JORC

LEVEL SENSED DRAINS

SMART-GUARD-MINI
SMART-GUARD
SMART-GUARD-HP

POD-TD
NUFORS-XF
MAG-11
MINI-MAG

DRAIN EFFICIENCY

RELIABLE

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

Level sensed condensate drains

Version 08-2020

JORC Industrial is a global condensate management specialist of Dutch origin offering condensate drains, oil water separators and air saving equipment to distributors, dealers and OEM's in more than 100 countries. JORC Industrial is dedicated to setting the standard in helping its customers manage their condensate management requirements.

CONDENSATE MANAGEMENT SPECIALIST

Chapter 1

COMPRESSED AIR CONDENSATE INTRODUCTION

During the process of compressing air, atmospheric air along with water vapor and atmospheric contaminants (hydrocarbon, dust particles or chemical vapors), are drawn into the compressor intake.

Additionally, the compression chambers of most compressors require oil for lubrication, sealing and cooling. Once compressed, the air flows into an after cooler to remove the heat of compression. As the air cools in the after cooler, water and hydrocarbon vapors will condense.

Additional condensation takes place as the air is further cooled in the piping and air dryers.

Environmental regulations strictly prohibit the discharge of oily wastes and chemicals, including the condensate drained from a compressed air system. Because of these requirements, municipalities regulate the discharge of compressor condensate to surface water, wastewater treatment facilities, and sanitary sewers. Please refer to our range of oil/water separators: SEPREMIUM and PURO-CT.

WHY INSTALL A CONDENSATE DRAIN?

Condensate drains are possibly the least glamorous and most ignored component of a compressed air system but nevertheless, a most important part. No matter how much money you spend on that fancy new compressed air system, not spending a little effort with your drain choice could cause you no end of headaches and increased operating costs for years to come.

Contaminants can enter a system at the compressor intake or be introduced into the airstream by the system itself. Lubricant, metal particles, rust, and pipe scale are all separated and filtered out, but it's the drains that have to operate properly for the filters and separators to be successful in completing their task.

Drains can be found on an intercooler, after-cooler, filter, dryer, receiver, drip leg, or at point of use. Drains come in many types and variants for all these applications, some quote fancy descriptions, but they fall into these basic categories. Level sensed – timer operated – float – none (yes that is a drain choice).

How do your drains improve system efficiency? Besides the obvious savings of compressed air with a zero air loss drain choice, there are other less obvious ways drains can save energy or cost you energy if not properly maintained.
They are key components in the quest for system efficiency and reliability.

On multiple stage compressors moisture carry over from the intercooler may allow liquid into the next stage causing premature wear and possibly a catastrophic failure.

Installing a reliable drain is an absolute must!

WILL ANY CONDENSATE DRAIN DO?

Compressed air condensate contains particles that contaminate compressed air systems and potentially cause valve blockages. It is important to choose a drain that offers a large enough orifice. Avoid drains that have diaphragm type valve constructions, the diaphragm has a very small hole in it, that once blocked, the complete drain fails to operate.

Drains are also installed outdoors. NEMA 4 (IP65) insulation protection is therefore a minimum requirement. Avoid drains that do not comply to this minimum specification.

For long life expectations select drains that have FPM seals. FPM is the best suited for the aggressive make up of compressor condensate.

Servicing a drain must be straight forward and quick. Avoid drains that are not service friendly as this will cost more time during the maintenance interval.

JORC'S DRAIN CONSTRUCTION

It starts with the design! JORC drains are robust and designed for long life industrial applications.

The JORC direct acting valve construction has proven to be the most reliable option for condensate draining applications. We apply stainless steel moving parts that offer a long life guarantee and are less sensitive to aggresive particles found in condensate.

The JORC valves are constructed from robust brass or stainless steel and not from plastic. This ensures that no damage occurs during transportation, installation, functional operation and the subsequent maintenance moments throughout the drain's working life.

High grade coil insulation protect the copper wire from overheating and top brand PCB components are applied on our electronic modules.

Servicing JORC drains is quick and simple. Economically sensible service kit packages are available for all JORC drains.

In all JORC drains there are FPM seals that have been specifically selected based on their high and low temperature operation characteristics. In addition, FPM seals are selected as this material has proved to be the best choice for compressed air condensate draining applications.

JORC drains can be applied in both oil lubricated and oil free compressor applications.

JORC products carry globally recognized approvals and each product is 100% tested prior to dispatch.

JORC is NEN – EN - ISO 9001:2015 – certified

Chapter 3

SMART-GUARD-MINI

Electronic operated level sensed drain (with alarm function)

The SMART-GUARD-MINI removes all types of condensate from compressed air systems up to 350 CFM without the loss of compressed air.

PRODUCT FEATURES

The SMART-GUARD-MINI incorporates the reliable JORC direct acting valve assembly with FPM seals, operating within a pressure range of 0 to 230 psi.

The SMART-GUARD-MINI can be supplied with or without the external alarm contact options N/O or N/C.

With an inlet connection height of only 2.9" this is an incredibly robust and compact solution with unrivaled installation versatility and reliability.
The weight of the SMART-GUARD-MINI is one lbs.

The maximum compressor capacity of this drain is 350 CFM and typical draining applications include fridge dryers and filters - mainly due to its incredible compact size.

COMMERCIAL BENEFITS

- Extremely compact and lightweight unit
- Side inlet adapter optionally available
- True zero air loss solution
- One model covers all compressor capacities up to 350 CFM
- No sizing chart required, offering stocking advantages
- The serviceable valve allows easy maintenance
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Zero air loss during the condensate discharge
- Visual alarm (LED indication)
- Optionally supplied with alarm function N/O or N/C
- Easy to install due to its low inlet height
- External valve construction allows for fast and easy maintenance
- Direct acting valve with FPM seal
- Robust corrosion resistant aluminum housing
- A large integrated mesh strainer

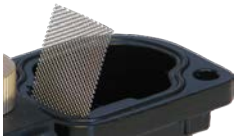
PRODUCT DIMENSIONS

Version with external alarm contact option N/O (U1) or N/C (U2)

Standard version

PRODUCT SPECIFICATIONS

Max. compressor capacity	350 CFM
Max. drainage capacity	12 gallons condensate per hour at 230 psi
Min./max. system pressure	0 - 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Supply voltage options	230VAC / 115VAC / 24VAC / 24VDC
Enclosure protection rating	NEMA 4 (IP65)
Connector type (power)	DIN 43650-B
Inlet connection	1/2" NPT
Inlet height	2.9"
Outlet connection	1/4", with brass hose barb adapter
Valve type	2/2 way, direct acting
Valve orifice	2 mm
Valve seals	FPM
Serviceable valve	yes
Integrated mesh strainer	yes
Housing material	Corrosion resistant aluminum, EP coating
Test feature	yes
Visual alarm	yes, LED indication
External alarm contact options	U1 (N/O), U2 (N/C) supplied optional



Large integrated mesh filter

Side inlet adapter optionally available

JORC direct acting valve construction offering you condensate discharge reliablity

Chapter 4

SMART-GUARD

Electronic operated level sensed drain with alarm function

The SMART-GUARD removes all types of condensate from compressed air systems up to 3500 CFM without the loss of compressed air.

PRODUCT FEATURES

The SMART-GUARD is cost effective and offers a rapid pay-back period due to a competitive pricing level, low stocking cost, zero air-loss and energy saving features.

The compact robust industrial housing, 2/2 way direct acting valve with a large orifice, alarm N/O or N/C and the integrated mesh strainer make the SMART-GUARD a highly reliable draining solution.

Equipped with a digital, LED illuminated, sight-port/level indicator showing you the condensate level inside the reservoir and enabling you to monitor the SMART-GUARD's operation, even in poor lit places.

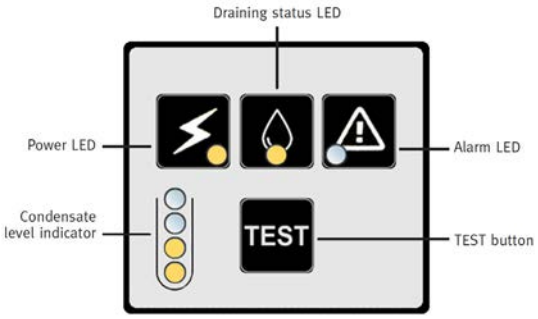
COMMERCIAL BENEFITS

- Competitive compact zero air loss draining solution
- Zero air loss technology saves air, energy and money
- Rapid pay-back period due to competitive pricing level and reduced stocking costs
- 1 Model covers up to 3500 CFM compressor capacity
- No sizing charts required
- Consult factory for D-LUX models (a variant that offers extensive programming options)
- Consult JORC for private labelling options

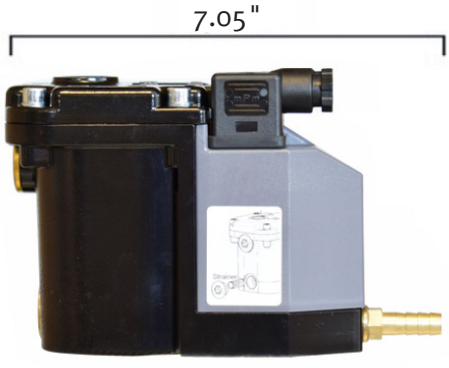
TECHNICAL ADVANTAGES

- Zero air loss during the condensate discharge
- Alarm function (N/O or N/C) standard incorporated
- Successful draining of all types of condensate due to large orifice
- Easy installation and visual display of operating status
- Integrated mesh strainer
- Direct acting valve assembly, ensuring reliable discharge operation
- Robust corrosion resistant aluminum housing
- Easy and quick to service
- Optional heater for cold weather applications available

PRODUCT DIMENSIONS



Digital sight port/level indicator



PRODUCT SPECIFICATIONS

Max. compressor capacity	3500 CFM
Max. drainage capacity U3/U4 version	176 gallons condensate per hour at 230 psi
Min./max. system pressure	0 - 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Supply voltage options	230VAC / 115VAC / 24VAC / 24VDC
Enclosure protection rating	NEMA 4 (IP65)
Connector type (power and alarm)	DIN 43650-B
Inlet connections	1/2" NPT, 3 inlet options
Inlet height	4.5" (top) and 2.9" & 0.6" (side)
Outlet connection	1/4", with brass hose barb adapter
Valve type	2/2 way, direct acting
Valve orifice	4 mm
Valve seals	FPM
Serviceable valve	yes
Integrated mesh strainer	yes
Housing material	Corrosion resistant aluminum, EP coating
Test feature	yes
External alarm contact version U3	Normally Open (N/O)
External alarm contact version U4	Normally Closed (N/C)

Three inlets offer installation flexibility

Integrated mesh strainer protects the valve against large contaminants

Chapter 5

SMART-GUARD-HP

High pressure electronic level sensed condensate drain

The SMART-GUARD-HP (up to 725 PSI) removes all types of condensate from compressed air systems up to 3500 CFM without the loss of compressed air.

PRODUCT FEATURES

The SMART-GUARD-HP is a compact electronic zero air loss condensate drain for applications up to 725 psi.

The SMART-GUARD-HP is effective and offers a rapid pay-back period due to a competitive pricing level, low stocking cost, zero air loss and energy saving aspects.

The SMART-GUARD-HP can be installed in all compressed air system components up to 3500 CFM regardless size and climate zone – only 1 model needed!

The robust industrial housing, the alarm feature and the 2/2 way direct acting valve assembly make the SMART-GUARD-HP a reliable solution for all compressed air system applications.

The SMART-GUARD-HP offers an integrated mesh strainer (to prevent large particles from entering the valve orifice), is easy to disassemble and is service friendly.

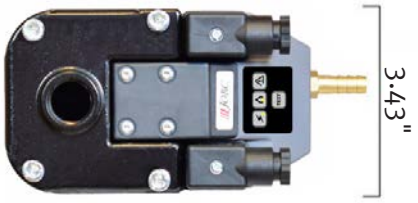
COMMERCIAL BENEFITS

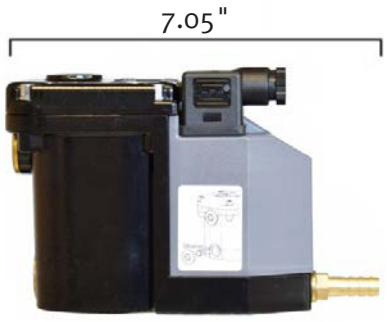
- Competitive compact zero air loss draining solution
- Zero air loss technology saves air, energy and money
- Rapid pay-back period due to competitive pricing level and reduced stocking costs
- 1 model covers up to 3500 CFM compressor capacity
- No sizing charts required
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Alarm function (N/O or N/C) standard incorporated
- Successful draining of condensate due to large orifice (also heavily emulsified condensate)
- Easy installation and visual display of operating status
- Integrated mesh strainer
- Direct acting valve assembly, ensuring reliable discharge operation
- Robust corrosion resistant aluminum housing

PRODUCT DIMENSIONS





Three stage compressor applications can be fitted with the all-in-one solution, covering the various pressure stages – mounted on one bracket

High Pressure up to 725 psi

PRODUCT SPECIFICATIONS

Max. compressor capacity	3500 CFM
Max. drainage capacity	31 gallons condensate per hour at 725 psi
Min./max. system pressure	0 - 725 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Supply voltage options	230VAC / 115VAC / 24VAC / 24VDC
Enclosure protection rating	NEMA 4 (IP65)
Connector type (power and alarm)	DIN 43650-B
Inlet connections	1/2" NPT, 3 inlet options
Inlet height	4.5" (top) and 2.9" & 0.6" (side)
Outlet connection	1/4", with brass hose barb adapter
Valve type	2/2 way, direct acting
Valve orifice	1.8 mm
Valve seals	FPM
Serviceable valve	yes
Integrated mesh strainer	yes
Housing material	Corrosion resistant aluminum, EP coating
Test feature	yes
External alarm contact version U1	Normally Open (N/O)
External alarm contact version U2	Normally Closed (N/C)

Integrated mesh strainer to protect the valve

Multiple (3) inlet options

Chapter 6

POD-TD

Level sensed condensate drain

The POD-TD removes all types of condensate from compressed air systems up to 3500 CFM without the requirement of electricity.

PRODUCT FEATURES

The POD-TD removes condensate from compressed air systems without using electricity.

The discharge process is automatic and is based on a newly developed 3/2 way level controlled valve principle that operates a piston type direct acting valve.

The POD-TD is ideally suited in applications where power is not available, too expensive or not reliable.

The integrated stainless steel strainer protects the valve, optimizing the discharge performance.

COMMERCIAL BENEFITS

- Suitable for any type of compressed air system
- No electricity required – install and go
- No operating costs
- Competitive 'true green' solution
- Reduced stocking costs - 1 model covers 3500 CFM
- No complicated sizing charts required
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Compact and unique design
- Incredibly easy and quick to install and service
- No complicated external control air balance line required
- Integrated mesh strainer
- Top and side inlets available
- Test feature for routine testing
- Robust corrosion resistant aluminum housing
- Direct acting valve construction for a reliable condensate discharge operation
- Successful draining of, even heavily emulsified, condensate due to large 6 mm valve orifice

PRODUCT DIMENSIONS

THINK GREEN

PRODUCT SPECIFICATIONS

Max. compressor capacity	3.500 CFM
Max. drainage capacity	281 gallons condensate per hour at 230 psi
Min./max. system pressure	44 - 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Enclosure protection rating	NEMA 6 (IP68)
Inlet connection	1/2" NPT, 3 inlet options
Inlet height	4.7" (top) and 3.8" & 0.6" (side)
Outlet connection	1/4", with brass hose barb adapter
Valve type	Direct acting
Valve orifice	6 mm
Valve seals	FPM
Serviceable valve	yes
Integrated mesh strainer	yes
Housing material	Corrosion resistant aluminium, EP coating
Test feature	yes

Integrated strainer to protect the valve

Three inlet options for easy installation

Test feature for routine testing

Chapter 7

NUFORS-XF

Pneumatically operated level sensed condensate drain

The NUFORS-XF removes all types of condensate from compressed air systems up to 17500 CFM without the requirement of electricity and without the unnecessary loss of compressed air.

PRODUCT FEATURES

The NUFORS-XF has an exceptional large condensate discharge capacity of 1260 gallons per hour at 230 psi.

The discharge process is automatic and is based on a 3/2 way level controlled valve principle that operates a piston type direct acting valve.

The NUFORS-XF is ideally suited in applications where power is not available, too expensive or not reliable.

In addition, the NUFORS-XF can be applied in applications that demand a higher enclosure protection rating. The NUFORS-XF offers a NEMA 6 rating.

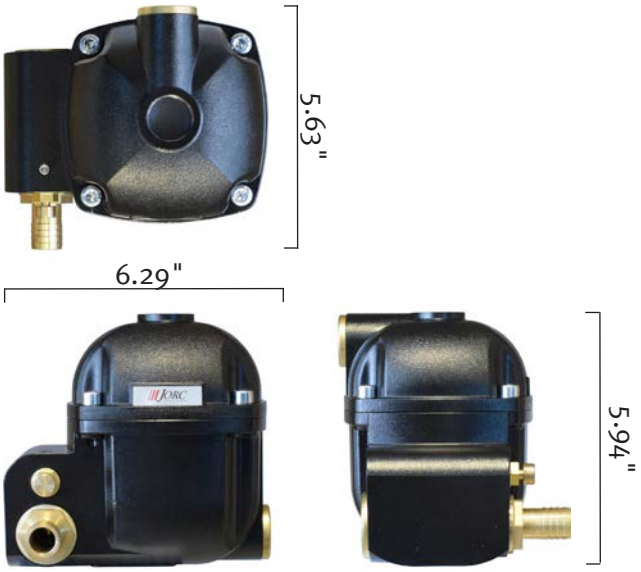
COMMERCIAL BENEFITS

- Suitable for large capacity compressed air applications up to 17500 CFM
- No electricity required – install and go
- No operating costs
- Competitive 'true green' solution
- Reduced stocking costs - 1 model covers 17500 CFM
- No complicated sizing charts required
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Level sensing drain technology
- Incredibly easy and quick to install and service
- No complicated external control air balance line required
- Top- and side inlets available
- Test feature for routine testing
- Robust corrosion resistant aluminum housing
- Direct acting valve construction for a reliable condensate discharge operation
- Successful draining of, even heavily emulsified, condensate due to a large 12 mm valve orifice

PRODUCT DIMENSIONS



THINK GREEN

PRODUCT SPECIFICATIONS

Max. compressor capacity	17500 CFM *guideline only*
Max. drainage capacity	1260 gallons condensate per hour at 230 psi
Min./max. system pressure	44 - 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Enclosure protection rating	NEMA 6 (IP68)
Inlet connection	1/2" NPT, 3 inlet options
Inlet height	5.94" (top), 5.24" and 0.70" (side)
Outlet connection	3/4", with brass hose barb adapter
Valve type	Direct acting
Valve orifice	12 mm
Valve seals	FPM
Serviceable valve	yes
Integrated mesh strainer	yes
Housing material	Corrosion resistant aluminium, EP coating
Test feature	yes

Integrated strainer to protect the valve

Three inlet options for easy installation

Test feature for routine testing

Chapter 8

MINI-MAG single inlet

Magnetically operated level sensed filter drain

The MINI-MAG is a magnetically operated level sensed drain that discharges condensate from all types of compressed air filters by using a unique technology based on magnetic forces.

PRODUCT FEATURES

The MINI-MAG uses specially selected magnets that operate the 2/2 way direct acting valve assembly.

The discharge process of the MINI-MAG is automatic and there is no loss of compressed air during the condensate discharge cycle.

The specially selected magnets ensure a high operation consistency.

The MINI-MAG is easy to install and service. It can also remain hooked up to the filter while maintenance is being carried out (i.e. the drain does not need to be unthreaded from the filter).

JORC recommends users to replace all unreliable filter (float) drains and to install the MINI-MAG.

