

# SPR-16/25/40

## STEAM SEPERATORS

### GENERAL FEATURES

Seperator separates liquids from steam, air and other gases' lines with the help of centrifugal force. It is the device which enables to obtain dry and clean steam, air and other gases by passing through the filter and discharging it by steamtrap or gastrap.

**AYVAZ SPR 25** Separators are specially designed to maintain high efficiency, variable steam rates and separation efficiency in lines running up to 25 bar. This product can be specially produced from stainless steel for process systems

#### Working Principle

It is not possible to distribute water droplets regularly throughout the pipe section. It is easy to pick up the drifting condensate from the bottom of the pipe. The water droplets in the steam can only be collected by seperators. The free gas with water droplets in it enters the seperator and around the conical cyclone downwards,

it starts to centrifuge and acceleration, separates the liquid particles, droplets and sediments by spewing into the wall. Dry and clean gas firstly moves large internal volume, after moves through conical cylane, optionally through filtration to continue the line. The condensate and residue descend into the collecting chamber below the separating stainless plate, and can not go up. The condensate is filtered out and drained off with a steamtrap.

#### Steam Seperator Applications

- **Boiler Outlets:** Prevents the transfer of chemicals, abrasive fluids, foreign substances, water droplets to the steam lines.

- **Control Devices Inlet:** Increase the efficiency and life of equipment such as pressure reducer, control valves and steam flow meters.

- **System Inlet:**

- \*At the entrance of the steam turbines,
- \*Heating battery and dryers
- \*Kitchen devices, washing machines
- \*Multi-layer presses (Rubber and wood presses)
- \*Autoclaves, sterilizer

- \* Paint and finishing machines
- \* Bread ovens
- \* Tea and tobacco businesses as used to obtain dry steam prior to system access.

It must used in open steam consumed systems.

**Body:** Carbon Steel  
(Optional Stainless Steel)

**Internal:** Stainless Steel

**Connection:** Threaded, flanged

**Connection type:** Horizontal,vertical

**Diameters:** Threaded 1/2"-2"

**Flanged** DN15-DN350

**Max. Working Pressure:**

16 Bar, 25 Bar, 40 Bar

**Max. Working Temperature:** 300 °C

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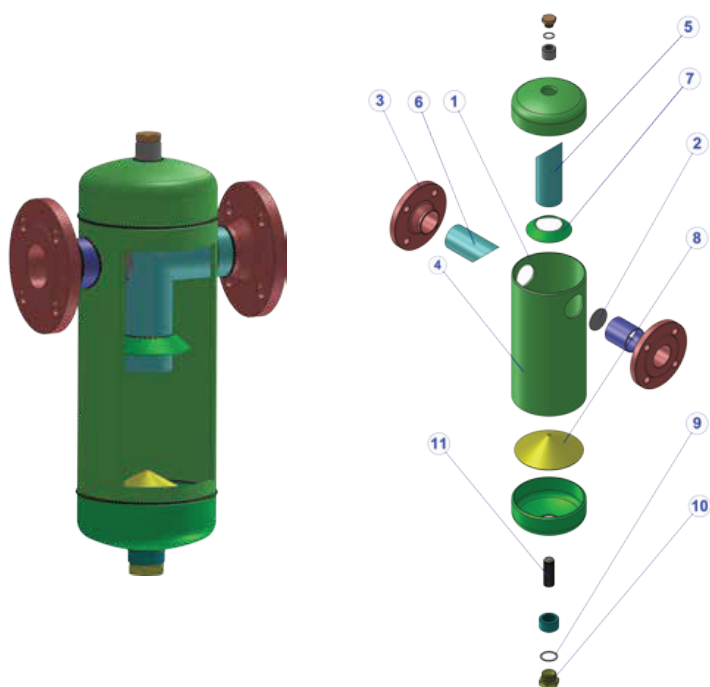
### Advantages

- Increase productivity and production quality.
- Reduced maintenance cost and downtime.
- Extends the life of plant and control valves in steam and air systems.
- Removes the water hammer damage and maintenance costs caused by it.
- Simple, robust design does not require maintenance.
- Provides a net measurement of steam, air or gas when used before flow counters.
- Ayvaz seperators, which can be easily installed in the system, are the simplest way of separating the condensate since there is no need for electrical connection.
- Steam, gas and pressurized air are used in applications that separate liquid power so that the maximum flow capacity does not exceed 40% by weight.
- Increase productivity and production quality. (Reduced efficiency with low heat transfer)
- Reduce maintenance cost and downtime. (Corrosion of pipelines, prevention of damage to mechanical elements such as water hammer).

