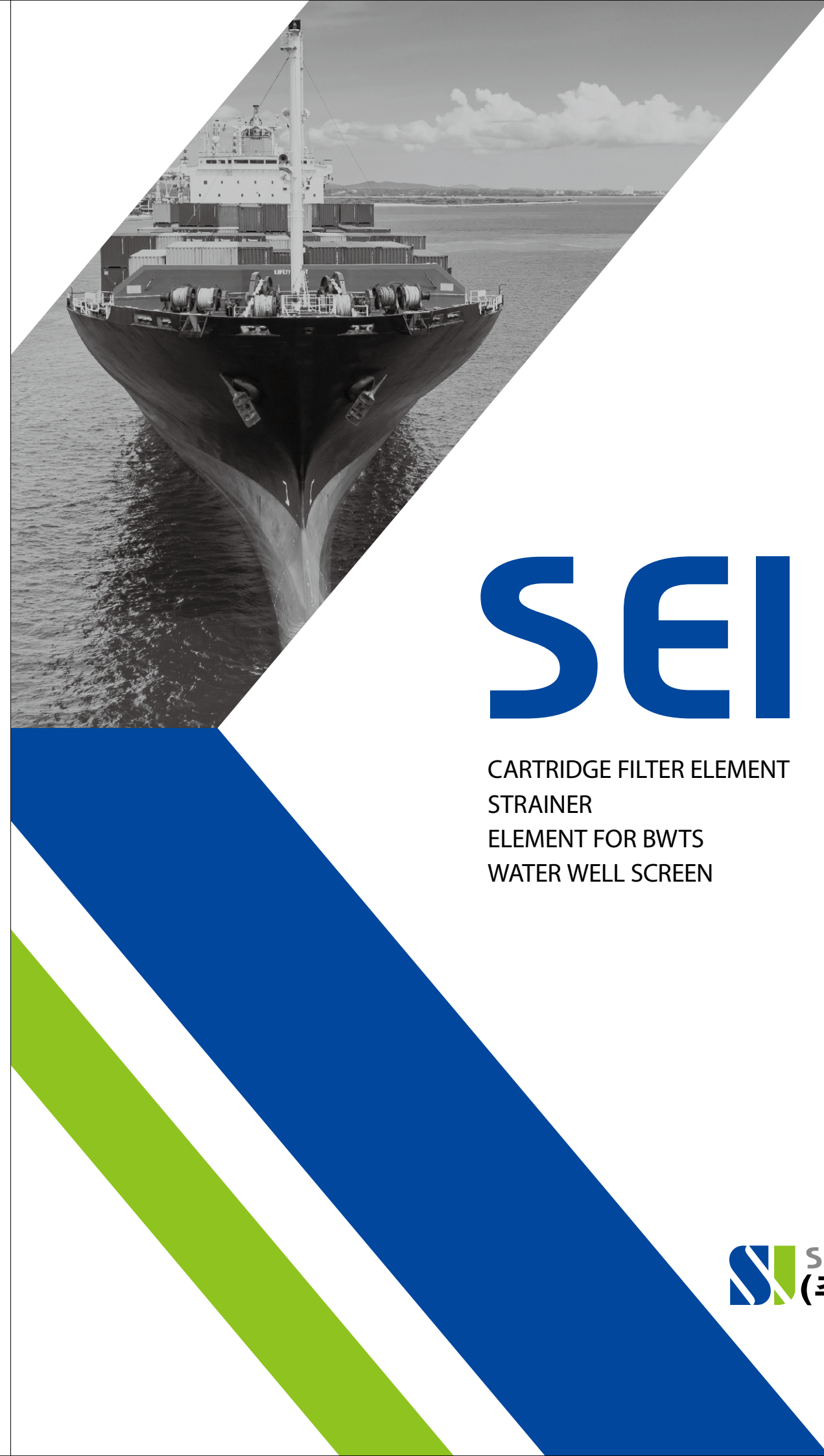




SEIL

CARTRIDGE FILTER ELEMENT
STRAINER
ELEMENT FOR BWTS
WATER WELL SCREEN

189, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
Tel. 82-55-322-1658 Fax. 82-55-322-1659
E-mail. seil1705@hanmail.net



Greetings

In the age of global management, there is SEIL, a company striving to become a world-class company.
To the world best Company
I would like to express my deepest gratitude to customers for always caring and loving our company SEIL.

SEIL Co., Ltd. is a company that specializes in producing filter elements for marine engine and industrial use, and strainers since its establishment in 2001. We are doing our best to satisfy our customers under the banner of the best quality, the best unit price, and delivery time compliance.

We produce filter elements for BWTS (Ballast Water Treatment System) and marine engine, etc., and export directly to Germany in recognition of our product quality, unit price, and delivery time compliance. We are doing our best for globalization by continuously exporting to other countries as well.

In addition, by acquiring ISO9001: 2015 certification, we will provide best products and services with the best quality.

SEIL Co., Ltd. promises to be the world's best company in the future, pursuing a new leap with the spirit of challenge and creation based on the principle of customer first, quality first, and superior environment for work.

SEIL Co., Ltd.

Jong-chan Kim, CEO



VISION

Superior Environment for Work

Management Policy

Looking forward to the 30th anniversary of the foundation in 2030, SEIL will be reborn as a leading company in the field of shipbuilding and marine equipment through continuous R & D and product expansion in order to become a company with superior environment for work.