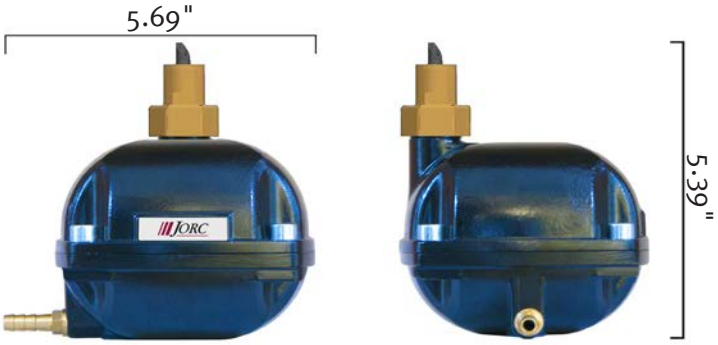
COMMERCIAL BENEFITS

- Does not require electricity
- No operating cost once installed
- Competitive true 'green' solution suitable for all compressed air filters
- Zero air loss technology saves air, energy and money
- Low stocking cost advantages for you
- Low purchase threshold for your customers
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Light weight, less than 2.2 lbs
- Robust corrosion resistant aluminium housing
- Incredibly easy to install and to service
- No need to unthread the MINI-MAG for routine maintenance
- Direct acting valve, for a reliable discharge
- Bottom part of the housing can be rotated 360° for installation simplicity
- Service kit available
- The anti-air-lock adapter is integrated in the design

PRODUCT DIMENSIONS



PRODUCT SPECIFICATIONS

Max. filter capacity	Unlimited
Max. drainage capacity	37.8 gallons condensate per hour at 230 psi
Min./max system pressure	0 - 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Enclosure protection rating	NEMA 6 (IP68)
Inlet connection	1/2" NPT
Inlet height	5,4"
Outlet connection	1/8", with brass hose barb adapter
Valve type	2/2 way direct acting
Valve orifice	2 mm
Valve seal	FPM
Serviceable valve	yes
Housing material	Corrosion resistant aluminum, EP coating
Anti-air-lock adapter	Standard integrated

Easy to install and to service

Anti-air-lock adapter (included)

Designed for filter draining

Chapter 9

MAG-11 dual inlet

Magnetically operated zero air loss drain

The MAG-11 is a magnetically operated level sensed drain that discharges condensate from all types of compressed air filters and refrigerated dryers by using a unique technology based on magnetic forces.

PRODUCT FEATURES

The MAG-11 is a magnetically operated level sensed drain that discharges condensate from all compressed air filters and refrigerated dryers by using a unique technology based on magnetic forces. The MAG-11 uses specially selected magnets that operate the 2/2 way direct acting valve assembly.

The discharge process of the MAG-11 is automatic and there is no loss of compressed air during the condensate discharge cycle. The specially selected long-life magnets ensure a high operation consistency.

The MAG-11 is easy to install due to the top and side inlet options. The MAG-11 is ideally suited to applications where power is not available, too expensive or not reliable.

Typically the MAG-11 is installed in refrigerated dryers, filters and under piston compressors.

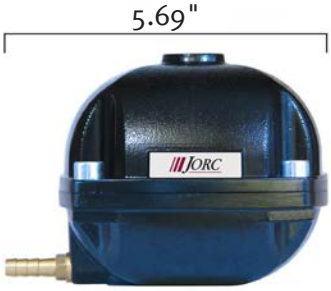
COMMERCIAL BENEFITS

- Does not require electricity
- No operating cost once installed
- Competitive true 'green' solution suitable for all compressed air filters and refrigerated dryers
- Zero air loss technology saves air, energy and money
- Low stocking cost advantages for you
- Low purchase threshold for your customers
- Consult JORC for private labeling options
- Bottom part of the housing can be rotated 360° for installation simplicity

TECHNICAL ADVANTAGES

- Two inlet options
- Robust corrosion resistant aluminum housing
- Incredibly easy to install and to service
- No need to unthread the MAG-11 for routine maintenance
- Direct acting valve, for a reliable discharge

PRODUCT DIMENSIONS



PRODUCT SPECIFICATIONS

Max. filter capacity	Unlimited
Max. drainage capacity	37.8 gallons condensate per hour at 230 psi
Min./max. system pressure	0 to 230 psi
Min./max. medium temperature	34 - 122 °F
Min./max. ambient temperature	34 - 122 °F
Enclosure protection rating	NEMA 6 (IP68)
Inlet connection	1/2" NPT (2 inlet options)
Inlet height	4.1" (top) and 3.5" (side)
Outlet connection	1/8", with brass hose barb adapter
Valve type	2/2 way direct acting
Valve orifice	2 mm
Valve seal	FPM
Serviceable valve	yes
Housing material	Corrosion resistant aluminum, EP coating

Service kit available

Bottom part of the housing can be rotated 360° for installation simplicity

Designed with top and side inlet options

Chapter 10

ALARM FEATURES

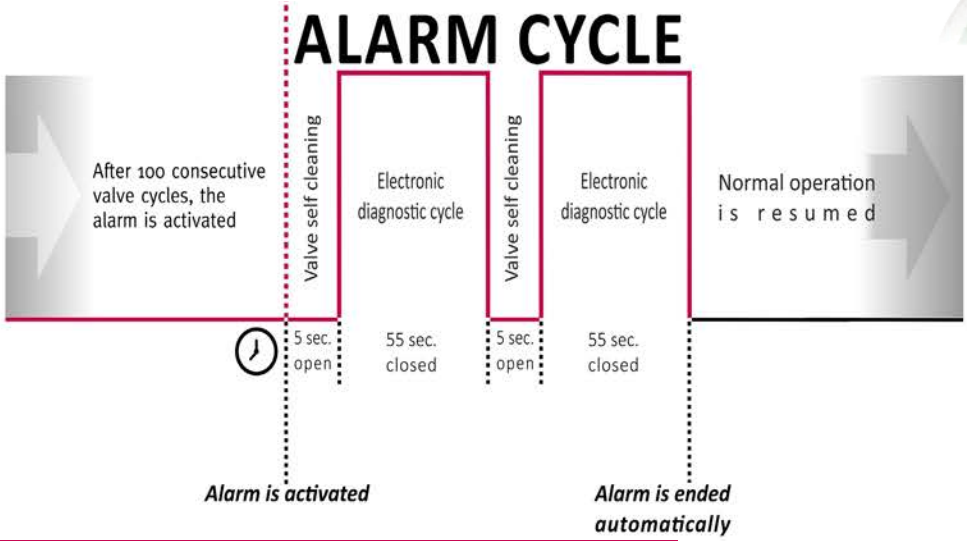
Electronic operated level sensed drains with alarm function

We determine an alarm situation when the drain has cycled too many times consecutively. As it only takes a fraction of time to drain condensate from the upper level to the lower level in the reservoir, we consider many consecutive discharge cycles abnormal and subsequently the alarm will be triggered.

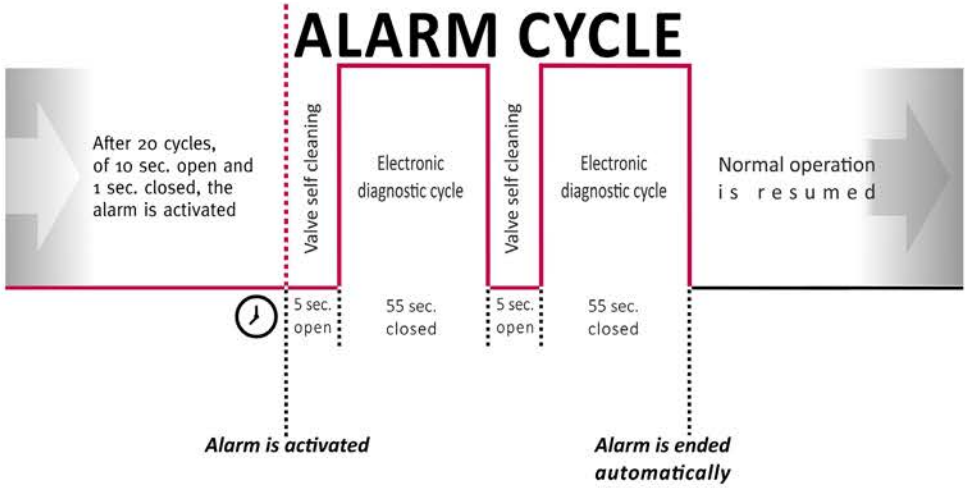
The smart alarm feature is programmed to try and blow out any debris that might obstruct the valve's discharge orifice. Should a valve orifice blockage occur then the drain is programmed to go through a "blow-out" cycle to clear the orifice blockage.

After the alarm cycle is completed the drain will automatically resume normal operation. There is no need to manually re-set the drain.

ALARM FEATURES SMART-GUARD-MINI U1/U2



ALARM FEATURES SMART-GUARD U3/U4



SERVICING THE SMART-GUARD

Servicing an electronic level sensed drain has never been so easy as with the SMART-GUARD range of drains.

The SMART-GUARD consists of three (3) main components that can be easily removed by unscrewing the 4 bolts on the top.

Remove the top part, slide off the (grey) PCB module and you have immediate access to the direct acting valve assembly.

A low cost service kit for the SMART-GUARD is available.

SERVICING THE SMART-GUARD-MINI

Servicing the SMART-GUARD-MINI could not be easier.
The drain comes apart by unscrewing two screws. You lift the coil from the valve stem and you have direct access valve assembly.

The JORC valve inner (moving) parts are always produced from high quality grade stainless steel. This offers long life and high resistance to aggressive types of condensate.

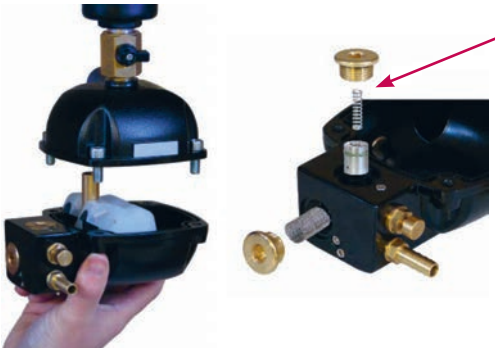
SERVICING THE MINI-MAG & MAG-11

Like all JORC drains, once installed, the threaded connection remains in place during service activities.

The illustration of the MINI-MAG makes this very clear. One of the advantages is that you do not need to re-connect the threaded connection, which saves time.

The MINI-MAG service kit is simple to install and the Allan-key is part of the kit.

SERVICING THE POD-TD



The POD-TD design allows you to service the valve by unthreading one brass fitting. You have direct access to the valve plunger and orifice.

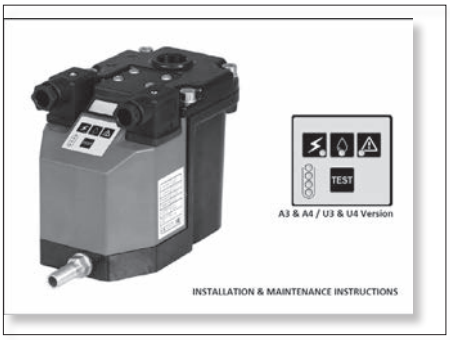
The POD-TD too is designed to remain threaded to your compressed air system whilst maintenance activities are being carried out.

Chapter 11

INSTALLATION

POSITIONING

Installation of level sensed drains requires attention to detail.
Level sensed drains must always be installed upright.
Installing a level sensed drain on an angle or upside down will cause malfunction in the way of air locking.
We recommend proper installation of level sensed drains at all times.
The JORC installation manuals offer more detailed information and guidance on level sensed drain installation procedures.



ANTI AIR-LOCK ADAPTER

The anti-air-lock adapter is simple to install and helps prevent air locks from being created.

This adapter is typically applied in combination with the MINI-MAG but can also be connected to other level sensed condensate drains.

The anti-air-lock adapter has a 1/2" inlet and outlet.

SIDE INLET ADAPTER

A specially designed adapter is available to offer a side inlet option for the SMART-GUARD-MINI zero air loss drain.

The SMART-GUARD-MINI fitted with the specially designed adapter offers an inlet height of only 3,27"! This is particularly interesting for installing the SMART-GUARD-MINI inside refrigerated dryers.

Also, piston type air compressors can be fitted with the reliable SMART-GUARD-MINI and adapter combination.

The SMART-GUARD-MINI can be ordered together with the brass adapter, alternatively you can order the brass adapter as a loose item and have it with you during installations, offering you installation flexibility.

LEVEL SENSED DRAIN ACCESSORIES

IN-LINE BALL VALVE STRAINER

The specially designed in-line ball valve strainer allows for easy local shut off of zero air loss drains for maintenance purposes.

Any debris will be caught in the mesh strainer that protects the drain from any blockages and reducing maintenance to a minimum.

It is specially designed to prevent flow restrictions that can cause air-locks.

A specially designed in-line protective strainer ensures debris does not affect the valve orifice or seals and allows the service engineer to safely shut the drain off from the compressed air system.

The typical Y or L type strainers are not designed for applications involving level sensed drains.

HOSE BARB ADAPTERS

Hose barb adapters are a robust and simple way to install the discharge pipe.

The diameter matches the connection to the JORC oil/water separators.

Alternatively, we can offer push-in nipples.

HEATER

In very cold temperatures, condensate may run the risk of freezing when it does not continuously flow through the system.

The heater guarantees a continuous condensate flow in all systems where you have trouble keeping the condensate flowing due to extreme cold weathers.

The heater can be installed in most of JORC's level sensed drains.

Notes:

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

JORC Industrial LLC
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JORC

AIR SAVING PRODUCTS

AIR-SAVER 1"
AIR-SAVER 2"

LOCATOR

LOCATOR-EV

ADDING VALUE

RELIABLE

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

Air saving products

Version 01-2020

JORC Industrial is a global condensate management specialist of Dutch origin offering condensate drains, oil water separators and air saving equipment to distributors, dealers and OEM's in more than 100 countries. JORC Industrial is dedicated to setting the standard in helping its customers manage their condensate management requirements.

SAVING AIR IS SAVING MONEY

Chapter 1

INTRODUCTION TO COMPRESSED AIR

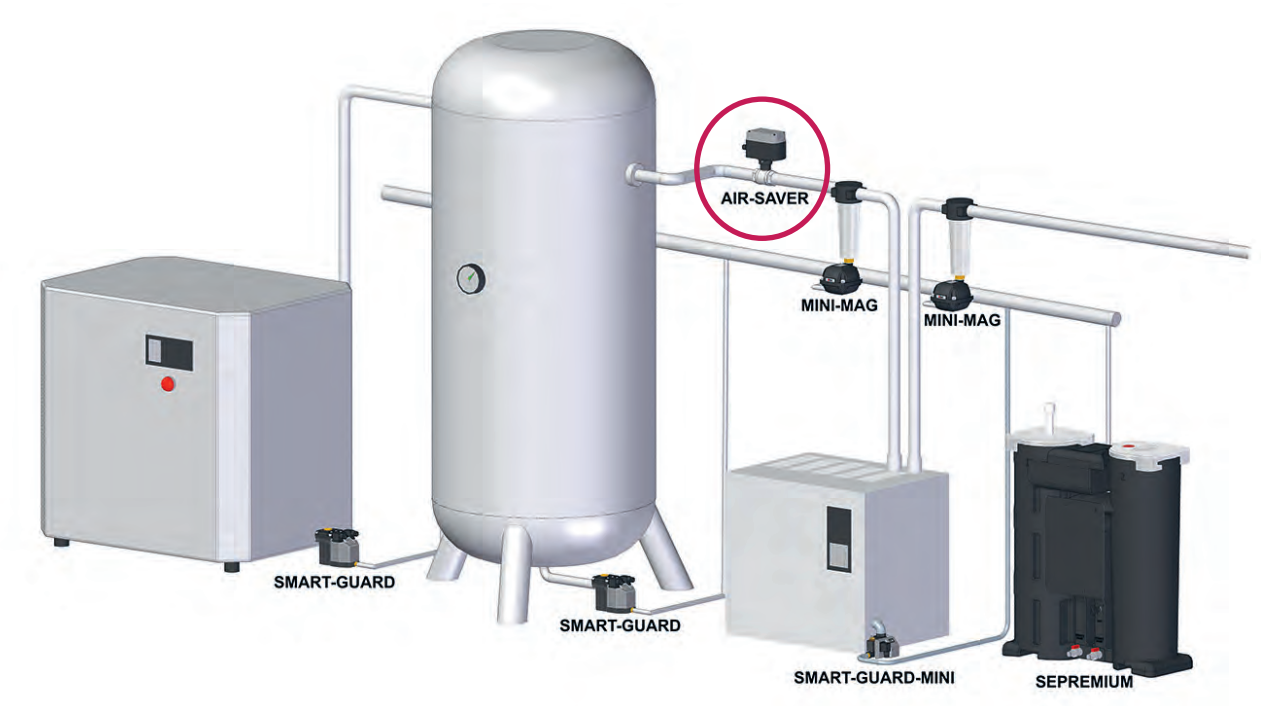
Compressed air is used widely throughout industry and is often considered the “fourth utility”. Almost every industrial plant, from a small machine shop to an immense pulp and paper mill, has some type of compressed air system. In many cases, the compressed air system is so vital that the facility cannot operate without it. Air compressor systems can vary in size from a small unit of 5 horsepower (hp) to huge systems with over 50,000 hp.

In many industrial facilities, air compressors use more electricity than any other type of equipment. Inefficiencies in compressed air systems can therefore be significant. Energy savings from system improvements can range from 20-50% or more of electricity consumption. For many facilities this is equivalent to thousands, or even hundreds of thousands of dollars of potential annual savings. A properly managed compressed air system can save energy, reduce maintenance cost, decrease downtime, increase production throughput and improve product quality.

Compressed air systems consist of a supply side, which includes compressors and air treatment, and a demand side, which includes distribution, storage systems and end-use equipment. A properly managed supply side will result in clean, dry and stable air being delivered at the appropriate pressure in a dependable, cost-effective manner.

A properly managed demand side minimizes wasted air and uses compressed air for appropriate applications. Improving and maintaining peak compressed air system performance requires addressing both the supply and demand sides of the system and how the two interact. The compressor is the mechanical device that takes in ambient air and increases its pressure. Controls serve to regulate the amount of compressed air being produced.

The treatment equipment removes contaminants from the compressed air and accessories keep the system operating properly. Distribution systems transport compressed air to where it is needed. Compressed air storage can also serve to improve system performance and efficiency.



AIR LEAKAGES, A COMMON PROBLEM

Air leaks are a concern for anyone operating a compressed air system. The average plant with no formal leak management program can have air leaks that can possible waste up to 30 percent of the total air capacity.

Leaks will cause compressors to run at full load for longer periods of time. The compressors will not only use more energy, but may also need additional maintenance due to the increased loads.

Leaks can give the false impression that additional compressors are required to meet the demand for compressed air.

COMMON LEAK POINTS

- Quick connections fittings have O-rings to seal the hose connections. A damaged or missing O-rings will cause the connection to leak.
- FRL's (filter, regulator & lubricator). Inlet and outlet connections and bottom drainage point can leak.
- The welds found on pipe joints and pipe flanges can leak due to vibrations, age or improper welding.
- Float or mechanical type condensate drains can also be a source of air leaks, because the operating mechanics can get stuck in the "open" position.
- Pipe thread connections, air tools and many more sources can be the cause of air leakages.

LOCATOR-EV

The LOCATOR-EV is an ultrasonic air leak detector and is a necessary part of a leak prevention program.

The LOCATOR-EV is lightweight and easy to operate. The reliable and accurate detection capacity makes it a highly efficient air leak detector. Air leak turbulence or friction produce high frequency ultrasonic waves and are normally higher than 20 kHz. This is typically above the range of human hearing levels.

The Locator is easy to use and highly effective at finding compressed air leaks.

AIR-SAVER

The compressed air that is stored in the receiver can leak out through the above mentioned sources of air leaks. This is a direct waste of energy and money.

The AIR-SAVER is installed on the air piping that comes out of a receiver tank. It can be programmed to automatically open just prior to the start of a work shift and close just after the end of the work shift.

The AIR-SAVER is an improvement to any compressed air system with the above mentioned air leak problems and has a fast payback.

Chapter 2

THE VALUE OF AN AIR-SAVER

The AIR-SAVER is installed just beyond the air receiver tank. It can be programmed to automatically open just prior to the start of a work shift and close just after the end of the work shift. By doing so you save compressed air and reduce energy costs.

Compressed air leakages are common and more importantly very costly. Graph A and B (next page) illustrate the value of the AIR-SAVER when installed. A typical installation is illustrated below.

In graph A and B the light blue line demonstrates the operating movements of the compressor, or to put it in other words – **ENERGY USAGE**.

Graph A shows a compressed air system without an AIR-SAVER installed. At 4 pm, the working shift is over and the compressed air leakages force the compressor to continually bring the air pressure up to the required level (even though no one is working in this particular example).

