



Purple Engineering

STRAINERS



**PRODUCT
CATALOGUE**



Purple Engineering



Strainer.net.au



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WHAT IS PURPLE ENGINEERING?

Purple Engineering PTY LTD (ABN: 79 163 404 644) is an Australian distribution company that was established in 2013 in Perth, Western Australia, by the visionary founder, Alex Ocean (MIEAust), who is a Civil Engineer by profession. We are proud to state that we are one of the Australian distributors for many world-class strainer brands. We offer a wide range of equipment for onshore & offshore pipelines, oil and gas, and power generation industries.

Our Location

Purple Engineering PTY LTD is based in Perth, Western Australia. We have three distribution warehouses located in Western Australia, Queensland and Victoria.

Why Us?

At Purple Engineering, we offer a range of strainer solutions ideal for steam, water, oil, and gas.

Unique Product Portfolio

As a dedicated strainer solutions provider, we offer an extensive selection of strainer products from leading global brands. Our carefully curated portfolio ensures that you have access to cutting-edge technologies and reliable products for your specific industrial needs.

Exceptional Quality Assurance

Quality is the core value of Purple Engineering. We rigorously check and select our strainer brands based on their reputation for delivering high-quality, durable, and precision-engineered products. When you choose Purple Engineering, you can trust that you are investing in solutions that meet and exceed industry standards.

Technical Expertise

Our team comprises seasoned experts with in-depth knowledge of strainer technologies and applications. Whether you have complex technical requirements or need assistance selecting the most suitable strainer for your project, our team of professionals is ready to provide expert guidance and support.

STRAINERS

Key Functions of Strainers

By investing in an industrial strainer, you can save valuable industrial machinery. Industrial strainers play a massive role in various fluid handling systems by removing unwanted particles and debris from the flowing liquid. The primary function of industrial strainers is to protect downstream equipment and components from potential damage caused by solid contaminants.

1. Particle Removal

Industrial strainers have been designed to capture and remove solid particles such as dirt, debris, rust, scale, and other impurities from liquids like water, oil, chemicals, or gases.

2. Equipment Protection

The main purpose of using an industrial strainer is to protect downstream equipment and components from damage caused by particles present in the fluid. For example, strainers help prevent damage to pumps, valves, heat exchangers, and other critical components by ensuring that only clean fluid passes through pipelines.

3. Extended Equipment Life

By removing solid contaminants, industrial strainers contribute to the longevity and efficient operation of industrial equipment. Reduced wear and tear on components leads to longer maintenance intervals and a longer overall lifespan for the equipment.

4. Process Efficiency

Uninterrupted fluid flow without the obstruction of contaminants improves the overall efficiency of industrial processes. This is particularly important in industries such as water treatment, petrochemicals, pharmaceuticals, and manufacturing.

5. Maintenance Reduction

Regular maintenance and cleaning of industrial equipment is definitely time-consuming and costly. Strainers help reduce the frequency of maintenance activities by preventing the accumulation of debris in the system.

Types of Strainers

01. Basket Strainers
02. Duplex Strainer
03. Y-Strainers
04. Tee Strainers
05. Temporary Strainers
06. Sanitary Strainers
07. Self-cleaning Strainers
08. Custom-made Strainers
09. Replacement Baskets & Screens

Materials Available

- | | |
|--------------------------------------|-------------------|
| 01. Cast Iron | 09. HDPE |
| 02. Carbon Steel | 10. Polypropylene |
| 03. Stainless Steel 304 / 316 / 316L | |
| 04. Duplex Stainless Steel | |
| 05. Super Duplex Stainless Steel | |
| 06. Hastelloy | |
| 07. Fiberglass Reinforced Plastic | |
| 08. PVC | |



Applications of Industrial Strainers in Diverse Industries

Industrial strainers play a vital role in a wide range of industries, contributing to the efficiency and reliability of fluid handling systems. These devices have been designed to remove solid particles and impurities from liquids and gases, ensuring the integrity of processes and equipment protection.

1. Water Treatment

In water treatment plants, industrial strainers remove debris, sediment, and impurities from raw water before it undergoes purification processes, ensuring the longevity of pumps, valves, and other equipment downstream.

2. Petrochemical Industry

Industrial strainers play a massive role in safeguarding critical components such as heat exchangers and compressors from damage caused by contaminants in liquid and gas streams in the petrochemical industry.

