



aerospace  
climate control  
electromechanical  
**filtration**  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# Filtration

Refrigeration Drying Solutions





# Parker's Global Motion & Control Solutions

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker.



## AEROSPACE

- Key Markets**
- Aircraft engines
  - Business & general aviation
  - Commercial transports
  - Land-based weapons systems
  - Military aircraft
  - Missiles & launch vehicles
  - Regional transports
  - Unmanned aerial vehicles

- Key Products**
- Flight control systems & components
  - Fluid conveyance systems
  - Fluid metering delivery & atomization devices
  - Fuel systems & components
  - Hydraulic systems & components
  - Inert nitrogen generating systems
  - Pneumatic systems & components
  - Wheels & brakes



## CLIMATE CONTROL

- Key Markets**
- Agriculture
  - Air conditioning
  - Food, beverage & dairy
  - Life sciences & medical
  - Precision cooling
  - Processing
  - Transportation

- Key Products**
- CO<sub>2</sub> controls
  - Electronic controllers
  - Filter driers
  - Hand shut-off valves
  - Hose & fittings
  - Pressure regulating valves
  - Refrigerant distributors
  - Safety relief valves
  - Solenoid valves
  - Thermostatic expansion valves



## ELECTROMECHANICAL

- Key Markets**
- Factory automation
  - Food & beverage
  - Life science & medical
  - Machine tools
  - Packaging machinery
  - Paper machinery
  - Plastics machinery & converting
  - Primary metals
  - Semiconductor & electronics
  - Textile
  - Wire & cable

- Key Products**
- AC/DC drives & systems
  - Electric actuators
  - Controllers
  - Gantry robots
  - Gearheads
  - Human machine interfaces
  - Industrial PCs
  - Inverters
  - Linear motors
  - Precision stages
  - Stepper motors
  - Servo motors
  - Structural extrusions



## FILTRATION

- Key Markets**
- Food & beverage
  - Industrial machinery
  - Life sciences
  - Marine
  - Mobile equipment
  - Oil & gas
  - Power generation
  - Process
  - Transportation

- Key Products**
- Analytical gas generators
  - Compressed air & gas filters
  - Condition monitoring
  - Engine air, fuel & oil filtration & systems
  - Hydraulic, lubrication & coolant filters
  - Process, chemical, water & microfiltration filters
  - Nitrogen, hydrogen & zero air generators



## FLUID & GAS HANDLING

- Key Markets**
- Aerospace
  - Agriculture
  - Bulk chemical handling
  - Construction machinery
  - Food & beverage
  - Fuel & gas delivery
  - Industrial machinery
  - Mobile
  - Oil & gas
  - Transportation
  - Welding

- Key Products**
- Brass fittings & valves
  - Diagnostic equipment
  - Fluid conveyance systems
  - Industrial hose
  - PTFE & PFA hose, tubing & plastic fittings
  - Rubber & thermoplastic hose & couplings
  - Tube fittings & adapters
  - Quick disconnects



## HYDRAULICS

- Key Markets**
- Aerospace
  - Aerial lift
  - Agriculture
  - Construction machinery
  - Forestry
  - Industrial machinery
  - Mining
  - Oil & gas
  - Power generation & energy
  - Truck hydraulics

- Key Products**
- Diagnostic equipment
  - Hydraulic cylinders
  - Accumulators
  - Hydraulic motors & pumps
  - Hydraulic systems
  - Hydraulic valves & controls
  - Power take-offs
  - Rubber & thermoplastic hose & couplings
  - Tube fittings & adapters
  - Quick disconnects



## PNEUMATICS

- Key Markets**
- Aerospace
  - Conveyor & material handling
  - Factory automation
  - Food & beverage
  - Life science & medical
  - Machine tools
  - Packaging machinery
  - Transportation & automotive

- Key Products**
- Air preparation
  - Compact cylinders
  - Field bus valve systems
  - Grippers
  - Guided cylinders
  - Manifolds
  - Miniature fluidics
  - Pneumatic accessories
  - Pneumatic actuators & grippers
  - Pneumatic valves and controls
  - Rodless cylinders
  - Rotary actuators
  - Tie rod cylinders
  - Vacuum generators, cups & sensors



## PROCESS CONTROL

- Key Markets**
- Chemical & refining
  - Food, beverage & dairy
  - Medical & dental
  - Microelectronics
  - Oil & gas
  - Power generation

