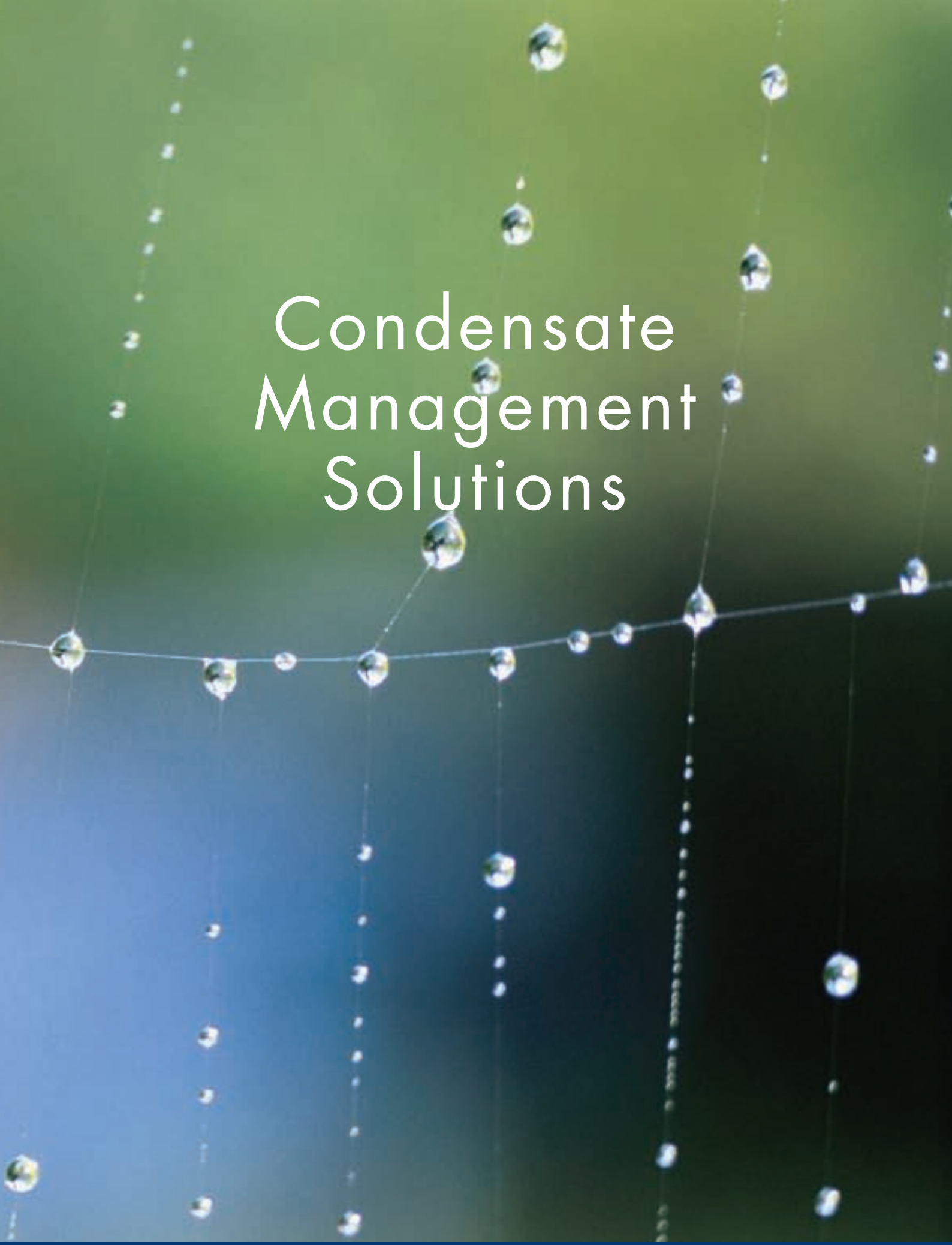


Condensate Management Solutions

domnick hunter hiross SpA

HIROSS

Compressed Air Treatment

Quality Condensate Management

How and where is condensate formed?