3. Power Generation

Industrial strainers are widely used to protect turbines, condensers, and heat exchangers from particles that could compromise their performance in power plants.

4. Oil and Gas

In the oil and gas industry, industrial strainers are used in pipelines to remove contaminants such as sand, rust, and scale, helping to prevent abrasion, corrosion, and fouling in equipment and ensuring the smooth flow of hydrocarbons.

5. Mining and Minerals

In mining operations, industrial strainers are widely used to filter water and liquids in various processes as they help prevent the clogging of pumps and protect equipment from the abrasive effects of suspended particles.





Purple Engineering

Basket Strainers (Simplex)

CAST IRON



ACE-BI-TE

Table E
Flanged
Quick-Open Cover
Sizes: 1 ~ 8"



BS 25-CI

Class 125
Threaded
Quick-Open Cover
Sizes: 3/8 ~ 3"



BS 25F-CI

Class 125
Flanged
Quick-Open Cover
Sizes: 1 ~ 8"



BS 55-CI

Class 125
Flanged
Clamp Cover
Sizes: 2 ~ 12"

Available with bolted
and clamp cover



BS 65-CI

Class 125
Flanged
Bolted Cover
Sizes: 2 ~ 12"

CARBON & STAINLESS STEEL



ACE-BC-150 ACE-BS-150

Class 150
Flanged
Sizes: 2 ~ 12"



ACE-BS 35-CS ACE-BS 35-SS

Class 150/300
Threaded
Sizes: 1/4 ~ 3"



ACE-BS 35F-CS ACE-BS 35F-SS

Class 150
Flanged
Sizes: 1 ~ 8"



BS 85-CS | BS 85-SS

Class 150
Flanged
Sizes: 2 ~ 12"

Available with bolted
and clamp cover.



BS 86-CS | BS 86-SS

Class 300
Flanged
Sizes: 2 ~ 12"



BS 87F-CS | BS 87F-SS

Class 150
Flanged
Sizes: 1 ~ 16"



BS 89-CS | BS 89-SS

Class 600
Flanged
Sizes: 2 ~ 12"





Purple Engineering

Basket Strainers (Simplex)

FIBERGLASS & ALUMINUM BRONZE



BS 55-FRP

Class 150
Flanged
Sizes: 4 ~ 20"



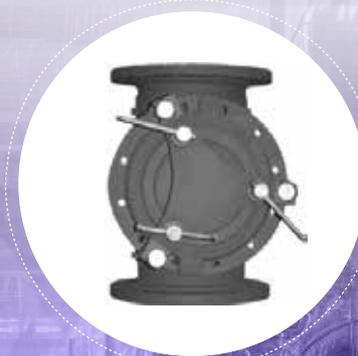
BS 95-AB

Class 150
Flanged
Sizes: 2 ~ 12"



BS 25-CI

Quick-open Cover



BS 85-CS

Clamped Cover

Optional Cover Designs

Most Basket Strainer models can be constructed with various cover designs including bolted, clamped, and hinged.



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Purple Engineering

Duplex Strainers

CAST IRON



DS 595-CI
 Class 125
 Threaded
 Cast Iron
 Sizes: 3/4 ~ 2 1/2"



ACE-DI
 Class 125
 Flanged
 Cast Iron
 Sizes: 1 ~ 8"



DS 695-CI
 Class 125
 Flanged
 Cast Iron
 Sizes: 6 ~ 8"

ALUMINUM BRONZE



DS 596-AB
 Class 150
 Threaded
 Aluminum
 Bronze
 Sizes: 3/4 ~ 2 1/2"

DS 696-AB
 Class 150
 Flanged
 Aluminum
 Bronze
 Sizes: 1 ~ 4"

CARBON & STAINLESS STEEL



DS 596-CS/SS
 Class 150
 Threaded
 Carbon Steel
 Stainless Steel
 Sizes: 3/4 ~ 2 1/2"



ACE-DC/SS
 Class 150
 Flanged
 Carbon Steel
 Stainless Steel
 Sizes: 1 ~ 8"



DS 696-CS
 Class 150
 Flanged
 Carbon Steel
 Sizes: 6 ~ 8"

DS 696-SS
 Class 150
 Flanged
 Stainless Steel
 Sizes: 6 ~ 8"

DS 796-CS/SS
 Class 300
 Threaded
 Carbon Steel
 Stainless Steel
 Sizes: 3/4 ~ 3"

