPED MATERIALS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	Grain Size (mm)	CCS (MPa)	Application
HEARTH-M83	83.00	9.00	1.30	5.00	0.50	2.20	0-6	-	Hearth ramming mass
REP-M82HF	82.00	10.00	0.80	6.50	0.50	2.20	0-8	-	Fettling mass
RAM-M94U	94.50	1.20	0.75	0.80	0.40	2.72	0-6	-	Joints ramming mass
GUN-M84S	84.00	3.50	7.00	2.50	2.00	2.00	0-3	-	Gunning for hot and cold reparations
MOR-M91	87.00	2.10	4.50	5.00	1.50	-	0-1	-	Mortar for the installation of safety lining bricks

The table does not represent all the available products. More qualities can be produced according to Customer requirements.

Treatment Ladle MgO-C / AMC Solution

1. Impact bottom reinforcement
2. Bottom
3. Purging system
4. Sidewall
5. Slag zone
6. Freeboard
7. Safety lining - Slag area
8. Slide gate system
9. Safety lining - Sidewall and bottom area



WORKING LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Carbon (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
EA14L4	98.02	0.94	0.40	0.43	14	3.05	3	47	Slag zone reinforcement
E14C4	98.05	0.95	0.44	0.43	14	3.05	3	40	Slag zone
E112L4	97.61	1.17	0.55	0.55	12	3.07	3	45	Slag zone
I10C1	97.11	1.37	0.67	0.70	10	3.06	4	45	Sidewall and transition
IP8L1	97.10	1.43	0.70	0.63	8	3.03	4.5	41	Sidewall and bottom
O6C1	96.11	1.75	0.87	0.83	6	3.10	5	40	Bottom

SAFETY LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
M91F	91.50	2.50	4.10	1.20	-	2.92	19	60	Safety lining - Slag area
HA80B-L	-	-	-	1.80	81.00	2.92	23	75	Safety lining - Sidewall and bottom area
FC42	-	-	-	2.00	42.00	2.15	24	25	Insulation lining

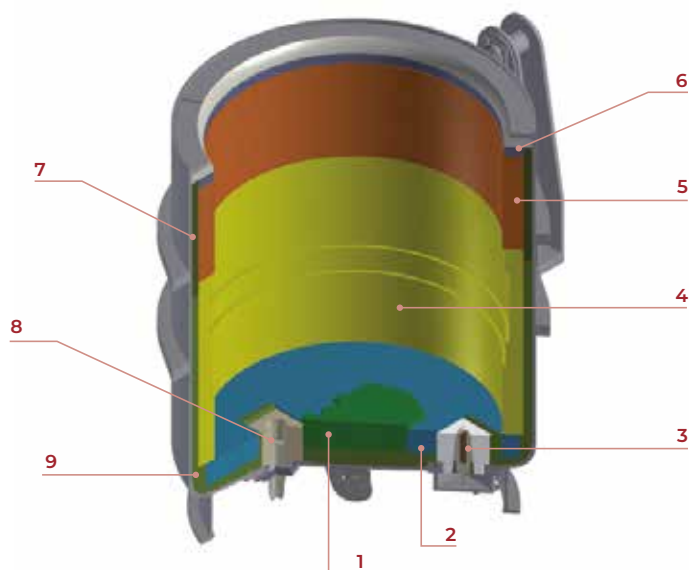
UNSHAPED MATERIALS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	Grain Size (mm)	CCS (MPa)	Application
CAST-M85	85.00	4.00	9.00	2.00	1.00	2.47	0-5	-	Castable for refractory lining installation
CAST-A85CB	-	1.02	-	0.80	85.17	2.90	0-8	-	Castable for refractory lining installation
CAST-A96T	-	0.80	-	-	96.25	2.95	0-5	-	Castable for refractory lining installation
PLAST-A70B	-	-	18.74	1.44	75.14	2.30	0-5	-	Plastic flange ramming
RAM-M65V	68.00	4.00	28.00	10.00	3.00	2.30	0-3	-	Backfilling mass
MOR-A80	-	-	-	-	80.00	-	0-1	-	Mortar for the installation of safety lining bricks