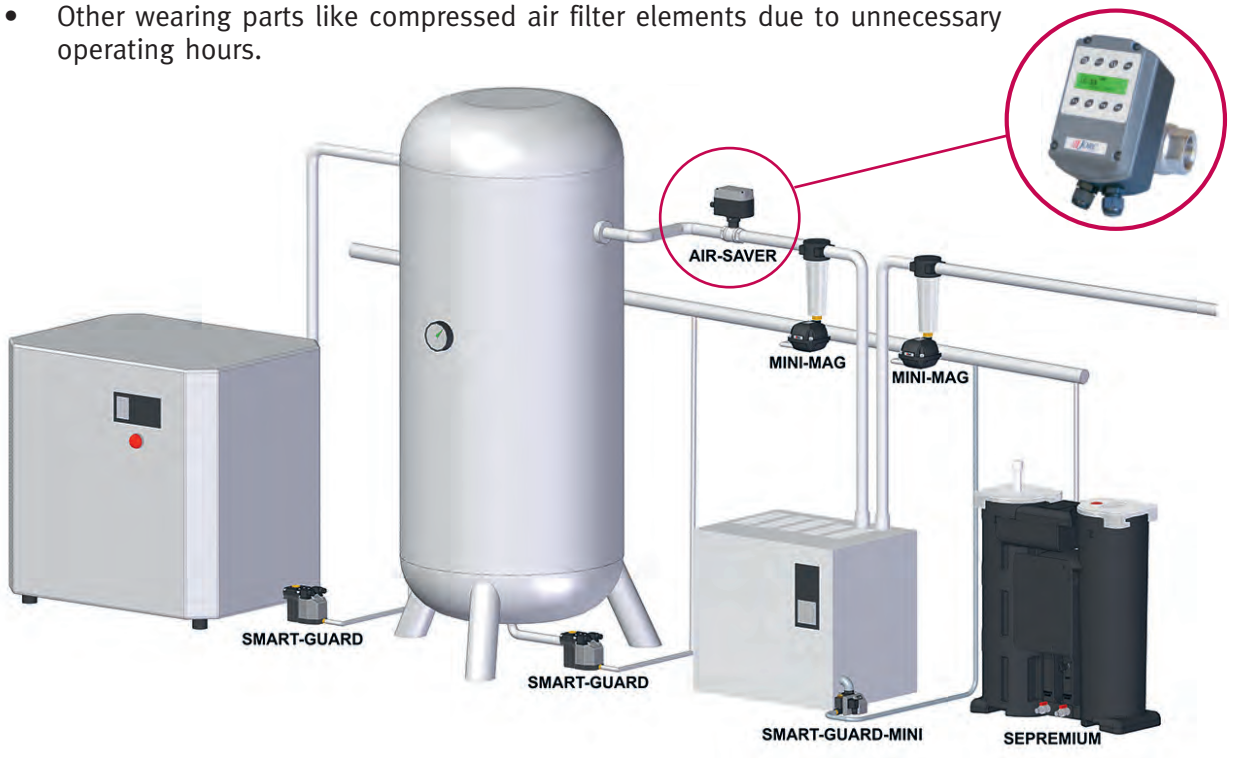
The result is that the compressor kicked in 20 times during the period in which no one was requiring compressed air! Compressed air losses occur through pipe work connection leakages, leaking float type drains, flow meters etc.

Graph B shows the same compressed air system with an AIR-SAVER installed. The light blue movements are the compressor in running mode. At 4 pm, you see that the working shift ends and that the AIR-SAVER is programmed to close.

The result is that the pressure in the pipe work beyond the AIR-SAVER is lost as you see the pressure drops to 0 bar. The produced compressed air stored in the air receiver is saved and the compressor does not require to kick on and off to bring the air pressure up to a certain level.

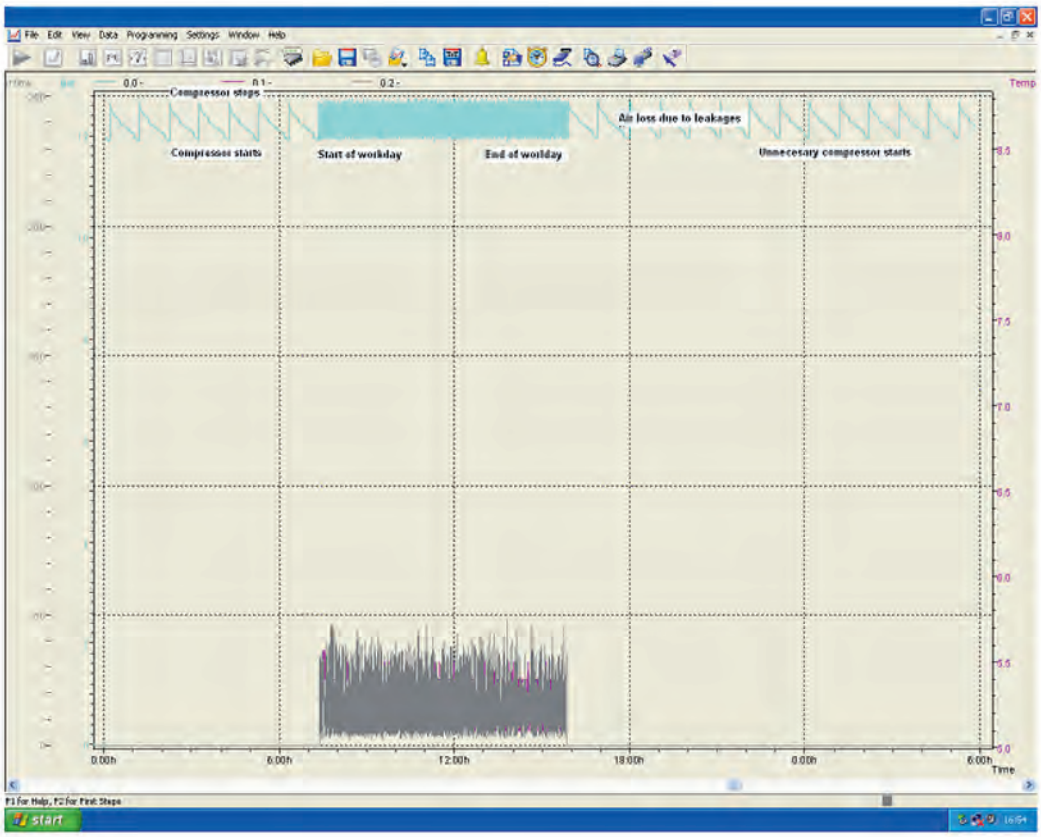
Savings achieved with the AIR-SAVER are:

- Valuable and expensively produced compressed air.
- Electricity for running the compressor.
- Wearing parts of the compressor.
- Compressor servicing costs due to unnecessary compressor operating hours.
- Other wearing parts like compressed air filter elements due to unnecessary operating hours.

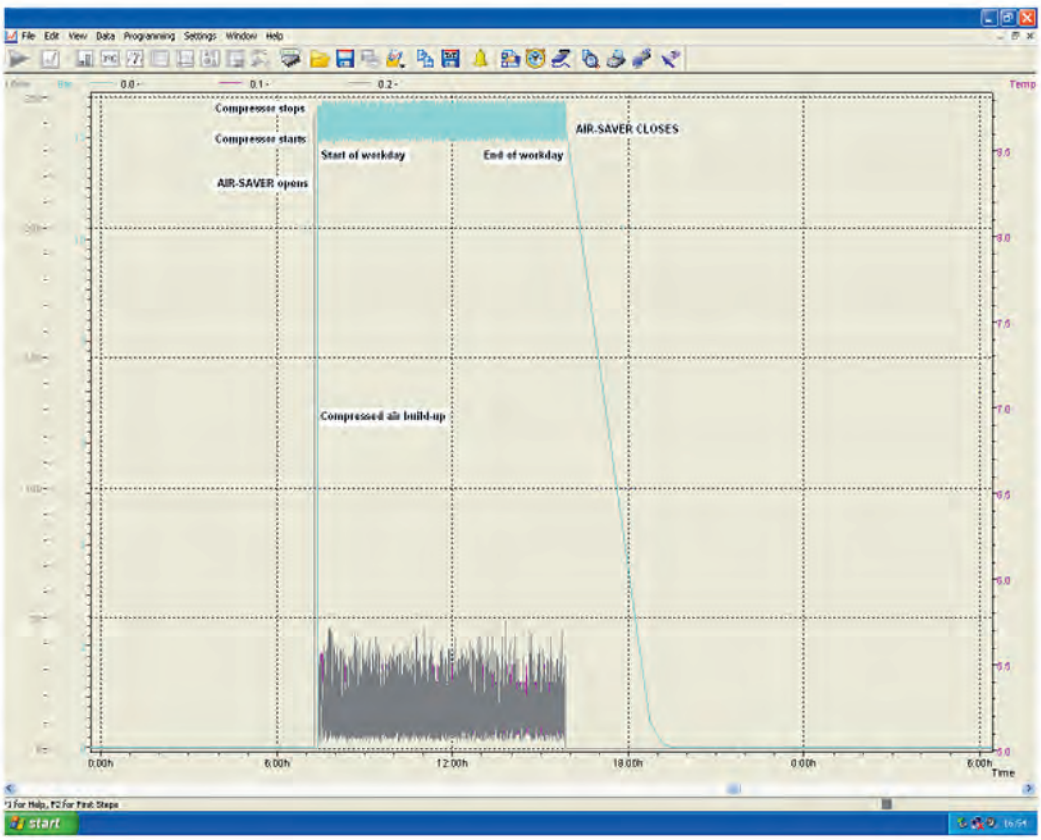


Chapter 2

GRAPH A: COMPRESSED AIR SYSTEM WITHOUT AN AIR-SAVER



GRAPH B: COMPRESSED AIR SYSTEM WITH AN AIR-SAVER



Chapter 3

LOCATOR

Compressed air energy saver

The LOCATOR is an ultrasonic air leak detector that detects compressed air leaks, covering a wide frequency spectrum of 20-100 kHz.

PRODUCT FEATURES

The LOCATOR is an ultrasonic compressed air leak detector that detects leakages in compressed air systems at a distance up to 33 ft.

The ultrasonic technology allows for easy and fast detection of leakages. Production activity may continue whilst using the LOCATOR. The headset and the LED display allow for audible and visual confirmation of all compressed air leakages.

The decibel meter can be adjusted to pin-point the exact location of a specific air leak.

The LOCATOR makes locating air leaks simple and cost effective.

A deluxe version of the LOCATOR with **hard-hat headset**, that meets **ANSI specifications and OSHA standards** with over 23 dB of noise attenuation is also available as **LOCATOR-D-LUX.**

COMMERCIAL BENEFITS

- Easy and effective detection of compressed air leaks in a wide frequency spectrum of 20-100 kHz
- Locates repair points in air lines, offering energy & money saving options
- Locates air leaks during working hours, no need to shut down production to carry out the leak audit
- Cost competitive offering a rapid pay-back
- Light and easy to operate, no training required
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Leaks will be detected from a distance up to at least 33 ft
- Includes sensitivity selection knob / noise reduction filter up to 70 dB
- Standard supplied in a protective case, complete with a headset
- The LOCATOR-D-LUX is supplied with a hard-hat headset. Meets ANSI specifications & OSHA standards
- Fully automatic – no maintenance

PRODUCT DIMENSIONS

PRODUCTS SPECIFICATIONS

Construction	Hand held ABS housing (pistol type) Stainless steel sensor enclosure
Circuitry	SMT/Solid state hybrid heterodyne receiver, ultrasonic processor
Response time	300 milliseconds
Frequency response	20 - 100 kHz (centered at 28 - 42 kHz)
Indicator	10 Segment visual leak indication LED bar
Sensitivity selection	8 Sensitivity positions / Noise reduction filter up to 70 dB
Power	9 Volt alkaline battery (included)
Low battery indicator	yes, LED
Headset	Included; comfortable, easy adjustable headset. Optionally available: noise reducing hard-hat earphones (see LOCATOR-D-LUX)
Ambient operating temp.	34 - 122 °F
Relative humidity	10 - 95 %
Weight	0.8 lb

Supplied in a protective case, complete with headset and rubber focussing probes

Visual leak & low battery indication and sensitivity selection knob

LOCATOR-D-LUX version with hard-hat earphones available, meets ANSI specifications & OSHA standards

Chapter 4

LOCATOR-EV

Ultrasonic air leak detector

The LOCATOR-EV is an ultrasonic air leak detector that detects compressed air leaks in a frequency spectrum of 36 - 44 kHz.

PRODUCT FEATURES

The LOCATOR-EV is lightweight and easy to operate. The reliable and accurate detection capacity makes it a highly efficient air leak detector. Air leak turbulence or friction produce high frequency ultrasonic waves and are normally higher than 20 kHz. This is typically above the range of human hearing levels.

The ultrasonic waves can travel in air and are highly directional. This directional aspect allows the LOCATOR-EV to isolate the ultrasonic sound amongst other external factory sounds, which will prove very useful in preventive maintenance, trouble shooting, quality control and diagnostic data collection on any compressed air system.

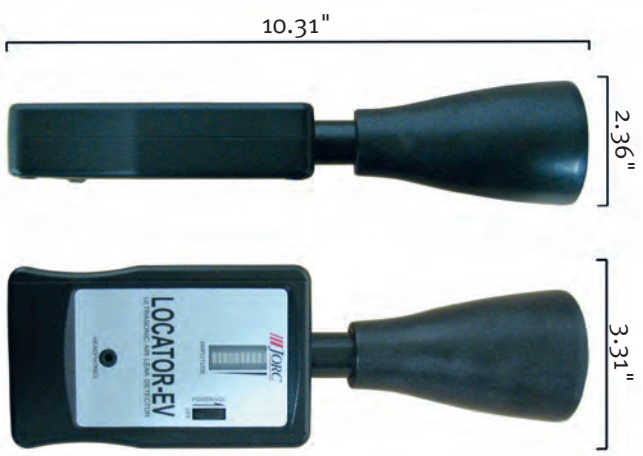
COMMERCIAL BENEFITS

- Easy and effective detection of compressed air leaks within a frequency spectrum of 36-44 kHz
- Locates repair points in air lines, offering energy & money saving options
- Production does not need to be disturbed when the LOCATOR-EV is being applied
- Cost competitive, offering a rapid pay-back
- Light and easy to operate, no training required
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Leaks will be detected from a distance up to 33 ft
- Includes sensitivity selection knob / noise reduction filter up to 70 dB
- Supplied in hard protective case, complete with a headset and rubber focusing probe
- Fully automatic – no maintenance

PRODUCT DIMENSIONS



PRODUCTS SPECIFICATIONS

Construction	Hand held ABS housing Plastic sensor enclosure
Circuitry	SMT/Solid state hybrid heterodyne receiver, ultrasonic processor
Response Time	300 milliseconds
Frequency Response	36 - 44 kHz
Indicator	10 Segment visual leak indication LED bar
Sensitivity selection	Adjustable volume/sensitivity turn-knob
Power	9 Volt alkaline battery (included)
Headset	Included; comfortable. easy adjustable headset
Ambient operating temp.	50 - 140 °F
Relative humidity	10 - 95 %
Weight	0.58 lb

Supplied in hard
case with headset

Visual and audible
leak indication

Comfortable, easy adjustable
headet included

Chapter 5

AIR-SAVER 1"

Compressed air energy saver

The AIR-SAVER 1" is installed in the compressed air line after the air receiver. The AIR-SAVER 1" opens and closes the air supply to the factory, based on customer specific working shifts.

PRODUCT FEATURES

A typical compressed air system has air loss through pipe work connections, leaking float type drains etc.

The AIR-SAVER 1" will open the ball valve at the beginning of a working shift and close the ball valve when the working shift is over. From that point on, all compressed air will remain in the air receiver until the next working shift, rather than being lost through leakages.

The clever and versatile programming feature allows for customer specific settings and is totally adaptable to the working hours of each individual factory.

The AIR-SAVER 1" can be installed in all pipe line systems up to 1". Remote switching kits are available to operate the AIR-SAVER 1" from a distance.

COMMERCIAL BENEFITS

- At least one air receiver's worth of compressed air savings per day
- No unnecessary compressor start-up during periods when compressed air is not required
- Compressor, dryer and filter activities are reduced during factory closing hours
- Possibility to shut of parts of the pipe line system where compressed air is not needed continuously
- Language selection feature (English, German, Spanish, French and Dutch)
- Each individual day can be programmed according to specific working day shift requirements
- Time programmed or remote controlled
- Manual valve opening and closing possible, in case of a power failure
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Microprocessor controlled (7 day program feature - multiple cycles possible each day)
- Extended programming features relating to valve open and close cycles (100)
- Slow ball valve rotation 90° in 30 seconds to avoid "water-hammer" when opening or closing
- Stainless steel ball, valve is nickel plated brass
- Battery saves the installation set-up during power failure
- Battery life indication in the display
- Compact design - Easy to install

PRODUCT DIMENSIONS

Manual valve opening and closing possible, in case of a power failure

PRODUCTS SPECIFICATIONS

Supply voltage options	115VAC or 230VAC 50/60 Hz
Power consumption	Approx. 7W during cycle rotation
Opening / Closing duration	30 sec. / 90°
Min./Max. medium temperature	34 - 212 °F
Min./Max. ambient temperature	34 - 140 °F
Valve	Nickel plated brass with stainless steel rotating ball
Connection	1" NPT
Min./Max. system pressure	0 to 230 psi
Manual override	yes
Environmental protection	NEMA13 (IP54)
Indicators	LCD indicating program and current time
Timer display	24 Hours
Battery	4 x AAA mini penlight batteries

Built-in quartz controlled timer with LCD display

Remote control option

1" Stainless steel rotating ball

Chapter 6

AIR-SAVER 2"

Compressed air energy saver

The AIR-SAVER 2" is installed in the compressed air line after the air receiver.

The AIR-SAVER 2" opens and closes the air supply to the factory, based on customer specific working shifts.

PRODUCT FEATURES

A typical compressed air system has air loss through pipe work connections, leaking float type drains etc.

The AIR-SAVER 2" will open the ball valve at the beginning of a working shift and close the ball valve when the working shift is over. From that point on, all compressed air will remain in the air receiver until the next working shift, rather than being lost through leakages.

The clever and versatile programming feature allows for customer specific settings and is totally adaptable to the working hours of each individual factory.

The AIR-SAVER 2" can be installed in all pipe line systems up to 2". Remote switching kits are available to operate the AIR-SAVER 2" from a distance.

COMMERCIAL BENEFITS

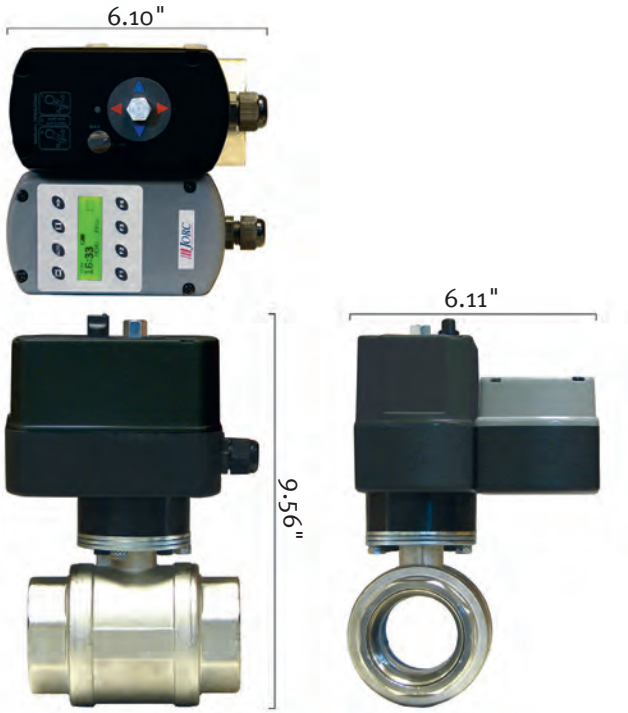
- At least one air receiver's worth of compressed air savings per day
- No unnecessary compressor start-up during periods when compressed air is not required
- Compressor, dryer and filter activities are reduced during factory closing hours
- Possibility to shut of parts of the pipe line system where compressed air is not needed continuously
- Language selection feature (English, German, Spanish, French and Dutch)
- Each individual day can be programmed according to specific working day shift requirements
- Time programmed or remote controlled
- Manual valve opening and closing possible, in case of a power failure
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Microprocessor controlled (7 day program feature - multiple cycles possible each day)
- Extended programming features relating to valve open and close cycles (100)
- Slow ball valve rotation 90° in 105 seconds to avoid water-hammer when opening or closing
- Stainless steel ball, valve is nickel plated brass
- Battery saves the installation set-up during power failure
- Battery life indication in the display
- Compact design - Easy to install

Chapter 6

PRODUCT DIMENSIONS



Manual valve opening and closing possible, in case of a power failure

PRODUCTS SPECIFICATIONS

Supply voltage options	115VAC or 230VAC 50/60 Hz
Power consumption	Approx. 9W during cycle rotation
Opening / Closing duration	105 sec. / 90°
Min./Max. medium temperature	34 - 212 °F
Min./Max. ambient temperature	34 - 140 °F
Valve	Nickel plated brass with stainless steel rotating ball
Connection	2" NPT
Min./Max. system pressure	0 to 230 psi
Manual override	yes
Environmental protection	NEMA13 (IP54)
Indicators	LCD indicating program and current time
Timer display	24 Hours
Battery	4 x AAA mini penlight batteries