5 BEST
PRODUCTS
IN THE
WORLD

HUMAN
RESOURCE
DEVELOPMENT

BUSINESS
DEVELOPMENT

Management Goal

- Strengthening marketing to preoccupy the BWTS equipment market
- Enhancement of capacity to expand A/S market share of equipment for engine (shipbuilding)
- Strengthening R & D capabilities to enter into water treatment field

Quality Policy and Goal

Realize customer satisfaction through continuous quality improvement

- Improve BWTS equipment quality and establish procedure standard
- Establish quality standard of equipment for water treatment

Company Overview

Company name	SEIL Co., Ltd.	Founded	May 2001
CEO	Jong-chan Kim	Employees	8
Factory	Land area 2,313m2, factory building 1,532 m2, office building 297 m2		
Main products	BWTS(Shipbuilding) / Industrial Machinery / Filter Elements For Engine(Shipbuilding), Strainer		
Address	189, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, 50875, Republic of Korea		
Tel	+82-55-322-1658	Fax	+82-55-322-1659
Email	seil1705@hanmail.net		

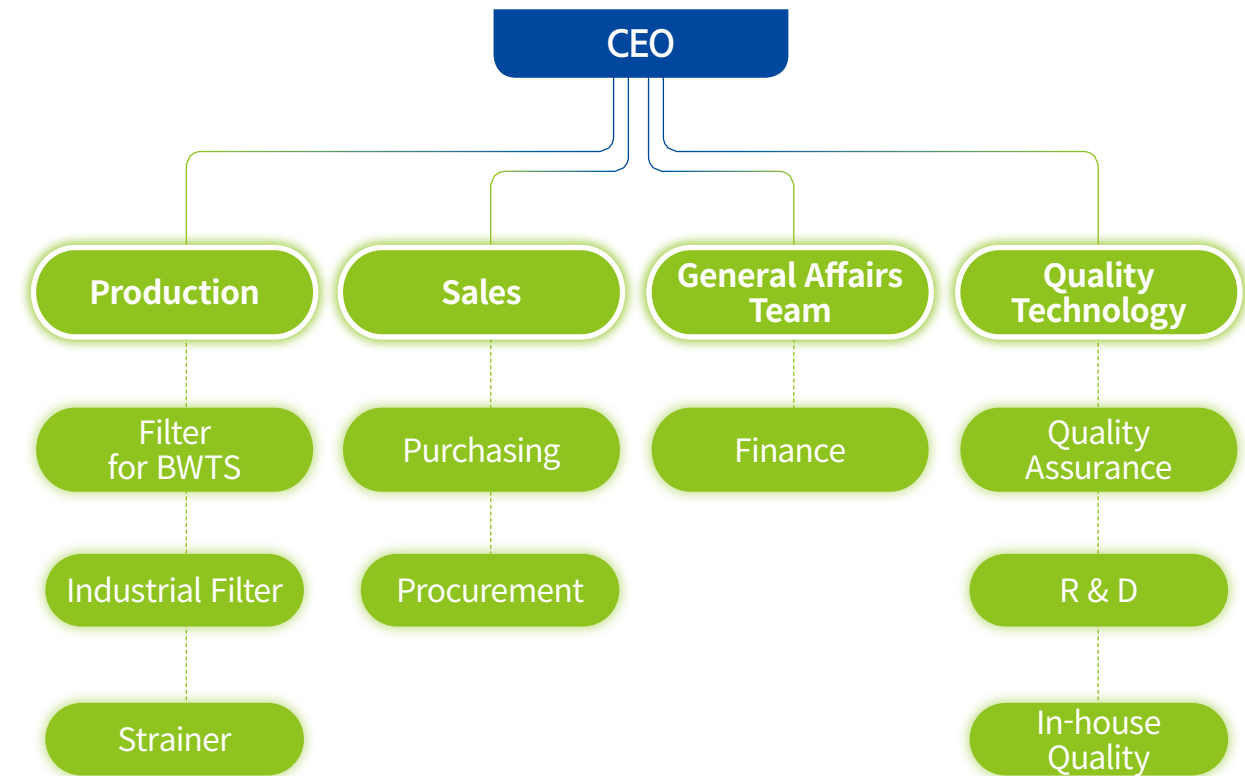
Company History

- 2010~

 - 2018. 06. Export contract with VTE(Germany)
 - 2017. 11. Converted to ISO9001:2015 Standard
 - 2016. 11. Moved factory(Techno Valley Industrial Complex, Jillye-myeon, Gimhae-si)
 - 2015. 10. Registered the company to Public Procurement Service
 - 2014. 04. Patent Registration 10-1392500, 10-1392501
 - 2013. 07. Company converted to SEIL Co., Ltd.
 - 2010. 12. ISO9001:2008 Certification
 - 06. Field: Industrial Filter Part & Marine Filter Part
 - Started production of ballast water treatment filter(BWTS)
- 2000~