- Key Products**
- Analytical sample conditioning products & systems
  - Fluoropolymer chemical delivery fittings, valves & pumps
  - High purity gas delivery fittings, valves & regulators
  - Instrumentation fittings, valves & regulators
  - Medium pressure fittings & valves
  - Process control manifolds



## SEALING & SHIELDING

- Key Markets**
- Aerospace
  - Chemical processing
  - Consumer
  - Energy, oil & gas
  - Fluid power
  - General industrial
  - Information technology
  - Life sciences
  - Military
  - Semiconductor
  - Telecommunications
  - Transportation

- Key Products**
- Dynamic seals
  - Elastomeric o-rings
  - EMI shielding
  - Extruded & precision-cut, fabricated elastomeric seals
  - Homogeneous & inserted elastomeric shapes
  - High temperature metal seals
  - Metal & plastic retained composite seals
  - Thermal management

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# Protect the Environment and your Investments

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## Parker Hiross Solutions

Compressed air is a fundamental source of energy for the large majority of industrial processes. However, air from a compressor is often too humid, contaminated or hot to be used in the production chain without prior treatment.

The application of high-quality air ensures continuity and reliability of industrial applications, the highest quality standards for finished products and the optimisation of production costs.

Parker Hiross offers a range of refrigerated air drying solutions including:

- Low and medium-capacity cycling refrigeration dryers, products which have made Parker Hiross the world leader in the field of refrigerated air drying. The current ranges - Starlette Plus<sup>®</sup>, PoleStar Smart<sup>®</sup> and PoleStar Smart<sup>®</sup> HP - are the products of more than forty years of experience in the research, development and production of compressed air treatment systems.
- High-capacity cycling refrigeration dryers, available as standard models or custom-made to customer requirements.

### Caring for the environment:

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Parker Hiross has been awarded ISO14001 certification and puts environmental standards at the heart of its production and design. Its refrigeration dryers guarantee:

- Zero pollution risks, due to its refrigeration system, which has been researched, developed and accurately tested to avoid any refrigerant loss.
- Top energy efficiency, reducing electrical energy consumption to a minimum.

### A safe investment:

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Parker Hiross refrigeration dryers furthermore offer:

- Energy awareness, using components and features which deliver maximum efficiency and energy savings.
- Low maintenance needs, due to technological advances in research, development, production and testing.

### Refrigeration dryers:

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**Starlette Plus<sup>®</sup>** (0.4 - 6m<sup>3</sup>/min)



**PoleStar Smart<sup>®</sup>** (7.5 - 180m<sup>3</sup>/min)



**PoleStar Smart<sup>®</sup> HP** for high pressure (3 - 120m<sup>3</sup>/min)

# Starlette Plus®

In industrial applications, operational requirements vary widely and flexibility is a key factor. Using advanced technology, Starlette Plus® guarantees continuous performance and superior efficiency in every type of situation. It can be easily adapted to all working conditions, maintaining impeccable dewpoint control and the lowest possible operating costs.

Pressure drops normally account for a third of dryers overall costs. With Starlette Plus®, pressure drops are reduced to a minimum (on average less than half that of alternative systems), leading to significantly lower running costs.

With its state-of-the-art PlusPack heat exchangers (patent pending) and the most compact dimensions of any system in its class, Starlette Plus® is the superior choice for any application.

PlusPack guarantees ideal dewpoints in any operating conditions and very low pressure drops (on average below 0.13 barg), as well as an extremely compact footprint.

\*All Starlette Plus® dryers are provided with the automatic electric time drained CDV.

## Operation

Hot and humid compressed air is cooled by a refrigeration circuit. The condensate in the air turns from a gaseous to a liquid state, allowing it to be separated and removed from the compressed air.

The CDV timed drains automatically discharge the condensate following the set cycles:

- Drain opening time set
- Interval between each drain opening set.

## The Range Starlette Plus® SPL004-060

### In the standard model:

- Maximum operational pressure of 16 barg
- Ambient temperature up to 50°C
- Inlet air temperature up to 65°C
- R134a environmentally friendly refrigerant in all models
- Timed drain

### Benefits:

- Extremely compact
- Low operating costs
- Environmentally friendly
- High operating limits



- Robust construction featuring a stainless steel and brass valve.

