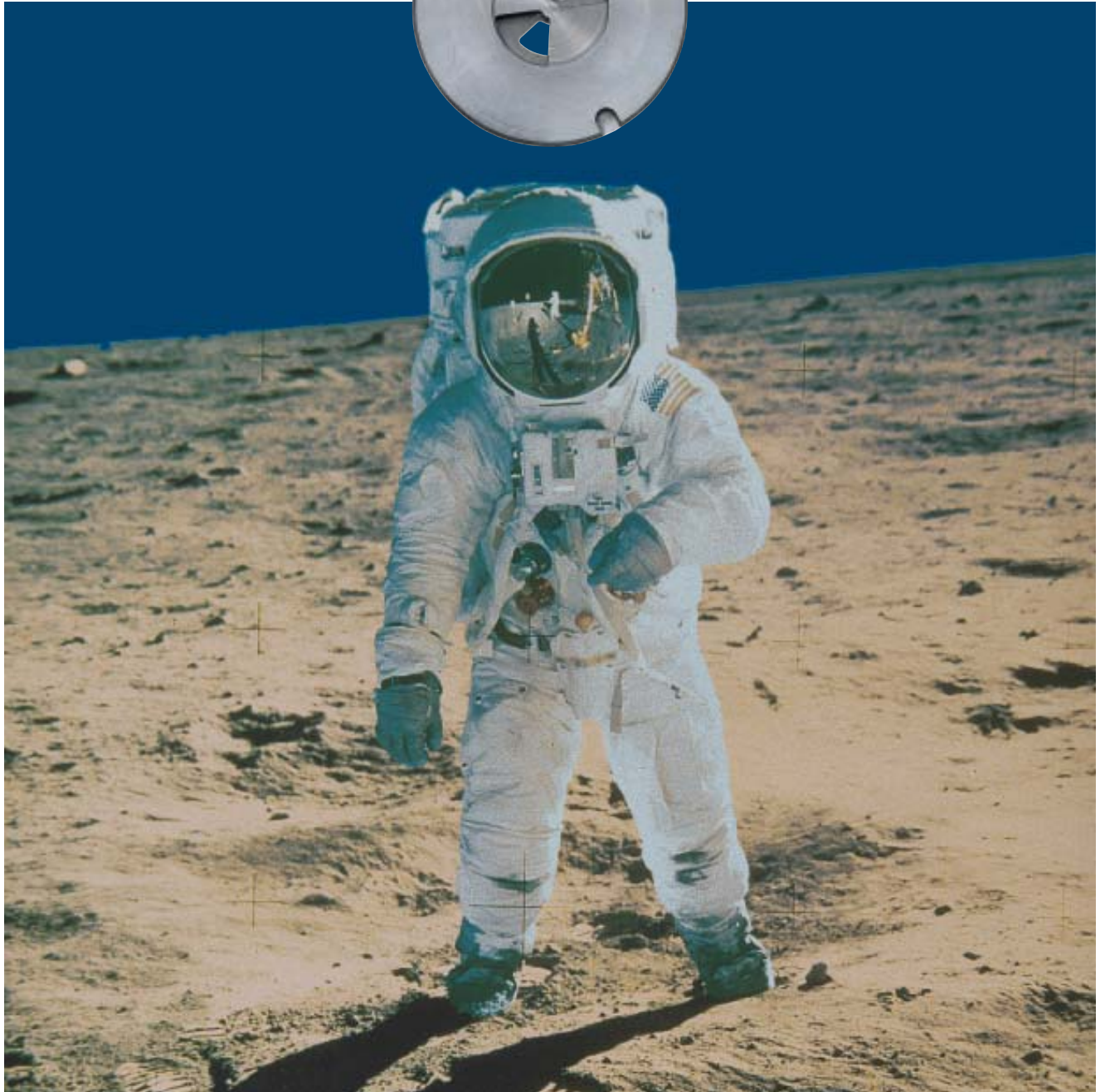


A new, fully improved live steam humidifier for optimum performance.