WORKING CONDITIONS		
DN	Max Working Pressure	Max Working Temperature
15 - 80	25 (Steam)	228
100 - 150	21 (Steam)	217

DN	Connection	Material
15 - 20 - 25	Flanged PN16/25/40 (DIN 2567)	Carbon Steel Stainless Steel
32 - 40 - 50		
65 - 80 - 100		
125 - 150 - 200		

**Note:** In PN 25 and PN 40 pressure classes connection flanges, body material and tickness,for other parts tickness vary.



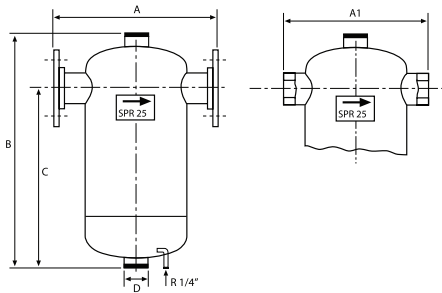
PART LIST		
No	Part Name	Material
1	Intermediate Part	Carbon Steel
2	Metal Cover	Carbon Steel
3	Flange	Carbon Steel C22.8
4	Body (Seamless Tube)	Carbon Steel
5	Spreader-Gathering Conical Cyclone	Carbon Steel
6	Filter Pipe	Carbon Steel
7	Special Particle holder filter	AISI 304 Stainless Steel
8	Liquid-Gaseous separator plate	AISI 304 Stainless Steel
9	Gasket	Brass
10	Filter Cleaning Cork	Carbon Steel C22.8
11	Steam Trap Protection Filter	AISI 304 Stainless Steel

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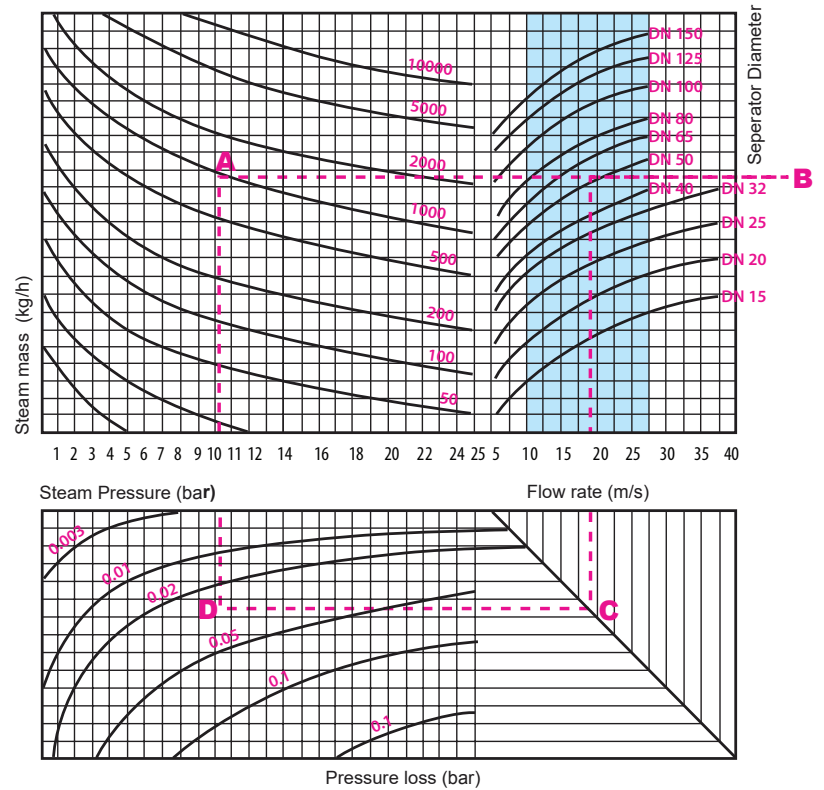
## How to use the diagram

- 1 - Draw A-D line for the steam pressure of 10 bar and the mass flow of 1000 kg/h.
- 2 - Extend A-B line horizontally.
- 3 - Any seperator is intersecting with the A-B line in the blue area would work with approximately 100% efficiency.
- 4 - Flow rate is determined by vertical line of B-C line(19 m/s.)
- 5 - Pressure drop is detected with intersecting the lines of A-B and C-D.
- 6- Seperator should be selected in the accordance with line diameter, velocity and pressure drop.

