

Since 1990

FILTRONE®

where quality filtration does matter

The First Step to
DEFECT FREE CASTINGS.



REFINING

Flow

Optimizing the movement of molten metal.

Inclusion

Removing impurities and trapped gases.

Laminar

Creating smooth, non-turbulent metal flow.

Thermal

Withstanding extreme kiln and casting temperatures.

Refining

Improving the chemical and physical integrity of the melt.

Output

Increasing the yield of defect-free castings.

Network

The sophisticated ceramic pore structure.

Efficiency

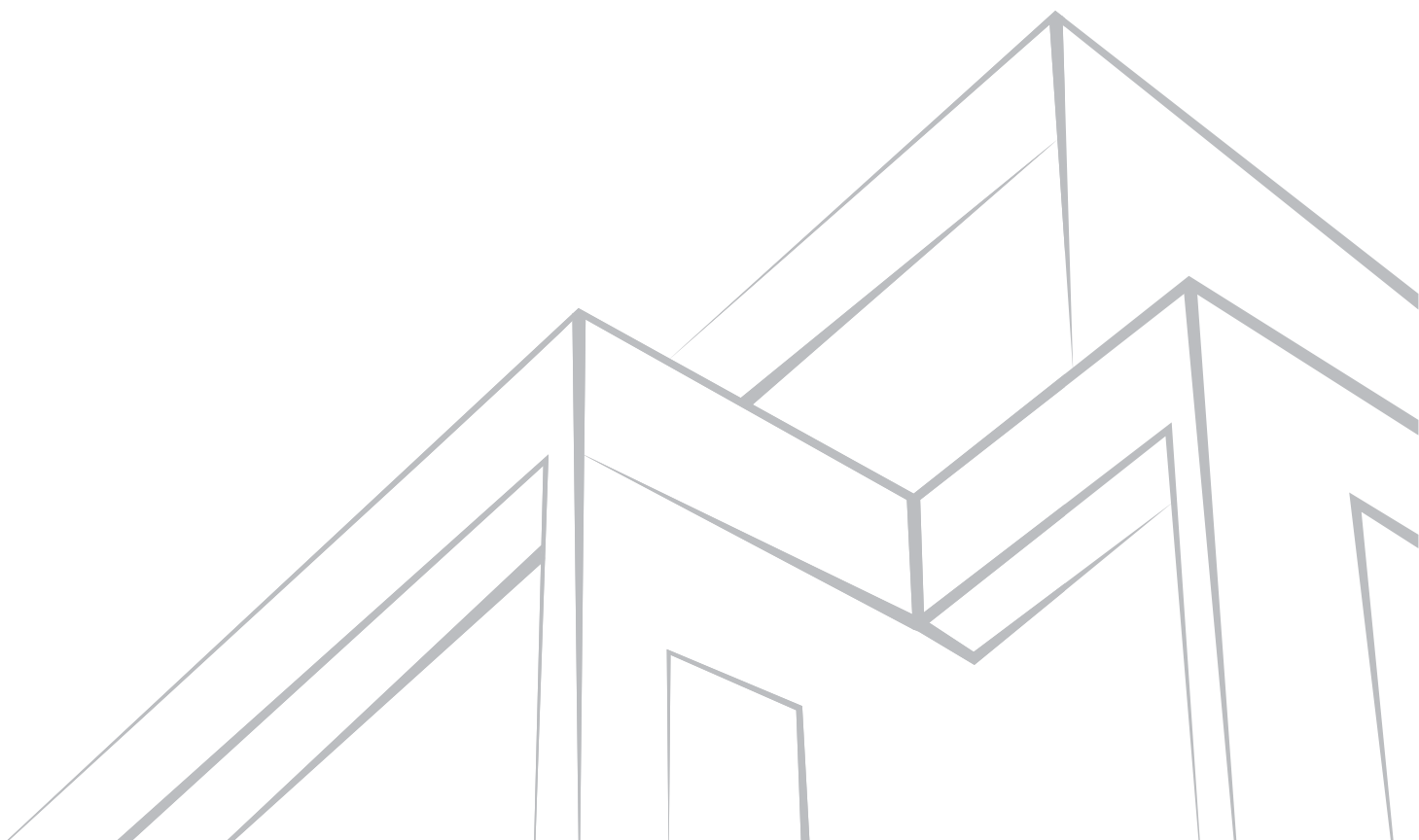
Reducing scrap and saving manufacturing costs.

Our Identity

For over 35 years, the **Filtrone Group** has been a dominant force in the industrial ceramics sector. What began as a vision in 1990 has evolved into a powerhouse of manufacturing excellence, comprising three specialized entities **Shakti Industries**, **Sun Cera Filter**, and **Shakti International**. Together, we operate under the unified brand Filtrone, delivering precision-engineered solutions to the global foundry and metal casting industries.

At the **Filtrone Group**, quality is our foundation. Our **ISO 9001 certification** is a testament to our rigorous quality management systems. From raw material selection to the final firing in our kilns, every step of our production is monitored to ensure that our Ceramic Foundry Filters and Refractories meet the highest global benchmarks for performance and durability.

“Advancing the art of the pour through ceramic excellence and uncompromising filtration.”



Our **Strengths**

35+ Years of Expertise

Deep technical "know-how" and a proven track record in the ceramic industry.

Integrated Manufacturing

Leveraging the combined strengths of our three production units to handle high-volume orders with precision.

Innovation-Driven

We continuously evolve our manufacturing processes to meet the changing needs of modern metallurgy.

Global Reach

Providing world-class products that meet international standards for efficiency and performance.

By uniting our expertise under the **Filtrone** brand, we offer a comprehensive, one-stop solution for industries seeking superior filtration and thermal protection.