DS 896-CS/SS
 Class 300
 Flanged
 Carbon Steel
 Stainless Steel
 Sizes: 1 ~ 4"





Purple Engineering

"Y" Type Strainers

CAST & DUCTILE IRON



ACE-YI-TE
Table E Flanged End
Sizes: 1 ~ 8"



YS 12-CI
Table E Threaded
Sizes: 1/4 ~ 3"



YS 12-DI
Class 300 Threaded
Sizes: 1/4 ~ 3"



YS 58-CI
Class 125 Flanged
Sizes: 2 ~ 24"



YS 58-D-GG
WOG 300 Grooved
Sizes: 2 ~ 12"



YS 59-CI
Table E Flanged
Sizes: 2 ~ 12"

BRONZE & BRASS



YS 55-EB
YS 55-BZ
Class 125 Threaded
Sizes: 1/4 ~ 3"



YS 56-EB
YS 56-BZ
Class 125 Solder
Sizes: 1/4 ~ 3"



YS 52-AB
Class 250 Threaded
Sizes: 1/4 ~ 3"



YS 54-AB
Class 150 Flanged
Sizes: 2 ~ 12"





Purple Engineering

"Y" Type Strainers

CARBON & STAINLESS STEEL



ACE-YS 80T-SS
800 WOG
Threaded
Sizes: 1/4 ~ 2"

YS 80S-SS
800 WOG
Socket Weld
Sizes: 1/4 ~ 3"



YS 81-CS
YS 81-SS
Class 600
Threaded
Sizes: 1/4 ~ 3"

YS 82-CS
YS 82-SS
Class 600
Socket Weld
Sizes: 1/4 ~ 3"



ACE-YS 61-CS
ACE-YS 61-SS
Class 150
Flanged
Sizes: 1 ~ 12"

* Bolted Cover is standard on sizes 2 1/2" and 3" and is optional on size 2"



ACE-YS 62-CS
ACE-YS 62-SS
Class 300
Flanged
Sizes: 1/2 ~ 12"



YS 63-CS
YS 63-SS
Class 300
Butt Weld
Sizes: 1/2 ~ 12"



YS 65-CS
YS 65-SS
Class 600
Butt Weld
Sizes: 1/2 ~ 12"



ACE-YF- A105
ACE-YF- F304
ACE-YF-F316
Forged Class 800
Threaded & Socket End
Sizes: 1/2 ~ 2"

DID YOU KNOW ?

If we do not have it, we will help you find it!

ACE Routinely Stocks

- Sizes 1/4" through 24"
- Pressure Classes 125 ~ 2500
- Standard Materials
- Exotic Materials
- All End Connection



Purple Engineering

"Y" Type Strainers

CARBON & STAINLESS STEEL



YS 64-CS
YS 64-SS
Class 600
Flanged
Sizes: 1/2 ~ 12"



YS 66-CS
YS 66-SS
Class 900
Butt Weld
Sizes: 1 ~ 12"



YS 67-CS
YS 67-SS
Class 900
Butt Weld
Sizes: 2 ~ 10"



YS 68-CS
YS 68-SS
Class 1500
Flanged
Sizes: 2 ~ 8"

HIGH PRESSURE



YS 69-CS
YS 69-SS
Class 1500
Butt Weld
Sizes: 2 ~ 8"



YS 70-CS
YS 70-SS
Class 2500
Flanged
Sizes: 2 ~ 8"



YS 71-CS
YS 71-SS
Class 2500
Butt Weld
Sizes: 1 1/2 ~ 10"



YS 83-CS
YS 83-SS
Class 1500
Threaded
Sizes: 1/2 ~ 3"

YS 84-CS
YS 84-SS
Class 1500
Socket Weld
Sizes: 1/2 ~ 3"

Available in additional materials



YS 86-CS
YS 86-SS
Class 2500
Socket Weld
Sizes: 3/4 ~ 2"

DID YOU KNOW ?

In addition to ACE's LEAD FREE options:

ACE Titan can provide NSF/ASME and FDA-approved coatings, making the product suitable for portable water applications.

Numerous options are available.

Please contact us for more details.



Purple Engineering

Valves

BALL VALVES



BV 25-SS
Male x Female
3000 WOG
Full Port Sizes: 1/
4 ~ 1 1/2"
Reduced Port Size: 2"



BV 60-BZ
600 WOG
Male x Female
Full Port Design
Sizes: 1/4 ~ 2"

BLOW-OFF VALVES





Purple Engineering

Fabricated Strainers

FABRICATED PRODUCTS

At ACE, we design and fabricate a variety of products per your exact specifications.