Built-in quartz controlled timer with LCD display

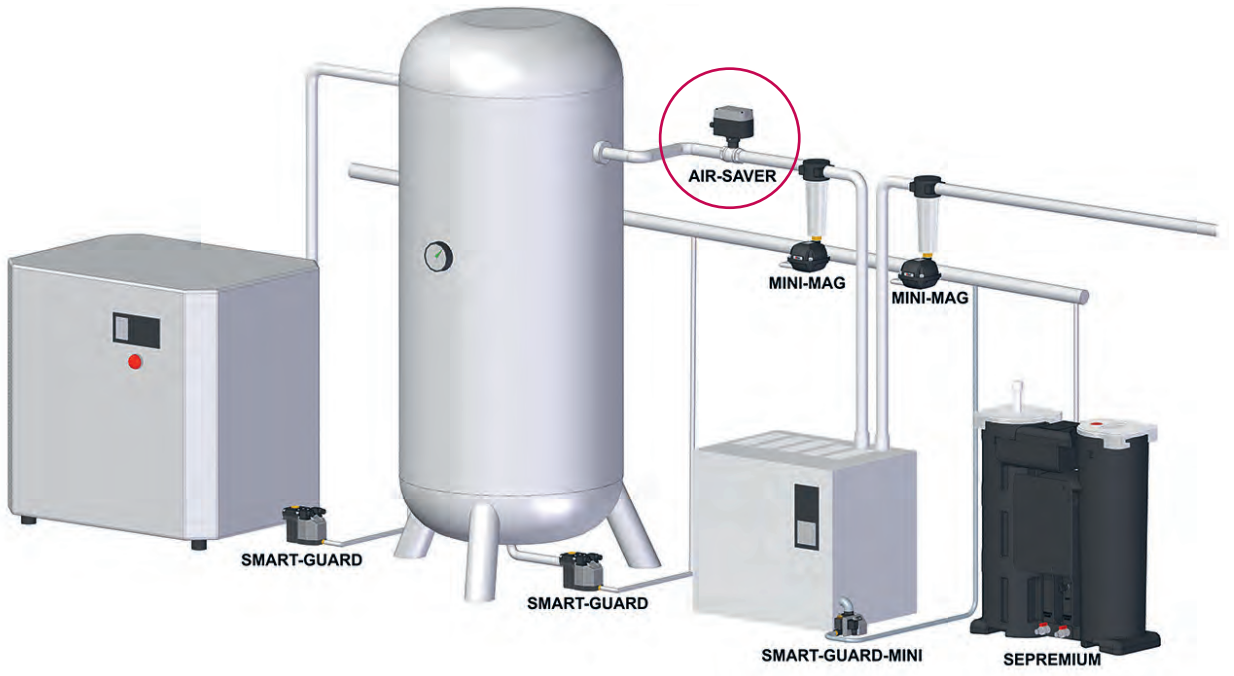
Remote control option

2" Stainless steel rotating ball

Chapter 7

INSTALLATION

POSITIONING



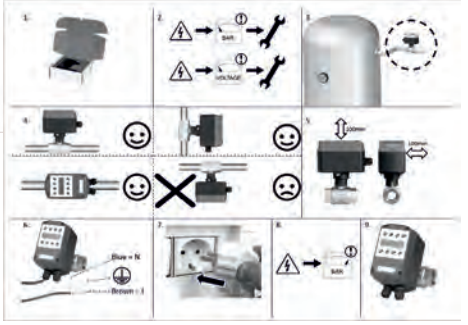
The AIR-SAVER typically gets installed after the receiver (air tank). Once closed, it retains the compressed air built up in the receiver and ensures that the compressor does not run unnecessarily during moment when it is not required.

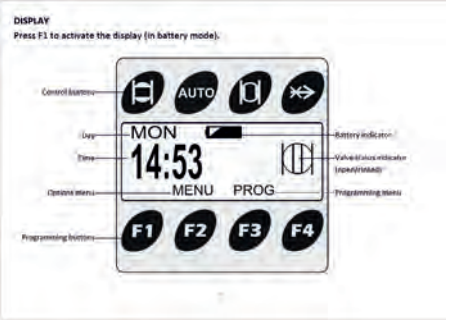
Furthermore, the AIR-SAVER can be used to section off certain compressed air pipelines if not required.

INSTALLATION

Detailed instruction manuals will guide you through the simple installation procedure. Our instruction manuals are designed with many illustrations and simple text.

In addition, the JORC instruction manuals are set up in various languages.





Chapter 7

ACCESSORIES

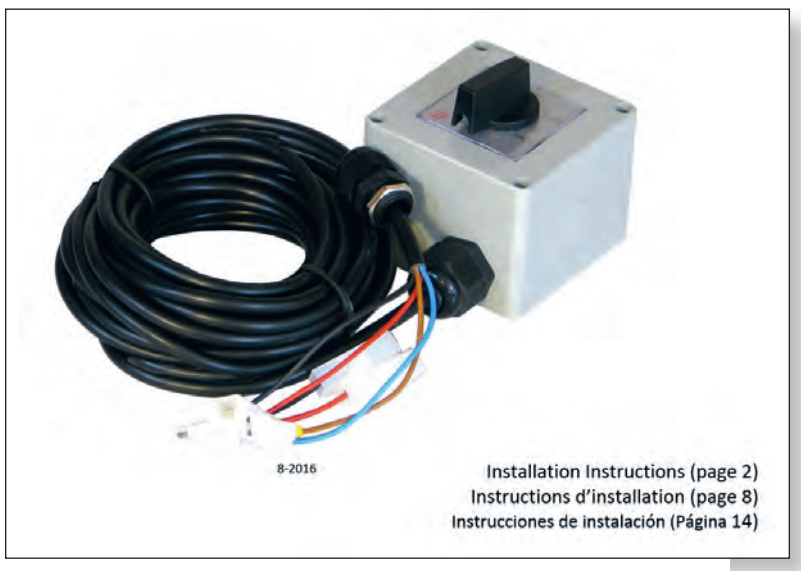
REMOTE SWITCHING KIT

The air pipe line is often positioned high up, under the ceiling. Attending to the AIR-SAVER to manually open or close the valve can be time consuming in this configuration. To simplify this procedure we offer a remote switching kit with 16 ft. cable.

The remote switching kit allows for open/close control at eye height.

JORC can supply the AIR-SAVER pre-wired to the remote switching kit or it can be ordered as a separate item. Connecting and installing the remote switching kit is a simple and straightforward procedure for which we have designed an instruction manual too.

Replacement valves kits are available



Notes:

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JORC

OIL/WATER SEPARATION

PURO-CT

COMPACT TECHNOLOGY

RELIABLE

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

oil/water separation

INDEX

Version 2018

JORC Industrial is a global condensate management specialist of Dutch origin offering condensate drains, oil water separators and air saving equipment to distributors, dealers and OEM's in more than 100 countries. JORC Industrial is dedicated to setting the standard in helping its customers manage their condensate management requirements.

CONDENSATE MANAGEMENT SPECIALIST

Chapter 1

INTRODUCTION TO COMPRESSOR LUBRICANTS

Compressed air is the fourth energy utility after electricity, gas and water. Few production lines in the world would run without it. The majority of compressed air is provided by oil-injected screw compressors and the compressor oils play a major role in generating clean compressed air in an energy-efficient way. They account for less than one percent of the cost of compressor operation; however, the right oil helps save a considerable part of the total cost.

The oil has three key functions:

1. It ensures that the rotors and rotor bearings in the compressor are lubricated;
2. It dissipates the heat of the compression process;
3. It forms a sealing film at the seal edge between the rotor and the compressor casing.

Two key factors play a major role in compressed air generation: high availability of clean compressed air and compressed air generation at reasonable cost. Newly developed synthetic compressor oils have proven their worth in practice. Long oil lifetime, high efficiency and a very low oil content in the compressed air combine to reduce operating costs considerably.

For efficient and trouble-free production, an oil with long service life and good temperature behavior with low residual content in the compressed air is required. However, there are considerable differences between the performances of different compressor oils.

A well-formulated synthetic product has considerable advantages over mineral oil-based products and particularly stands out for optimum oxidation protection, good adhesion and low residue formation.

However there is a consequence, the modern lubricants create an emulsification in the condensate that does not separate fast enough for gravity type separators. A JORC adsorption type separator offers a guaranteed separating solution.

ADDITIVES & DETERGENTS

Oil additives are vital for the proper lubrication and prolonged use of air compressor oil. Without many of these, the oil would become contaminated, break down, leak out, or not properly protect compressor parts at all operating temperatures.

Just as important are additives for oils used inside gearboxes, automatic transmissions, and bearings.
Some of the most important additives include those used for viscosity and lubricity, contaminant control, for the control of chemical breakdown, and for seal conditioning.

Some additives permit lubricants to perform better under severe conditions, such as extreme pressures and temperatures and high levels of contamination.

EFFICIENT LUBRICATION REQUIRES EFFICIENT SEPARATION

COMPRESSED AIR CONDENSATE

During the process of compressing air, atmospheric air along with water vapor and atmospheric contaminants (hydrocarbon, dust particles or chemical vapors), are drawn into the compressor intake.

Additionally, the compression chambers of most compressors require oil for lubrication, sealing and cooling. Once compressed, the air flows into an after cooler to remove the heat of compression. As the air cools in the after cooler, water and hydrocarbon vapors will condense.

Additional condensation takes place as the air is further cooled in the piping and air dryers.

Environmental regulations strictly prohibit the discharge of oily wastes and chemicals, including the condensate drained from a compressed air system. Because of these requirements, municipalities regulate the discharge of compressor condensate to surface water, wastewater treatment facilities, and sanitary sewers.

Compressor condensate must therefore be either collected or treated prior to disposal. An oil/water separator can be used here to remove the oil from the condensate. Untreated condensate disposal is costly as your customer will be charged by volume. As most of the untreated condensate is water it makes financial sense to separate the lubricant from the condensate by means of an oil/water separator.

Fully synthetic | Polyglycol based | Mineral oil | Semi synthetic | Separated condensate

WHY INSTALL AN OIL/WATER SEPARATOR?

Condensate is a by-product of air compressors. It is a mixture of oil and water with particles and hydrocarbons that have been concentrated during the compression process.

This mixture of oil and water is classified as hazardous industrial waste. Environmental laws and regulations prohibit the discharge of untreated compressor condensate into foul sewers.

After the oily condensate has been efficiently removed from the compressed air system by a reliable JORC drain, it cannot be discharged directly to the foul sewer without first having the oil content reduced to within legal disposal limits.

Considering that compressor condensate consists of approximately 95% water, it makes financial sense to separate the oil from the condensate prior to the waste is disposed.

Every end-user that operates a compressed air system should have a (condensate) waste management program (ISO 14000) in place not only to abide to laws and regulations but to also practice ecological responsibility.

JORC's PURO-CT Oil/Water Separators are a reliable, effective, efficient and above all an environmental solution.

Chapter 2

WILL ANY OIL/WATER SEPARATOR DO?

Back in the 1980's the lubricant was much more buoyant versus water and as such floated to the water surface much quicker than current lubricants do. Oil/water separators that were developed to work on this gravity type separation might have performed better in the days **prior to the introduction of "commercial internet...".**

These days these old-style oil/water separators simply do not perform to current environmental laws and regulations because the modern oils form an emulsion in the condensate which will not separate on gravity.

The old-style (gravity separation/weir type) separators were also developed back in the day when **ergonomic laws** were not considered, or did not exist. For instance, the weight of the saturated elements exceed current ergonomic laws and regulations. Carrying out routine element replacement activities therefor carries a potential risk to the servicing engineer.

In the year 2018 it is critical to understand that modern day lubrications require modern day oil/water separation technology solutions. JORC is constantly in direct contact with compressor lubrication manufacturers to understand and follow the lubricant development based on the demands made be compressor manufacturers.

The PURO-CT technology is based on these current and evolving developments.

JORC'S GUARANTEE

Thousands of JORC oil/water separators are installed worldwide.

The PURO-CT elements are designed and manufactured to successfully separate compressor lubricant from condensate.

Even application specific tailor made elements are designed and manufactured to successfully operate in unique circumstances whereby possible external influences require to be considered.

There appears to be no application that cannot get resolved with the PURO-CT range of elements combined with JORC's in-house application and product knowledge.

HOW IS THE PURO-CT CONSTRUCTED?

The robust injection-die-casted housing is made from PPC material and the design is based on JORC's familiar two tower principle.

We apply brass thread inserts to ensure a secure piping installation without running the risk of easy damaging of the threads, like you can see when applying plastic threads.

The PURO-CT models have two high performance elements consisting of one poly-propylene fiber element and one activated carbon element.

The test valve and test bottle offer simple routine sample taking and this give you a visual indication of the output performance.

HIGH PERFORMANCE ELEMENTS

The clever lubricant adsorbing elements of the PURO-CT are designed to perform in the widest range of applications.

The chosen element fibers have been specially selected and treated to maximize its supreme adsorbing performance.

We have been able to design the PURO-CT elements in to a multi-stage configuration, offering an increased filtration efficiency and easy servicing procedures.

Ergonomic laws and legislation have been taken into account during the R&D of the elements.

Chapter 3

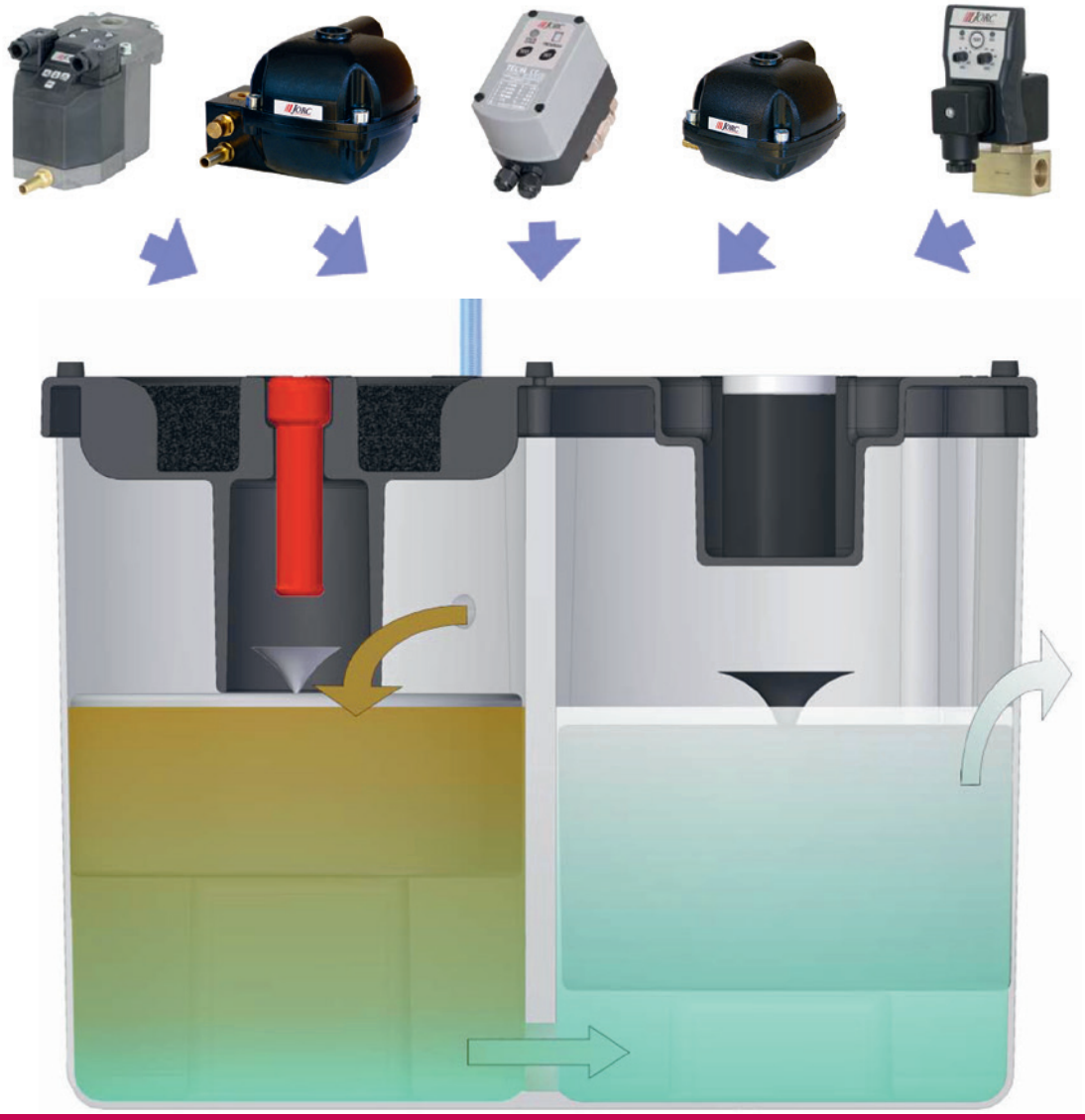
PRINCIPLE WORKINGS OF THE PURO-CT

Condensate may be discharged in to the PURO-CT by any type of condensate drain. The depressurizing chamber neutralizes the pressure.

As condensate flows in to the PURO-CT, the oil is filtered out through various filtration elements. The PURO-CT uses adsorption filter materials, instead of a weir, to remove the bulk of the oil. The life of the PURO-CT first stage filtration element is determined by the amount of oil removed, not by the amount of condensate treated. The PURO-CT carbon element is utilized only for final purification purposes and ensures that the targeted values of <10 ppm are achieved.

The professional design of the PURO–CT is incredibly compact and the elements are lightweight, maximizing the ergonomic factors when carrying out routine maintenance. The elements are designed to combine various types of adsorption technologies to achieve less than 10 ppm oil residue values at the output stage.

Final separation stage includes specially selected activated carbon to polish out the remaining contaminants.



COMPACT TECHNOLOGY

STANDARD COLOR

The standard color combination is grey towers and a black lid.

COLOR OPTIONS

The PURO-CT can be supplied in a branded/private labeled version. Color options of the lid is part of the branding features.

Chapter 4

PURO-CT-DISTRIBUTOR

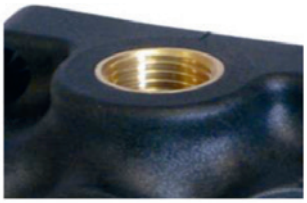
The PURO-CT-DISTRIBUTOR is designed to distribute condensate into two or three oil/water separators.

This way you can combine more PURO-CT units to match up against larger compressor systems.

As condensate flows into the PURO-CT-DISTRIBUTOR the condensate flows evenly into the connected oil/water separators.
This way the elements of the separator are equally loaded with condensate to treat.

The PURO-CT-DISTRIBUTOR has a 1" condensate inlet and three 1/2" outlets.

The PURO-CT-DISTRIBUTOR is supplied complete with the required fixings.



Brass connections, offering you a secure fixing during installation.

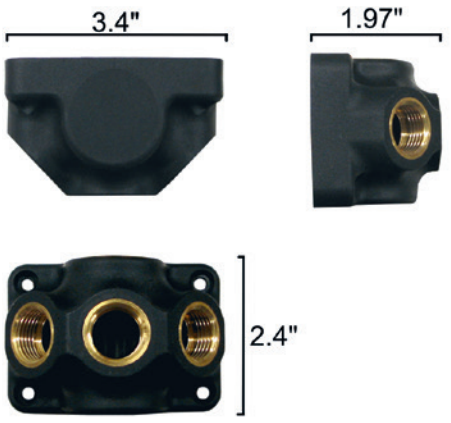
The PURO-CT-Distributor is supplidd with the requierd fixings.