Our **Purpose**

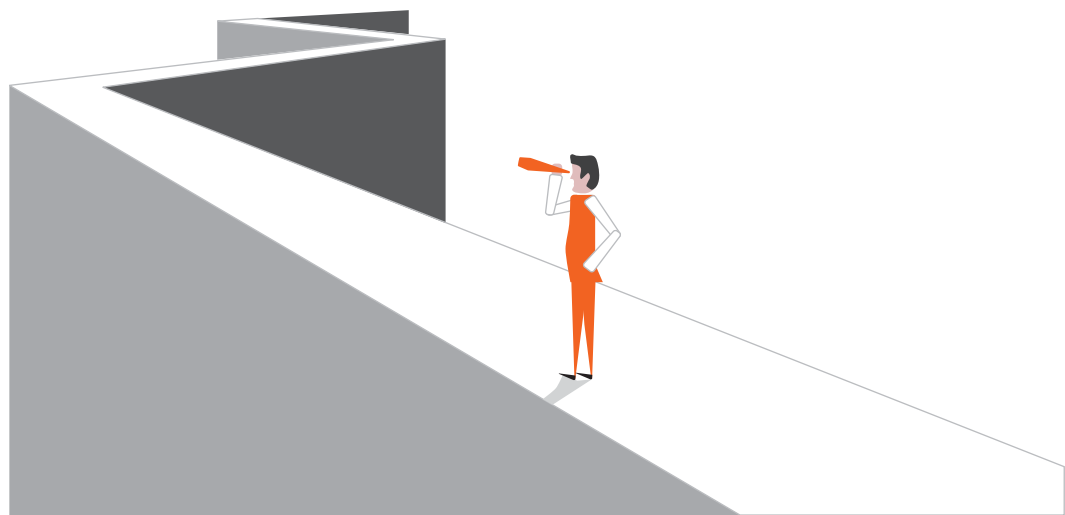


Mission

“Our mission is to manufacture precision-engineered ceramic products that withstand extreme thermal environments, providing foundries with the tools needed for accurate temperature control and superior metal purification.”

Vision

“To set the industry standard in ceramic material science, delivering innovative products that eliminate casting waste and maximize manufacturing efficiency.”



Our **Growth Story**

1990

Founded Shakti Industries

1996

Manufactured India's first
Foundry Filter

2006

Established 24/7 continuous
Sintering System

2010

Established Sun Cera Filter
(Unit II)

2018

Built strong relationships
with foundries across India...

2020

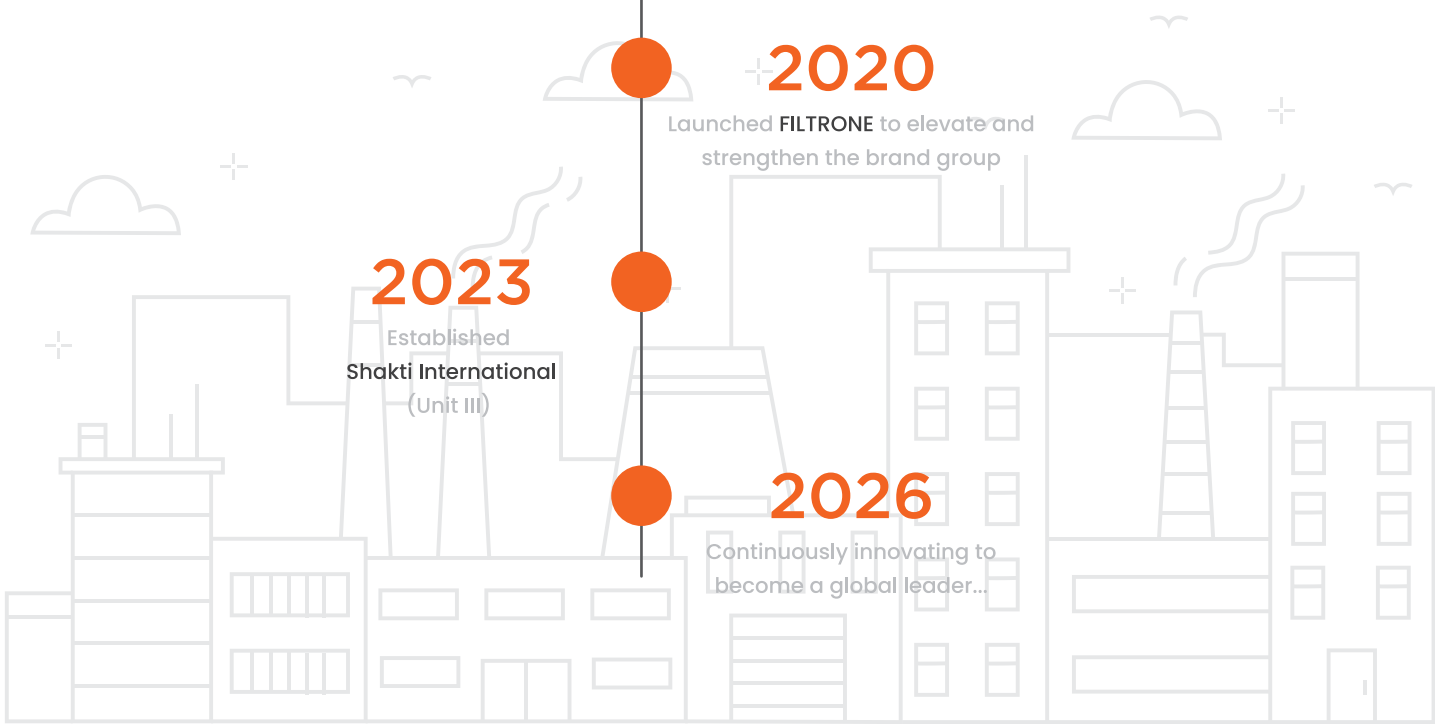
Launched **FILTRONE** to elevate and
strengthen the brand group

2023

Established
Shakti International
(Unit III)

2026

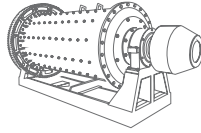
Continuously innovating to
become a global leader...