Condair Esco  
**The only live steam humidification system  
with valve hermetically sealed.**



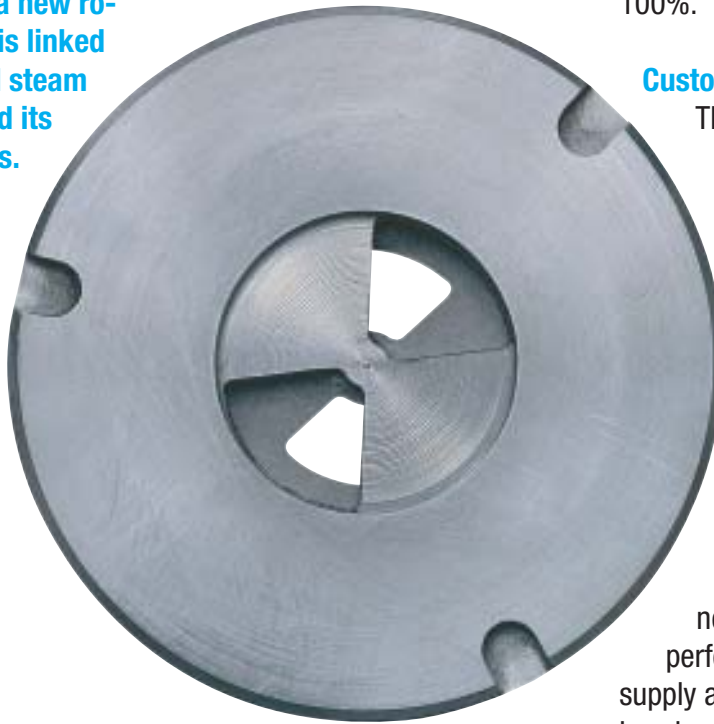
# Condair Esco

## And the old, familiar problems dissolve into thin air.

Now Condair Esco sets completely new standards in steam humidification systems and eliminates all the weak points found in conventional humidifiers connected to a live steam supply. At the heart of the system is an all-in-one steam connection unit featuring a new rotary disk valve, which is linked to the tried-and-tested steam distribution system and its patented steam nozzles. The result: a system able to deal with virtually any air humidification need. Plus a double bonus for you: you can rely on top performance and save money at the same time.

### Absolutely steam-tight

The ceramic rotary disk valve is a totally new concept and does away with all the problems associated with the vertical stroke valves used in the past. For a start, the rotary valve is absolutely steam-tight, which prevents steam



from penetrating into the humidification section even when the unit is switched off and effectively prevents the formation of unwanted condensation.

### Uniform performance even at less than full capacity

The steam nozzles guarantee uniform distribution of steam in the air duct, even when the unit is working at less than full capacity. The characteristic curve is linear over the entire range from 0 to 100%.

### Customized system design

The steam nozzles are positioned inside the air duct to meet the customer's humidification requirements precisely. And regardless of the humidification distance involved, distribution is never less than optimum.

### Cost-saving

The all-in-one steam connection unit guarantees a perfect link-up to the steam supply and saves the customer the hassle and expense of additional ducts and seals. Extra, unforeseen costs for materials and installation are thus a thing of the past and the steam nozzles eliminate the need for jacket heating.

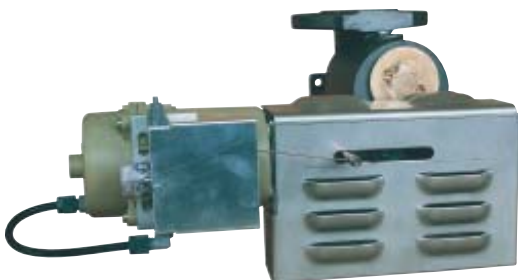
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## And the new design has a wealth of features to recommend it.