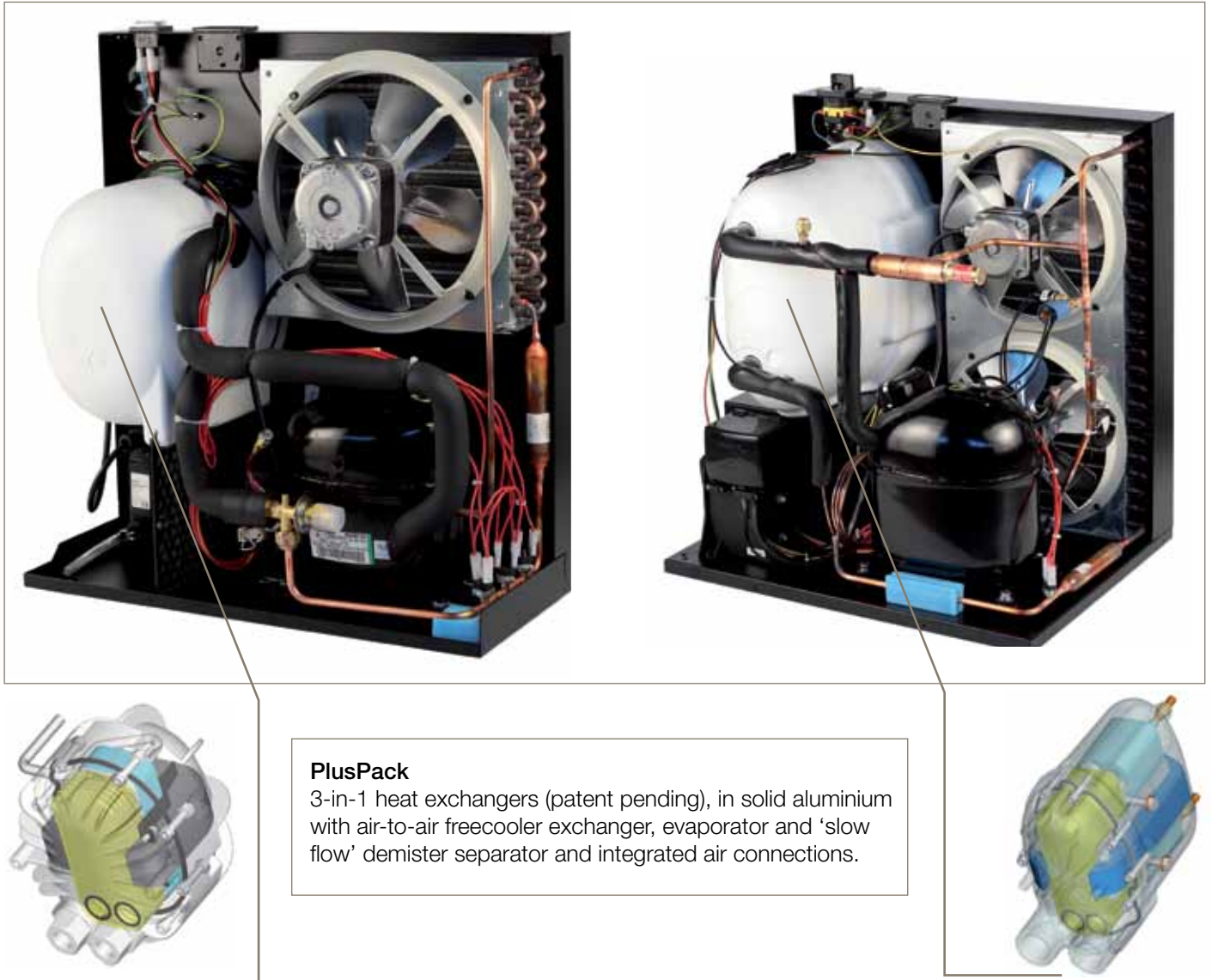
- Compact, packed design.



- CDV  
Timed drain

- Guarantee reliable operation even in the most demanding conditions.

# Startlette Plus®



## PlusPack

3-in-1 heat exchangers (patent pending), in solid aluminium with air-to-air freecooler exchanger, evaporator and 'slow flow' demister separator and integrated air connections.