Our fabricated products include:

- Y-Strainers
- Basket Strainers
- Temporary Strainers
- Plate Strainers
- T-Strainers
- Duplex Strainers
- Orifice Plates
- Spectacle Flanges
- Single Blinds
- Ring Spacers
- Steam Jacketed Strainers
- Fiberglass Reinforced Plastic Strainers
- And many more ...



Fabricated Y-Strainer



Fabricated Basket Strainer



Fabricated Duplex Strainer

----Y OUR SPECS
O UR DESIGN-----

ACE Fabrications is an ASME-coded facility. Let us fabricate your custom solution!

ACE is a proud American Society of Mechanical Engineers (ASME) code certified manufacturer. We provide authorized fabrication.



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Purple Engineering

Self-cleaning Strainers



Model 2596

Backwashing
Cast iron or stainless steel
up to 35,000 gpm
Sizes: 2 ~ 36"



MCS 1500

Mechanically cleaned
Cast iron or stainless steel
30-150 psi (2-10.5 bar)
180 °F (82 °C)



MCS 500

Mechanically cleaned
Cast iron or stainless steel
30-150 psi (2-10.5 bar)
180 °F (82 °C)



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Purple Engineering

Fabricated Products

REPLACEMENT SCREENS & BASKETS

We at ACE manufacture straining elements for all types of strainers, including:

- Y-Strainers
- T-Strainers
- Basket Strainers
- Duplex Strainers

ACE manufactures straining elements in a wide variety of perforations, meshes, and materials (Type 304, Type 316, Alloy 20, Monel).



Perforated Screen



Wire Mesh with
Perforated Backing



Wire Mesh

We also provide replacement screens and baskets for our competitor's strainers.

Just send us your prints and samples, or give us your requirements and let us design a straining element that is right for your application. Most of the time, straining elements can be ordered by referencing ACE's or any other manufacturer's strainer model number.

TEMPORARY STRAINERS

ACE FCI also manufactures Temporary / Conical Strainers.