Inside **Our Factory**



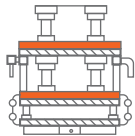
**RAW
MATERIALS**



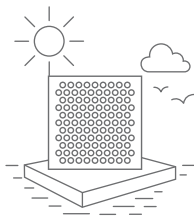
**MIXING RAW
MATERIALS**



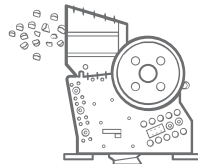
**STORE SLURRY
CASTING**



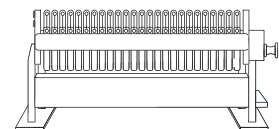
**PRESS FILTER
PARTICULAR SIZE**



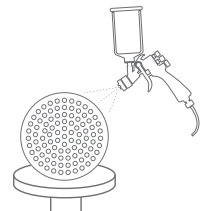
**NATURAL
DRYING**



**CRUSH CAKE
IN SMALL
PARTICALS**



**CREATE SLURRY
TO CACK**



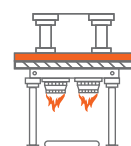
**AIR CLEANING
PARTICULAR FILTER**



**PACKING &
DISPATCH**



**QUALITY
INSPECTION
& TESTING**



FIRING

What's **Inside**

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Ceramic Press **Filter**

Ceramic Filter Manufactured today are highly reliable for their Physical Characteristics and dimension and therefore mass production of casting on automated moulding lines has seamlessly accepted and accommodated the introduction of these high-quality filters.

FILTRONE CERAMIC FILTERS prepared from good quality raw material and made under strict process controls are ideally suited for foundry applications. Good thermal and mechanical properties together with consistent dimensions make **FILTRONE** filters the best in choice for the production of clean castings with superior surface finish.

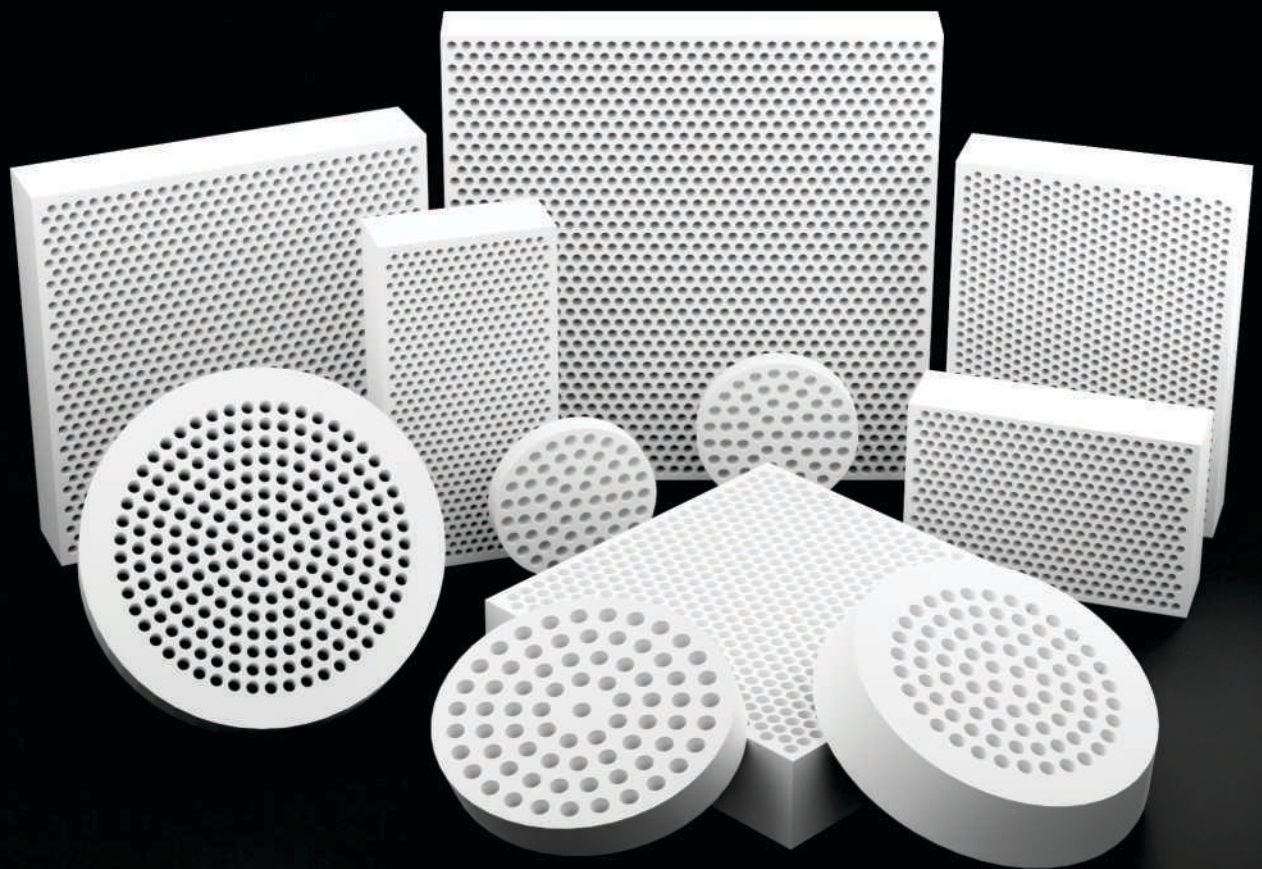
Rejection of casting due to inclusions can be reduced considerably by using **FILTRONE CERAMIC FILTERS** in foundry moulding systems. Customers who buy these high-quality casting will benefit immensely because of the reliability and assured performance characteristics derived from these casting.

What makes our **Filter** superior?

- They are prepared under high pressure and therefore offer high densities.
- They are fired at elevated temperatures to ensures complete sintering.
- Their external dimensions pore sizes are accurate and made to close tolerances.
- They can be offered in different shapes and sizes to suit a variety of mould design and gating systems.
- They possess consistent thermal properties like refractoriness, thermal shock resistance etc.

Benefits of using our **Filter**

- | | |
|--|---|
| ○ Purify the liquid iron | ○ Improve mechanical properties of casting |
| ○ Remove non-metallic impurities | ○ Reduce rejection rate and improve energy consumption |
| ○ Trap slag and dross particles | ○ Enable reduction in machining allowances |
| ○ Minimize turbulent flow of liquid iron | ○ Increase life of cutting tools and reduce cost of machining |
| ○ Reduce inclusion in the casting | ○ Improve reliability of casting performance |
| ○ Improve the surface quality of casting | |



We can also manufacture as per your drawing, sample, or required dimensions.