When air is compressed, so is the moisture it contains that, when cooled, becomes a liquid condensate and can form anywhere along the compressed air line, especially in aftercoolers, receivers, dryers, filters and drip legs.

The liquid condensate is actually a contaminant to the application itself by corroding and damaging other products in the system. Consequently, the condensate becomes more acidic, and therefore more harmful. This resulting toxic industrial condensate causes irreparable damage to the environment.

Why implement Quality Condensate Management?

To Protect the Environment
Oily, industrial condensate is considered a chemical toxin to most plants and animals: it forms a superficial layer reducing solar exposure and photosynthesis; it covers both land and water plants and animals; it deteriorates the environment's aesthetic aspect; it presents a fire hazard; and its decomposition seriously compromises the oxygen content in water, making it anaerobic and toxic.

To avoid such damage to the environment, ISO 14001 requires that compressed air applications implement proper industrial condensate treatment.

To Protect Your Investment
Users often overlook the real costs of inefficient drainage. A faulty drain may remain blocked open (causing the loss of expensive compressed air) or blocked shut (causing condensate carry-over).

Unless removed, this highly contaminated condensate leads to damaged tools, blocked valves and orifices, piping corrosion, and damage to the product itself. Not only maintenance costs increase, but also system downtime.

Guarantee yearly energy savings, which easily exceed the drain's purchasing price, and rapid oil/water separator payback with the HIROSS Hyperdrain - Hypersplit solution.

The HIROSS Solution:
Hyperdrain Condensate Drains and Hypersplit Oil/Water Separators

With the first zero loss drain patented nearly 40 years ago, today domnick hunter hiross offers the most advanced solutions, allowing customers to maximize performance and minimize costs.

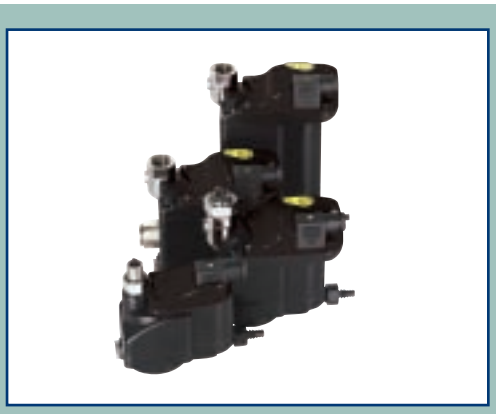
Condensate Drains: Hiross Hyperdrain
meets each customer's every need with all drain configurations as well as solutions for aggressive condensate and high pressure applications.

Oil/Water Separators: Hypersplit
ensures up to 99% of the system's condensate can be safely discharged and promises rapid payback compared to treatment by specialist waste disposal companies.

Free your Energy

Protect both the Environment and Your Investment

Condensate drains



Electronic zero loss

Mechanical zero loss

Mechanical zero loss
for high pressure

Timed

Internal (float) zero loss

Separators

Oil/Water Separators

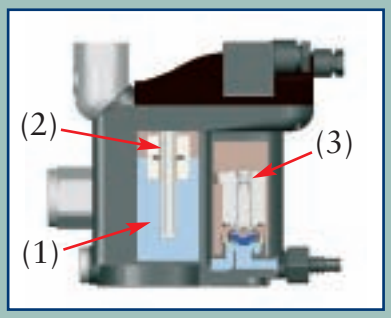
The HIROSS solutions

Condensate Drains

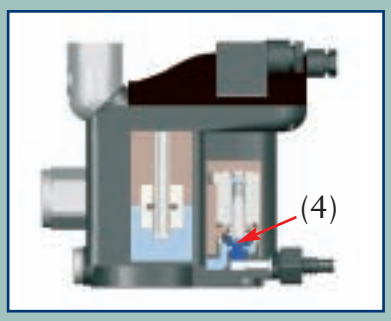
Hyperdrain: HDE-X
Electronic zero loss drains

HDE-X has the most advanced condensate drain technology available on the market.
It offers zero-loss technology for maximum energy savings, and the operating safety offered by electronic drains.
HDE-X's magnetic core technology avoids the reliability issues often seen with the more common sensor-based drains.