Temporary Strainer
'Pilgrim's Hat' Type



Temporary Strainer
'Witch's Hat' Type





Purple Engineering

Fabricated Products

SPECTACLE BLINDS, OPEN & CLOSED BLINDS (RING SPACER)
RESTRICTION ORIFICE PLATES
BLEED RINGS

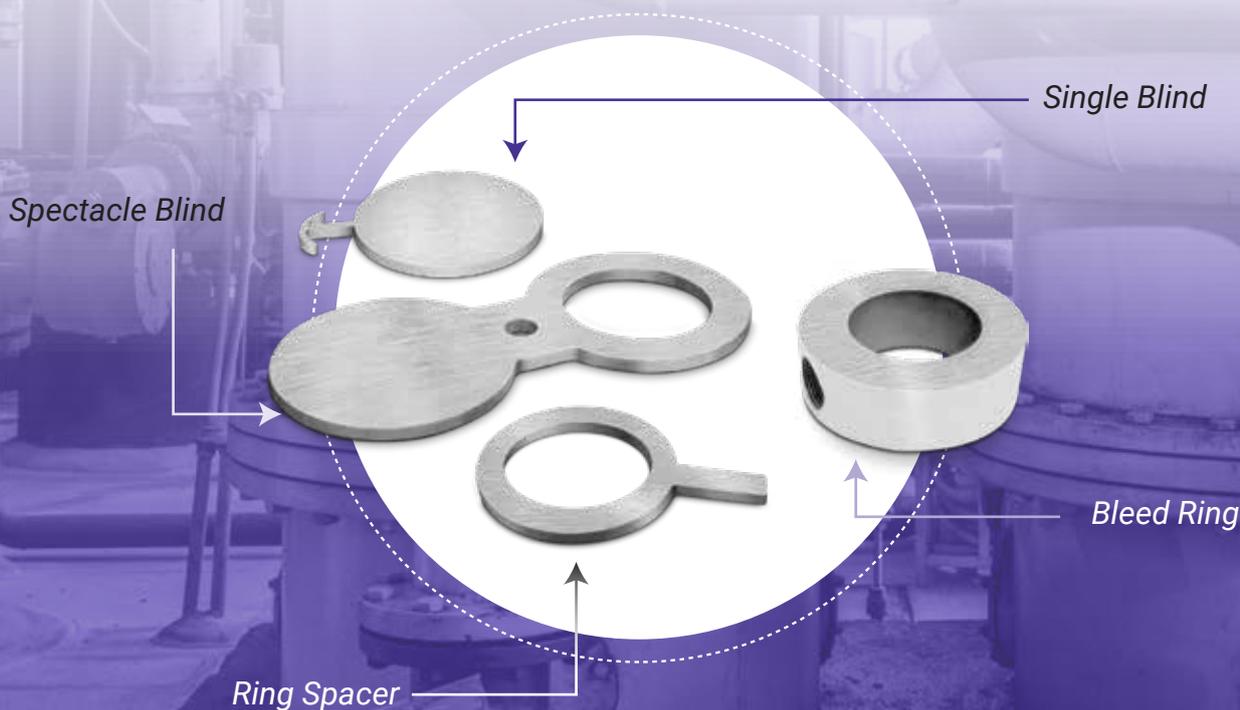
BENEFITS OF ACE BLIND

- Provides permanent - positive shutoff.
- Promotes safety during downstream service operations.
- Spectacle Blinds provide visible shutoff.
- Economical solution when compared to Isolation Valves.
- Can be used with liquids, solids, slurries and gases.

ACE BLEED RING BENEFITS

- The ability to safely drain pipeline liquid.
- Provide easy access for taking samples.
- Can often be used in place of orifice flanges.
- Convenient method of attaching equipment.
- Can be used as pressure-relief rings.
- Standard sizes stocked for quick delivery

VARIOUS FINISHES ARE AVAILABLE.



Venting, purging, and blind storage racks are also available. Please contact ACE for more information.





Purple Engineering

Fabricated Products

REPLACEMENT SCREENS & BASKETS



Cylindrical Screen, Style 'D'



Basket Type, Style 'E'



Slanted Type Basket, Style 'F'

Replacements for Any Major Competitor's Model Strainer

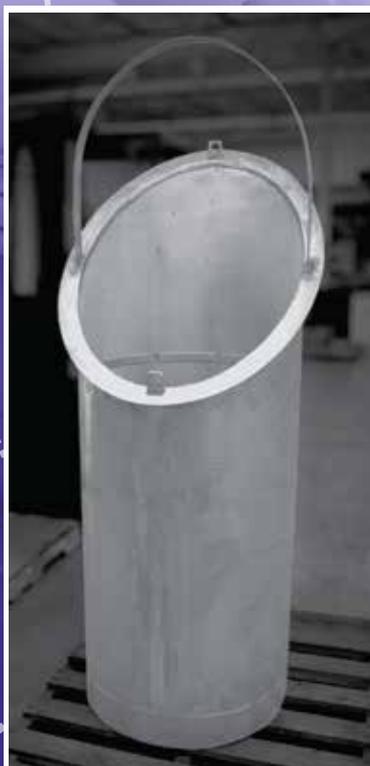
ACE possesses the full capacity for manufacturing replacements, not only for ACE strainers but other companies' strainers as well!

In most cases, we only need the model number, size, and perforation. We can also provide a blank specification sheet, ACE Straining Element Design Specification, to help identify the exact design and dimensional data required. These sheets are available online at www.strainer.net.au, or you can have them by calling +61 1300 62 4020.

ACE makes it easy to order the straining element that you need!

High Quality Screens and Baskets

If you need more information about screen and basket selection, please check out ACE's Screen and Basket Selection Guide, available on www.strainer.net.au or in the Technical Data Section of the catalogue.



ACE for large baskets and screens



ACE for wedgewire & special materials

ACE manufactures special screens and baskets for extreme pipeline conditions. Pictured above are screens made of wedgewire straining material which provides great strength and durability while maintaining a large open-area ratio.



ACE for large quantities

The ACE manufacturing factory is capable of fulfilling all sizes of screen and basket orders. No order is too large - in size or quantity! Titan prides itself on its ability to provide for each customer's individual needs.