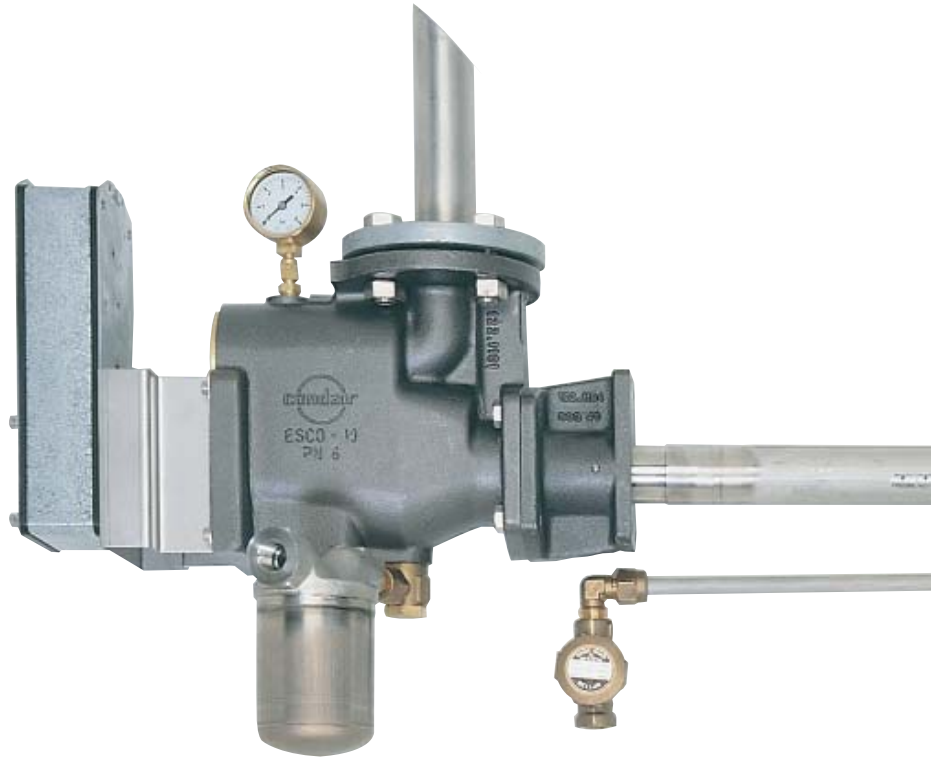
The Condair Esco steam humidifier was perfected using computer simulations based on the laws of thermodynamics and fluidics. It is infinitely superior to all other systems.

The maintenance-free **bell-shaped float steam trap** drains water from the steam inlet and the connecting unit before it passes through the valve, preventing condensate from forming inside the steam distribution system.

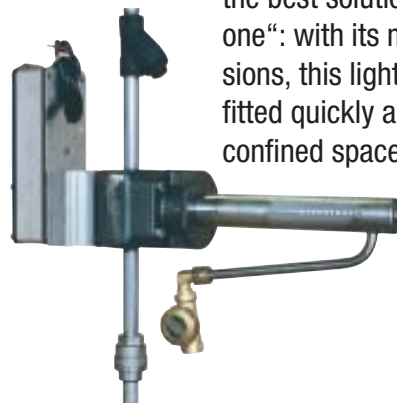
The **rotary disk valve actuator** guarantees optimum reliability. Thanks to the minimal torque required to turn the valve and direct power transmission, the design is compact and space-saving. It can be connected to any standard electronic humidity control unit.



As an option, the steam connection units can also be supplied with a pneumatic drive.



And, for optimum cost efficiency in the lower performance range, the best solution is our „little one“: with its minimum dimensions, this lightweight unit can be fitted quickly and easily – also in confined spaces.



Esco 5 valve unit for connection to horizontal steam distribution pipes, with thermal primary steam trap and optional strainer.