 - 2007. 05. Moved the factory
 - 2001. 05. Founded SEIL Industry

Organization Chart

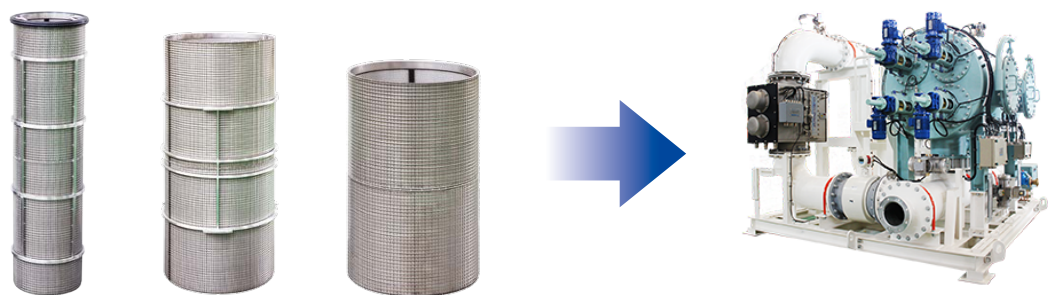


Certification

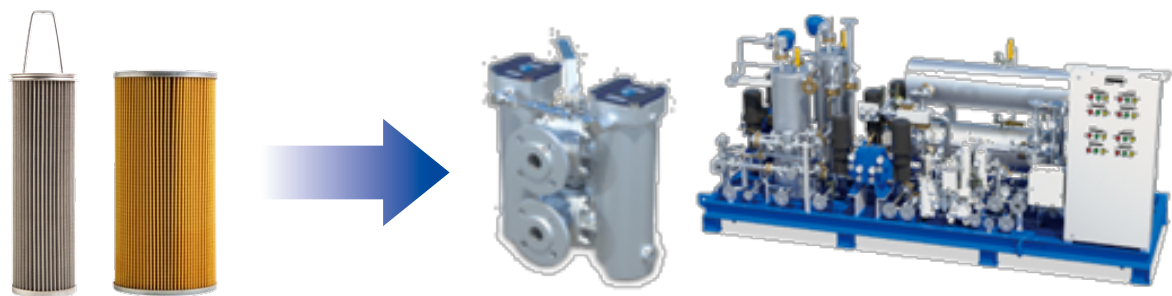


Business Areas

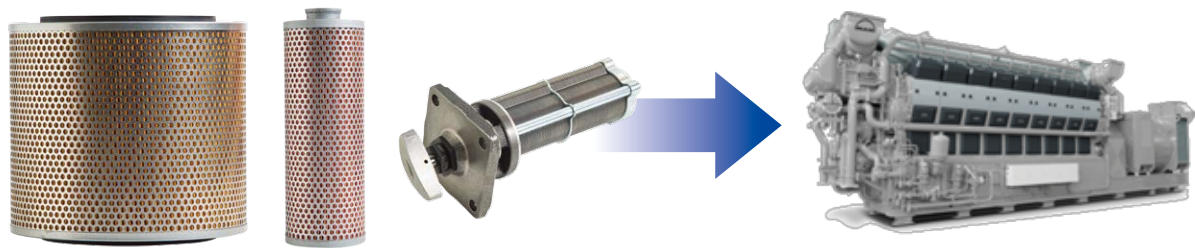
Filter Element for BWTS



Filter Element for Industrial Use



Filter Element for Marine Engine



Strainer



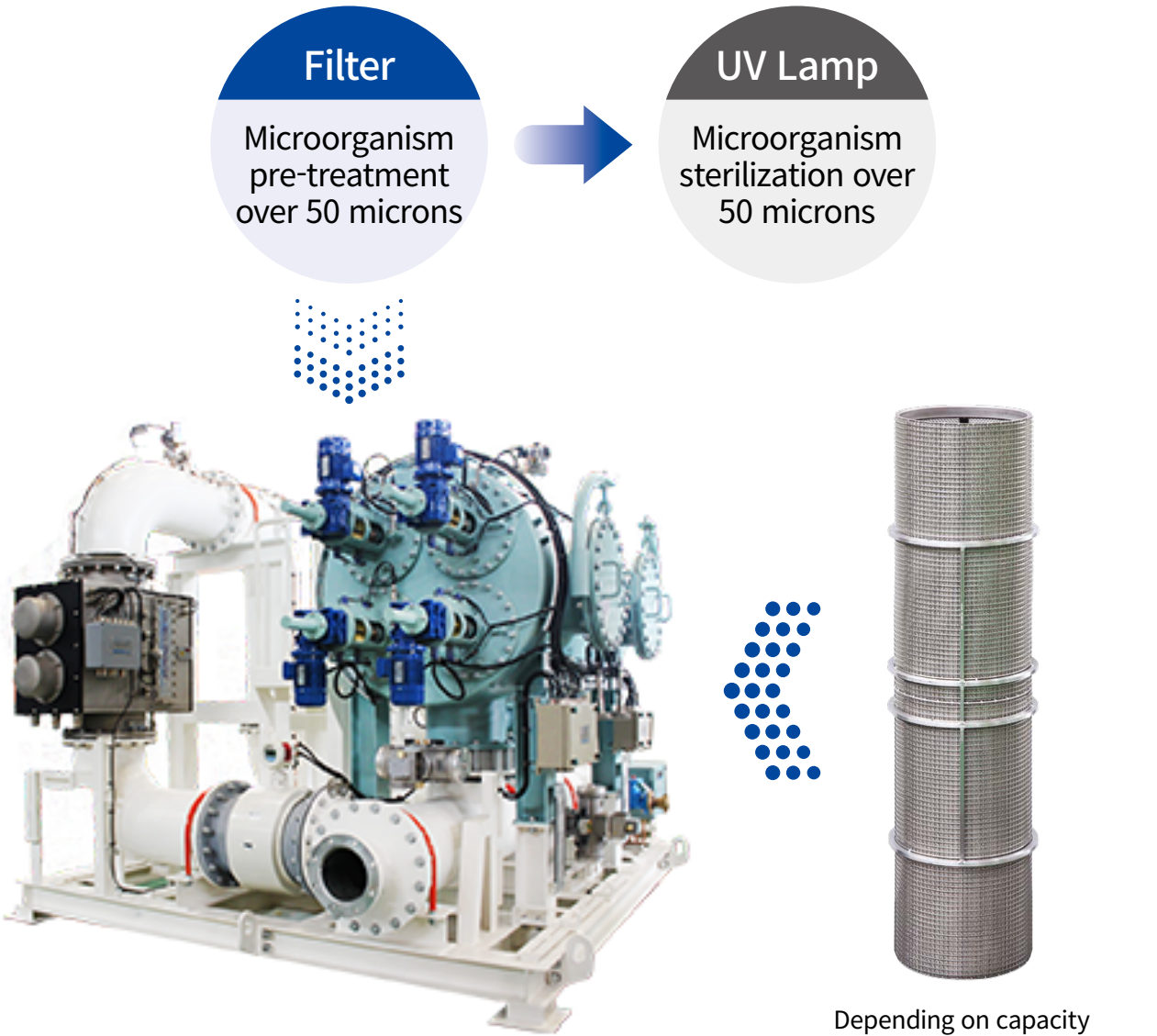
ELEMENT FOR BWTS

Filter Element for BWTS

Pre-treatment filter for passing only microorganisms of 50 microns or less through UV lamp in the filter system for BWTS where microorganisms are treated using UV (Ultra Violet) sterilization