Why do we need **Filters...**

Removal of Non-Metallic Inclusions

The most direct role of a ceramic filter is to act as a physical barrier. During the melting and pouring process, various impurities—such as slag, dross, and pieces of furnace lining—can enter the molten metal.

Mechanical Filtration : The pore structure traps large particles that would otherwise cause structural weaknesses in the final casting.

Adsorption : As metal flows through the ceramic network, smaller impurities stick to the surface of the filter walls, cleaning the melt at a microscopic level.

Reduction of Turbulence

Turbulent flow is a major enemy in casting. When molten metal splashes or swirls violently, it traps air and forms oxides (re-oxidation).

Laminar Flow : A ceramic press filter acts as a "flow straightener." It converts turbulent, chaotic liquid metal into laminar flow, which fills the mold cavity smoothly and consistently.

Oxidization Control : By smoothing the flow, the filter prevents the metal from reacting with the atmosphere, significantly reducing the risk of gas holes and oxide films.

Improved Surface Finish and Machinability

Castings produced with filtered metal require much less "cleanup" work

Surface Quality : Without inclusions at the surface, the final part looks better and meets tighter visual standards.

Tool Longevity : Inclusions like sand or slag are often harder than the metal itself. When your customers machine the casting, these "hard spots" can break or dull expensive cutting tools. Using filters ensures a consistent material hardness throughout the piece.

Lower Scrap Rates and Rework

Every rejected casting is a loss of energy, labor, and material.

Internal Integrity : Filters reduce internal defects that are often only found during X-ray testing or final machining.

Cost Savings : By significantly lowering the scrap rate, the filter pays for itself by increasing the "yield" of good castings per melt.

Square **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm2)
	Nominal	Thickness				
FF-101	25x25	10	39	2.25	25	155
FF-102	39X39	12	143	2.00	30	449
FF-103	40X40	12.5	168	2.00	33	558
FF-104	40X40	15	168	2.00	33	558
FF-105	40X40	12.5	188	2.00	37	590
FF-106	40X40	15	188	2.00	37	590
FF-107	40X40	10	114	2.50	35	559
FF-108	40X40	12	264	1.70	37	599
FF-109	40X40	10	127	3.00	56	897
FF-110	40X40	12.5	127	3.00	56	897
FF-111	49X49	15	294	2.00	38	923
FF-112	50X50	20	137	2.30	23	569
FF-113	50X50	12.5	310	1.90	35	878
FF-114	50X50	21	64	3.75	28	707
FF-115	50X50	12.5	230	2.30	38	955
FF-116	50X50	12.5	279	2.17	41	1031
FF-117	50X50	15	279	2.17	41	1031
FF-118	50X50	12.5	294	2.00	37	923
FF-119	50X50	15	294	2.00	37	923
FF-120	50X50	22	297	2.00	37	923
FF-121	50X50	15	104	2.80	26	640
FF-122	50X50	20	104	2.80	26	640
FF-123	50X50	15	200	2.17	29	739
FF-124	55X55	12.5	389	2.00	40	1221
FF-125	55X55	15	389	2.00	40	1221
FF-126	55X55	12.5	261	2.30	36	1084
FF-127	55X55	12.5	279	2.20	35	1060
FF-128	55X55	12.5	687	1.50	40	1213
FF-129	55X55	15	687	1.50	40	1213
FF-130	60X60	12.5	426	2.00	37	1338
FF-131	66X66	12.5	537	2.00	39	1686
FF-132	66X66	15	537	2.00	39	1686
FF-133	75X75	12.5	585	2.30	43	2429
FF-134	75X75	15	585	2.30	43	2429
FF-135	75X75	22	585	2.30	43	2429

Square **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm ²)
	Nominal	Thickness				
FF-136	75X75	22	425	2.50	37	2085
FF-137	75X75	15	621	2.00	35	1950
FF-138	75X75	20	621	2.00	35	1950
FF-139	75X75	22	621	2.00	35	1950
FF-140	75X75	22	621	2.17	41	2295
FF-141	75X75	20	150	4.50	42	2384
FF-142	100X100	20	295	4.50	47	4689
FF-143	100X100	20	952	2.30	40	3953
FF-144	100X100	22	952	2.30	40	3953
FF-145	100X100	20	1050	2.00	33	3297
FF-146	132X132	20	493	4.50	45	7837
FF-147	134X134	20	1340	2.50	37	6574

Rectangle **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm ²)
	Nominal	Thickness				
FF-201	55X60	15	385	2.00	36	1209
FF-202	50X75	15	374	2.17	37	1382
FF-203	50X75	22	374	2.17	37	1382
FF-204	50X75	20	171	2.80	28	1052
FF-205	50X75	20	200	2.50	26	981
FF-206	50X75	20	105	4.50	44	1669
FF-207	50X100	22	507	2.00	32	1592
FF-208	50X100	22	507	2.17	37	1874
FF-209	50X100	12	305	2.25	24	1212
FF-210	50X100	20	279	3.50	53	2683
FF-211	50X100	20	1325	1.00	21	1040
FF-212	75X100	22	850	2.00	36	2669
FF-213	75X100	22	850	2.17	42	3142
FF-214	90X100	20	42	4.50	9	668