The table does not represent all the available products. More qualities can be produced according to Customer requirements

Treatment Ladle Dolomite

1. Impact bottom reinforcement
2. Bottom
3. Purging system
4. Sidewall
5. Slag zone
6. Freeboard
7. Safety lining - Slag area
8. Slide gate system
9. Safety lining - Sidewall and bottom area



WORKING LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Carbon (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
MDB-KI-60F	60.70	37.30	0.80	0.60	-	2.98	12.8	68	Slag zone
MDB-KI-40F	40.90	57.10	0.60	0.70	-	2.93	13.2	65	Slag zone
MDB-KI-51	50.90	47.20	0.60	0.60	5.7	2.94	3.9	63	Slag zone and sidewall
MDB-KI-40	40.60	57.10	0.80	0.80	3.7	2.96	3.9	73	Sidewall and bottom
MDB-KI-43	41.00	57.00	0.70	0.60	7.5	2.90	4.8	58	Sidewall and bottom
MDB-KI-42	40.80	57.10	0.70	0.60	5.5	2.93	4.6	62	Bottom

SAFETY LINING BRICKS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
M91F	91.50	2.50	4.10	1.20	-	2.92	19	60	Safety lining - Slag area
HA80B-L	-	-	-	1.80	81.00	2.92	23	75	Safety lining - Sidewall and bottom area
FC42	-	-	-	2.00	42.00	2.15	24	25	Insulation lining

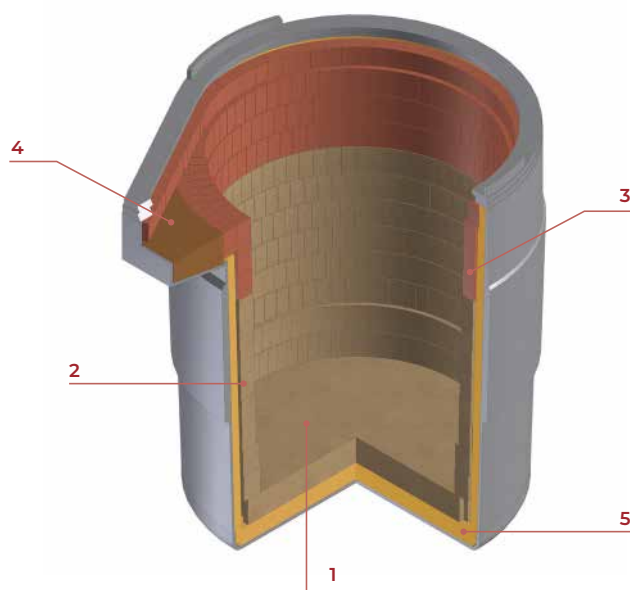
UNSHAPED MATERIALS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	Grain Size (mm)	CCS (MPa)	Application
DOLO-KI-RAM	58.00	37.50	1.70	2.40	0.80	2.80	0-6	-	Ramming mass
DOLO-KI-FIL	41.00	57.00	0.90	0.70	0.60	2.45	0-6	-	Backfilling mass

The table does not represent all the available products. More qualities can be produced according to Customer requirements.

Transfer Ladle - AMC

1. Bottom
2. Sidewall
3. Slag zone
4. Spout
5. Safety lining



WORKING LINING BRICKS

Quality Name	Al ₂ O ₃ (%)	MgO(%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Carbon (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
1274C	10.00	74.00	-	-	12	3.06	4	45	Slag zone and sidewall
1060CS	16.00	60.00	-	-	10	3.06	7	45	Slag zone and sidewall
712BCS	76.70	11.80	1.00	-	6.9	3.10	6	60	Sidewall and transition
810C	78.00	9.92	-	0.70	8	3.20	7	60	Impact area
510C	78.00	9.90	0.46	0.70	8	3.20	7	60	Bottom impact reinforcement
825B	55.70	25.46	-	1.80	8	3.06	7	50	Barrel and bottom

SAFETY LINING BRICKS

Quality Name	Al ₂ O ₃ (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	MgO (%)	BD (g/cm ³)	AP (%)	CCS (MPa)	Application
HA75B-L	76.00	-	-	1.60	-	2.47	26	55	Safety lining
HA65B-L	66.00	-	-	1.90	-	2.42	26	50	Safety lining