## Features

- Reliable airtight piston compressors which do not require preheating.
- Simple and secure refrigeration circuits which do not require adjustment during operation and undergo vigorous quality testing in production.
- Large adjustable condenser and fan compartments to guarantee optimal performance even in extreme conditions.
- Security protection in the refrigeration circuit, increasing reliability and safeguarding the air dryer.
- Simple disassembly, with easy access to the internal components for efficient maintenance.
- Drain positioned in a niche, allowing easy access without the need to remove the top panel.

# PoleStar Smart®

With the most advanced components, the latest technology and intelligent controls, the PoleStar Smart® air dryer offers guaranteed reliability and the lowest energy consumption in its field.

The price of the air dryer - calculated over a five-year period - amounts to around 25% of the total cost, with operational and maintenance costs making up the rest. PoleStar Smart® has been designed to reduce direct and indirect energy consumption and keep maintenance to an absolute minimum.

Technical interventions are made simple by easy access to all air dryer components and the provision of maintenance kits.

PoleStar Smart® features exclusive compliant scroll compressors (from PST120 models upwards), offering energy savings of up to 20% compared to other systems.

Totally resistant to liquid refrigerant returns and with 50% less moving parts than other models, these compressors are extremely reliable and almost indestructible. Low vibration levels also serve to prolong the refrigeration circuit life.

## Operation

Although it looks like a traditional refrigerated air dryer, PoleStar Smart® boasts an array of new special energy-saving and maximum efficiency features.

Its innovative Smart-Save feature and the new SmartPack heat exchanger, in solid aluminium, are two pending patents designed to optimize electricity consumption in response to load variations, maintaining a constant optimal dewpoint.

Its SmartSave feature ensures the refrigeration compressor is employed as little as possible.

The integrated electronic condensate drain is operated by microprocessor controller and saves energy by avoiding compressed air wastage.

## The range Polestar Smart® PST075-1800

In the standard model:

- Maximum 12 barg operational pressure (14 barg for PST075 and PST095)
- AS1210-1997 registered
- Ambient temperature up to 50°C
- Inlet air temperature up to 65°C
- R407C environmentally friendly refrigerant in all models
- SmartSave in models from PST120 upwards
- Water condenser models from PST220 upwards



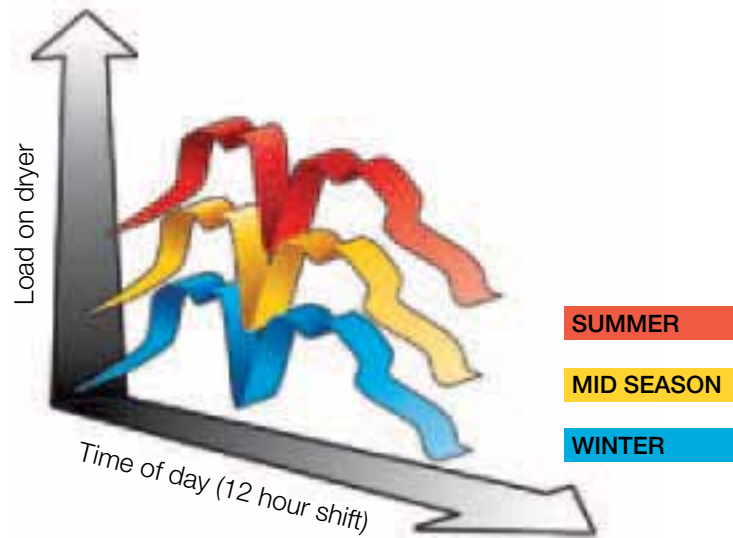
The condenser prefilter is available from model PST120 upwards.





## Minimal direct energy costs

- **The SmartSave** patent-pending feature (in model PST120 upwards) automatically and precisely adjusts energy consumption in response to actual operating conditions (air variability and seasonal changes), avoiding unnecessary waste.
- **SmartControl** controls the SmartSave feature, with multiple sensors guaranteeing maximum savings and avoiding dewpoint surges.
- **SmartPack's** all-in-one design and thermal insulation are further energy-saving features.



## Reduced indirect costs

- Electricity required by the compressor to compensate for pressure drops in the air dryer accounts for around 25% of its total cost over 5 years. PoleStar Smart® offers average pressure drops which are about one half those of conventional systems.
- The air compressor requires additional energy to offset the drop in compressed air pressure caused by traditional condensate drains. SmartDrainer, standard in models PST120 upwards, automatically adjusts its drainage pattern to avoid compressed air loss, thereby saving energy.