Operation



The condensate accumulates in the drain bowl (1), forcing the magnetic core level control (2) to rise.
When the level control reaches the upper sensor, the valve (3) is opened.



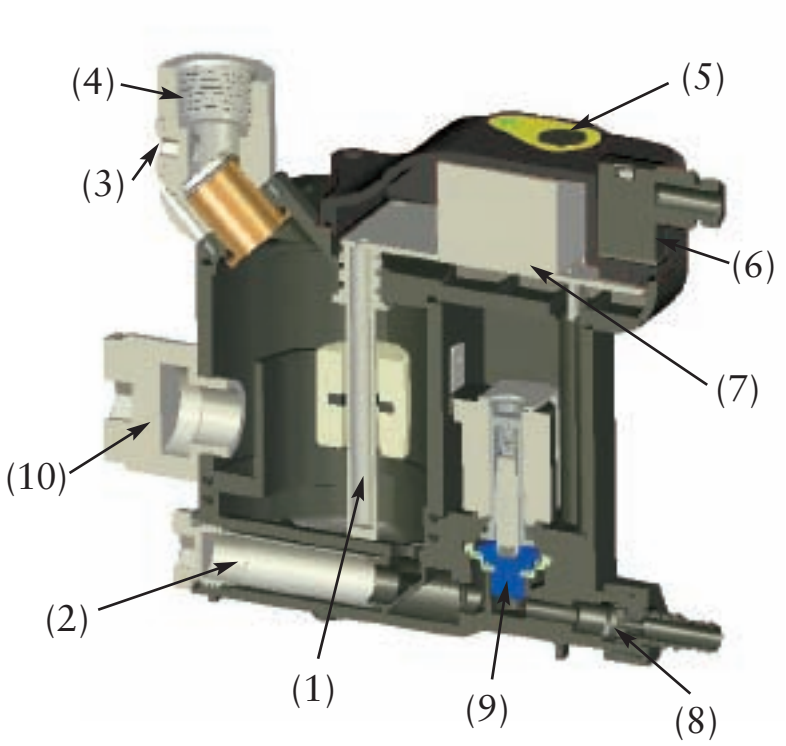
As the condensate flows out of the diaphragm valve (4), so both the water level in the drain and the level control drop.
When the level control reaches the lower sensor, the valve is closed, ensuring no air is allowed to escape.

Magnetic core level control

- Works with all condensates (including impurities and oil).
- Operation is not effected by the working pressure, ensuring increased reliability.
- Non contact and thus non-wearing configuration, high reliability, low maintenance requirements.
- Ensures fewer cycles and increased reliability with the utilization of separate opening and closing sensors (HDE30X-50X).

Integral dirt screen

- Contaminants which could damage the diaphragm are blocked, increasing reliability.
- Easy access, allowing simple maintenance.
- Unique design triggers an alarm if the screen is blocked.
- Condensate passage at working pressure reduces maintenance requirements, which permits programmed preventive maintenance



1) magnetic core level control
2) integral dirt screen
3) balance line inlet
4) condensate inlet
5) alarm lamp
6) volt free alarm contact
7) electrical connector
8) outlet flow regulator
9) diaphragm valve
10) Bottom condensate inlet (from HDE30X)

Simple installation

- Condensate inlet (4) rotates for easy top or rear inlet connection(from HDE20X).
- Supplied ready to work in all operating conditions, no calibration required.
- Balance line inlet (3) for installation ease even in complex situations (from HDE20X).

Maintenance friendly

- Easy drain access and easily removable electrical connector (7) simplify maintenance.
- Service kit available for quick and straightforward programmed preventive maintenance.
- One single kit covers all models and includes all necessary parts.