Round **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm ²)
	Nominal	Thickness				
FF-301	35	8	39	3.00	29	276
FF-302	37	7	49	2.00	14	154
FF-303	38	8	35	3.75	34	386
FF-304	38	10	35	3.75	34	386
FF-305	40	8	9	5.50	17	214
FF-306	40	10	117	2.00	29	367
FF-307	40	22	117	2.00	29	367
FF-308	40	10	63	2.75	30	374
FF-309	40	22	63	2.75	30	374
FF-310	47	7.5	58	3.75	37	640
FF-311	47	10	58	3.75	37	640
FF-312	47	8	169	2.00	31	531
FF-313	47	10	169	2.00	31	531
FF-314	47	7	63	2.75	22	374
FF-315	47	10	63	2.75	22	374
FF-316	47	10	127	2.30	30	527
FF-317	50	10	58	3.75	33	640
FF-318	50	15	58	3.75	33	640
FF-319	50	10	41	4.50	33	652
FF-320	50	10	197	2.00	32	619
FF-321	50	10	73	2.75	22	433
FF-322	50	12	73	2.75	22	433
FF-323	50	15	73	2.75	22	433
FF-324	55	10	29	5.50	29	689
FF-325	60	10	95	2.75	20	564
FF-326	60	15	95	2.75	20	564
FF-327	60	10	104	2.75	22	617
FF-328	60	10	144	2.00	16	452
FF-329	60	10	73	3.75	29	806
FF-330	60	15	73	3.75	29	806
FF-331	60	10	237	2.50	47	1162
FF-331	60	20	173	2.00	19	543
FF-333	66	10	61	4.50	28	970
FF-334	66	15	61	4.50	28	970
FF-335	67	10	106	3.75	33	1170

Round **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm ²)
	Nominal	Thickness				
FF-336	70	10	106	3.75	30	1170
FF-337	70	20	106	3.75	30	1170
FF-338	70	10	145	2.75	22	860
FF-339	70	20	145	2.75	22	860
FF-340	70	20	238	2.00	20	747
FF-341	70	10	133	3.20	28	1069
FF-342	70	10	98	4.5	41	1558
FF-343	75	20	289	2.00	21	907
FF-344	80	10	39	5.50	18	926
FF-345	80	15	223	2.50	22	1094
FF-346	100	10	308	2.15	14	1118
FF-347	100	20	500	2.00	20	1570
FF-348	120	15	386	1.50	6	681
FF-349	140	10	217	3.5/2.3	6	901
FF-350	150	15	638	1.50	6	1127

Round Taper **Filters**

Item Code	Dimensions (mm)		Number of Hole	Hole Dia (mm)	Open Area %	Pouring Area (mm ²)
	Nominal	Thickness				
FF-401	40/42	10	139	2.00	32	436
FF-402	40/42	10	27	3.75	22	298
FF-403	48/50	15	42	3.50	21	404
FF-404	56/58	15	58	3.50	21	558
FF-405	50/56	10	74	2.75	17	423
FF-406	50/52	10	15	3.75	8	165
FF-407	50/52	15	170	2.00	25	534
FF-408	50/52	15	42	2.75	12	249
FF-409	58/60	12	333	1.70	27	755
FF-410	58/60	12	223	2.00	25	700
FF-411	61/63	10	107	2.75	20	635
FF-412	62/64	10	242	2.00	24	760
FF-413	62/64	10	196	2.10	21	679
FF-414	70/66	10	24	5.00	12	471
FF-415	70/72	15	86	3.50	20	827
FF-416	73/75	10	19	9.00	27	1208
FF-417	74/76	15	366	2.00	25	1149
FF-418	80/82	15	122	3.50	22	1173

SiC Foam Filter

High-Efficiency Filtration for Molten Metal Casting

The **SiC Foam Filter** is manufactured using premium Silicon Carbide material for effective filtration of molten metal in foundry applications. It helps remove slag, inclusions, and impurities while ensuring smooth metal flow and improved casting quality.

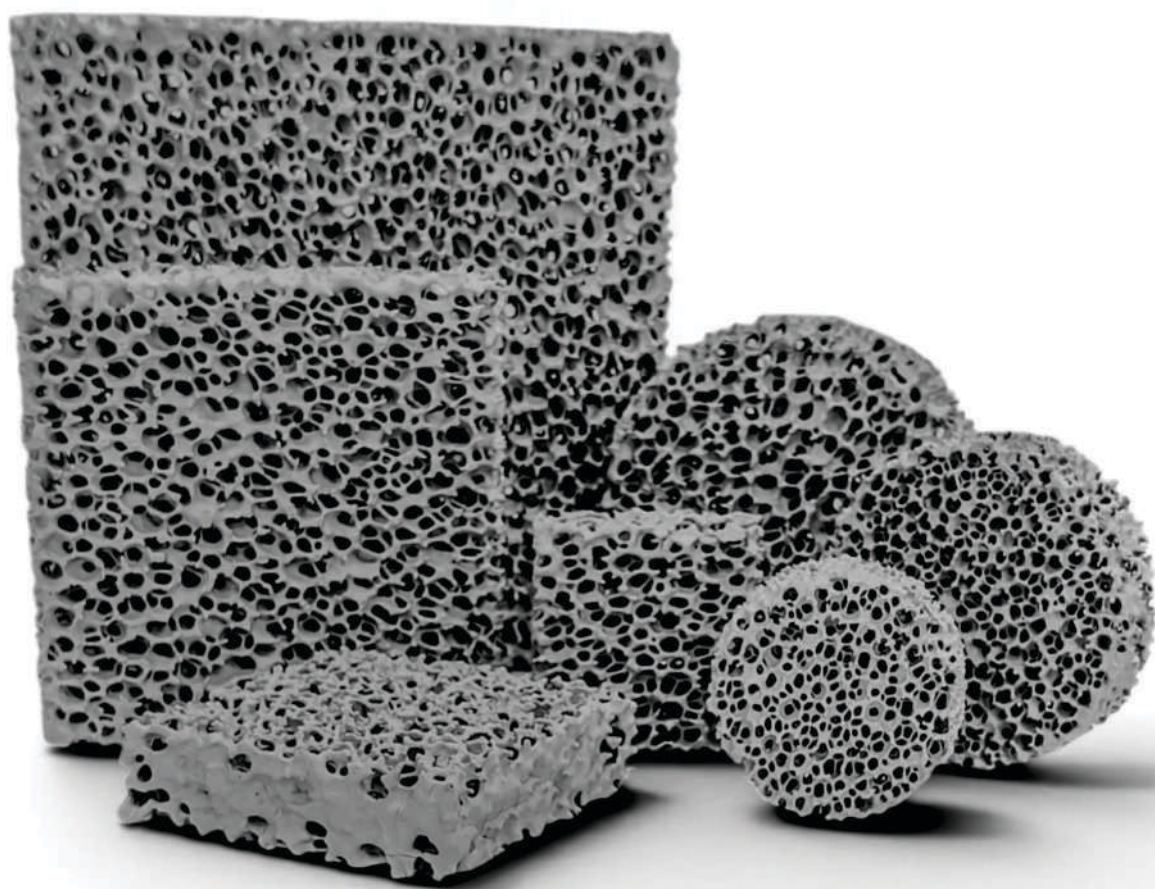
Designed for high-temperature performance, SiC Foam Filters offer excellent thermal shock resistance, high strength, and reliable operation in ferrous casting applications.