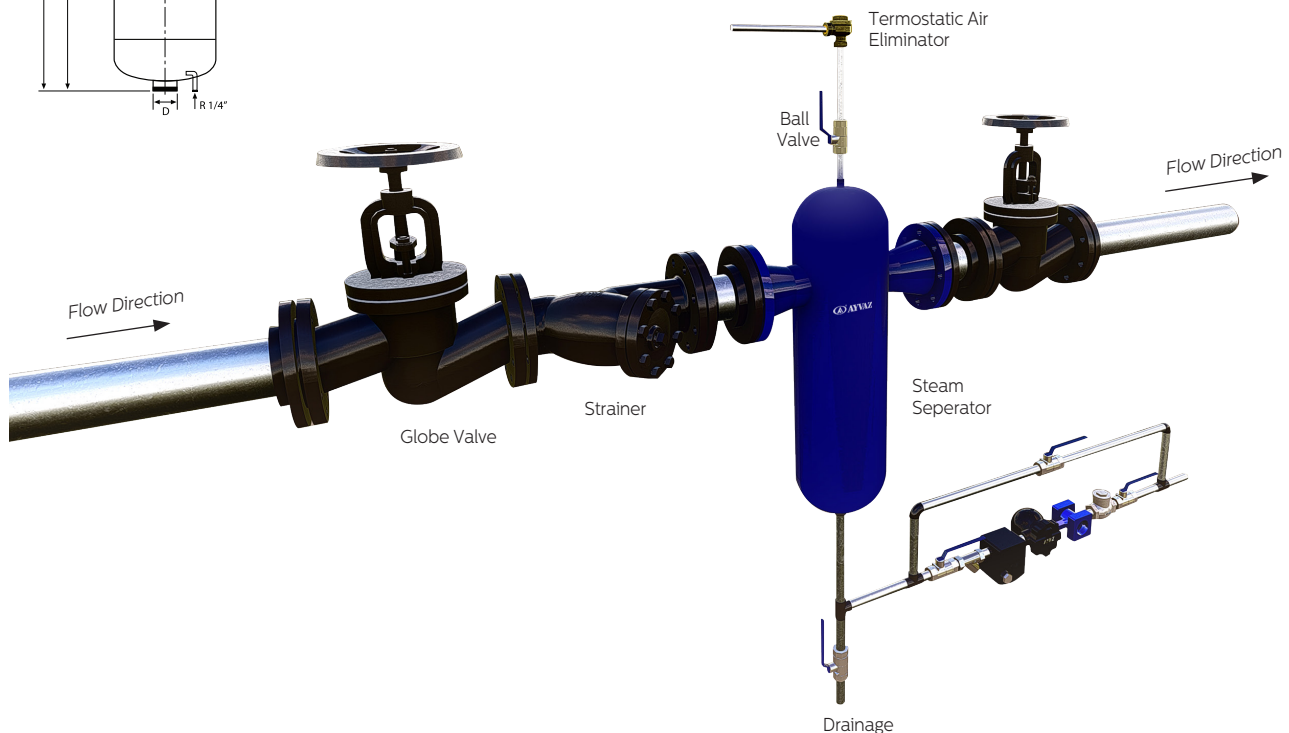
VERTICAL TYPE DIMENSIONS (mm)					
DN	A	A1	B	C	D
15	180	130	345	240	1/2"
20	230	160	410	290	1/2"
25	230	160	430	310	1/2"
32	250	200	440	330	1/2"
40	300	260	480	340	1/2"
50	300	260	540	400	1/2"
65	400	-	645	475	3/4"
80	450	-	720	530	3/4"
100	500	-	865	620	1"
125	600	-	1046	770	1"
150	600	-	1190	895	1"
200	850	-	1240	900	1"
250	900	-	1640	1240	1"
300	950	-	1740	1320	1"
350	1100	-	1800	1380	2"