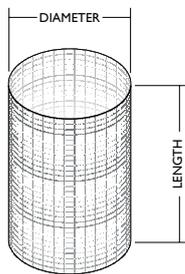




Standard Screen and Basket Designs

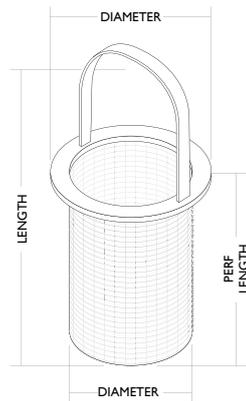
ACE has the total capacity to manufacture straining elements for all types of strainers, including "Y," "T," and baskets in a wide variety of materials. We can also manufacture conical/temporary strainers. Please send us your prints and samples, or simply share your requirements and let us design a straining element for you. Usually, straining elements can be ordered by referencing ACE's or any other manufacturer's strainer model number.

Figure 3:



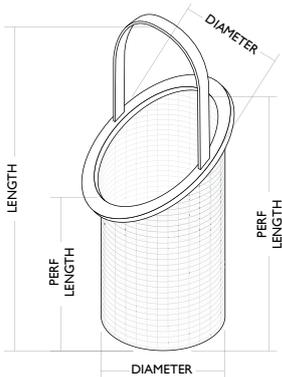
STYLE 'D'
Cylindrical Screen
Generally used for "Y" Type Strainers.

Figure 4:



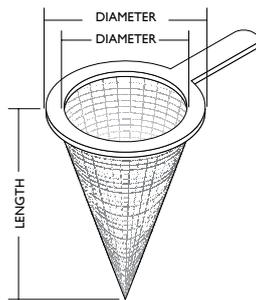
STYLE 'E'
Basket Type
Typically used for smaller sized Simplex and Duplex Basket Strainers. Strainer cover presses down on handle to ensure straining element remains securely seated

Figure 5:



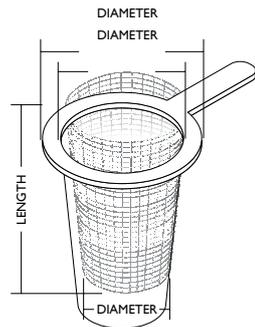
STYLE 'F'
Slanted Type Basket
Typically used for larger sized Simplex and Duplex Basket Strainers. Slanted inlet side reduces pressure drop across the strainer. Strainer cover presses down on handle to ensure straining element remains securely seated.

Figure 6:



Temporary Conical
Often referred to as a cone or witch's hat strainer. Used during start-up operations.

Figure 7:



Temporary Basket
Often referred to as a basket or pilgrim's hat strainer. Used during start-up operations.

When ordering, please specify:

1. Pipe Size
2. Straining Element Type
3. Perforation or Mesh
4. Construction Material
5. Design Type (cone, basket etc.)
6. Flow Direction
7. Open Area % and Length
8. Pressure Ratio

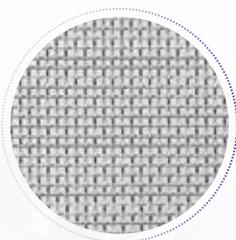


Purple Engineering

Perforation and Mesh Configurations

STANDARD MESH AND PERFORATED CONFIGURATIONS ⁽¹⁾⁽²⁾

20 Mesh
 51.8% Open Area
 .036 Openings
 (.914 mm / 914 μm)
 .014 Wire Diameter



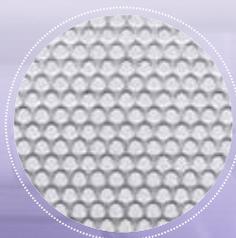
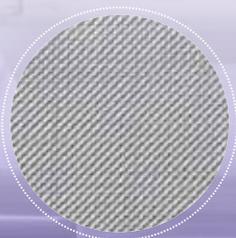
1/32" Diameter
 (.033 in / 0.83 mm)
 .055 Centers
 28% Open Area
 330 holes/sq. in.
 Straight Line

30 Mesh
 44.8% Open Area
 .0223 Openings
 (.566 mm / 566 μm)
 .011 Wire Diameter



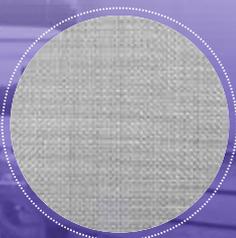
3/64" Diameter
 (.045 in / 1.14 mm)
 .066 Centers
 36% Open Area
 225 holes/sq. in.
 Straight Line

40 Mesh
 36% Open Area
 .015 Openings
 (.381 mm / 381 μm)
 .010 Wire Diameter



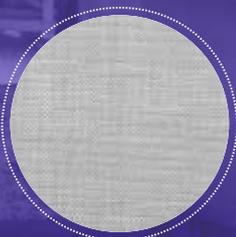
1/16" Diameter
 (.0625 in / 1.58 mm)
 3/32" Centers
 41% Open Area
 132 holes/sq. in.