Easy to use

- Large cross section diaphragm valve (9) with pilot control improves reliability.
- Alarm lamp (5) warns the user if condensate cannot be discharged.
- Standard volt-free alarm contact (6) allows remote monitoring (from HDE30X).
- Special outlet flow regulator (8) to throttle condensate flow, ensures no emulsion is created and supports Hypersplit oil-water separator installation.

Condensate Drains

Hyperdrain: HDF
Mechanical zero loss drains

More than 40 years of experience in mechanical zero loss drain technology offer the most reliable package on the market. Zero loss design (for notable energy savings) in combination with extreme installation simplicity and excellent value for money.

Hiroshield protection

- Even works with dirty, oily condensates.
- High wearing, long operating life in even the harshest conditions.

Patented valve mechanism

- Fruit of 40 years experience.
- Finely calibrated design, long-term reliability.

Simple installation

- No need for electrical wiring as power supply is not required.
- No programming or calibration required, HDF arrives ready to use in all applications.
- Also available with an internal vent line for installation ease.

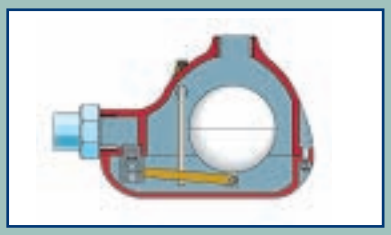
Maintenance friendly

- Manual drain valve for system discharge and operational check fitted as standard.
- Quick, straightforward preventive maintenance with the annual maintenance kit.

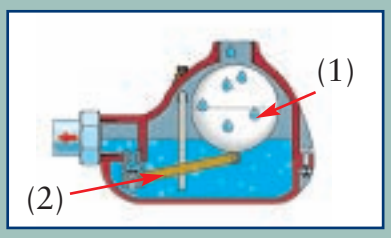
Easy to use

- Large cross section outlet valve opening minimizes the chance of blockages for improved reliability.
- Low velocity condensate outlet ensures that no emulsion is created and supports installation of a Hypersplit static oil-water separator.

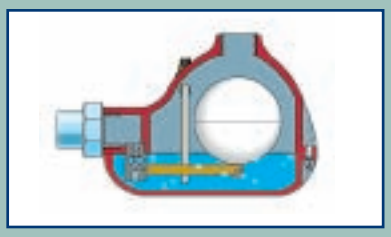
Operation



With no water in the drain the valve is closed – no air loss.



The rising water level forces the float (1) to rise and open the valve (2). The water is allowed to exit without any air loss.



As the water exits the float drops. The valve re-closes before any air can escape.

Hyperdrain:
HDF510 mechanical zero loss drains for high pressure

Simple Installation

- No power supply required.

Easy to use & maintain

- Robust coated housing, with choice of 3 materials options for aggressive condensates (carbon steel, stainless-steel & brass or all stainless-steel).
- Highly reliable valve mechanism, no need for calibration.
- Allows operation at up to 51bar g.

Free your Energy

Condensate Drains

Hyperdrain: CDV timed drains

CDV's popularity is above all due to its ability to offer years of reliable operation in even the most adverse conditions, all in a very competitive package.

Robust design with stainless steel and brass valve construction.
Highest quality field-proven electrical & control section.

Allows operation at up to 50barg.

Simple installation

- Compact dimensions.
- IP65 protection rating allows outdoor installation.
- Various voltages available.

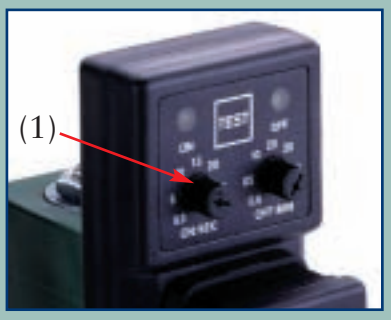
Maintenance friendly

- Stainless steel strainer fitted as standard, protects drain from impurities.
- Standard manual drain valve.
- Service kit allows quick and straightforward preventive maintenance.