A typical PURO-CT DISTRIBUTOR installation

PRODUCT SPECIFICATIONS

Number of separators that can be hooked up	3
Inlet connection	1"
Outlet connection	1/2" (3 off)
Total recyclable	Yes
Color	Black
Installation kit included	Yes

DIMENSIONS



EXPANDED VIEW

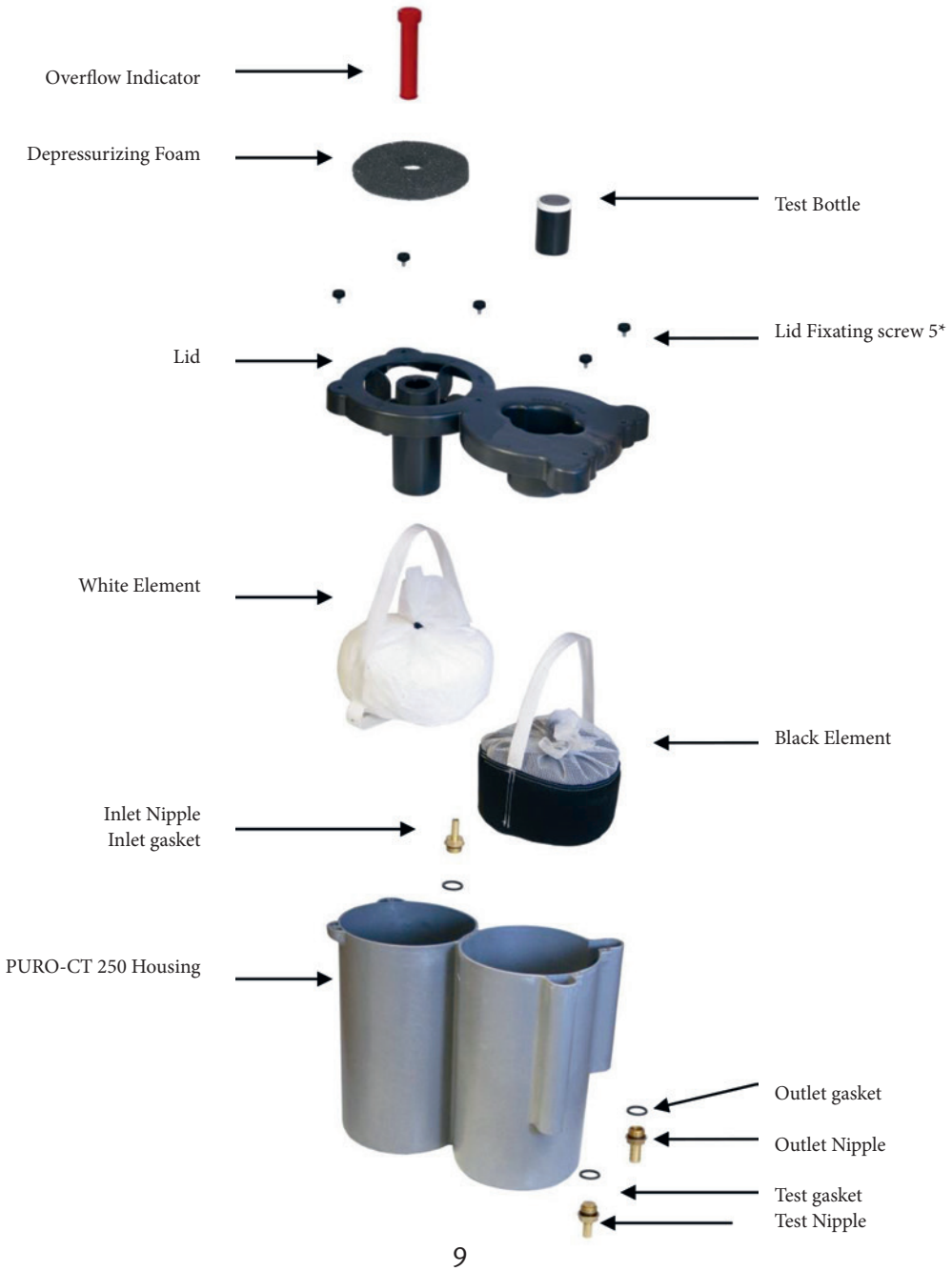
The PURO-CT models 125, 250 and 600 are designed to operate the same way. Differences are physical sizing to account for the various compressor capacities and condensate flows.

A key feature of the PURO-CT is the simplicity and ease of servicing.

The elements are designed to be replaced/serviced in a time efficient way. They are also designed to be as light-weight as possible.

Brass threads add to the professional finish of the PURO-CT.

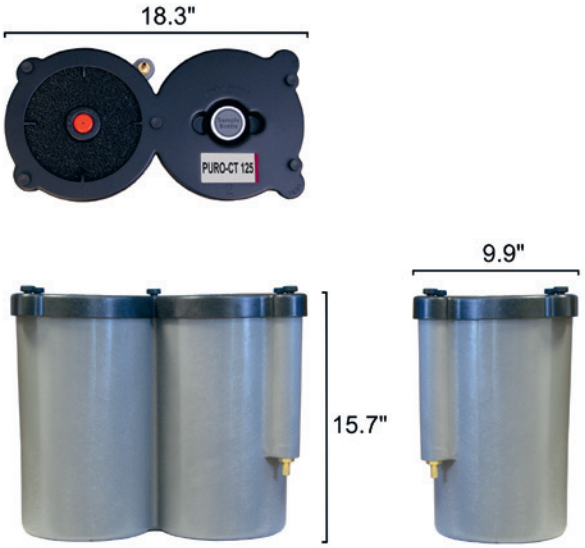
As standard the PURO-CT package includes an installation clothing kit including a breathing mask, to protect your service engineer from carbon dust, we also include the functional condensate sample bottle for routine inspection and finally a step by step instruction manual to ensure a proper installation.



Chapter 5

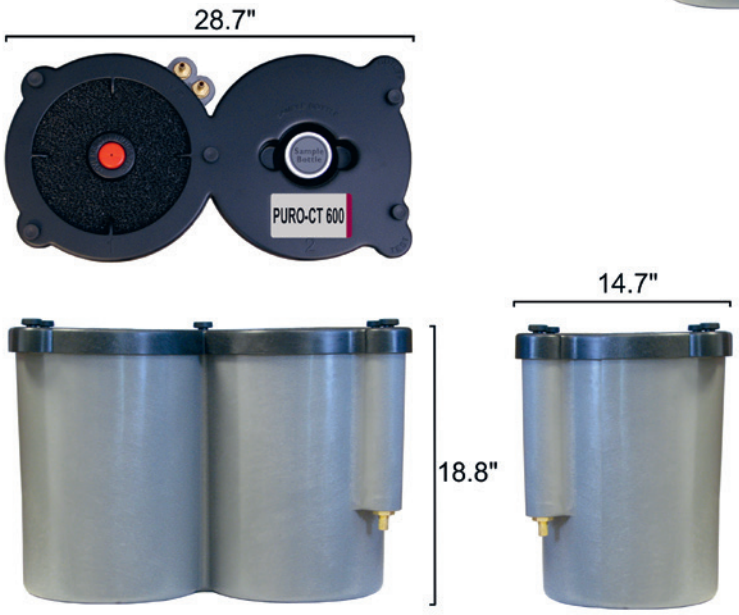
PURO-CT DIMENSIONS

PURO-CT 125



PURO-CT 250

PURO-CT 600



PURO-CT CAPACITY CHART

MODELS	PURO CT- 125	PURO CT- 250	PURO CT-600
Max. compressor capacity (CFM)	125	250	600*
Maximum oil adsorption (Gallons)	0.8	1.8	4.0
Inlet connections	1/2”	1/2”	1/2”
Outlet connection	1/2”	1/2”	1/2”
Test valve	yes	yes	yes
Overflow indicator	yes	yes	yes
Target output value	‹10 ppm	‹10 ppm	‹10 ppm
Weight (Packaged)	14 lbs	22 lbs	37 lbs
Pallet quantity	30 pieces	20 pieces	12 pieces
Housing material	PPC	PPC	PPC
Total recyclable	yes	yes	yes
Housing color	Grey	Grey	Grey
Lid color	Black	Black	Black
Separation of:			
Mineral lubricants	yes	yes	yes
Synthetic lubricants	yes	yes	yes
Stabile condensate emulsions	yes	yes	yes
Polyglycol, Roto-Inject, Sigma Mol**	yes	yes	yes

* Consult JORC for larger capacities, see page 8 for the PURO-CT-DISTRIBUTOR details.

** Consult JORC for special elements and/or 24/7 applications.
Roto-inject, Ultracoolant and Sigma Mol are oil brands available in the market for compressor lubrication.

Consult JORC for private labeling.

EASY MAINTENANCE

The initial installation of the **JORC PURO-CT** oil/water separator will reward you with a high performing separation performance. Thereon after the maintaining and servicing of the oil/water separator is required. The replacement of the elements is light and simple.

JORC also offer a condensate self-test kit that allows you to perform condensate separating tests, **please see page 12 for details**.

Chapter 6

CONDENSATE SELF-TEST-KIT

JORC offers an in-house laboratory test kit to analyze and determine the success rate of our oil/water separators prior to sale and/or installation.

Potential complicated compressor systems, i.e. 2 different compressor brands with different lubricants, make it difficult to determine which elements to use.
This self-test kit will enable you to determine the right unit and to demonstrate its effectiveness to your customer prior to installation.

The test kit consists of a universal kit for all types of lubricants, any type of compressor etc.

The test is quite simple to carry out and a detailed instruction manual is provided. After carrying out your test we advise if tailor made elements are required.

If your customer has a failing old style separator, this is an ideal tool to apply to prove the PURO-CT will solve the problem.

TAILOR-MADE ELEMENTS

The PURO-CT elements offer supreme separation performance in applications where other separators are failing to separate the lubricant from condensate.

Applications where your customer might have two different compressor models running on two different types of lubricant forms no problem for the PURO-CT separators.

When a stabile emulsion flow through the separator we have limited time to extract the lubricant from the condensate.

At JORC we are able to modify/adapt the polymer fibers to suit specific separating requirements. In short, we are able to minimize the contact time required to adsorb the lubricant.

You will be given a specific part number relating to a special separating case. This way you will always apply the correct elements in the right application.

Chapter 6

MANUALS

The installation is as good as the instruction manual!

The installation procedure of the PURO-CT separators is quite straight forward.
Nevertheless we have designed the instruction manuals with step by step pictures of every aspect involved in getting your PURO-CT up and running.

3/2017

Installation & Maintenance Instructions (Page 2)
Instructions d'Installation & Entretien (Page 7)
Instrucciones de instalación & Mantenimiento (Página 11)

TECHNICAL SPECIFICATIONS

Max. compressor capacity	3 m³/min *(based on a 8h. Shift)*	7 m³/min *(based on a 8h. Shift)*	15 m³/min *(based on a 8h. Shift)*
Max. oil adsorption elements	Approx. 3 litres	Approx. 7 litres	Approx. 15 litres
Inlet connection	1" ½" BSP	1" ½" BSP	2" ½" BSP
Outlet connection	1" ½" BSP	1" ½" BSP	1" ½" BSP
Test drain	Yes	Yes	Yes
Overflow indicator	Yes	Yes	Yes
Housing material	PPC	PPC	PPC
Total recyclable	Yes	Yes	Yes
Mineral lubricants	Yes	Yes	Yes
Synthetic lubricants	Yes	Yes	Yes
Stabile condensate emulsions	Yes *(consult factory)*	Yes *(consult factory)*	Yes *(consult factory)*
Polyglycol	Yes *(consult factory)*	Yes *(consult factory)*	Yes *(consult factory)*

6

Chapter 7

PURO-CT SERVICE PACKS

The PURO-CT service pack includes:

- Two elements.
- Plastic waste bags for disposing the saturated elements.
- Optionally available:
  clothing kit comprising of
  a mouth mask
  plastic gloves
  plastic overall.

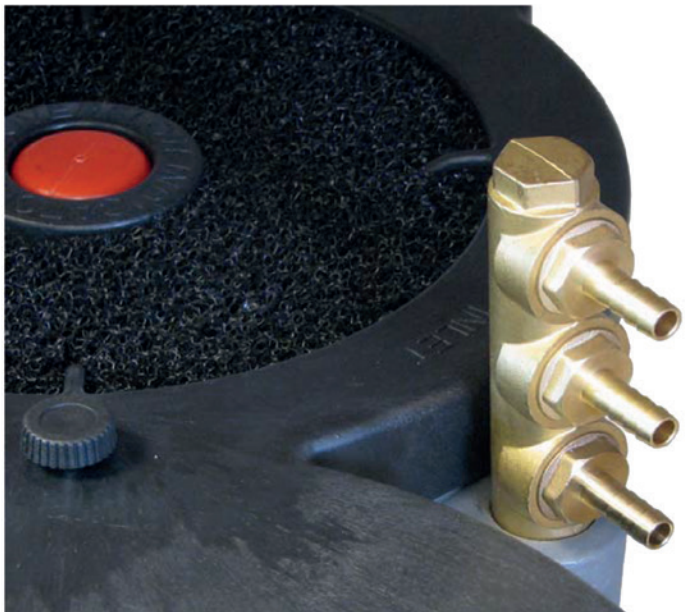
Light weight elements for easy servicing!

MULTI-INLET ADAPTER

The Multi-inlet adapter allows for up to three additional condensate inlet options.

The brass adapter threads in to the brass inlet of the PURO-CT.

To simplify installation, we include the brass hose connection nipples also.



Chapter 7

FUNCTIONAL SAMPLE BOTTLE

The JORC oil/water separators include a functional sample bottle for visual routine inspection of the output quality.

This visual inspection sample bottle offers the service engineer an indication of the output performance.

The sample bottle kit is positioned in the tower lid.

ADAPTERS

Adapter, nipples and hose connectors applied on all JORC's separators are also available as stand-alone products.

REPLACEMENT ELEMENTS

Replacement elements of virtually all competitive oil/water separator models are available.

These are produced with JORC's high quality nettings and fillings.

Notes:

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

JORC Industrial LLC.
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USA - DE 19720 New Castle

Phone: 302 395 0310

info@jorc.com
www.jorc.com

JORC

OIL/WATER SEPARATORS

SEPREMIUM

ENVIRONMENT SAFEGUARD

RELIABLE

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

Oil/water separation

Version 01-2020

JORC Industrial is a global condensate management specialist of Dutch origin offering condensate drains, oil water separators and air saving equipment to distributors, dealers and OEM's in more than 100 countries. JORC Industrial is dedicated to setting the standard in helping its customers manage their condensate management requirements.

CONDENSATE MANAGEMENT SPECIALIST

Chapter 1

OIL/WATER SEPARATION

A typical compressed air system will produce thousands of gallons of oily, contaminated condensate every year. Environmental regulations strictly prohibit disposing of this condensate without proper treatment to remove the oil.

Traditional solutions for condensate disposal have been to:

- **Collect the condensate and have it trucked away periodically by a waste disposal company.** This not only requires storage of the hazardous condensate on site, posing a health and safety risk, it is very costly as disposal charges can be up to several dollars per gallon.

- **Use a settling tank to separate the oil and water by gravity, then using carbon to filter the remaining water.** Advances in compressor lubricants have made this technology obsolete. Modern compressor lubricants have a specific gravity similar to water and because of this, they form an emulsified oil/water mixture that cannot be separated by gravity.

INTRODUCING THE SEPREMIUM RANGE

JORC Industrial has developed a condensate cleaner that works anywhere, anytime, with virtually any condensate, and with any type of condensate drain. Free yourself from outdated oil/water separators that are health hazards, provide limited performance and are costly to operate. Experience the difference of JORC's advanced technology. Experience the SEPREMIUM.

CONDENSATE TREATMENT TECHNOLOGY

JORC welcomes you to the future of condensate treatment technology with the advanced design of the SEPREMIUM condensate cleaner.

Using a specially treated, adsorbent, polypropylene media, the JORC SEPREMIUM condensate cleaners efficiently and effectively separate all compressor lubricants without the need for condensate storage tanks, settling chambers or costly disposal. JORC has once again set the standard for modern condensate management.

Don't let your condensate harm the environment. SEPREMIUM condensate cleaners are a cost effective and reliable solution to meet environmental regulations for condensate treatment and ensure your compliance with ISO 14000.

Chapter 2

INTRODUCTION TO COMPRESSOR LUBRICANTS

Compressed air is the fourth energy utility after electricity, gas and water. Few production lines in the world would run without it. The majority of compressed air is provided by oil-injected screw compressors and the compressor oils play a major role in generating clean compressed air in an energy-efficient way. They account for less than one percent of the cost of compressor operation; however, the right oil helps save a considerable part of the total cost.

The oil has three key functions:

1. It ensures that the rotors and rotor bearings in the compressor are lubricated;
2. It dissipates the heat of the compression process;
3. It forms a sealing film at the seal edge between the rotor and the compressor casing.

Two key factors play a major role in compressed air generation: high availability of clean compressed air and compressed air generation at reasonable cost. Newly developed synthetic compressor oils have proven their worth in practice. Long oil lifetime, high efficiency and a very low oil content in the compressed air combine to reduce operating costs considerably.

For efficient and trouble-free production, an oil with long service life and good temperature behavior with low residual content in the compressed air is required. However, there are considerable differences between the performances of different compressor oils.

A well-formulated synthetic product has considerable advantages over mineral oil-based products and particularly stands out for optimum oxidation protection, good adhesion and low residue formation.

However there is a consequence, the modern lubricants create an emulsification in the condensate that does not separate fast enough for gravity type separators. A JORC adsorption type separator offers a guaranteed separating solution.

ADDITIVES & DETERGENTS

Oil additives are vital for the proper lubrication and prolonged use of air compressor oil. Without many of these, the oil would become contaminated, break down, leak out, or not properly protect compressor parts at all operating temperatures.

Just as important are additives for oils used inside gearboxes, automatic transmissions, and bearings.
Some of the most important additives include those used for viscosity and lubricity, contaminant control, for the control of chemical breakdown, and for seal conditioning.

Some additives permit lubricants to perform better under severe conditions, such as extreme pressures and temperatures and high levels of contamination.

EFFICIENT LUBRICATION REQUIRES EFFICIENT SEPARATION

COMPRESSED AIR CONDENSATE

During the process of compressing air, atmospheric air along with water vapor and atmospheric contaminants (hydrocarbon or chemical vapors), are drawn into the compressor intake.

Additionally, the compression chambers of most compressors require oil for lubrication, sealing and cooling. Once compressed, the air flows into an after cooler to remove the heat of compression. As the air cools in the after cooler, water and hydrocarbon vapors will condense.

Additional condensation takes place as the air is further cooled in the piping and air dryers.

Environmental regulations strictly prohibit the discharge of oily wastes and chemicals, including the condensate drained from a compressed air system. Because of these requirements, municipalities regulate the discharge of compressor condensate to surface water, wastewater treatment facilities, and sanitary sewers.

Compressor condensate must therefore be either collected or treated prior to disposal. An oil/water separator can be used here to remove the oil from the condensate. Untreated condensate disposal is costly as your customer will be charged by volume. As most of the untreated condensate is water it makes financial sense to separate the lubricant from the condensate by means of an oil/water separator.

Fully synthetic

Polyglycol based

Mineral oil

Semi synthetic

Separated condensate

WHY INSTALL AN OIL/WATER SEPARATOR?

Condensate is a by-product of air compressors. It is a mixture of oil and water with particles and hydrocarbons that have been concentrated during the compression process.

This mixture of oil and water is classified as hazardous industrial waste. Environmental laws and regulations prohibit the discharge of untreated compressor condensate into foul sewers.

After the oily condensate has been efficiently removed from the compressed air system by a reliable JORC drain, it cannot be discharged directly to the foul sewer without first having the oil content reduced to within legal disposal limits.

Considering that compressor condensate consists of approximately 95% water, it makes financial sense to separate the oil from the condensate prior to the waste is disposed.

Every end-user that operates a compressed air system should have a (condensate) waste management program (ISO 14000) in place not only to abide to laws and regulations but to also practice ecological responsibility.

JORC's SEPREMIUM oil/water separators are a reliable, effective, efficient and above all an environmental solution.

Chapter 3

WILL ANY OIL/WATER SEPARATOR DO?

Back in the 1980's the lubricant was much more buoyant than water and as such floated to the water surface much quicker than current lubricants do. Oil/water separators that were developed to work on this gravity type separation might have performed better in the days **prior to the introduction of "commercial internet…".**

These days old-style oil/water separators simply do not perform to current environmental laws and regulations because the modern oils form an emulsion in the condensate which will not separate on gravity.

The old-style (gravity separation/weir type) separators were also developed back in the day when **ergonomic laws** were not considered, or did not exist. For instance, the weight of the saturated elements exceed current ergonomic laws and regulations. Carrying out routine element replacement activities therefor carries a potential risk to the servicing engineer.

These days it is critical to understand that modern day lubrications require modern day oil/water separation technology solutions. JORC is constantly in direct contact with compressor lubrication manufacturers to understand and follow the lubricant development based on the demands made by compressor manufacturers.

The SEPREMIUM technology is based on these current and evolving developments.

JORC'S GUARANTEE

Thousands of JORC oil/water separators are installed worldwide.

The SEPREMIUM elements are designed and manufactured to successfully separate compressor lubricant from condensate.

Even application specific tailor made elements are designed and manufactured to successfully operate in unique applications where possible external influences require to be considered.

There appears to be no application that cannot get resolved with the SEPREMIUM range of elements combined with JORC's in-house application and product knowledge.


Allgemeine bauaufsichtliche Zulassung

22.12.2017

Zulassungsnummer:
Z-83.5-27

Antragsteller:
JORC Industrial BV
Pretoriastraat 28
6412 NH HEERLEN
NIEDERLANDE

Geltungsdauer
vom: 22. Dezember 2017
bis: 20. März 2023

Zulassungsgegenstand:
Anlage zur Behandlung von Kompressorenkondensat Typ SEPREMIUM

Der oben genannte Zulassungsgegenstand wird hiermit allgemein bauaufsichtlich zugelassen.
Diese allgemeine bauaufsichtliche Zulassung umfasst acht Seiten und elf Anlagen.
Diese allgemeine bauaufsichtliche Zulassung ersetzt die allgemeine bauaufsichtliche Zulassung Nr. Z-83.5-27 vom 26. Juli 2017.