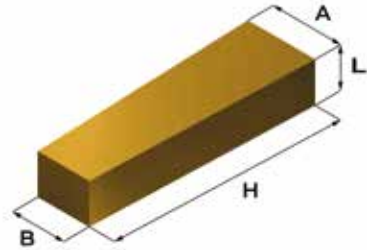
UNSHAPED MATERIALS

Quality Name	MgO (%)	CaO (%)	SiO ₂ (%)	Fe ₂ O ₃ (%)	Al ₂ O ₃ (%)	BD (g/cm ³)	Grain Size (mm)	CCS (MPa)	Application
CAST-M85	85.00	4.00	9.00	2.00	1.00	2.47	0-5	-	Castable for refractory lining installation
CAST-A85CB	-	1.02	-	0.80	85.17	2.90	0-8	-	Castable for refractory lining installation
CAST-A96T	-	0.80	-	-	96.25	2.95	0-5	-	Castable for refractory lining installation
PLAST-A70B	-	-	18.74	1.44	75.14	2.30	0-5	-	Plastic flange ramming
RAM-M65V	68.00	4.00	28.00	10.00	3.00	2.30	0-3	-	Backfilling mass
MOR-A80	-	-	-	-	80.00	-	0-1	-	Mortar for the installation of safety lining bricks

The table does not represent all the available products. More qualities can be produced according to Customer requirements.

Shapes Catalogue

Wedges

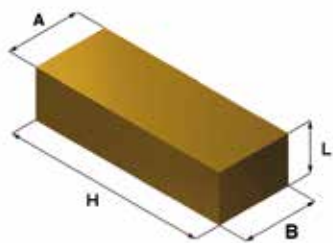


Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
20/8	154	146	200	100	3.00
20/16	158	142	200	100	3.00
20/30	165	135	200	100	3.00
25/8	154	146	250	100	3.75
25/16	158	142	250	100	3.75
25/30	165	135	250	100	3.75
25/60	180	120	250	100	3.75
30/8	154	146	300	100	4.50
30/20	160	140	300	100	4.50
30/40	170	130	300	100	4.50
30/70	185	115	300	100	4.50
35/8	154	146	350	100	5.25
35/20	160	140	350	100	5.25
35/40	170	130	350	100	5.25
35/80	190	110	350	100	5.25
40/8	154	146	400	100	6.00
40/20	160	140	400	100	6.00
40/40	170	130	400	100	6.00
40/80	190	110	400	100	6.00
45/8	154	146	450	100	6.75
45/20	160	140	450	100	6.75
45/40	170	130	450	100	6.75
45/90	195	105	450	100	6.75
50/8	154	146	500	100	7.50
50/20	160	140	500	100	7.50
50/36	168	132	500	100	7.50
50/60	180	120	500	100	7.50
50/80	190	110	500	100	7.50
55/8	154	146	550	100	8.25
55/20	160	140	550	100	8.25
55/36	168	132	550	100	8.25
55/60	180	120	550	100	8.25
55/100	200	100	550	100	8.25
60/8	154	146	600	100	9.00
60/20	160	140	600	100	9.00
60/36	168	132	600	100	9.00

Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
60/60	180	120	600	100	9.00
60/120	210	90	600	100	9.00
65/8	154	146	650	100	9.75
65/20	160	140	650	100	9.75
65/36	168	132	650	100	9.75
65/60	180	120	650	100	9.75
65/120	210	90	650	100	9.75
70/8	154	146	700	100	10.50
70/20	160	140	700	100	10.50
70/36	168	132	700	100	10.50
70/60	180	120	700	100	10.50
70/120	210	90	700	100	10.50
75/8	154	146	750	100	11.25
75/20	160	140	750	100	11.25
75/36	168	132	750	100	11.25
75/60	180	120	750	100	11.25
80/8	154	146	800	100	12.00
80/20	160	140	800	100	12.00
80/36	168	132	800	100	12.00
80/60	180	120	800	100	12.00
80/80	190	110	800	100	12.00
85/8	154	146	850	100	12.75
85/20	160	140	850	100	12.75
85/80	190	110	850	100	12.75
90/8	154	146	900	100	13.50
90/20	160	140	900	100	13.50
90/80	190	110	900	100	13.50
100/8	154	146	1000	100	15.00
100/20	160	140	1000	100	15.00
100/80	190	110	1000	100	15.00

