

# *Moisture Separator*

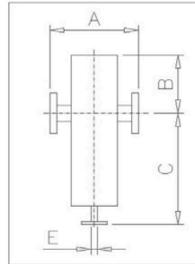
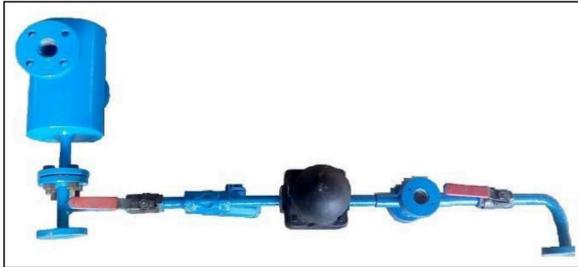
Dual Action Defence for Clean & Dry Steam



# Moisture separator with drain module

## Description:

Indo Anushka make Moisture separator with drain module is a value added solution for removal of moisture from the steam headers. Moisture separator with drain module consists of M.S. fabricated moisture separator with completely assembled drain assembly consisting of ball float steam trap, Indo Anushka make MAINTENO strainer with inbuilt blowdown valve and Indo Anushka make MULTIVIEW double window sight glass with deflector and 1 no. Isolating valve completely assembled with interconnecting piping and 1 no. Outlet nozzle as provision for bypass.



SIZE	A	B	C	E
15 NB	190	100	200	15 NB
25NB	265	150	295	15 NB
40NB	265	150	280	15 NB
50NB	315	220	355	15 NB
80NB	315	240	480	15 NB
100 NB	370	280	515	15 NB
150NB	475	395	775	15 NB
200NB	560	520	840	15 NB
250NB	560	610	910	15 NB
300NB	610	660	960	15 NB

## Technical Detail:

<b>Available Sizes</b>	Steam / Air / Gas
<b>Pipe Connections</b>	ANSI 150, 300 & 600. BS-10 Table-H, J &
<b>Limiting Conditions</b>	Max Operating pressure-13bars, Max Operating temp – 180 OC.
<b>Materials</b>	Body & Baffles – M.S. Fabricated Strainer – MS with SS internal Valves – CI with SS internal Trap – CI with SS internal Multiview – M.S Fabricated Pipes and flanges – IS 1239 / A106 GR. B

## WHAT IS M SEP?

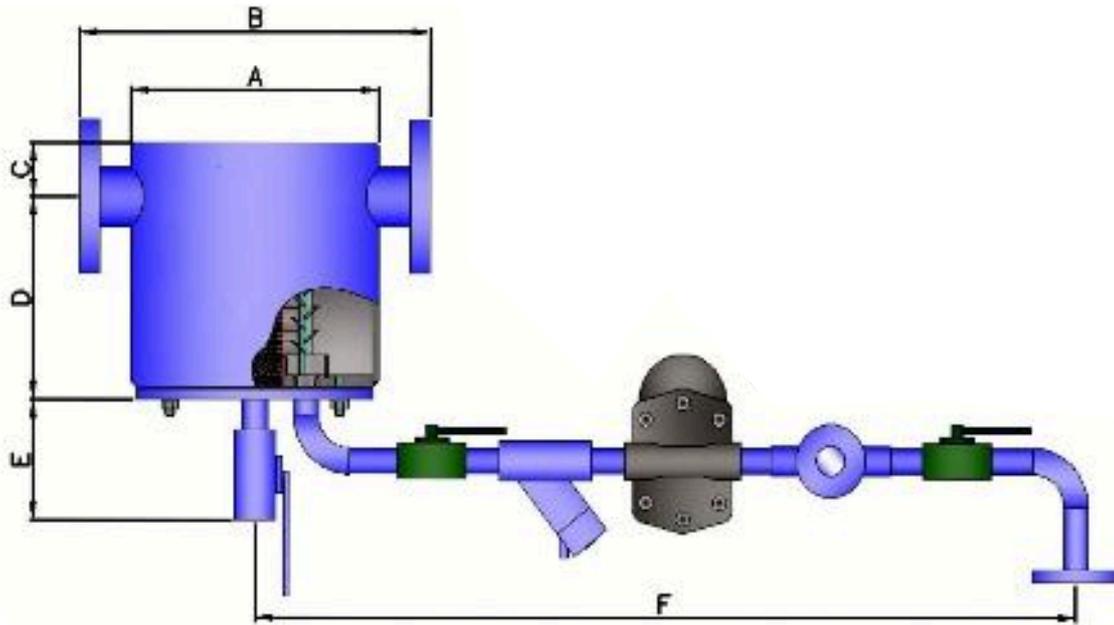
IA make Moisture Separator cum Strainer- A unique solution for removing moisture from steam/air and increasing its dryness fraction while simultaneously straining it to remove any carry over solid particles. This product is a combination of a T - Type Strainer with online cleaning arrangement and a moisture separator to remove moisture online. It comes installed with a Steam Trap Module with online cleaning strainer-Mainteno, Ball Float Type steam trap for continuous moisture removal and sightglass - Multiview to monitor the moisture removal.