DIBt

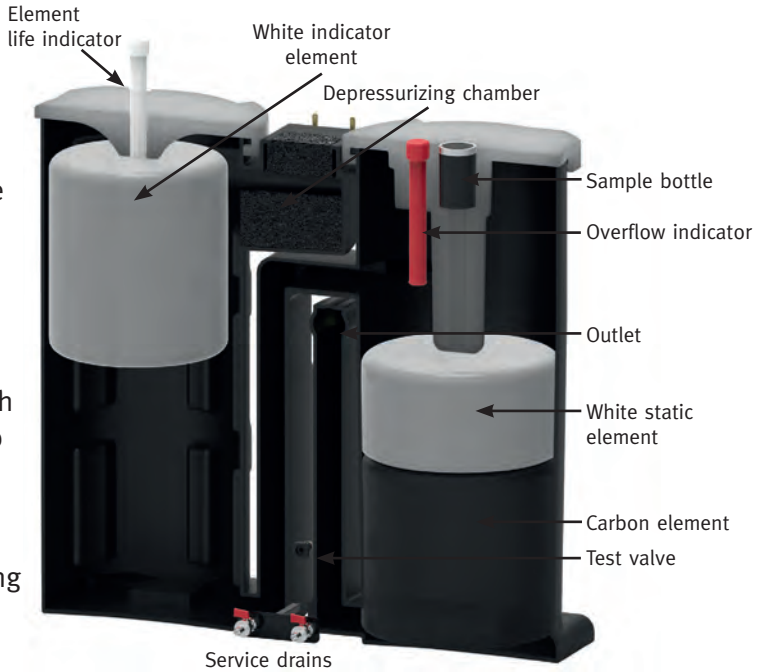
HOW IS THE SEPREMIUM CONSTRUCTED?

The robust rotor-die-casted housing is made from Poly-Ethylene (PE) material and the design is based on JORC's familiar two tower principle.

We apply brass thread inserts to ensure a secure piping installation without running the risk of easy damaging of the threads, typical when using plastic threads.

The SEPREMIUM models have three high performance elements consisting of two poly-propylene fiber elements and one activated carbon element.

There is an element life indicator offering you a visual guidance as to when to replace the elements with new ones.



HIGH PERFORMANCE ELEMENTS

The clever lubricant adsorbing elements of the SEPREMIUM are designed to perform in the widest range of applications.

The chosen element fibers have been specially selected and treated to maximize its supreme adsorbing performance.

We have been able to design the SEPREMIUM's elements in to a multi-stage configuration, offering an increased filtration efficiency and easy servicing procedures.

Ergonomic laws and legislation have been taken into account during the R&D of the elements.

Chapter 4

SEPREMIUM 70

Oil/water separator for compressor capacities up to 70 CFM

As condensate flows in to the SEPREMIUM, the oil is filtered out through various filtration elements.

The oil adsorbing elements combine various types of adsorption technologies to achieve less than 10 ppm oil residue values at the output stage.

PRODUCT FEATURES

The SEPREMIUM 70 is a cost effective high performance solution for small compressed air applications.

The SEPREMIUM 70 drops in to its holding bracket (supplied as standard). Servicing involves disconnecting the inlet and outlet, removing the separator and placing the new unit in the holding bracket.

There are no separate replacement elements and as such servicing is a quick and above all a clean process.

Brass connections offer a quick coupling installation feature.

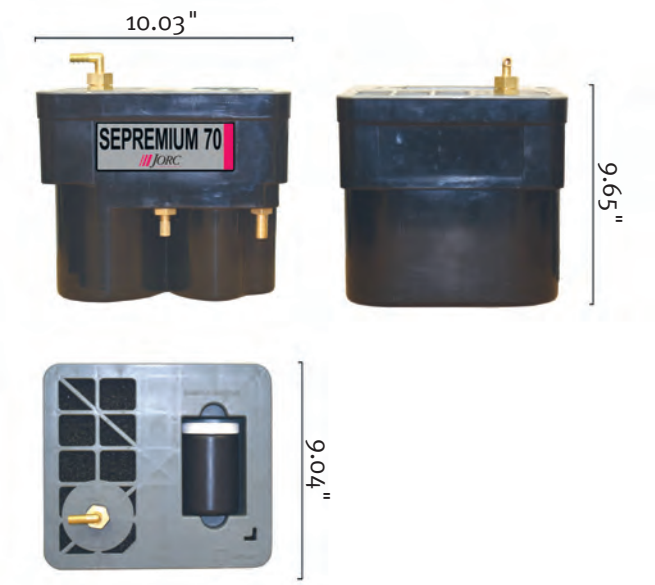
COMMERCIAL BENEFITS

- Separation of all types of compressor lubricants
- Compact design
- Test valve and sample bottle to test oil ppm residue included as a standard
- The SEPREMIUM does not incorporate a settling reservoir (no bacteria growth)
- Consult JORC for private labeling options

TECHNICAL ADVANTAGES

- High performance filtration materials applied
- Simple, fast and clean installation and maintenance procedure
- Successful separation of mineral oil, synthetic lubricants and stabile emulsions
- Relevant fixings and mounting bracket for wall mounting included
- Brass hose barb adapters for quick and easy installation

PRODUCT DIMENSIONS IN INCHES



Mounting bracket

PRODUCT SPECIFICATIONS

MODEL	**70**
Max. compressor capacity	70 CFM
Maximum oil adsorption	0.5 gallon
Inlet connections	1/2", with 10 mm hose barb adapter
Outlet connection	1/2", with 14 mm hose barb adapter
Test valve & sample bottle	yes
Service drain	no
Overflow indicator	no
Target output value	<10 ppm
Housing material	ABS
Total recyclable	yes
Housing color	black
Lid color	grey

Inlet connection

Outlet connection

Test valve

SEPARATION OF

Mineral lubricants	yes
Synthetic lubricants	yes
Stabile condensate emulsions	yes
Polyglycol, Roto-Inject, Sigma Mol*	yes

**Consult JORC for special elements and/or 24/7 applications.*

Roto-Inject and Sigma Mol are registered trade names of producers of compressor lubricants

Sample bottle included

Chapter 5

SEPREMIUM 130

Oil/water separator for compressor capacities up to 130 CFM

As condensate flows in to the SEPREMIUM, the oil is filtered out through various filtration elements.

The oil adsorbing elements combine various types of adsorption technologies to achieve less than 10 ppm oil residue values at the output stage.

PRODUCT FEATURES

Specially designed for compressed air applications from 70 to 130 CFM, the SEPREMIUM 130 oil/water separator is a simple and cost effective way to meet environmental regulations for condensate disposal.

With an advanced polypropylene adsorbent media and a carbon polisher, the SEPREMIUM 130 can separate virtually any condensate containing any compressor lubricant discharged from any type of condensate drain, and it does so without the need for a condensate settling tank or storage

SEPREMIUM oil/water separators are the most cost effective and reliable solution to meet environmental regulations for condensate treatment.

COMMERCIAL BENEFITS

- Separates all types of compressor lubricants
- Operates with all drain types (both timer controlled and level sensed)
- Compact design and small footprint, offering:
  - easy handling
  - flexible installation benefits
- Clothing kit included as standard
- Competitive pricing levels
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- High performance filtration materials applied
- Simple, fast and clean installation and maintenance procedure
- Successful separation of mineral & synthetic lubricants and stabile emulsions
- Test valve & sample bottle to test oil ppm residue included as standard
- Mounting bracket for wall mounting and multi inlet adapter optionally available
- Brass threaded inlet/outlet, ensuring a secure installation (hose barb adapters are included)

PRODUCT DIMENSIONS IN INCHES

The SEPREMIUM 130 shown with a multi-inlet adapter and wall mounting bracket (both are optionally available)

PRODUCT SPECIFICATIONS

ODEL	**130**
Max. compressor capacity	130 CFM
Maximum oil adsorption	1 gallon
Inlet connections	1/2", with 10 mm hose barb adapter
Outlet connection	1/2", with 14 mm hose barb adapter
Test valve & sample bottle	yes
Service drain	no
Overflow indicator	no
Target output value	‹10 ppm
Housing material	PE
Total recyclable	yes
Housing color	black
Lid color	grey

Test valve & sample bottle to test oil ppm residue included as standard

Brass inlet and outlet connections

SEPARATION OF

Mineral lubricants	yes
Synthetic lubricants	yes
Stabile condensate emulsions	yes
Polyglycol, Roto-Inject, Sigma Mol*	yes

**Consult JORC for special elements and/or 24/7 applications.*

Roto-Inject and Sigma Mol are registered trade names of producers of compressor lubricants

Replacement service elements

Chapter 6

SEPREMIUM 175 - 2500

Oil/water separator for compressor capacities 175 up to 2500 CFM

The SEPREMIUM range of oil/water separators separates oil from condensate, generated by compressed air systems.

The SEPREMIUM achieves efficient separation of oil from condensate by means of directing the condensate through various separation stages.

PRODUCT FEATURES

As condensate flows in to the SEPREMIUM, the oil is filtered out through various filtration elements.

The first oil adsorbing element has a clever saturation indicating feature, offering you a visual indication of the elements' saturation level.

Final separation stages include a second polypropylene element and specially selected activated carbon to polish out the remaining contaminants.

The elements are designed to combine various types of adsorption technologies to achieve less than 10 ppm oil residue values at the output stage.

COMMERCIAL BENEFITS

- Separates all types of compressor lubricants
- Operates with all type drains (both timer controlled and level sensed)
- Five models covering up to 2500 CFM compressor capacity offering sizing flexibility
- Small foot print
- Consult JORC for private labeling options

TECHNICAL ADVANTAGES

- Element life indicator, offering you a visual indication of the element life status
- Simple installation and maintenance procedures
- Lighter and easier replacement of elements
- Sectional service draining options during servicing
- Multiple condensate inlets with brass inserts for hard piping installations
- Large 1" output capacity
- Test valve and sample bottle to test oil ppm residue included as standard

PRODUCT SPECIFICATIONS

MODEL	175	350	750	1250	2500
Max. compressor capacity (CFM)	175	350	750	1250	2500*
Maximum oil adsorption (gallons)	1.3	2.6	4.0	6.6	13.2
Inlet connections	1/2" (2*)	1/2" (2*)	1/2" (2*)	1/2" (2*)	1/2" (2*)
Outlet connection	1"	1"	1"	1"	1"
Test valve & sample bottle	yes	yes	yes	yes	yes
Service drains	no	yes (2*)	yes (2*)	yes (2*)	yes (2*)
Overflow indicator	yes	yes	yes	yes	yes
Target output value	‹10 ppm	‹10 ppm	‹10 ppm	‹10 ppm	‹10 ppm
Housing material	PE	PE	PE	PE	PE
Total recyclable	yes	yes	yes	yes	yes
Housing color	black	black	black	black	black
Lid color	grey	grey	grey	grey	grey

*For larger capacities (up tp 15.000 CFM) apply the DISTRIBUTOR

PRINCIPLE WORKINGS SEPREMIUM 175 - 2500

For a comprehensive explanation of the principle workings of the SEPREMIUM models 175 up to 2500 please see chapter 8. The SEPREMIUM models 175-2500 incorporate a special visual element life indication feature.

SEPARATION OF

MODEL	175	350	750	1250	2500
Mineral lubricants	yes	yes	yes	yes	yes
Synthetic lubricants	yes	yes	yes	yes	yes
Stabile condensate emulsions	yes	yes	yes	yes	yes
Polyglycol, Roto-Inject, Sigma Mol*	yes	yes	yes	yes	yes

**Consult JORC for special elements and/or 24/7 applications.*

Roto-Inject and Sigma Mol are registered trade names of producers of compressor lubricants

SERVICE DRAINS SEPREMIUM 350-2500

The SEPREMIUM models 350 up to 2500 incorporate service drains at the bottom of each tower, offering you a draining solution of the individual towers during routine maintenance activities.

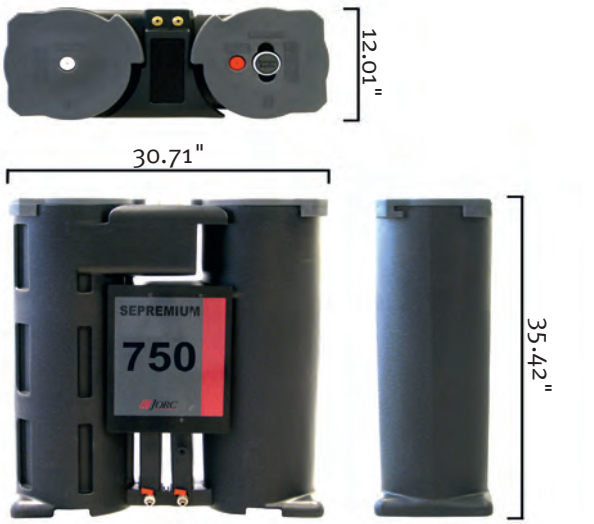
Chapter 7

DIMENSIONS SEPREMIUM 175 - 2500 & DISTRIBUTOR

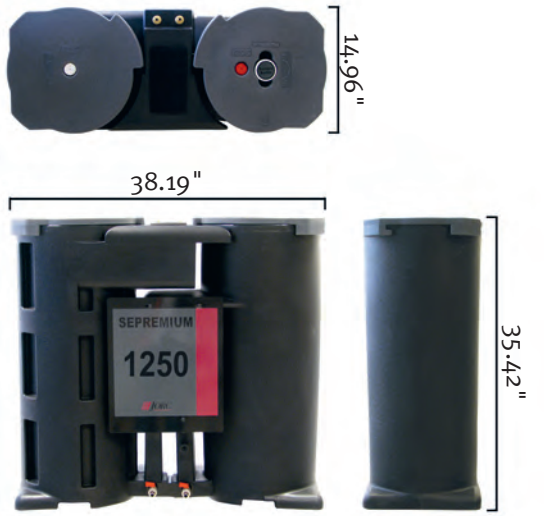
SEPREMIUM 175

SEPREMIUM 350

SEPREMIUM 750

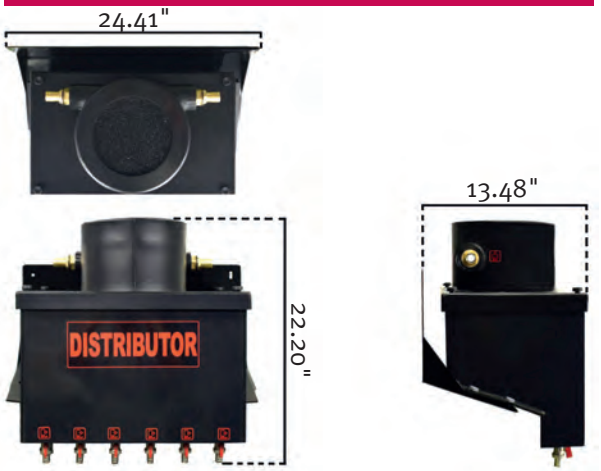


SEPREMIUM 1250



SEPREMIUM 2500

DISTRIBUTOR



Chapter 7

EXPLODED VIEW SEPREMIUM 350 SEPARATOR

All SEPREMIUM models (175 – 2500) are designed to operate in the same manner.
Differences are physical sizing to account for the various compressor capacities and condensate flows.

A key feature of the SEPREMIUM is the simplicity and ease of servicing.

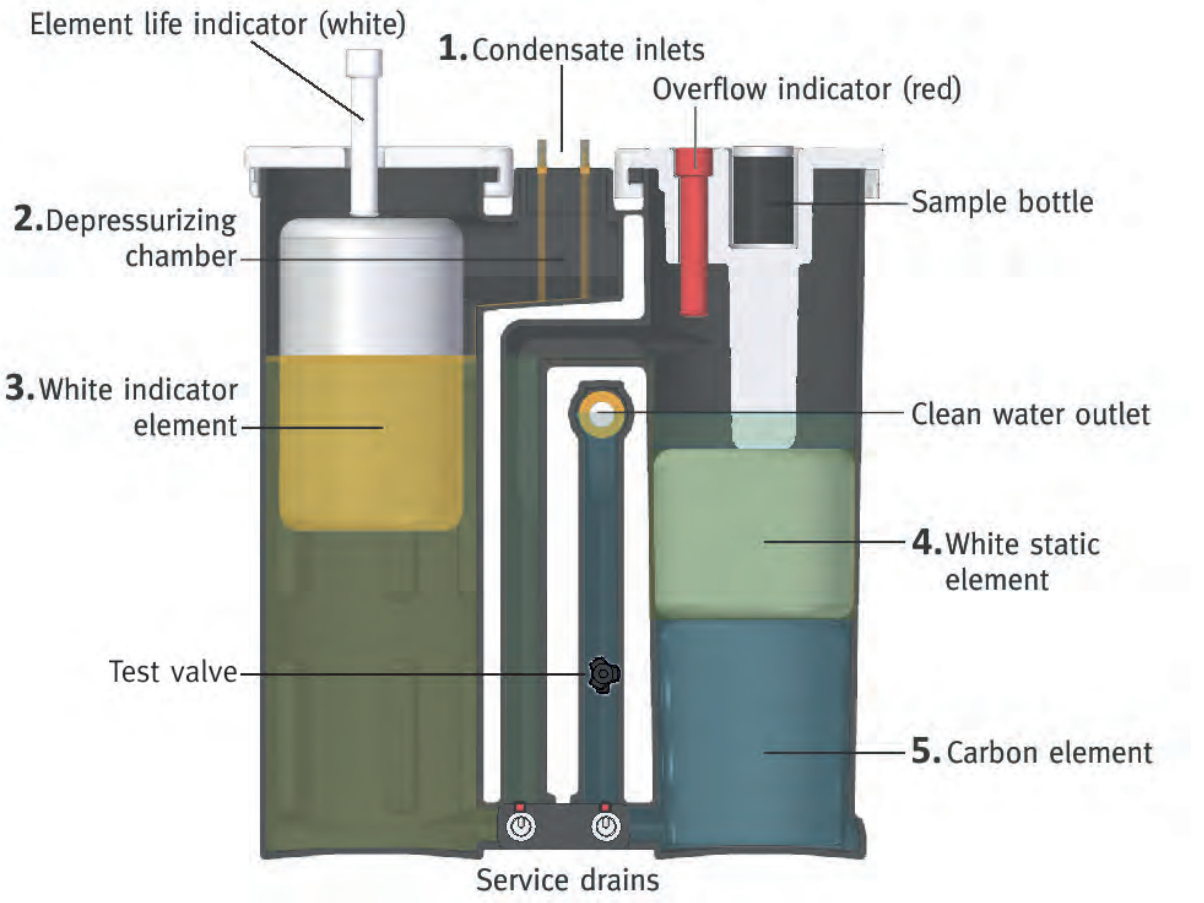
The elements are designed to be replaced/serviced in a time efficient way. They are also designed to be as light-weight as possible.

Brass threads are used to reduce the potential of cross threading, unlike competitive models that utilize plastic threads - the SEPREMIUM is a heavy duty industrial product.

The SEPREMIUM 350 up to 2500 models are equipped with double service drains for quick and easy service options.

Chapter 8

PRINCIPLE WORKINGS SEPREMIUM 175 - 2500



1. Condensate enters the brass condensate inlets. Unlike traditional separators which require the use of zero air loss drains to reduce emulsification, the SEPREMIUM can accept, and effectively separate, virtually any condensate from any source using any type of drain.

2. In the depressurizing chamber, a foam mesh separates the condensate from the compressed air and slows it's velocity. The compressed air is discharged cleanly to the atmosphere through a second foam filter. The condensate drains into the first tower.

3. Here the condensate passes through the primary white indicator element where the majority of the oil is adsorbed by the specialized polypropylene media. This element floats. As it becomes saturated with oil over time, it will slowly sink, lowering the element life indicator. This unique feature allows you to maximize element life, replacing it only when it is fully utilized.

4. The condensate then passes into the second tower. Here, the remaining oil is adsorbed by a second stage white static element of polypropylene media. Should any blockage occur during this process, the red overflow indicator will rise alerting you to the issue.

5. Finally the condensate, now almost entirely water, passes through a carbon filter element polishing out any remaining hydrocarbons. A test valve and sample bottle allow you to easily confirm compliance with local environmental regulations.

ELEMENT LIFE INDICATION

Indicator is up.
Element is clean.

Indicator at half.
Element is half saturated.

Indicator down.
Replace element.

One unique feature of the SEPREMIUM separators is the element life indicator. This indicator gives instant visual confirmation of the condition of the elements in the separator and when they need to be replaced.