Ballast Water Treatment System

De Ballasting



Depending on capacity
Single Type: 750 ton or less
Multi Type: 1000 ton or more
Assembled in two forms

ELEMENT FOR BWTS

Filter Element for BWTS

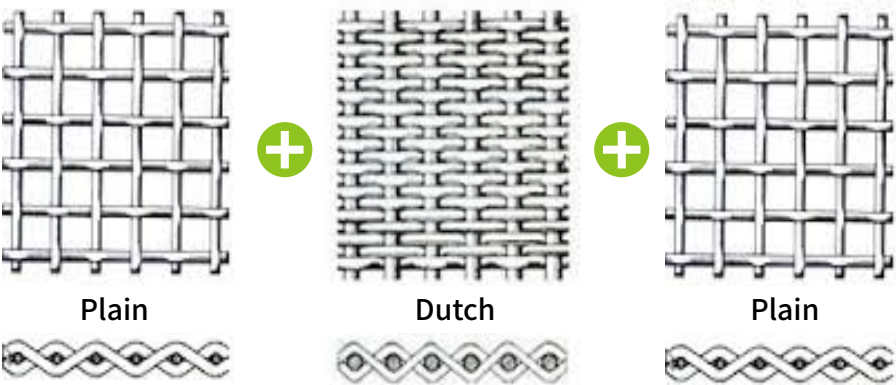
Features of Product

Manufactured in a compact size by installation capacity (single, multi) in order to utilize the space of the ship, and all materials are stainless steel with strong corrosion resistance to seawater. The main function units are made of Hastelloy and super duplex, and fine gaps such as top and bottom caps are finished in epoxy to ensure perfect filtering.

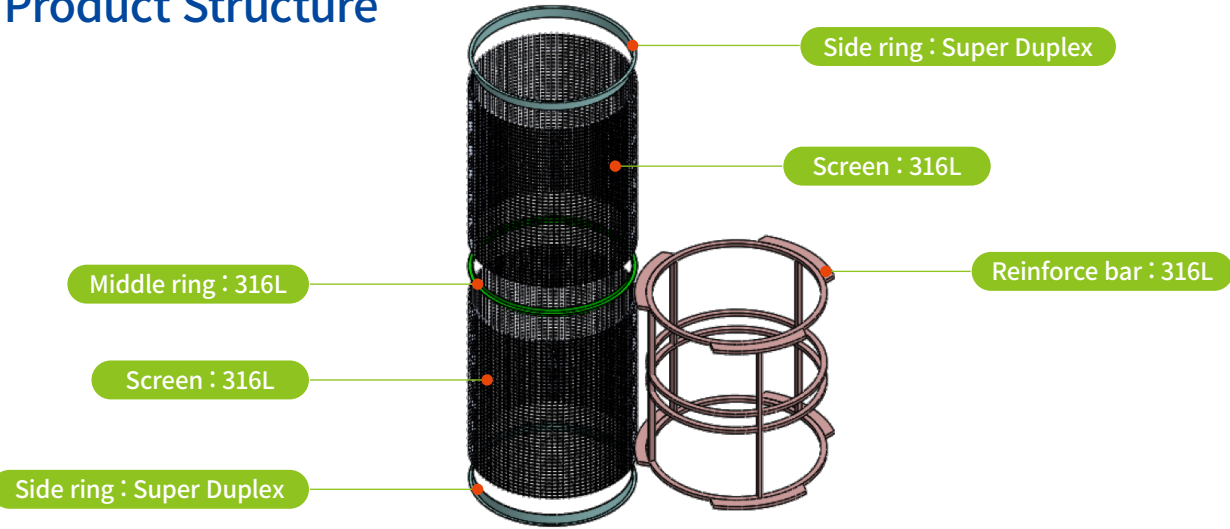
Product

Products Size(mm)	Φ280.3X1197	Φ493X810	Φ493X1190	Φ643X1430
Capacity(m³/h)	300(Multy)	250(Single)	500(Single)	750(Single)
Filtration	50micron(3 layer mesh)			
Material	316L / Hastelloy(C276) / Super Duplex			

3Layer Mesh Sytem(7+50µm+7)



Product Structure



ELEMENT FOR INDUSTRIAL

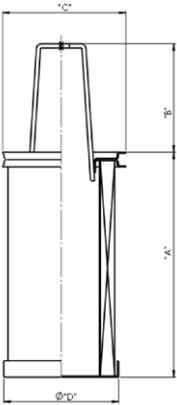
Filter Element for Industrial Use

Features of Filter Element for Industrial Use

It consists of products that use disposable filter paper and metal wire mesh products that are reused after cleaning depending on the intended use. For compact size, star pleat technology is applied that expands the filtration area optimally for the same size.