Product Features

- High filtration efficiency
- Excellent thermal shock resistance
- Strong and durable structure
- Uniform pore distribution
- Suitable for high-temperature casting

Technical Benefits

- Removes impurities and slag
- Improves casting surface finish
- Reduces casting defects
- Enhances metal flow quality
- Increases casting yield and productivity



SiC Foam Filter

Item Code	Dimensions (mm)		PPI
	Nominal	Thickness	
FF-501	D 30	15	10/20
FF-502	D 40	15 / 22	10/20
FF-503	D 50	15 / 22	10/20
FF-504	D 60	22	10/20
FF-505	D 70	22	10/20
FF-506	D 90	22	10/20
FF-507	D 100	22	10/20
FF-508	40X40	15 / 22	10/20
FF-509	50X50	15 / 22	10/20
FF-510	60X60	22	10/20
FF-511	75X75	15 / 22	10/20
FF-512	100X100	22	10/20
FF-513	125X125	22	10/20
FF-514	150X150	22	10/20
FF-515	50X75	22	10/20
FF-516	50X100	22	10/20
FF-517	75X100	22	10/20



Ceramic Tube for Temperature Tips

The Ceramic Tube for Temperature Tips is designed to protect thermocouples or other temperature sensors in high-temperature environments, such as molten metal baths in foundries. These tubes are typically made of high-quality refractory ceramics, ensuring thermal stability, resistance to thermal shock, and durability in extreme conditions

Product Features

- High thermal shock resistance
- Excellent heat resistance at high temperatures
- Strong mechanical strength
- Accurate support for BMD temperature tips
- Long service life
- Smooth surface finish
- Easy installation and replacement
- Suitable for repeated industrial use

Technical Benefits

- Prevents direct damage to thermocouple tip
- Improves measurement accuracy
- Reduces replacement cost
- Safer handling during molten metal testing
- Reliable performance in harsh foundry condition

We can also manufacture as per your drawing, sample, or required dimensions.



Ceramic **Pouring Cup**

Ceramic Pouring Cup is a high-quality refractory pouring aid specially designed for smooth and controlled pouring of molten metal into moulds during casting operations. It helps reduce turbulence, minimizes slag entry, improves metal flow, and enhances casting quality. Ceramic pouring cups are widely used in investment casting, steel foundries, iron foundries, and non-ferrous metal casting industries.

Manufactured from premium refractory ceramic materials, our pouring cups offer excellent thermal shock resistance, high strength, dimensional accuracy, and stable performance under extreme foundry temperatures.

Product **Features**

- Excellent heat resistance at high temperatures
- Smooth and controlled molten metal flow
- Reduces turbulence during pouring
- Helps minimize slag and impurity entry
- High thermal shock resistance
- Strong mechanical strength
- Accurate shape and dimensions
- Crack resistant structure
- Easy mould placement
- Improves casting surface finish

Technical **Benefits**

- Improves metal pouring efficiency
- Reduces casting rejection
- Better filling of mould cavity
- Cleaner casting output
- Reduces metal splash and wastage
- Suitable for automatic and manual pouring systems



We can also manufacture as per your drawing, sample, or required dimensions.

Ceramic **Breaker Core**

Reliable Flow Control Solution for Foundry Applications

The FILTRONE Ceramic Breaker Core is specially manufactured for efficient control and distribution of molten metal flow during casting operations. Designed with high-quality refractory ceramic materials, breaker cores help reduce turbulence, minimize slag entry, and improve overall casting quality.