When the primary white indicator element is new, it floats on top of the water level in the first tower. As condensate enters the separator over time, the oil becomes adsorbed on the fibres of the polypropylene filter element. This additional weight will cause the element to sink. As it sinks the element life indicator begins to lower.

When the element is fully saturated with oil, the element life indicator will be all the way down. This indicates that it is time to replace all three elements. Contact JORC for a comprehensive service kit.

FEATURES AND BENEFITS

1. The depressurizing chamber is filled with a foam filter allowing for complete depressurization of the condensate. The benefit is that any type of drain can therefore be applied.

2. Three stages of treatment, two polypropylene adsorbers and a carbon polisher for optimum outlet water quality.

3. Strong, corrosion proof cast poly-ethylene construction and brass thread inserts for secure piping connections.

4. Element life indicator (white) for confident on-time filter replacement.

5. Overflow indicator (red) to prevent a spill in the event of a blockage.

6. Multiple lightweight filter elements complying to OSHA lifting regulations.

Chapter 9

DISTRIBUTOR

Compressed air condensate distributor

PRODUCT FEATURES

Large compressor systems might require two or more oil/water separators to be installed to match the total compressor capacity of an installation. To connect the oil/water separators together and to ensure an even distribution of condensate in to the oil/water separators, you require the DISTRIBUTOR.

The DISTRIBUTOR ensures an equal distribution of the condensate in to the oil/water separators and the elements are subsequently saturated evenly.

The DISTRIBUTOR has two 1" condensate inlets and six 1/2" outlets with integrated ball valves, allowing you to connect two and up to six oil/water separators.

To service the DISTRIBUTOR simply loosen the 4 top screws and remove the lid. This will give you instant access to the inner working mechanism.

The depressurizing pad ensures compressed air condensate depressurisation and the subsequent distribution into the oil/water separators.

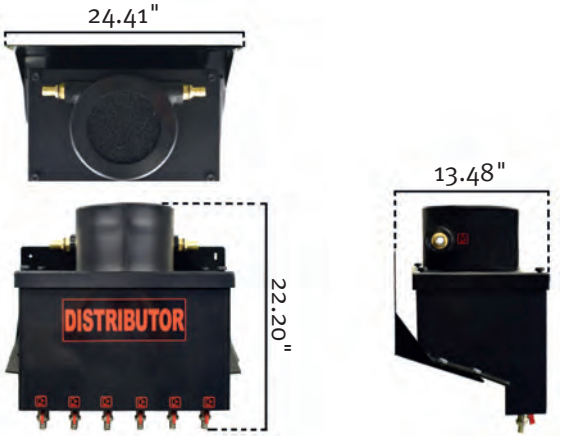
The DISTRIBUTOR is supplied with an installation kit.

A typical DISTRIBUTOR installation

PRODUCT SPECIFICATIONS

Separator connections points	6
Inlet connection	1" (2*)
Outlet connection	1/2" (6*)
Housing material	PP
Total recyclable	yes
Housing color	black
Installation kit included	yes

DIMENSIONS



Chapter 9

PURO-CT-DISTRIBUTOR

Economy condensate distributor

PRODUCT FEATURES

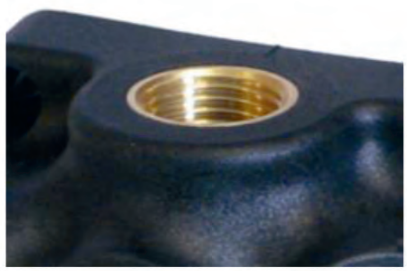
The PURO-CT-DISTRIBUTOR is designed to distribute condensate into two or three oil/water separators. See our PURO-CT catalogue for more information on the PURO-CT range of oil-water separators.

This way you can combine more PURO-CT units to match up against larger compressor systems.

As condensate flows into the PURO-CT-DISTRIBUTOR the condensate flows evenly into the connected oil/water separators. This way the elements of the separator are equally loaded with condensate to treat.

The PURO-CT-DISTRIBUTOR has a 1/2" condensate inlet and three 1/2" outlets.

The PURO-CT-DISTRIBUTOR is supplied complete with the required fixings.



Brass connections, offering you a secure fixing during installation

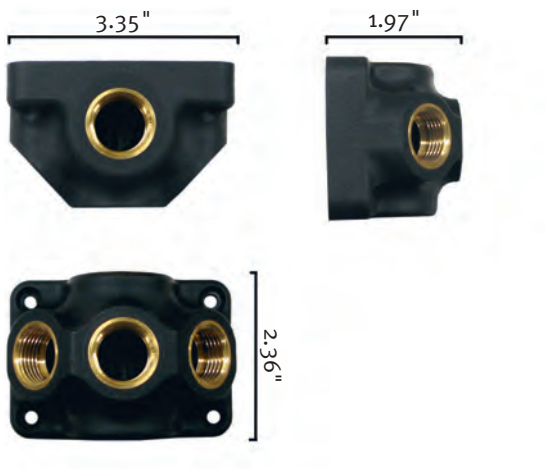
PURO-CT-DISTRIBUTOR installation kit

A typical PURO-CT-DISTRIBUTOR installation

PRODUCT SPECIFICATIONS

Nr. of separators that can be hooked up	3
Inlet connection	1/2"
Outlet connection	1/2" (3*)
Total recyclable	yes
Color	black

DIMENSIONS



Chapter 10

CONDENSATE SELF-TEST-KIT

JORC offers an in-house laboratory test kit to analyse and determine the success rate of our oil/water separators prior to sale and/or installation.

Potential complicated compressor systems, i.e. 2 different compressor brands with different lubricants, make it difficult to determine which elements to use. This self-test kit will enable you to determine the right unit and to demonstrate its effectiveness to your customer prior to installation.

The test kit consists of a universal kit for all types of lubricants, any type of compressor etc.

The test is quite simple to carry out and a detailed instruction manual is provided. After carrying out your test we advise if special elements are required.

If your customer has a failing old style separator, this is an ideal tool to apply to prove the SEPREMIUM will solve the problem.

TAILOR MADE ELEMENTS

The SEPREMIUM elements offer supreme separation performance in applications where other separators are failing to separate the lubricant from condensate.

Applications where your customer might have two different compressor models running on two different types of lubricant forms no problem for the SEPREMIUM separators.

When a stabile emulsion flows through the separator we have limited time to extract the lubricant from the condensate.

At JORC we are able to modify/adapt the polymer fibres to suit specific separating requirements. In short, we are able to minimise the contact time required to adsorb the lubricant.

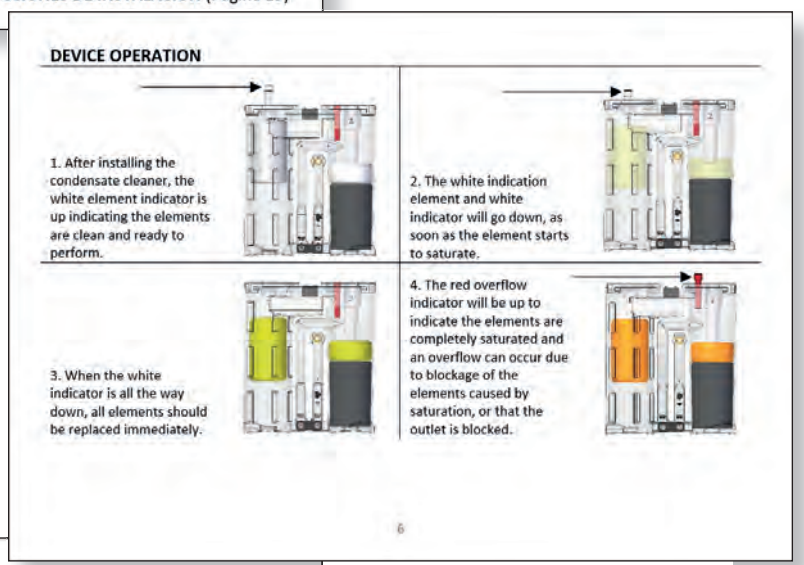
You will be given a specific part number relating to a special separating case. This way you will always apply the correct elements in the right application.

MANUALS

The installation is as good as the instruction manual!

The installation procedure of the SEPREMIUM separators is quite straight forward.
Nevertheless we have designed the instruction manuals with step by step pictures of every aspect involved in getting your SEPREMIUM up and running.

INSTALLATION INSTRUCTIONS (Page 2)
INSTRUCTIONS D'INSTALLATION (Page 11)
INSTRUCCIONES DE INSTALACIÓN (Página 19)



MAINTENANCE INSTRUCTIONS (Page 3)
INSTRUCTIONS DE MAINTENANCE (Page 9)
INSTRUCCIONES DE MANTENIMIENTO (Página 15)

Chapter 11

EASY MAINTENANCE

The initial installation of the **JORC SEPREMIUM** oil/water separator will reward you with a high performing separation performance. Thereon after the maintaining and servicing of the oil/water separator is required. Here too we have designed the replacement of the elements to be light and simple.

EASY MAINTENANCE

The SEPREMIUM service pack includes:

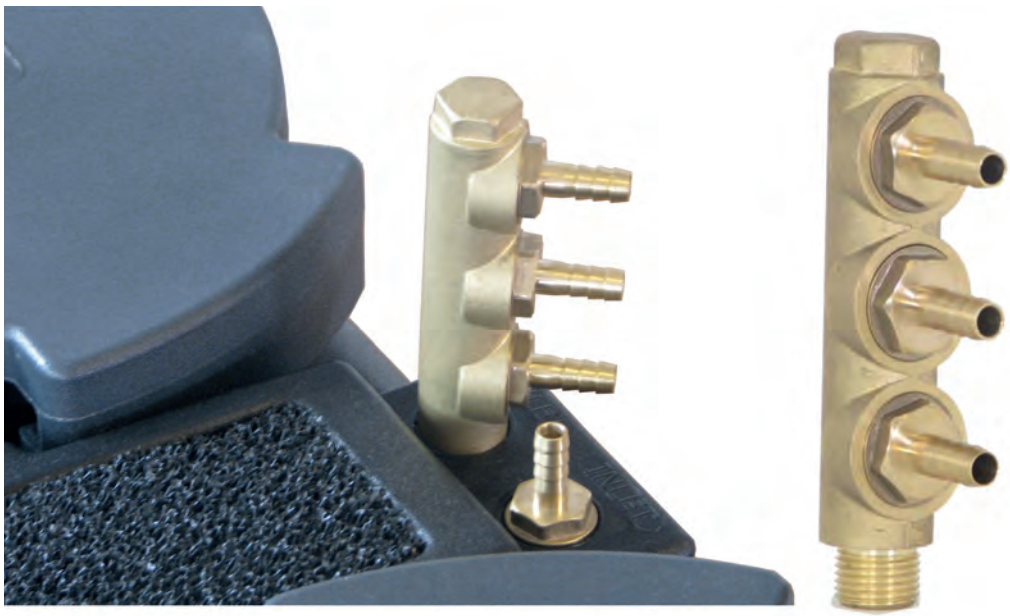
- Three elements
- Plastic waste bags for disposing the saturated elements

Optionally available is a clothing kit (mask, gloves, plastic coat)

MULTI-INLET ADAPTER

The Multi-inlet adapter allows for up to three additional condensate inlet options. The brass adapter threads in to the brass inlet of the SEPREMIUM.

To simplify installation, we include the brass hose barb adapters also.

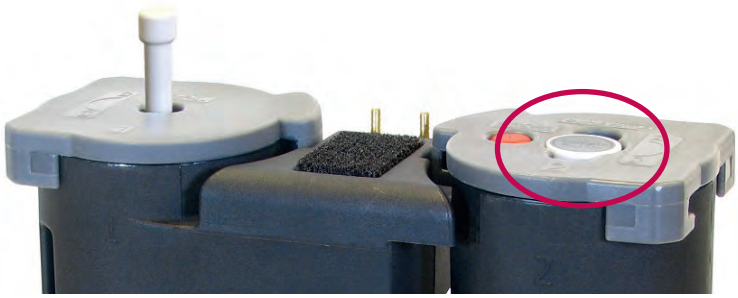


FUNCTIONAL SAMPLE BOTTLE

The JORC oil/water separators include a functional sample bottle for visual routine inspection of the output quality.

This visual inspection sample bottle offers the service engineer an indication of the output performance.

The sample bottle kit is positioned in the tower lid.



ADAPTERS

Hose barb adapters, test valves and service drains applied on all JORC's separators are also available as stand alone products.

REPLACEMENT ELEMENTS

Already have a condensate separator?

Even if replacing your outdated condensate separator with a SEPREMIUM isn't in the budget this year - you don't have to wait to experience our advanced adsorption technology.

We make media bags, to fit virtually all other brands of condensate separators.

Write down the make and model of your existing separator and contact us for more information.

Notes:

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

JORC Industrial LLC
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New Castle, DE 19720
Tel: 302 395 0310
info@jorc.com www.jorc.com

JORC

TIMER CONTROLLED DRAINS

OPTIMUM
EAD
COMBO
TEC-44
TEC-11
COMBO-D-LUX
HIGH-PRESSURE

DRAIN FLEXIBILITY

RELIABLE

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

Condensate drains

Version 01-2020

JORC Industrial is a global condensate management specialist of Dutch origin offering condensate drains, oil water separators and air saving equipment to distributors, dealers and OEM's in more than 100 countries. JORC Industrial is dedicated to setting the standard in helping its customers manage their condensate management requirements.

CONDENSATE MANAGEMENT SPECIALIST

Chapter 1

INTRODUCTION TO COMPRESSED AIR CONDENSATE

During the process of compressing air, atmospheric air along with water vapor and atmospheric contaminants (hydrocarbon, dust particles or chemical vapors), are drawn into the compressor intake.

Additionally, the compression chambers of most compressors require oil for lubrication, sealing and cooling. Once compressed, the air flows into an after cooler to remove the heat of compression. As the air cools in the after cooler, water and hydrocarbon vapors will condense.

Additional condensation takes place as the air is further cooled in the piping and (refrigerated) air dryers.

Environmental regulations strictly prohibit the discharge of oily wastes and chemicals, including the condensate drained from a compressed air system. Because of these requirements, municipalities regulate the discharge of compressor condensate to surface water, wastewater treatment facilities, and sanitary sewers.

WHY INSTALL A CONDENSATE DRAIN?

Condensate drains are possibly the least glamorous and most ignored component of a compressed air system but nevertheless, a most important part. No matter how much you spend on that fancy new compressed air system, not spending a little effort with your drain choice could cause you no end of headaches and increased operating costs for years to come.

Contaminants can enter a system at the compressor intake or be introduced into the airstream by the system itself. Lubricant, metal particles, rust, and pipe scale are all separated and filtered out, but it's the drains that have to operate properly for the filters and separators to be successful in completing their task.

Drains can be found on an intercooler, after-cooler, filter, dryer, receiver, drip leg, or at point of use. Drains come in several types and variants for all these applications, some quote fancy descriptions, but they fall into these basic categories: level sensed – timer operated – float - manual – none (yes that is a drain choice!).

How do your drains improve system efficiency? Draining the moisture from compressed air systems ensures fewer downtimes and less damage due to rust and scale etc. JORC timer drains are designed for long life and require a minimum amount of maintenance. They are key components in the quest for system efficiency and reliability.

When a drain fails to eject all of the condensate collected, oil and/or water will collect, causing carry over into the system – allowing build-up of contaminants in dryers, receivers and filters.

On multiple stage compressors moisture carry over from the intercooler may allow liquid into the next stage causing premature wear and possibly a catastrophic failure.

Installing a reliable drain is an absolute must!

WILL ANY CONDENSATE DRAIN DO?

Because compressed air condensate contains particles that contaminate compressed air systems and potentially cause valve blockages. It is important to choose a drain that offers a large enough orifice. Avoid drains that have diaphragm type valve constructions, the diaphragm has a very small hole in it, that once blocked the complete drain fails to operate. Always apply direct acting valve constructions.

Drains are also installed outdoors. NEMA4 insulation protection is therefore a minimum requirement. Avoid drains that do not comply with this minimum specification.

For long life expectations select drains that have FPM seals. FPM is the best suited for the aggressive make up of compressor condensate.

Servicing a drain must be straight forward and quick. Avoid drains that are not service friendly as this will cost more time during the maintenance interval.

JORC'S DRAIN CONSTRUCTION

It starts with the design! JORC drains are robust and designed for long life industrial applications.

The JORC direct acting valve construction has proven to be the most reliable option for condensate draining applications. We apply stainless steel moving parts that offer a long life guarantee and are less sensitive to aggresive particles found in condensate.

The JORC valves are constructed from robust brass or stainless steel and not from plastic. This ensures that no damage occurs during transportation, installation, functional operation and the subsequent maintenance moments throughout the drain's working life.

High grade coil insulation protect the copper wire from overheating and top brand PCB components are applied on our electronic modules.

Servicing JORC drains is quick and easy. Economically sensible service kit packages are available for all JORC drains.

In all JORC drains there are FPM seals that have been specifically selected based on their high and low temperature operation characteristics. In addition, FPM seals are selected as this material has proved to be the best choice for compressed air condensate draining applications.

JORC drains can be applied in both oil lubricated and oil free compressor applications.

JORC products carry globally recognized approvals and each product is 100% tested prior to dispatch.

JORC is NEN – EN - ISO 9001:2015 – certified

Chapter 3

OPTIMUM

Electronic timer controlled condensate drain

The OPTIMUM timer controlled condensate drain is a combination of a solenoid valve and an electronic timer designed to automatically remove condensate from compressed air systems.

PRODUCT FEATURES

The OPTIMUM is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The OPTIMUM offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide. The large orifice in the direct acting valve, combined with its sophisticated timer module ensures many years of trouble-free draining of condensate providing minimum service work is carried out.

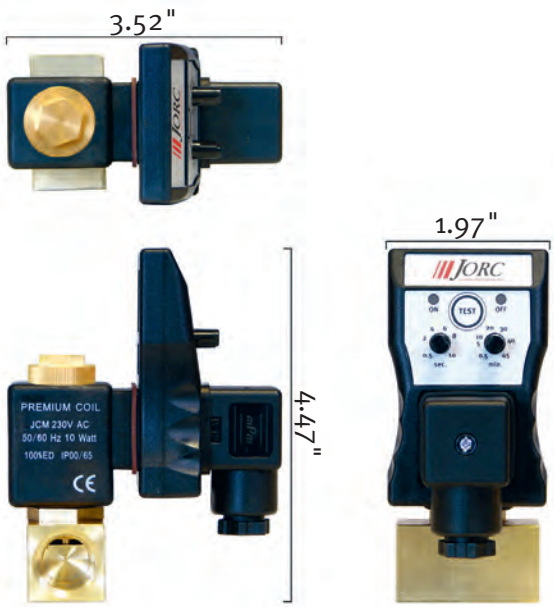
COMMERCIAL BENEFITS

- Any type of compressed air system and up to any compressor capacity
- Also available in High Pressure and stainless steel
- Voltage range 12 – 380VAC/DC
- Environmental low Watt version available
- Serviceable valve construction, offering you routine maintenance revenues

TECHNICAL ADVANTAGES

- Large (4.5 mm) valve orifice
- Does not air-lock during operation
- Quick to service
- Test feature (micro-switch)
- Accurate time cycles
- High quality PCB components, offering you consistent quality

PRODUCT DIMENSIONS



Environmentally friendly
low Watt version available

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Min./max. system pressure	0 to 230 psi (higher pressure available, see OPTIMUM-HP)
Min./max. medium temperature	34 - 131 °F
Min./max. ambient temperature	34 - 131 °F
Supply voltage options	12 – 380VAC/DC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-A
Inlet/outlet connections	1/8", 1/4", 3/8", 1/2" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	4.5 mm
Valve seals	FPM
Serviceable valve	yes
Valve housing material	Brass (stainless steel available)
Test feature	yes
Timer cycle range (ON/OFF)	0.5 – 10 seconds / 0.5 – 45 minutes
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination

Highest quality PCB

Service kits available

Accessories include ball
valve strainers

Chapter 4

EAD

Electronic timer controlled condensate drain

The EAD controlled condensate drain is a combination of a solenoid valve and an electronic timer designed to automatically remove condensate from compressed air systems.

PRODUCT FEATURES

The EAD is designed to remove condensate from compressors, compressed air dryers and receivers up to maximum 230 psi.
The EAD offers true installation simplicity at the lowest possible cost. The EAD is a mass produced product available in various valve connection sizes and timer color options.