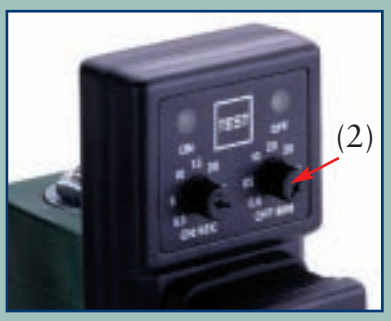
Easy to use

- Large condensate inlet & outlet ports prevent blockages.
- Forced drainage pattern ensures high reliability, even in the presence of impurities.

Operation



Drain opening time set (1).



Interval between each drain opening set (2).

Drain automatically discharges according to the set cycle.

Hyperdrain: HDI internal zero loss drains

Simple Installation

- Extremely compact design.
- No power supply required.

Easy to use & maintain

- Large drainage surface with integral screen filter.
- Standard manual drain valve.
- Compact design for installation in filter housings.

Oil/Water Separators

Hypersplit:
Safe and secure oil-water separation

Protect both your investment and the environment with Hypersplit. Reliable, efficient and maintenance-friendly, Hypersplit guarantees rapid payback and up to 99% of condensate safely discharged as clean water.

Twin tank models (OWS185; OWS485) feature patented parallel flow design, ensuring longer active carbon life as well as significantly improved performance.

OWS125-485 with 4 inlet ports allow connection of up to 4 condensate lines onto one Hypersplit.

Hypersplit features single moulded construction for minimum weight and compact dimensions.

Polyethylene throughout construction prevents corrosion and leakages.

Inlet chamber, primary tank and main tank generously dimensioned, improving separation and reducing the risk of blockages.

Accessories

For large installations a Multibanking option is available, allowing up to 5 Hypersplit installations in parallel.

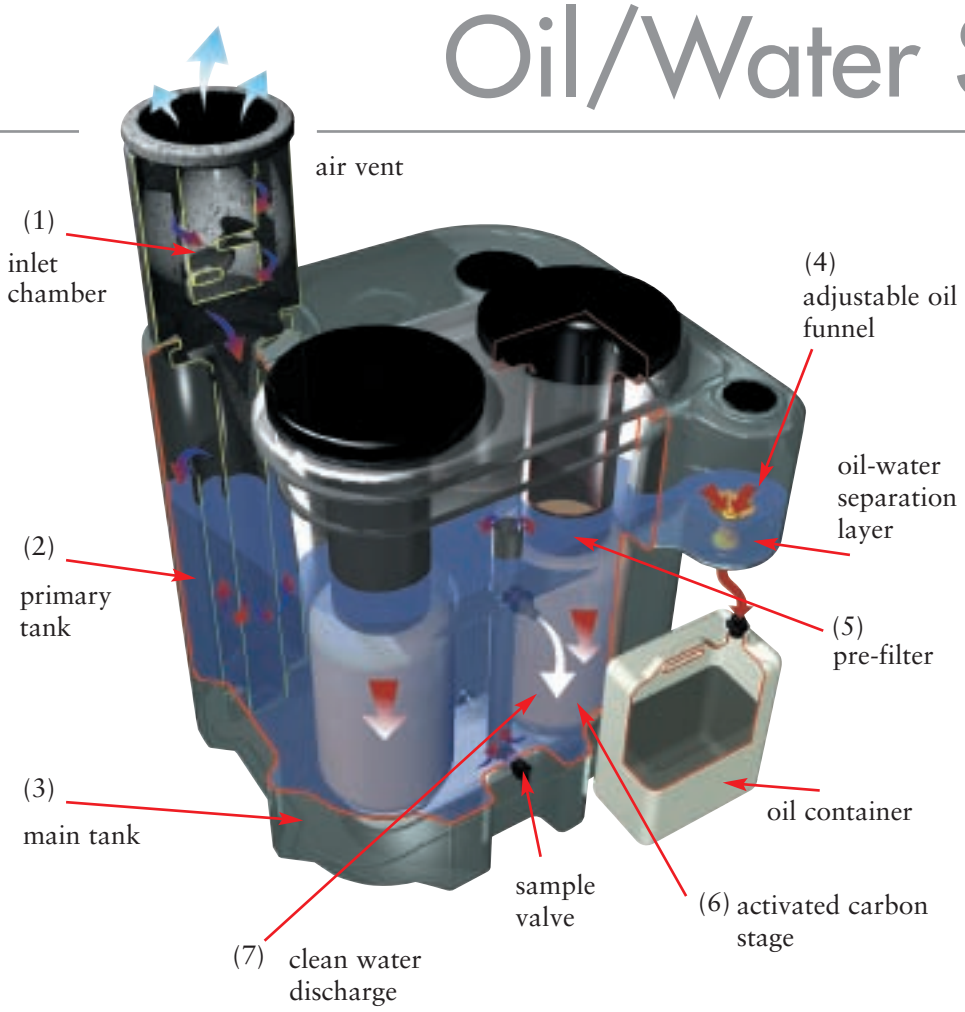
Operation further simplified with an additional oil container.