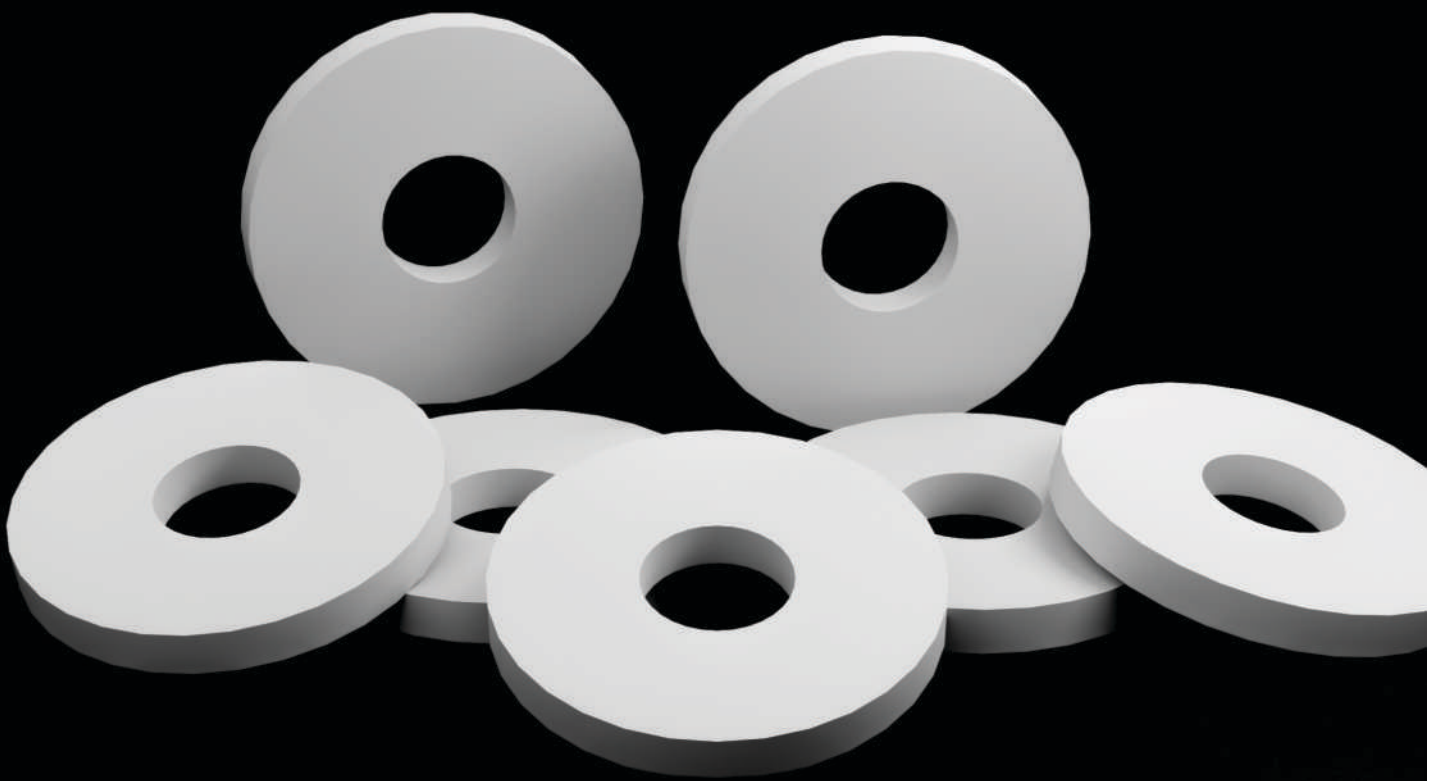
These products are widely used in foundries for ferrous and non-ferrous metal casting applications where smooth metal flow and defect reduction are essential.

Product **Features**

- Excellent resistance to high temperature
- Superior thermal shock resistance
- Strong and durable structure
- Accurate dimensions and uniform shape
- Helps control molten metal flow
- Reduces turbulence and air entrapment
- Improves casting surface finish

Technical **Benefits**

- Controls molten metal flow
- Reduces turbulence and slag entry
- Improves casting quality
- High thermal shock resistance
- Stable at high temperatures
- Reduces casting defects
- Enhances production efficiency
- Suitable for continuous operation



We can also manufacture as per your drawing, sample, or required dimensions.

Ceramic Products for **Lost Foam Casting**

1 Runner Top **Ceramic Ring**

High-Temperature Protection & Flow Stability Solution

The FILTRONE Runner Top Ceramic Ring is specially designed for Lost Foam Casting applications to provide stable molten metal flow and improve casting efficiency. Manufactured from high-quality refractory ceramic material, it offers excellent resistance against thermal shock, molten metal erosion, and high pouring temperatures.

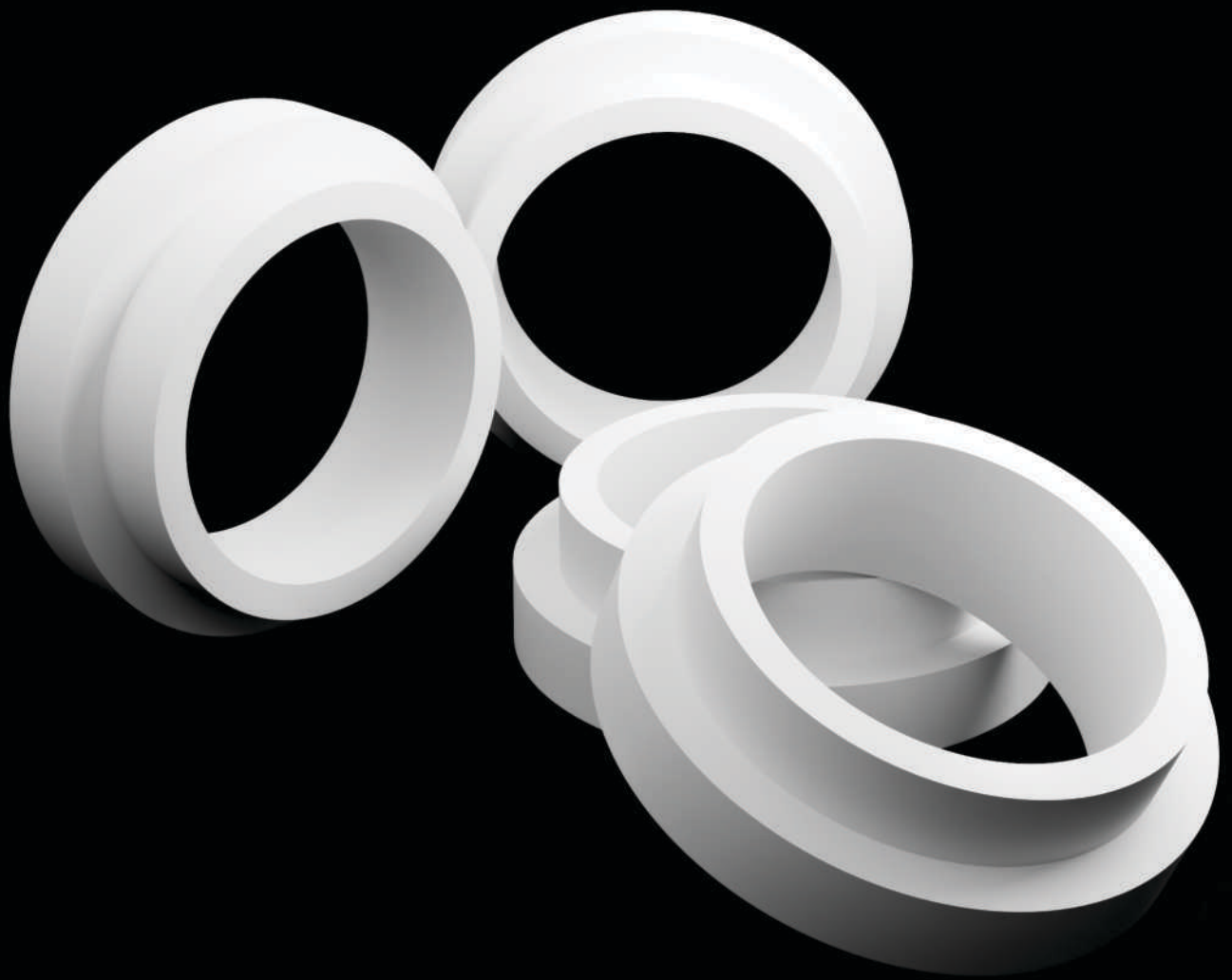
This ceramic ring helps maintain smooth metal entry into the gating system while reducing turbulence and casting defects.