COMMERCIAL BENEFITS

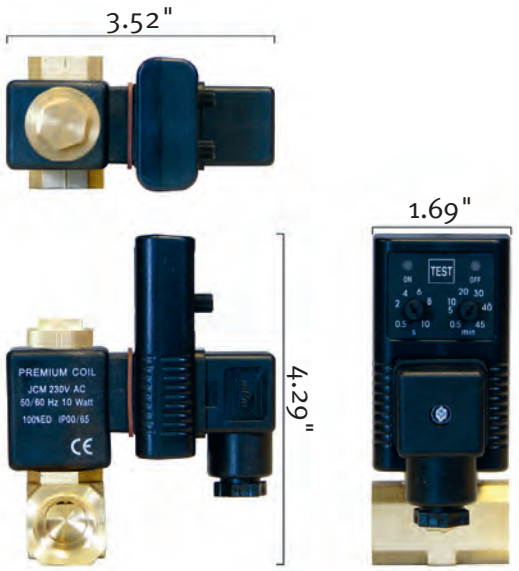
- Competitive pricing levels available
- Any type of compressed air systems and up to 230 psi
- Serviceable valve construction, offering your routine maintenance revenues
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Large (4.0mm) valve orifice
- Various connection sizes available, offering you installation flexibility without the need of adapters
- Does not air-lock during operation
- Quick to service
- Test feature (micro-switch)
- Accurate time cycles
- Premium PCB components selected

JORC

PRODUCT DIMENSIONS



Bright LED illumination, indicating operating status

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Min./max. system pressure	0 to 230 psi (higher pressure available, see OPTIMUM-HP)
Min./max. medium temperature	34 - 131 °F
Min./max. ambient temperature	34 - 131 °F
Supply voltage options	24 – 230VAC/DC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-A
Inlet/outlet connections	1/4", 3/8", 1/2" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	4.0 mm
Valve seals	FPM
Serviceable valve	yes
Valve housing material	Brass (stainless steel available, see OPTIMUM)
Test feature	yes
Timer cycle range (ON/OFF)	0.5 – 10 seconds / 0.5 – 45 minutes
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination

Various connection options

Service kits available

Accessories include ball valve strainers

Chapter 5

COMBO

Electronic timer controlled condensate drain

The COMBO timer controlled condensate drain is a combination of a solenoid valve (integrated ball valve strainer) and an electronic timer designed to automatically remove condensate from compressed air systems.

PRODUCT FEATURES

The COMBO is designed to remove condensate from compressors, compressed air dryers and receivers up to 230 psi.

The COMBO saves installation time and protects against large particles found in condensate, thanks to the integrated ball valve and strainer. The unit can be shut off from the compressed air system, enabling easy and safe work to be carried out.

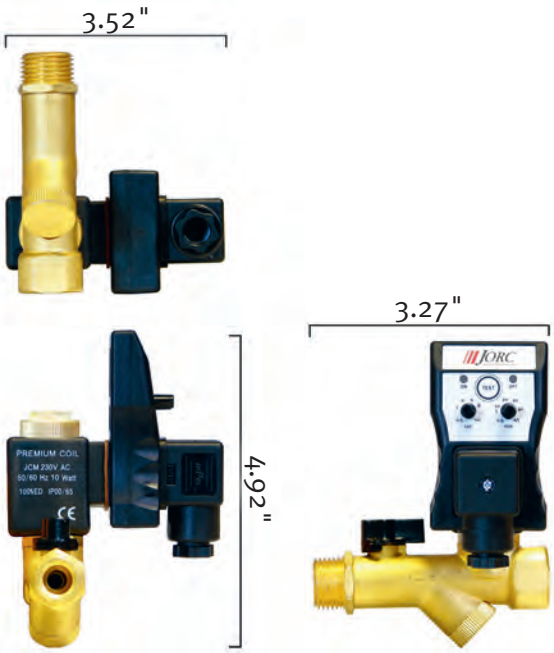
COMMERCIAL BENEFITS

- Installation time saver thanks to the integrated shut off valve & mesh strainer
- Dual thread inlet (1/2" & 1/4"), offering installation flexibility
- Any type of compressed air system and up to 230 psi
- Serviceable valve construction, offering you routine maintenance revenues
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Integrated mesh strainer, offering valve and orifice protection from larger particles found in condensate
- Integrated shut off valve, offering easy shut off of the valve for routine maintenance
- Does not air-lock during operation
- Test feature (micro-switch)

PRODUCT DIMENSIONS



Exceptionally compact!

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Min./max. system pressure	0 to 230 psi
Min./max. medium temperature	34 – 131 °F
Min./max. ambient temperature	34 – 131 °F
Supply voltage options	12 – 380VAC/DC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-A
Inlet/outlet connections	1/4" & 1/2" / 1/2" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	4.0 mm
Valve seals	FPM
Serviceable valve	yes
Valve housing material	Brass (stainless steel available, see OPTIMUM)
Test feature	yes
Timer cycle range (ON/OFF)	0.5 – 10 seconds / 0.5 – 45 minutes
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination

Dual inlet feature
1/2" and 1/4"

Shut off valve
incorporated

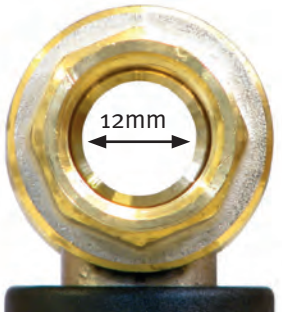
Integrated mesh strainer

Chapter 6

TEC-44

Motorized ball valve condensate drain

The TEC-44 is a microprocessor operated ball valve, designed to remove condensate from deliquescent dryers, rusty old tanks, vessels and refrigerated dryers.



Large full bore orifice

PRODUCT FEATURES

The TEC-44 is a powerful timer controlled motorized ball valve, designed to remove condensate from deliquescent dryers, tanks, vessels and refrigerated dryers.

The TEC-44 is designed to remove heavy contaminated condensate up to pressure ratings of 600 psi. This condensate drain cannot be blocked and is applied where all else fails. Draining applications with a high level of contamination (rust, scale etc.) require the TEC-44. The TEC-44 is impossible to block due to its powerful ball valve rotation and large orifice.

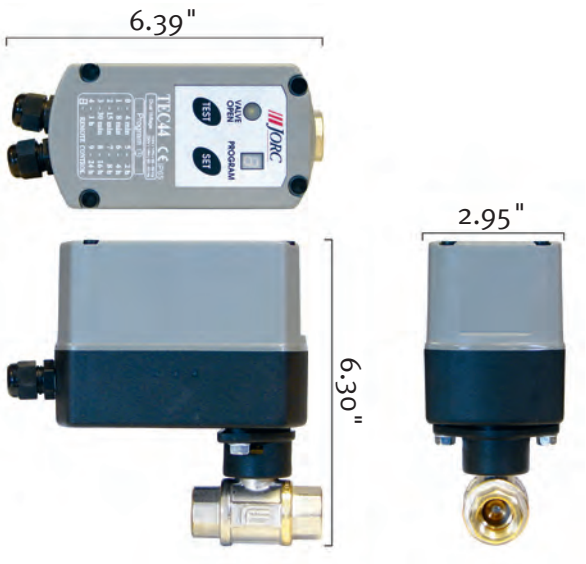
COMMERCIAL BENEFITS

- Suitable for all types of compressed air systems with high contamination levels (rust, scale)
- Impossible to block due to its powerful ball valve rotation
- Compressed air systems up to 600 psi applications

TECHNICAL ADVANTAGES

- Large (full bore) 12mm orifice, offering you a drain that cannot block
- Stainless steel ball valve
- Remote switch feature
- Does not air-lock during operation
- Test feature (micro-switch)
- Micro-processor controlled (high level of time cycle accuracy)

PRODUCT DIMENSIONS



Bright visual display of selected program!

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Pressure range	0 to 600 psi
Min./max. medium temperature	34 - 131 °F
Min./max. ambient temperature	34 - 131 °F
Supply voltage options	24VDC, 115VAC and 230VAC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Power connection	Cable and plug
Inlet/outlet connections	1/2", 3/4" and 1" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, motorized ball valve
Valve orifice	12 mm
Valve seals	FPM and Teflon
Serviceable valve	yes
Valve housing material	Brass nickel plated, stainless steel rotating ball
Test feature	yes
Remote switch feature	yes
Timer cycle range (ON/OFF)	7 seconds to 15 minutes ON / 4 minutes to 24 hours OFF
Actuator PCB	SMD technology, ensuring consistency in production
Time cycle indication	Bright LED illumination

Brass nickel plated valve

Stainless steel rotating ball

Remote switch feature

Chapter 7

TEC-11

Electronic timer controlled condensate drain

The TEC-11 timer controlled condensate drain is a combination of a solenoid valve and an electronic timer designed to automatically remove condensate from compressed air filters.

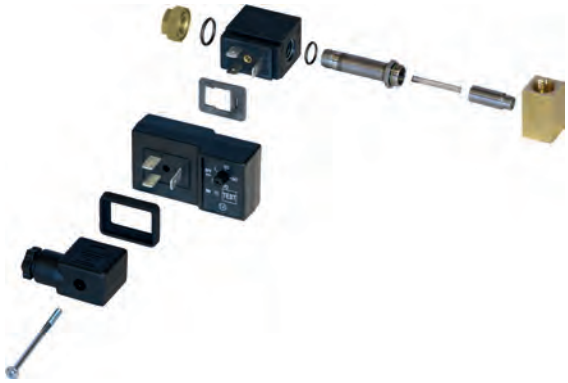
PRODUCT FEATURES

The TEC-11 removes condensate, automatically, from compressed air filters and small dental (oil free type) compressors.

The clever in-line design allows for perfect installation under all types of compressed air filters, regardless of their capacity or size.

COMMERCIAL BENEFITS

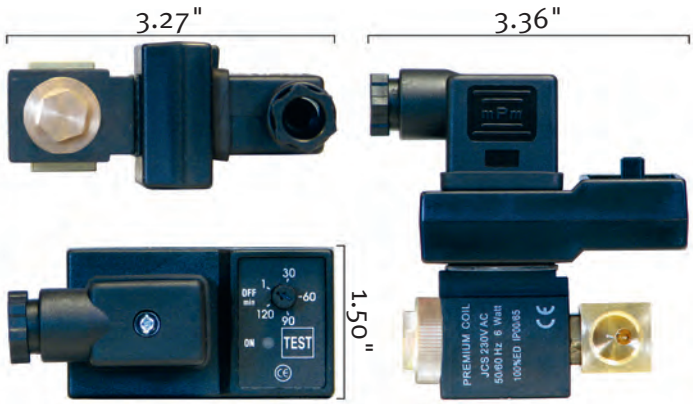
- In-line design, offering easy mounting under filters
- Small and compact, offering easy installation on small dental compressors
- Medium pressure up to 230 psi (optionally up to 300 psi)
- Serviceable valve construction, offering you routine maintenance revenues
- Consult JORC for private labelling options



TECHNICAL ADVANTAGES

- Connection sizes 1/8" & 1/4"
- Does not air-lock during operation
- Quick to service
- Test feature (micro-switch)
- Fixed ON cycle and an adjustable OFF cycle

PRODUCT DIMENSIONS



Inline installation under compressed air filters.

PRODUCT SPECIFICATIONS

Max. filter capacity	Any size
Min./max. system pressure	0 to 230 psi
Min./max. medium temperature	34 - 131 °F
Min./max. ambient temperature	34 - 131 °F
Supply voltage options	12 - 380VAC/DC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-B
Inlet/outlet connections	1/8" or 1/4" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	2.0 mm
Valve seals	FPM
Serviceable valve	yes
Valve housing material	Brass
Test feature	yes
Timer cycle range (ON /OFF)	2 seconds fixed / 1 minute to 120 minutes adjustable
Timer PCB	SMD technology, ensuring consistency in production
Time cycle indication	Bright LED illumination

Service kits

Private labelling available

Install under any filter

Chapter 8

COMBO-D-LUX

Digital timer controlled condensate drain

The COMBO-D-LUX feature is a digital timer setting applied on time controlled condensate drains designed to automatically remove condensate from compressed air systems.

PRODUCT FEATURES

The COMBO-D-LUX is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The COMBO-D-LUX is an all-in-one digital timer drain with an integrated ball valve and strainer. The unit offers true digital time cycle programming luxury ranging from mille-seconds to 99 hours.

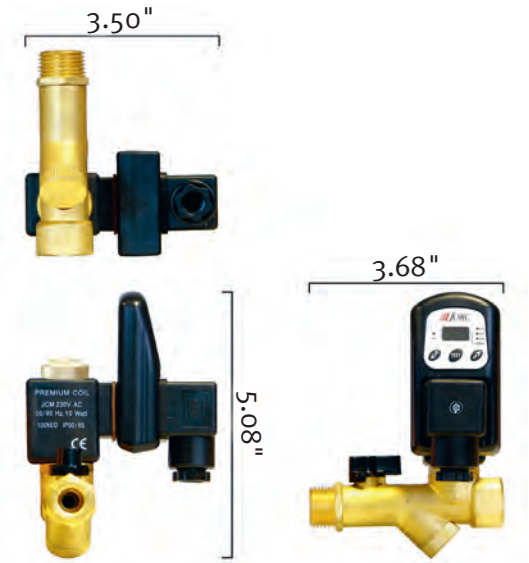
COMMERCIAL BENEFITS

- Wide time setting range, offering you application flexibility
- Exceptionally accurate cycle timing
- Suitable for all types of compressed air systems
- Serviceable valve construction, offering you routine maintenance revenues
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Integrated mesh strainer for large particles
- Shut off valve incorporated
- Dual threaded inlet (1/2" and 1/4")
- Does not air-lock during operation
- Quick to service
- Test feature (micro-switch)
- Bright digital illuminated display, offering you a visual indication of current operating cycle

PRODUCT DIMENSIONS



Also available in a
OPTIMUM valve version

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Min./max. system pressure	0 to 230 psi (higher pressure available see OPTIMUM-HP)
Min./max. medium temperature	34 – 131 °F
Min./max. ambient temperature	34 – 131 °F
Supply voltage options	12 – 380VAC/DC 50/60 Hz
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-A
Inlet/outlet connections	1/4" & 1/2" / 1/2" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	4.0 mm
Valve seals	FPM
Serviceable valve	yes
Valve housing material	Brass (stainless steel available, see OPTIMUM)
Test feature	yes
Timer cycle range (ON/OFF)	0,01 second to 99 hours (both ON and OFF)
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination

Visual display of current
operating cycle

Integrated mesh
strainer

Digital processor, offering you
exceptionally accurate cycle timing

Chapter 9

OPTIMUM-HIGH PRESSURE

Timer controlled condensate drain

The OPTIMUM-High Pressure timer controlled condensate drains are designed to automatically remove condensate from compressed air systems up to 7.250 psi.

PRODUCT FEATURES

The OPTIMUM-HP is designed to remove condensate from high pressure compressed air systems and systems that require stainless steel valves (food industry etc.).

The OPTIMUM-HP offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide.

The OPTIMUM-HP offers trouble free condensate draining on systems up to 7.250 psi, depending on the valve orifice, valve material and seal selection.

COMMERCIAL BENEFITS

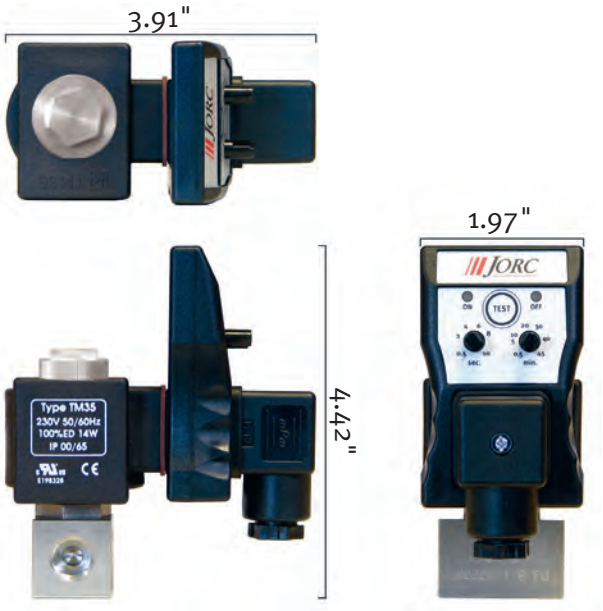
- Suitable for all types of compressed air systems up to 7.250 psi
- Special valve constructions & seals available for special applications
- Stainless steel valve options, offering you solutions in niche markets
- Serviceable valve construction, offering you routine maintenance revenues
- Consult JORC for private labelling options

TECHNICAL ADVANTAGES

- Brass & stainless steel valve constructions depending on pressure
- FPM, Peek, PU, NBR and several other seals are available
- Does not air-lock during operation
- Quick to service
- Test feature (micro-switch)

JORC

PRODUCT DIMENSIONS



The right seal for the right job!

PRODUCT SPECIFICATIONS

Max. compressor capacity	Any size
Min./max. system pressure	0 to 7.250 psi (depending on OPTIMUM model)
Min./max. medium temperature	34 - 131 °F
Min./max. ambient temperature	34 - 131 °F
Supply voltage options	12 - 38VAC/DC 50/60 Hz.
Environmental protection	NEMA4 (IP65)
Connector type (power)	DIN 43650-A
Inlet/outlet connections	1/4" NPT
Inlet connection height	Approx. 0.4"
Valve type	2/2 way, direct acting
Valve orifice	Depending on pressure
Valve seals	FPM or other, depending on pressure and application
Serviceable valve	yes
Valve housing material	Brass or stainless steel, depending on pressure
TEST feature	yes
Timer cycle range (ON/OFF)	0.5 – 10 seconds / 0.5 – 45 minutes
Timer PCB	SMD technology, ensuring consistency in production
Time cycle indication	Bright LED illumination

Highest quality PCB

Service kits available

Stainless steel valve options, offering you solutions in niche markets

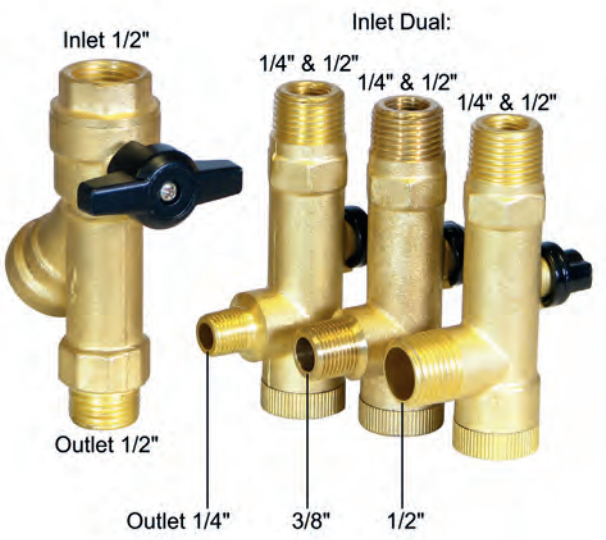
Chapter 10

BALL VALVE STRAINERS

The OPTIMUM and EAD drain valves have an orifice of 4.5 mm (EAD 4.0 mm). This large orifice ensures that emulsions and particles in compressed air cannot block the valve.

We offer 1/2", 3/8" and 1/4" valves and to avoid unnecessary adapters etc. we offer the right strainer for the right valve. In addition, the inlet thread is dual threaded 1/2" and 1/4".

Pressure ratings of the JORC strainers are 0 to 600 psi.



JORC PREMIUM COILS

JORC's JC-type coils are produced with H-grade coil insulation, ensuring maximum heat resistance during operation.

The outer encapsulation is a PA type material.

All voltages are available ranging from 12 – 380VAC/DC 50/60 Hz.

There are three coil sizes - JCS, JCM and JCL - depending on type of valve in combination with pressure rating requirements.

POWER CONNECTORS

Power (DIN) connectors are available in FORM A & B (square and rectangle) with or without a molded power cord.

Special adapters to make connection from FORM B to FORM A, are also available.

HOSE BARB ADAPTERS

Hose barb adapters are a sure and simple way to install the discharge pipe.

The diameter matches the connection to the SEPREMIUM or PURO-CT oil/water separators.

WALL MOUNTING BRACKET

Wall mounting brackets allow easy installation of timer drains to walls or inside of refrigerated dryers.

The bracket kit contains all necessary fixings to complete the job.

SERVICE KITS

Great care is taken to ensure long lasting components are selected and applied in our products.

JORC products are designed in a way that makes servicing simple, quick and error free.

Servicing JORC products is a cost effective way to recondition the products for many more years of draining service.

NEMA SEALING KIT

In certain applications a drain requires to be installed to a higher degree on environmental protection. For instance an installation in a refrigerated air dryer.

For these special application we offer a NEMA sealing Kit to protect the coil and timer.

JORC TIMERS

The JORC timers (EAD, OPTIMUM, D-LUX, TEC-11) are produced to the highest standards. We apply two voltage protection element (IN and OUT) to ensure a long life protection against electrical power surges.

Our timers are also purchased by other solenoid valves producers and mounted on their valves for all kinds of different applications besides condensate draining.

Notes:

COMPRESSED AIR CONDENSATE MANAGEMENT AND ENERGY SAVING PRODUCTS

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