Star Pleat Products

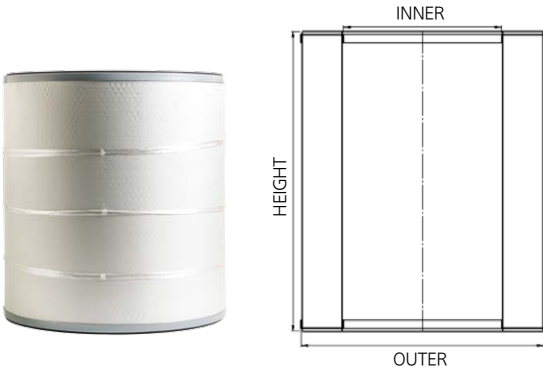
Standard	Size(mm)				Filtration Degree
	A	B	C	D	
DN25	110	53	63	57	20µm Nom.
DN32	155	53	63	57	
DN40	209	73 -5	81.5	76	34µm Abs.
DN50	255	73 -5	81.5	76	



Oily Separator

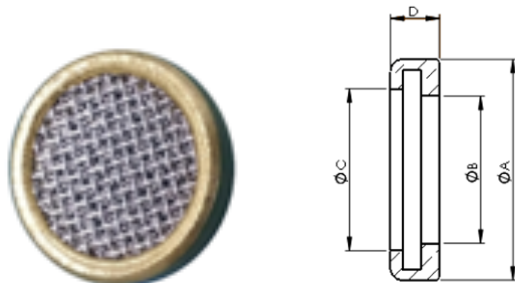
Oil-water separation element that separates foreign substances of 15 ppm or more using nonwoven fabric

Size(mm)		
Outer	Inner	Height
200	120	250
250	160	300
230	150	320
380	290	400
260	170	410
470	365	450
370	264	500



For 15 CC gear pump

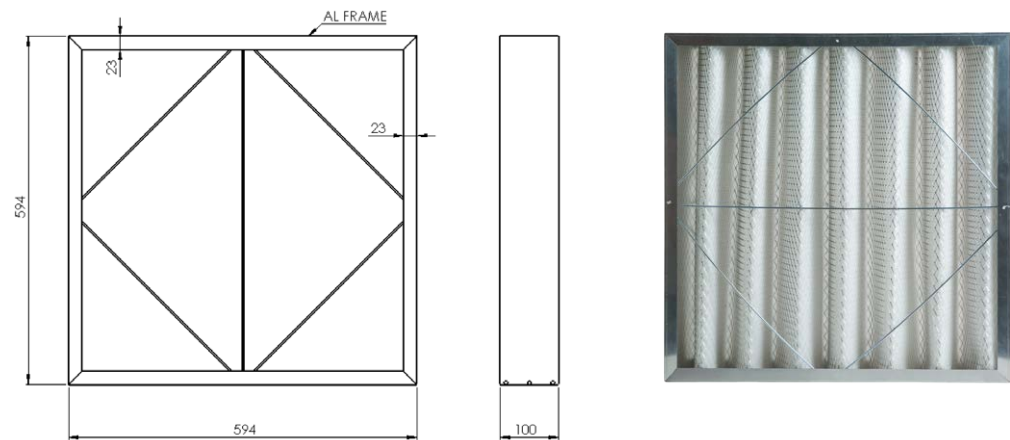
A	B	C	D
18	12	13.2	4.0
25	17.2	19	3.5
16	10	11	3.0



ELEMENT FOR INDUSTRIAL

Filter Element for Industrial Use

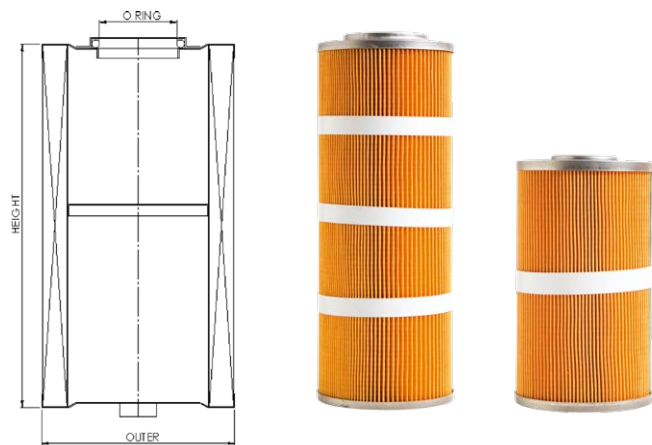
Air Intake Filter



ELEMENT FOR REFRIGERATOR

Filter Element for Marine Refrigerator

Filter Element



No	Size(mm)			Media
	OUTER	HEIGHT	O RING	
1	100	170	39.7(Φ3.5)	Cellulose or Stainless wire mesh
2	114	295	57.6(Φ5.7)	

ELEMENT FOR ENGINE

Filter Element for Automotive

Air Cleaner



Vehicle	Out(mm)	In(mm)	Height(mm)
SCANIA	300	193	365
MAN	300	193	456
BENZ	300	192	410

PARTS

End Cap



Engine Type	End Plate(mm)				Packing			
	O.D	I.D	Thick.	Mat.	O.D	I.D	Thick.	Mat.
L16/24	194	118	0.45	EGI	145	125	4.5	NBR
L23/30H	241	134	0.8	EGI	No Packing			
H21/32	241	134	0.8	EGI	158	140	4.5	NBR
L32/40	270	195	1.6	EGI	225	201	3.0	NBR

ELEMENT FOR ENGINE

Filter Element for Marine Engine

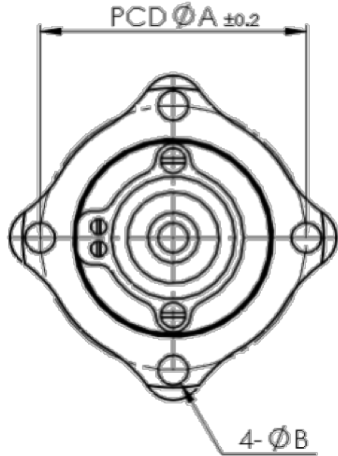
Features of HFO (Heavy Fuel Oil) Element

When using HFO (Heavy Fuel Oil), a stainless steel media is assembled in a filter element engine with 30-micron filtering capability to provide stable fuel.