Product **Features**

- Excellent thermal shock resistance
- High-temperature stability
- Smooth molten metal flow control
- Strong and durable structure
- Accurate dimensions and easy installation
- Resistant to molten metal erosion

Technical **Benefits**

- Reduces turbulence during pouring
- Improves casting quality
- Minimizes slag and impurities
- Enhances mould filling efficiency
- Reduces casting defects



We can also manufacture as per your drawing, sample, or required dimensions.

2 Ceramic **Warpage Plate**

Reliable Support Solution for Lost Foam Casting

The FILTRONE Ceramic Warpage Plate is developed to provide dimensional stability and support during Lost Foam Casting processes. It is manufactured using premium refractory ceramic material capable of withstanding extreme temperatures and continuous production conditions.

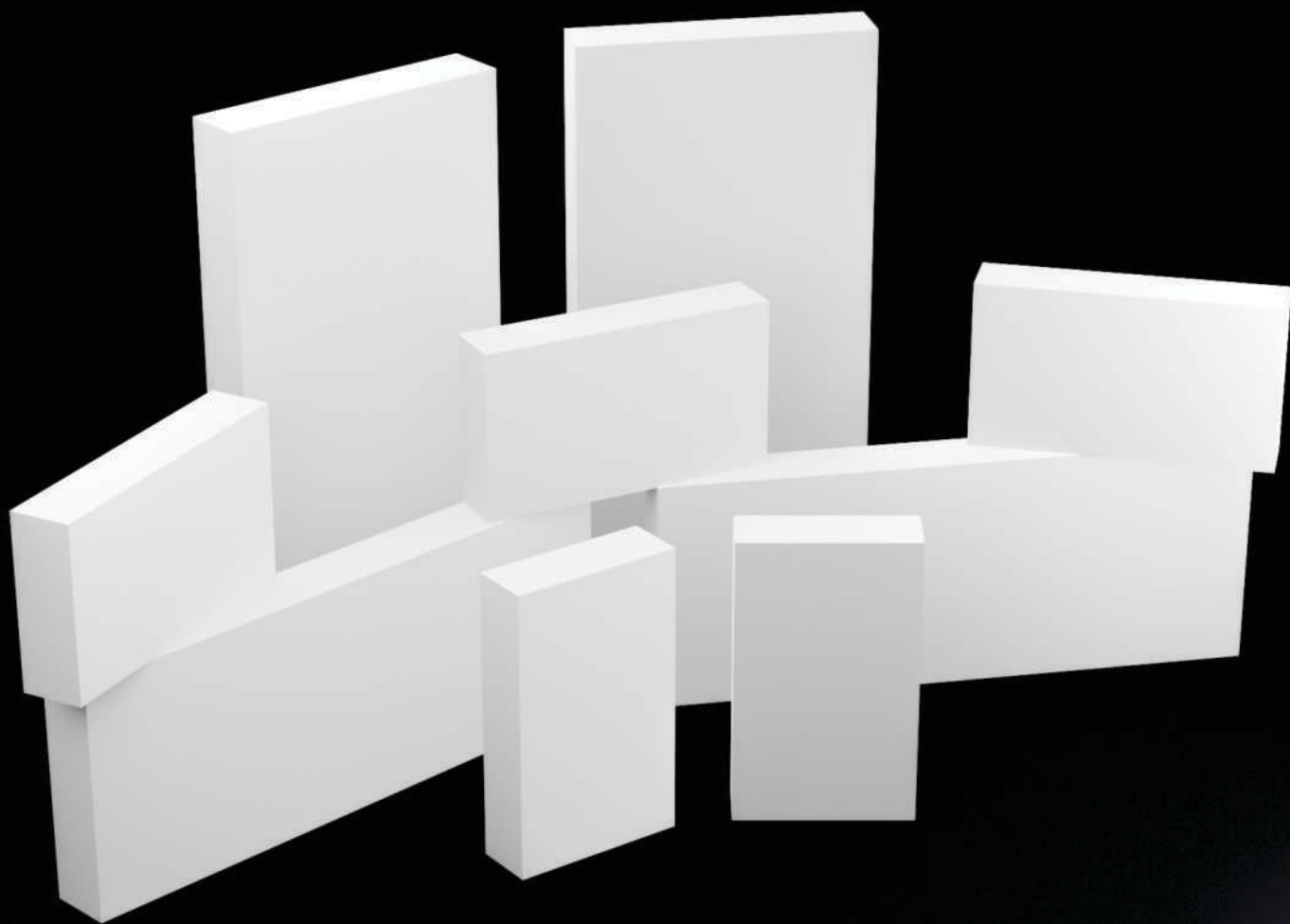
The plate helps prevent deformation and improves casting consistency during mould handling and pouring operations.

Product **Features**

- High mechanical strength
- Excellent heat resistance
- Superior dimensional stability
- Long service life
- Smooth surface finish
- Suitable for continuous operation

Technical **Benefits**

- Prevents mould deformation
- Improves casting accuracy
- Stable performance at high temperatures
- Reduces production rejection
- Enhances operational efficiency



We can also manufacture as per your drawing, sample, or required dimensions.

FILTRONE®

:: Powered by ::

SHAKTI
Industries

SHAKTI
International

SUN CERA
Filter

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