Incoming steam is filtered, dried and drained in the **connection unit** and then fed into the distribution system at the desired rate. The steam passes through the flanged connection which is a standard feature of the system and saves the customer the problem of extra

tion in the air duct, eliminating the need for extra materials on the part of the customer.

Dry steam is taken directly from the centre of the distribution pipe and expelled through the patented nozzles without creating drips.



**The new, patented ceramic rotary disk valve** was developed specifically for use with humidifiers. Unlike standard vertical stroke valves, it is absolutely steam-tight, wear-resistant, and unaffected by dirt and contamination. As a result, steam which



ducts and seals. All joints are steam-tight and part of the standard system. The system is also guaranteed steam-tight even if it has not been used for some time. The steam connection unit has been passed by the German standards authorities (TÜV).

The position of the steam nozzles in the **distribution pipe** is determined by the customer's requirements, guaranteeing a uniform steam supply even when the system is operating at less than full capacity. A special flanged connection is supplied to facilitate installa-

Any condensation flows down the side of the pipe and is removed via the secondary condensate drain.

would otherwise cause unwanted condensation or damage is unable to enter the humidification chamber even when the unit is switched off. The valve's characteristic curve is linear and satisfied even the most demanding control technology criteria.

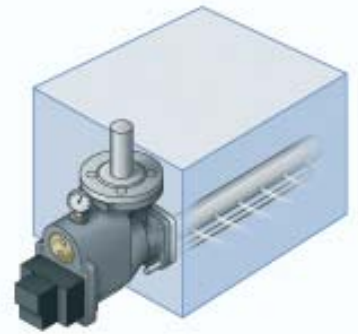


# Condair Esco

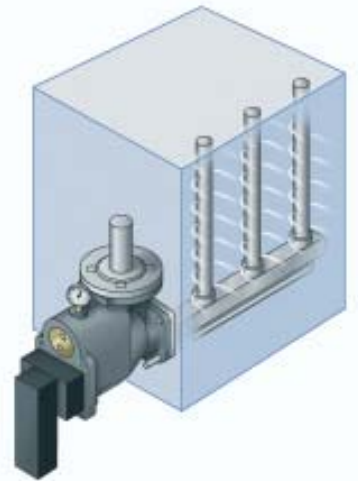
## And one of these models will do the job for you.

The Condair Esco steam humidification system is available in two versions, both of which are equally suitable for process and environmental applications as well as for installation in plant and machinery. The actual choice is largely determined by the geometry of the humidification duct. The steam distribution pipe(s) can be positioned to suit your planning needs exactly.

The Condair Esco **DL 40** steam humidification system has a steam connection unit with a horizontal distribution pipe and was designed for use in plant with narrow air ducts or a long humidification section.



The Condair Esco **DR 73** is a complete steam humidification system with a steam connection unit, a main distribution pipe and vertical secondary pipes, and was designed for use in plant with relatively wide air ducts or a short humidification section.



### Key technical features at a glance

Rotary steam valve	Steam pressure bar	max. steam capacity kg/h	Rotary actuator Type CA: electrical Type P: pneumatic	Steam distribution pipe Type	max. duct width mm
Esco 5	0.2 - 4.0	127	CA75, CA150(S), P10	DL40-10/023-10/178	2 000
Esco 10	0.2 - 4.0	250	CA75, CA150(S), P10	DL40	4 000
			CA150(S), P10	DR73	10 000
Esco 20	0.2 - 4.0	487	CA150(S), P10	DL40	4 000
				DR73	10 000
Esco 30	0.2 - 4.0	976	CA150(S), 2 x P10	DR73	10 000

Steam humidification has a direct, positive affect on merchandise quality and people's wellbeing. Ideal humidity levels are essential in industrial environments which involve machines and production processes, in hospitals, clinics and laboratories, and in the warehousing of food and other organic materials. At Axair, our on-going R&D program is dedicated to recognizing and satisfying these needs. We would be pleased to provide you with information about any of the products we manufacture for all types of air humidification applications.



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