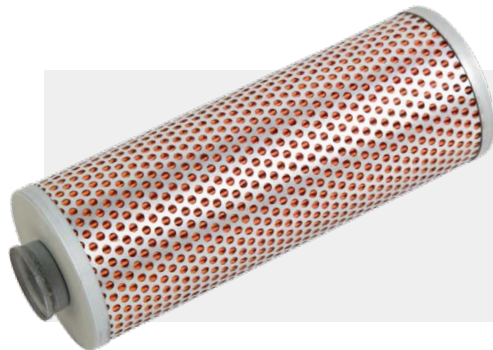
HFO Products

Classification	A	B	Engine Type
Type 1	84	Φ9.5	L23/30, L23/30H, L28/32, L27/38
Type 2	94	Φ13	H21/32



MDO(Marine Diesel Oil) ELEMENT

Size : Φ80X216
Filtration is nominal 10 micron.

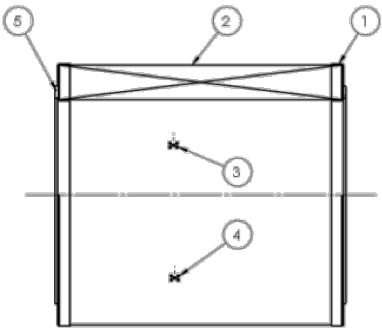


Features of Lubricating Oil Element

It is an element that removes impurities of lubricating oil used in ship diesel engine. It is a disposable product that cannot be recycled because it uses nominal 15-micron paper. The paper is a product imported from Germany and satisfies the service life required by ships 100%.

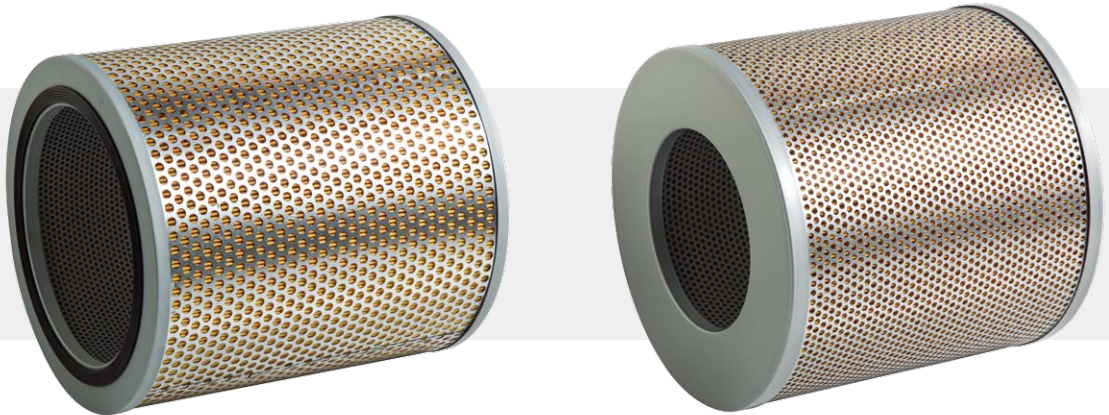
Structure

Filter media(2) is resin impregnated cellulose.
Filtration is nominal 15 micron.
Filter media(2) shape is star pleat
Perforation(3,4) and cover's(1) material is electrolytic galvanized iron.



Products

Engine type	Size(mm)			Type
	O.D	I.D	Height	
L16/24	194	118	171	With Packing
H21/32	241	134	243	
L32/40	270	195	297	
L16/24	194	118	528	
L21/31	242	132	747	
L27/38	242	132	998	
L23/30H	241	134	243	Without Packing



ELEMENT FOR ENGINE

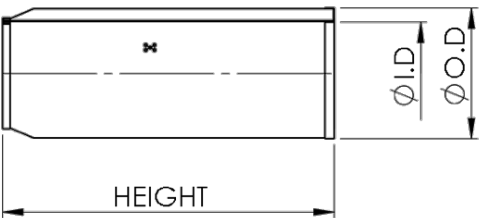
Filter Element for Marine Engine

Features of Safety Element

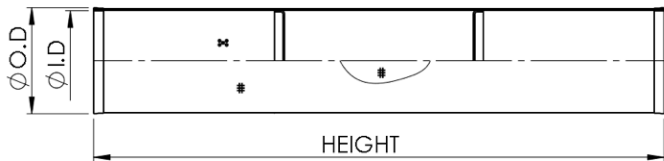
Inside the lubricating oil filter element, a safety element of stainless steel with a compactness of 60 microns is assembled.