## Steam Separator Selection Diagram

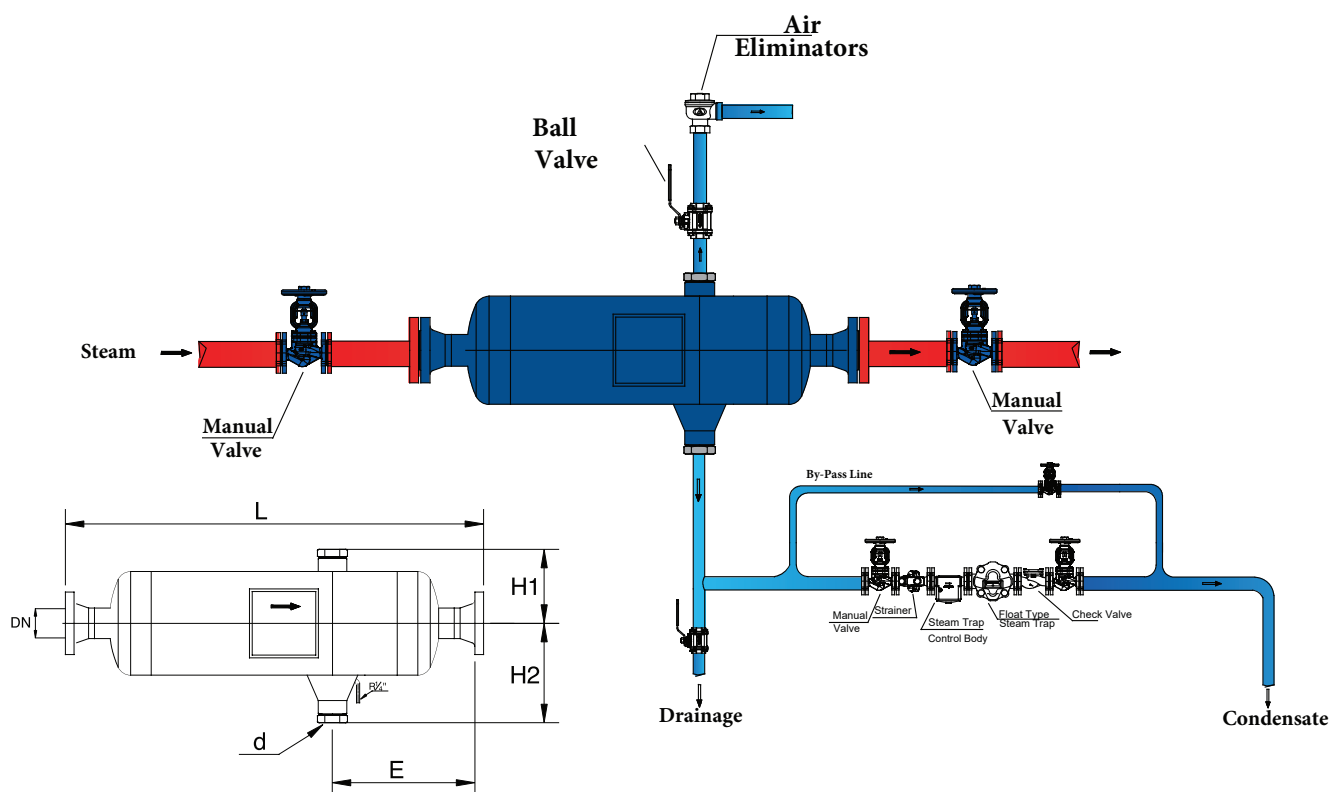


## 3D APPLICATION SAMPLE



# SPR-16/25/40 STEAM SEPERATORS

## Steam Seperator Grup (Horizontal Type)



HORIZONTAL TYPE STEAM SEPERATORS DIMENSIONS(mm)

DN	L	H1	H2	E	D	DN	L	H1	H2	E	D
20	300	57	127	140	1/2"	100	700	162	275	232	1"
25	400	57	127	158	1/2"	125	800	178	235	250	1"
32	500	70	140	165	1/2"	150	850	203	320	258	1"
40	500	84	170	170	1/2"	200	1000	254	350	303	1"
50	500	84	170	180	1/2"	250	1300	305	415	414	2"
65	600	110	210	180	3/4"	300	1500	305	450	325	2"
80	650	136	240	207	3/4"	350	1650	410	500	341	2"



### HEAD OFFICE - FACTORY

Atatürk Sanayi Bölgesi Hadımköy Mahallesi Mustafa İnan Caddesi No: 44 Arnavutköy - İSTANBUL  
Tel: +90 212 771 01 45 (pbx) | Fax: +90 212 771 47 27  
info@ayvaz.com | www.ayvaz.com

#### Cona Caserta/Italy

Tel: +39 0823 187 3988  
rmolaro@ayvaz.com

#### Ayvaz Germany Viernheim/Germany

Tel: +49 62046014399  
germany@ayvaz.com

#### Ayvaz Ukraine Kiev/Ukraine

Tel: +380 44 390 57 57  
info@ayvaz.com.ua

#### Tricorr Warsaw/Poland

Tel: +48 530 030 810  
+48 533 603 335  
tricorr@tricorr.eu

#### Ayvaz Azerbaijan Baku/Azerbaijan

Tel: +99 (455) 579-84-32  
ahayatov@ayvaz.com

#### Ayvaz Egypt Cairo/Egypt

Tel: +20 122 819 78 29  
andrew.eid@ayvaz.com

#### Ayvaz Gulf Dubai/U.A.E

Tel: +971 563550822  
+971 501306871  
mideast@ayvaz.com

#### Ayvaz China Ningbo/China

Tel: +86 152 5830 7361  
msahin@ayvaz.com

#### Ayvaz Kazakhstan LLP Almaty/Kazakhstan

Tel: +7 (727) 327 97 57  
info\_kz@ayvaz.com

#### Ayvaz N Isperih/Bulgaria

Tel: +359 8431 27 32  
office@ayvaz-n.eu

#### Ayvaz Serbia Belgrade/Serbia

Tel: +381 61 658 70 52  
yakbiyik@ayvaz.com

#### Ayvaz Vietnam HCMC/Vietnam

Tel: +84 89 8508345

#### Ayvaz Americas Rhode Island/USA

Tel: +1 401 737 8380  
americas@ayvaz.com