The active carbon stage utilizes high specification activated carbon maximizing its lifetime.

The pre-filter protects the carbon stage from bulk contamination, whilst the carbon stage itself has been sized to ensure that the outlet water is free of any traces of oil.

Free your Energy

Oil/Water Separators



Operation

1) Condensate enters inlet chamber, where it expands.

2) Liquid separates by centrifugal motion and drains into primary tank, at the bottom of which, any dirt settles.

3) Condensate flows into main tank. With time oil and water separate; oil settles at the surface of the main tank, coalescing to form a thick layer.

4) Oil removed by adjustable funnel; collected in external oil container.

5) Water passes through pre-filter(s) for bulk contamination removal.

6) Water passes through carbon filter(s) for removal of any oil traces.

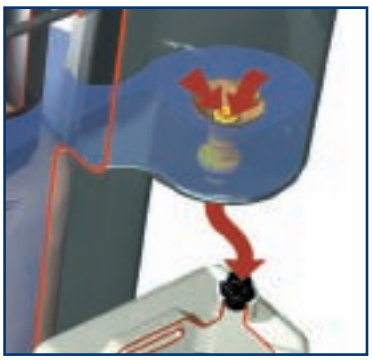
7) Clean water discharge (up to 99% of the system's condensate).

Programmed Preventive Maintenance, easy and secure

ISO 14001 compliance guaranteed by following the dh-hiross Hypersplit Programmed Preventive Maintenance schedule.

Programmed
Active carbon filter substitution at least once every 6 months.

Preventive
Meanwhile, monthly condensate tests are taken, simple with Hypersplit Performance Sampling Valve. When oil content levels approach ISO 14001 limits, active carbon filters are to be substituted.



Maintenance friendly

- The separated oil, stored in an external container, easily and quickly removed.
- Active carbon stage designed for easy substitution with the Hiross active carbon replacement kit.
- Oil separation optimized using the adjustable funnel in the main tank.
- Performance sampling valve for rapid verification of the water cleanliness.
- Easily accessible primary tank for cleaning.