## WHY M SEP?

There is always a certain degree of heat loss from the distribution pipe of a steam distribution system, which causes steam to condense.

The condensed water molecules will eventually gravitate towards the bottom of the pipe forming a film of water. Steam flowing over this water can raise ripples that can build up into waves. The tips of the waves tend to break off, throwing droplets of condensate into the steam flow. A significant part of this water also flows into the steam transfer equipments creating a heat barrier film.

# MAINTENO – MSEP – MOISTURE SEPERATOR CUM STRAINER.



## Available Sizes & Pipe Connections:

25NB TO 150 NB T-type Flanged to ASA 150  
Available in both MS and SS Body construction.  
Other flange ratings can be provided on request.

## Limiting Conditions:

Max. Op. Pr. 10 bar. Max Op. Temp. 180°C/ Cold  
hyd. test pr. 15 bars, For sizes upto 50NB higher  
pressure and Temperature ratings can be  
provided on request.

## Screen Details:

Fitted as standard with a S.S. screen having  
perforation of 0.8 mm Dia and other perforations  
are available to special order.

SR No.	Description	MOC
1	SCREEN	SS304, 0.8mm PERF. SHEET
2	BODY	M.S./SS304
3	BAFFLES	M.S./SS304
4	INLET PIPE & FLANGES	M.S./ SS304 WITH #150 CLASS FLANGES
5	BALL VALVE	BRASS WITH SS INTERNALS
6	GASKETS	ASBESTOS FREE
7	TRAP	C.I. BODY/SS INTERNALS
8	MAINTENO STRAINER	M.S./C.I. WITH SS INTERNALS

SR No.	Inlet Size	A	B	C	D	E	F	Ball Valve Size
1	25NB	219	309	45	248	120	1000	15NB
2	32/40NB	219	309	45	267	120	1000	15NB
3	50NB	273	387	60	320	150	1000	25NB
4	80NB	324	480	78	450	165	1000	40NB
5	100NB	355	485	90	506	180	1000	50NB

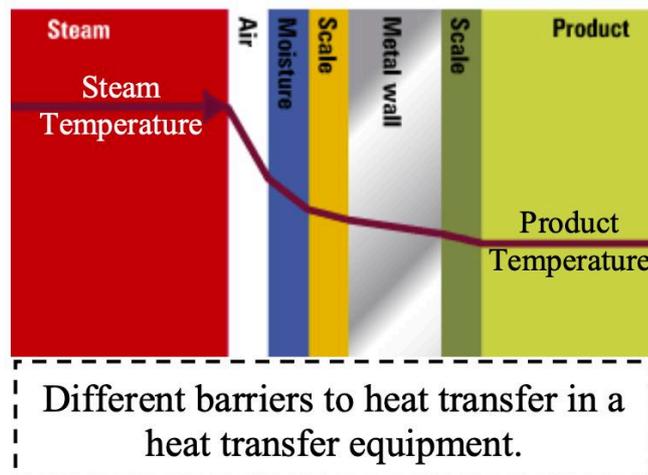
## RESULT...

### Water droplets travelling at high steam velocities

- wire drawing
- eroded valve seats & fittings
- the droplets causing increased corrosion
- erratic operation and failure of control valves... flow meters...
- occurrence of water hammer...

### Creation of water film as shown in adjacent graph in heat exchange equipments

- heat transfer barrier
- decreased heat transfer efficiency
- increased rate of scaling
- reduction in plant productivity
- deteriorated product quality
- increased batch time...



## SOLID PARTICLE CARRYOVER....

In any given steam distribution system, due to various reasons, solid particle carryover along with the steam is an unpreventable phenomenon.

### Carried over suspended solid particles

- Choking of nozzles
- malfunctioning of control valves, safety valves
- choking of heating tubes
- deposition on heat transfer areas
- reduced heat transfer efficiency
- leakages/choking of steam traps
- damage of pump impellers.....

### Strainers used to strain suspended solid particles

- frequent choking
- huge shutdowns required to clean
- parallel strainers required to be installed
- increased pressure drops across strainers
- cleaning of strainers cannot be done during production
- additional manpower requirement for maintaining strainers.....

## MAINTENO M-sep

### Carried over suspended solid particles

- Unique area design – ensures negligible pressure drop across M-sep.
- Now, strain muck online without shutdown.
- Unique baffle design – removes more than 98% moisture.
- Two critical operations requiring different equipments efficiently combined into one.
- No strainer choking. Cleans online without requiring to open it.
- Get advantage of total productive maintenance (TPM) as the M-sep can be maintained online without opening it practically eliminating maintenance shutdowns.
- Removes moisture continuously online without opening valves.
- Increase heating efficiency of equipments like dryers, ejectors, coiled vessels, PHE radiators, etc. by totally eliminating the phenomenon of choking & making the steam significantly dry by removing moisture.

## Get In Touch

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