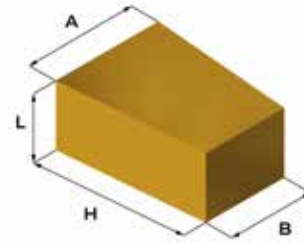
The table does not represent all the available shapes. More shapes can be produced according to Customer requirements.

Straights



Shape	A=B (mm)	H (mm)	L (mm)	VOL (dm ³)
20/0	150	200	100	1.50
25/0	150	250	100	1.88
30/0	150	300	100	2.25
35/0	150	350	100	2.63
40/0	150	400	100	3.00
45/0	150	450	100	3.38
50/0	150	500	100	3.75
55/0	150	550	100	4.13
60/0	150	600	100	4.50
65/0	150	650	100	4.88
70/0	150	700	100	5.25
75/0	150	750	100	5.63
80/0	150	800	100	6.00
85/0	150	850	100	6.38
90/0	150	900	100	6.75
100/0	150	1000	100	7.50
1P0	150	90	250	2.81
2P0	125	124	250	3.88
3P0	100	155	250	3.88
4P0	100	187	250	4.68
5P0	100	220	250	5.50
1	114	230	64	1.68
1-32	114	230	32	0.84
1-40	114	230	40	1.05
1-76	114	230	76	1.99
2	124	250	64	1.98
2-32	124	250	32	0.99
2-40	124	250	40	1.24
2-76	124	250	76	2.36
3	150	300	64	2.88
3-76	150	300	76	3.42

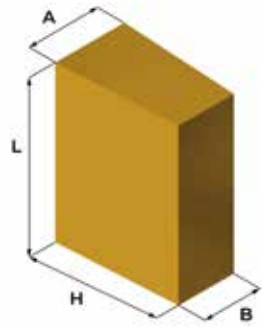
Mini keys



Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
MK5/8	154	146	127	100	1.91
MK5/20	160	140	127	100	1.91
MK5/32	166	134	127	100	1.91
MK6/8	154	146	152.4	100	2.29
MK6/20	160	140	152.4	100	2.29
MK6/30	165	135	152.4	100	2.29
MK6/40	170	130	152.4	100	2.29
MK7/8	154	146	177.8	100	2.67
MK7/20	160	140	177.8	100	2.67
MK7/30	165	135	177.8	100	2.67
MK7/40	170	130	177.8	100	2.67
MK8/8	154	146	203.2	100	3.05
MK8/20	160	140	203.2	100	3.05
MK8/30	165	135	203.2	100	3.05
MK8/40	170	130	203.2	100	3.05
MK9/8	154	146	228.6	100	3.43
MK9/16	158	142	228.6	100	3.43
MK9/20	160	140	228.6	100	3.43
MK9/30	165	135	228.6	100	3.43
MK9/40	170	130	228.6	100	3.43
MK9/50	175	125	228.6	100	3.43

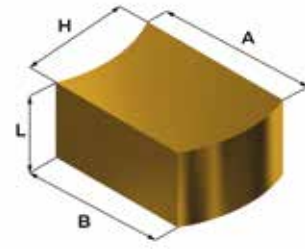
The table does not represent all the available shapes. More shapes can be produced according to Customer requirements.