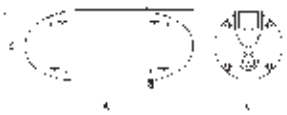
Hyperdrain Condensate Drains

MODEL	Air flow aftercooler		Air flow refrigeration dryer		Air flow filter		Connections		Max. working pressure	Power supply (V / ph / Hz)	Dimensions (mm)			Weight (kg)
	m³/min	m³/h	m³/min	m³/h	m³/min	m³/h	IN	OUT			A	B	C	
Electronic zero loss drains														
HDE10X	-	-	-	-	12	720	1 X G1/2	G 3/8	16	115-230/1/50-60	67	110	146	0,5
HDE20X	4	240	8	480	24	1440	1 X G1/2	G 3/8	16	115-230/1/50-60	67	101	139	0,6
HDE30X	7	420	14	840	42	2520	2 X G1/2	G 3/8	16	115-230/1/50-60	67	122	164	1,0
HDE40X	30	1800	60	3600	180	10800	2 X G1/2	G 3/8	16	115-230/1/50-60	67	137	164	1,1
HDE50X	100	6000	200	12000	600	36000	2 X G1/2	G 38	16	115-230/1/50-60	67	197	164	1,5
Mechanical zero loss drains														
HDF120	90	5400	180	10800	540	32400	1/2"	1/2"	16	-	156	111	108	0,9
HDF180	100	6000	200	12000	600	36000	1"	1"	16	-	156	111	108	0,9
HDF220	250	15000	500	30000	1500	90000	1"	1"	16	-	266	111	108	1,9
Mechanical zero loss drains for high pressure														
HDF510	100	6000	200	12000	600	36000	1"	1"	51	-	233	186	158	1,1
HDF510S	100	6000	200	12000	600	36000	1"	1"	51	-	233	186	158	1,1
HDF510C	100	6000	200	12000	600	36000	1"	1"	51	-	233	186	158	1,1
Internal zero loss drains														
HDI	-	-	-	-	0,5-0,7	32-432	1/2"	1/2"	16	-	40	62	-	0,03
Timed drains														
CDV/24	150	9000	300	18000	900	54000	1/2"	3/8"	16	24/1/50-60	90	110	90	0,7
CDV/115	150	9000	300	18000	900	54000	1/2"	3/8"	16	115/1/50-60	90	110	90	0,7
CDV/230	150	9000	300	18000	900	54000	1/2"	3/8"	16	230/1/50-60	90	110	90	0,7
CDV/50bar	150	9000	300	18000	900	54000	1/2"	3/8"	50	230/1/50-60	90	110	90	0,7

Performances refer to 35°C compressed air temperature, 25°C ambient temperature, 65% relative humidity, 3°C pressure dew point (calculations with refrigeration dryer), 7barg working pressure. Figures for refrigeration dryer and filter assume adequate condensate removal upstream

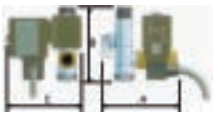
	Drain use in application		
	after Aftercooler	with Dryers	with Filters
Airflow correction factor	1	2	6

HDF120-180



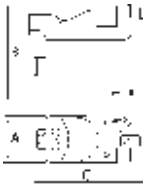
HDF220

HDF510

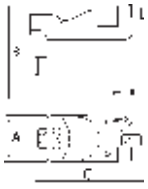


CDV

HDE10X



HDE20X



HDE30-40X

HDE50X

HDI

MANUALE

HDE electronic drains have the most advanced condensate drain technology available on the market. Zero air loss technology, significant energy savings.
HDF float drains benefit from nearly 40 years of experience in mechanical zero loss drain technology, offering the most reliable package on the market. Zero air loss technology, significant energy savings, extreme installation simplicity and excellent value for money.

Free your Energy

Hypersplit Oil/Water Separators

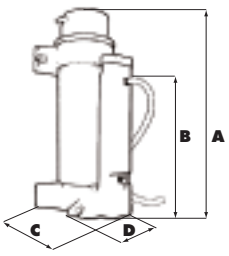
MODEL	With refrigeration Dryer in system			Without refrigeration Dryer in system		
	oil type 1 m³/h	oil type 2 m³/h	oil type 3 m³/h	oil type 1 m³/h	oil type 2 m³/h	oil type 3 m³/h
Airflow with residual oil content of 20mg/l						
OWS001	100	80	70	130	100	90
OWS060	160	130	100	200	180	150
OWS075	250	200	170	330	300	250
OWS125	350	300	250	450	400	350
OWS185	700	600	500	900	800	650
OWS355	1400	1200	950	2000	1500	1250
OWS485	2700	2300	2000	3600	3000	2500
Airflow with residual oil content of 10mg/l						
OWS001	55	50	40	75	60	50
OWS060	100	75	60	120	100	80
OWS075	150	100	100	200	150	125
OWS125	200	150	130	250	200	175
OWS185	400	350	260	500	400	350
OWS355	750	650	550	1000	850	700
OWS485	1500	1300	1050	2000	1700	1400