Safety Element Shape and Products

BASKET



SIEVEMANTLE

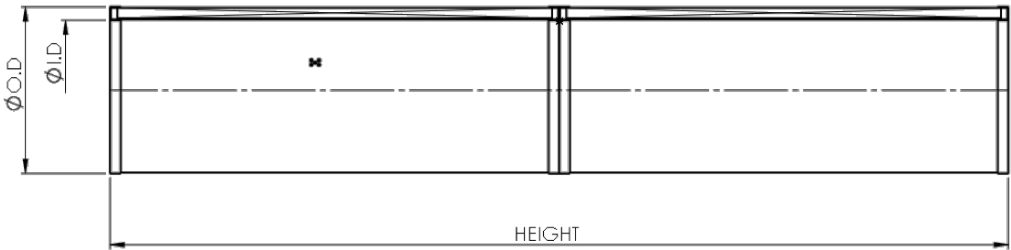


Engine type	Size(mm)			Type
	O.D	I.D	Height	
L23/30	106	83	269	Basket
L28/32	106	83	530	Basket
L21/31	106	83	758	Basket
L27/38	106	83	1010	Basket
L23/30	105	99	390	Sieve mantle
L16/24	105	99	568	Sieve mantle

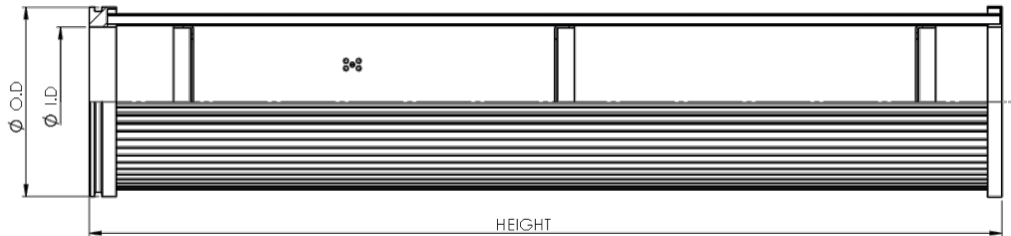
Secondary Element Shape and Products



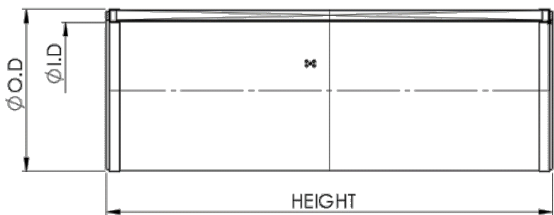
L32/40



H32/40
H21/32
H17/28



H32/40



Engine type	Size(mm)			Remark
	O.D	I.D	Height	
L32/40	158	130	844	
H32/40	158	130	534	
H32/40	158	130	411.3	With packing
H21/32	105	82.9	509.5	
H17/28	105	82.9	255	

STRAINER

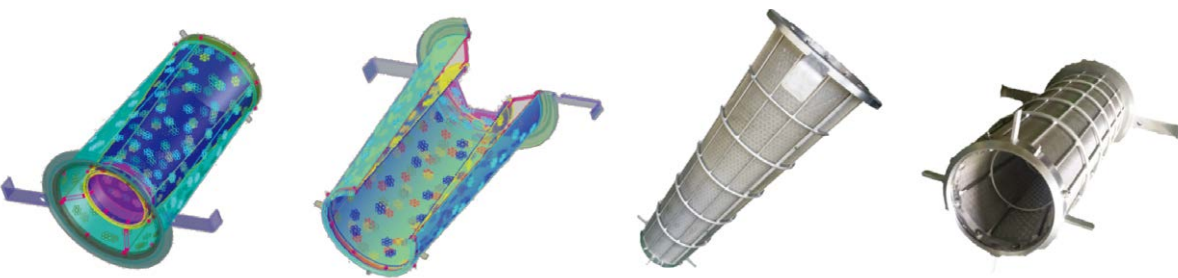
Manual Strainer

Installed in front-end of expensive products such as pump impellers to prevent damage due to the inflow of foreign substance



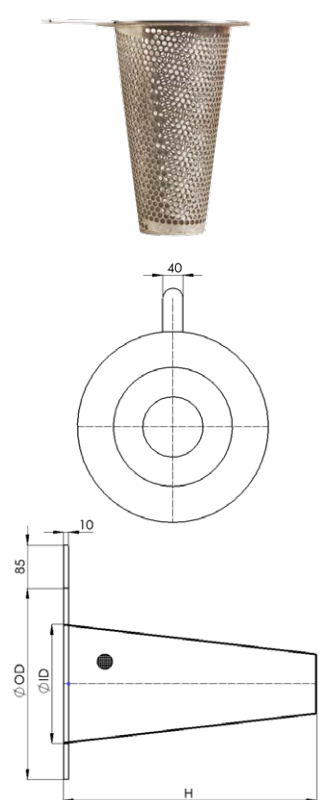
LNG Cargo Strainer

Two-way strainer is used to prevent damage caused by foreign substances during transportation of LNG Liquid, and is manufactured in star pleat form for optimization of the filtration area.



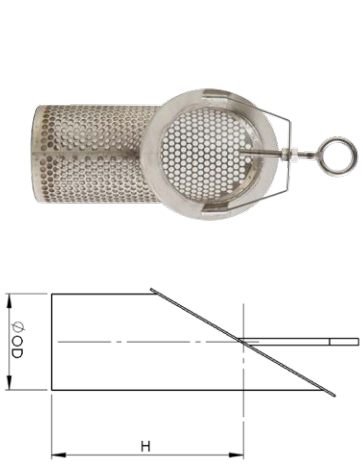
Spec	400A Pleat	400A Basket	500A Basket
Capacity(m³/h)	5500	5000	5000
Filtration	Customize		
Material	AISI 316L		

TEMPORARY Strainer



No	O.D	I.D	H	Material	Mesh
5K-40A	120	37	48	304/316L	CUSTOMIZER
5K-80A	180	72	98		
5K-100A	200	92	98		
5K-125A	235	115	98		
5K-150A	265	143	98		
5K-200A	320	185	98		
5K-250A	385	245	148		
5K-300A	430	275	148		
5K-350A	480	338	148		
5K-400A	540	370	197		
10K-80A	185	70	98		
16K-80A	200	72	98		
20K-100A	225	92	98		
20K-125A	270	115	98		