P-Shapes



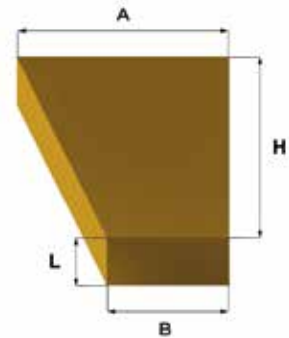
Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
1P0	125	125	90	250	2.81
1P8	129	121	90	250	2.81
1P18	134	116	90	250	2.81
2P0	125	125	124	250	3.88
2P10	130	120	124	250	3.88
2P16	133	117	124	250	3.88
3P0	100	100	155	250	3.88
3P8	104	96	155	250	3.88
3P10	105	95	155	250	3.88
3P20	110	90	155	250	3.88
4P0	100	100	187	250	4.68
4P8	104	96	187	250	4.68
4P12	106	94	187	250	4.68
4P22	111	89	187	250	4.68
5P0	100	100	220	250	5.50
5P8	104	96	220	250	5.50
5P16	108	92	220	250	5.50
5P22	111	89	220	250	5.50
6P10	105	95	250	250	6.25
6P18	109	91	250	250	6.25
6P26	113	87	250	250	6.25

SU-Shapes



Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
SU530	210	183.4	127.0	100	2.50
SU545	210	192.3	127.0	100	2.55
SU630	210	178.1	152.4	100	2.96
SU645	210	188.7	152.4	100	3.04
SU660	210	194.0	152.4	100	3.08
SU736	210	178.9	177.8	100	3.45
SU745	210	185.2	177.8	100	3.51
SU760	210	191.4	177.8	100	3.57
SU836	210	174.4	203.2	100	3.90
SU845	210	181.6	203.2	100	3.98
SU860	210	188.7	203.2	100	4.05
SU945	210	178.1	228.6	100	4.44
SU960	210	186.1	228.6	100	4.53

Angulars



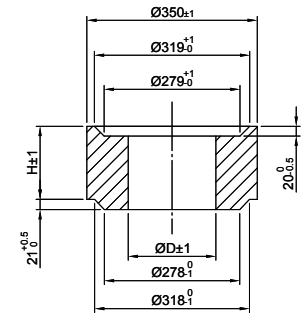
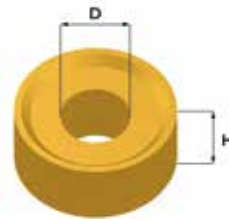
Shape	A (mm)	B (mm)	H (mm)	L (mm)	VOL (dm ³)
V2-L100	250	150	375	100	7.50
V3-L100	300	180	450	100	10.80
V4-L100	275	140	500	100	10.38

The table does not represent all the available shapes. More shapes can be produced according to Customer requirements.

EBT Blocks

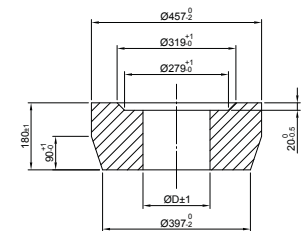
EBT round blocks

Shape	H (mm)	D (mm)	VOL (dm ³)
RB150D120	150	120	12.78
RB150D130	150	130	12.48
RB150D140	150	140	12.16
RB150D150	150	150	11.82
RB150D160	150	160	11.45
RB150D170	150	170	11.06
RB150D180	150	180	10.65
RB200D120	200	120	17.02
RB200D130	200	130	16.63
RB200D140	200	140	16.20
RB200D150	200	150	15.75
RB200D160	200	160	15.26
RB200D170	200	170	14.74
RB200D180	200	180	14.18



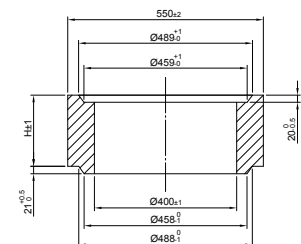
EBT end blocks

Shape	D (mm)	VOL (dm ³)
EB180D120	120	24.45
EB180D130	130	24.14
EB180D140	140	23.80
EB180D150	150	23.43
EB180D160	160	23.04
EB180D170	170	22.63
EB180D180	180	22.19



EBT square blocks

Shape	H (mm)	VOL (dm ³)
EB150D400	150	25.56
EB200D400	200	35.40



The table does not represent all the available shapes. More shapes can be produced according to Customer requirements.

[illegible]



TRASTEEL INTERNATIONAL SA
Via Balestra 10 | Palazzo TenTower
CH-6900 Lugano | Switzerland
T +41 91 910 5300
F +41 91 910 5353
E info@trasteel.com

trasteel.com