Performances refer to compressed air temperature of 35°C (condition A) or 45°C (condition B), ambient temperature of 25°C (condition A) or 35°C (condition B), relative humidity of 65% (condition A) or 85% (condition B), pressure dewpoint of 3°C for calculations with refrigeration dryer or minimum system temperature of 30°C (condition A) or 40°C (condition B) for calculations without refrigeration dryer, 7barg working pressure. All data is valid for rotary screw and vane compressors; for 1 or 2 stage piston/reciprocating compressors mulitply above values by 1,4; for 3 or 4 stage piston/reciprocating compressors or conditions other than those shown above please contact us.

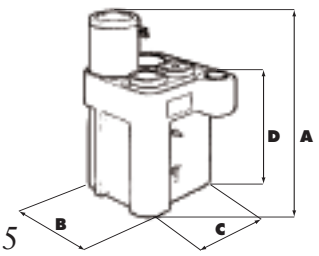
Oil types: type 1: Turbine, Additive free
type 2: Mineral, Poly alpha olefins (PAO), Trimethylolpropane Ester (TMP), Pentaerythrityl Ester (PE)
type 3: Diesters, Triesters, Polyoxyalkylene glycol (PAG)

TECHNICAL DATA

MODEL	Tank vol. litres	Hose in	con. out	Dimensions (mm) A	B	C	D	Weight (kg) empty	full	Replacement kits carbon pack	vent filter
OWS001	N/A	1/4"- 1/2"	19 mm	842	550	316	270	6	24	1 X OWSCP1	OWSVF1
OWS060	60	1/4"- 1/2"	25 mm	810	350	433	675	10	78,5	1 X OWSCP1	OWSVF1
OWS075	75	1/4"- 1/2"	19 mm	803	350	450	675	12	93,5	1 X OWSCP1	OWSVF1
OWS125	125	1/4"- 1/2"	25 mm	1195	650	500	750	27	159	1 X OWSCP2	OWSVF2
OWS185	185	1/4"- 1/2"	25 mm	1195	650	650	750	36	217	2 X OWSCP2	OWSVF2
OWS355	355	1/4"- 1/2"	25 mm	1535	860	700	1090	70	400	1 X OWSCP3	OWSVF2
OWS485	485	1/4"- 1/2"	25 mm	1535	860	1000	1090	97	550	2 X OWSCP3	OWSVF2



OWS001



OWS060-OWS485

From every point of condensate drainage in any compressed-air application, the appropriate treatment is required.
Collected by Hyperdrain, condensate is deposited in a Hypersplit oil-water separator selected with the dimensions to handle and properly treat the system's damaging condensate.
Hypersplit is recommended for any unstable lubricant, able to offer up to 99% of the condensate as clean water safely discharged.

Free your Energy

Release your power

Save Energy

Purify your Air

Stop Wasting Water

Respect the Environment

Improve your Factory's performances

Focus on your Core Business






104292 / 09-06 / 1.000 / R0

Parker
anything possible

TAHAS Tazyikli Hava Sanayi ve Ticaret A.S.
I. Karaoglanoglu Cad. No: 25/4
34418 Seyrantepe, Istanbul Turkey
Tel: +90 212 284 93 33 Fax: +90 212 282 64 93
Web Site: www.tahas.com E-Mail: info@tahas.com

domnick hunter hiross SpA
HIROSS
Compressed Air Treatment

domnick hunter hiross S.p.A.
Strada Zona Industriale, 4
35020 S. Angelo di Piove, PD, ITALY
www.dh-hiross.com