60 Mesh
 33.9% Open Area
 .0097 Openings
 (.246 mm / 246 μm)
 .007 Wire Diameter



1/8" Diameter
 (.125 in / 3.17 mm)
 3/16" Centers
 40% Open Area
 33 holes/sq. in.
 Staggered Line

80 Mesh
 36% Open Area
 .0075 Openings
 (.190 mm / 190 μm)
 .005 Wire Diameter



5/32" Diameter
 (.1563 in / 3.96 mm)
 3/16" Centers
 63% Open Area
 33 holes/sq. in.
 Staggered Line

100 Mesh
 30.3% Open Area
 .0055 Openings
 (.139 mm / 139 μm)
 .0045 Wire Diameter



1/4" Diameter
 (.25 in / 6.35 mm)
 5/16" Centers
 58% Open Area
 12 holes/sq. in.
 Staggered Line





Perforation and Mesh Configurations

STANDARD MESH AND PERFORATED CONFIGURATIONS ⁽¹⁾⁽²⁾

Table 3: Optional Mesh Configurations ⁽³⁾

Mesh (Linear inch)	Wire Dia. (in)	Hole Openings		Open Area (%)
		(in)	(μm)	
20	.016	.034	863	46.2
20	.023	.027	685	29.2
30	.010	.0233	591	48.9
30	.014	.0193	490	33.5
40	.009	.016	406	41.0
40	.011	.014	355	31.4
50	.009	.011	279	30.3
60	.0065	.0102	259	37.5
60	.0080	.0087	221	27.2
80	.0055	.0070	177	31.4
80	.0060	.0065	165	27.0
100	.0040	.0060	152	36.0
100	.0045	.0055	139	30.3
120	.0037	.0046	116	30.7
130	.0034	.0043	109	31.1
140	.0029	.0042	106	34.9
150	.0026	.0041	104	37.4
160	.0025	.0038	96	36.4
170	.0024	.0035	88	35.1
180	.0023	.0033	83	34.7
200	.0021	.0029	73	33.6
325	.0011	.0020	50	42.0
400	.0010	.0015	38	36.0
500	.0010	.0010	25	25.0

Table 4: Optional Perf. Configurations ⁽³⁾

Hole Diameter (in)	Centers (in)	Open Area (%)
.027	.05 Straight	23.0
.045	.066 Straight	36.0
.045	.088 Staggered	24.0
1/16	7/64 Staggered	30.0
1/16	1/8 Staggered	22.5
5/64	7/64 Staggered	46
5/64	1/8 Staggered	36
3/32	5/32 Staggered	33.0
3/32	3/16 Staggered	25.0
3/32	1/4 Straight	12.7
.100	5/32 Staggered	36.0
.117	5/32 Staggered	51.0
1/8	7/32 Staggered	30.0
1/8	1/4 Staggered	23.0
9/64	3/16 Staggered	51.0
5/32	1/4 Staggered	34.0
3/16	1/4 Staggered	50.0
3/16	5/16 Staggered	33.0
3/16	1/2 Straight	10.0
7/32	5/16 Staggered	45.0
1/4	3/8 Staggered	40.0
1/4	1/2 Staggered	23.0
1/4	1/2 Straight	20.0
5/16	7/16 Staggered	46.0
3/8	1/2 Staggered	52.0
3/8	9/16 Staggered	40.0
7/16	5/8 Staggered	45.0
1/2	1 1/16 Staggered	48.0
1/2	3/4 Staggered	40.0

Notes:

1. ACE's standard construction material for all screens and baskets is Type 304 stainless Steel. Other materials (i.e., Type 316 and Monel) are available upon request. Please consult the factory for pricing and availability for non-stock materials.
2. Table 2 represents ACE's most commonly stocked mesh and perforation arrangements. A large variety of special mesh and perforation options are available. Please book a consultation with the factory or your local sales representative regarding the specific requirements for your application.
3. Table 3 and Table 4 represent the optional mesh and perf configurations, which are not routinely stocked but can be furnished upon request. Please consult the factory for pricing and availability.
4. 5/32" perf is the most commonly used for outer support (backing) for mesh-lined screens or baskets. If other backing is required, please specify at the time of the order.