BASKET Strainer



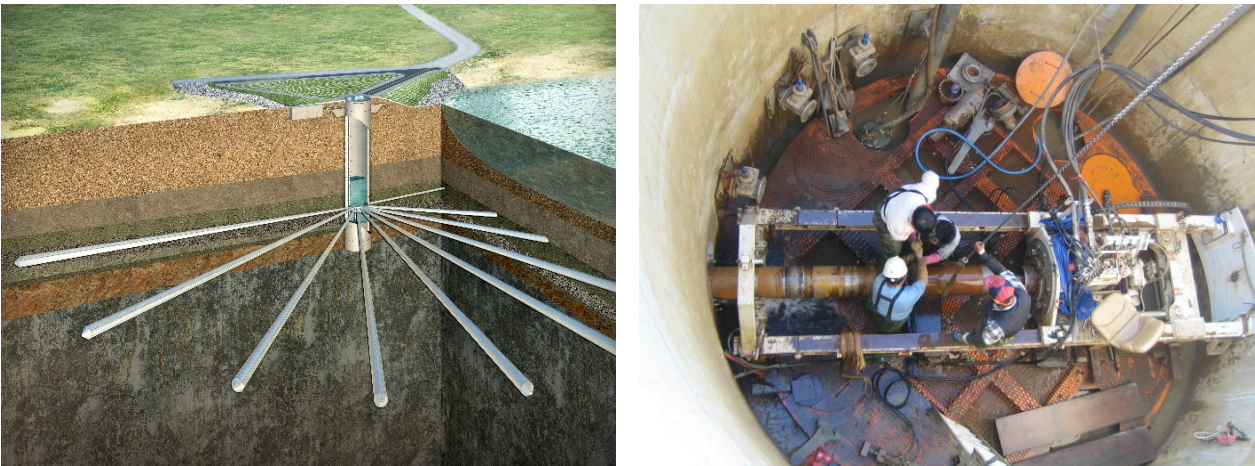
Standard	O.D	H	Material	Mesh
100A	140	321	304/316L	CUSTOMIZER
150A	180	321		
200A	220	468		
250A	280	588		
300A	310	725		
350A	340	855		
400A	420	985		
450A	460	1135		
500A	520	1235		

WATER WELL SCREEN

Filter Element For River Bank Filtration

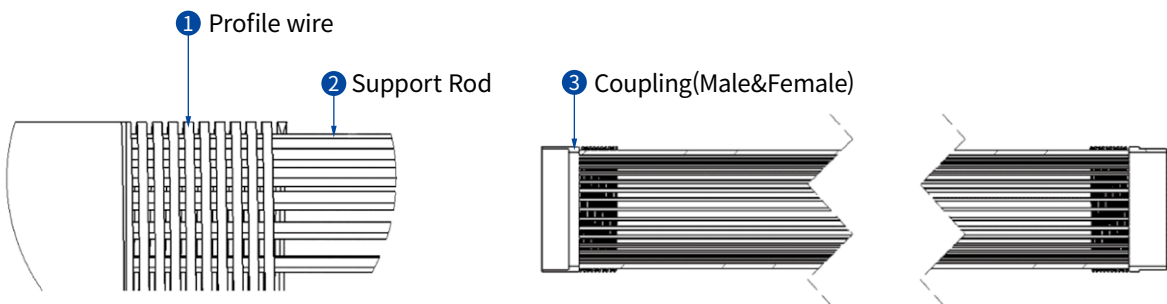
River Bank Filtration

At the edge of the river, a pipeline to collect the water that has soaked into the river bed is buried underground and collected by the sump well.



Filter Element for River Bank Filtration

Perforated pipe made of stainless steel, resistant to corrosion, specially manufactured according to customer requirements

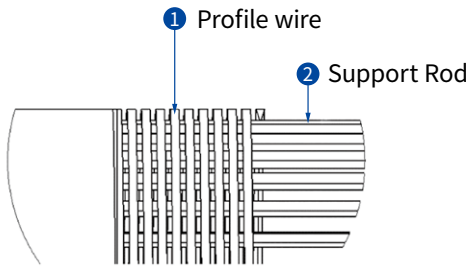


Filter Element



No	I.D	O.D	MATERIAL
1	292.6	309	304/316L
2	506.4	522.8	
3	660	676.4	
4	294.5	318.5	
5	425	449	
6	194	216	
7	328	350	

Profile Wire



No	Profile Wire			Support Rod			Slot (mm)
	Shape	Width(mm)	Height(mm)	Shape	Width(mm)	Height(mm)	
1		2.2	4.5		1.8	3.7	CUSTOMIZER
2		2.2	4.5		1.8	3.7	
3		2.2	4.5		1.8	3.7	
4		2.8	5.5		3.0	6.5	
5		2.8	5.5		3.0	6.5	
6		2.2	4.5		3.0	6.5	
7		2.2	4.5		3.0	6.5	

MANUFACTURING EQUIPMENT

Filter Element for Marine Engine



Knife Bending Machine(Wire Mesh)



Filter Paper Bending Machine



Air Spot Welder



Epoxy Injector



Epoxy Dryer

Filter Element for Industrial Use



Knife Bending Machine(Wire Mesh)



Metal Sheet Cutting Machine



Rolling



Air Spot Welder



Bending Machine And Press



Lathe

Filter Element for BWTS



Automatic Screen Welder



Screen Cutting Machine



Wire Mesh Welder



Angle Forming Machine



Angle Rolling Machine



Vertical Assembly Fixture



Rolling Machine



Cap Splicing Jig



Square Screen Welder

Inspection Equipment



Height Measuring Instrument



Nondestructive Component Analyzer

LOCATION



SEIU