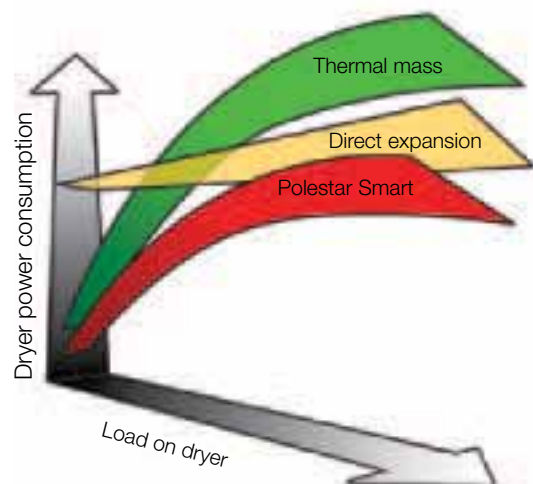


## Result

The most effective air dryer on the market, in all operating conditions. PoleStar Smart® leads the market with the lowest full-load power consumption due to its:

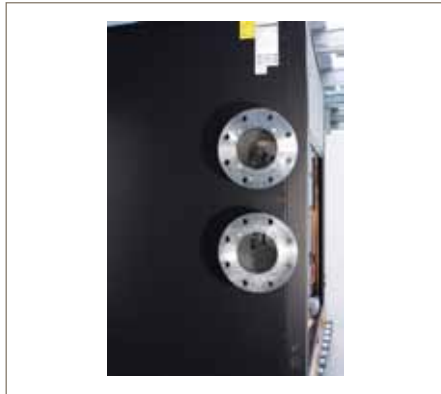
- **oversized heat exchanger**
- **compliant scroll compressors**
- **R407C environmentally friendly refrigerant**
- **direct operation,**

These elements assist in avoiding the increased energy consumption of thermal mass-type air dryers. PoleStar Smart® consumes less energy at full load and saves more energy at partial loads. Electrical consumption usually accounts for around 50% of the air dryer's total cost over a five-year period.





PST750



At the heart of the PoleStar Smart refrigeration dryer is the SmartPack heat exchanger (patent pending). This highly-compact, all-in-one, aluminium module contains 4 treatment stages in one single unit:

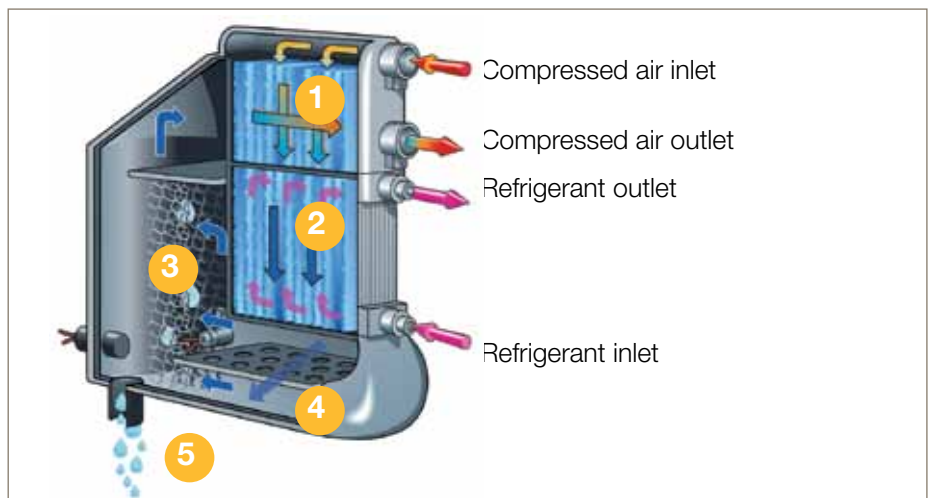
### 1 Air-to-air heat-exchanger

The air-to-air heat exchanger functions as a pre-cooler and a re-heater. It ensures the pre-cooling of the incoming 100% saturated hot compressed air, by transferring the heat to the cold air exiting from the stainless steel demister separator on its way to the dryer outlet. This reduces the likelihood of “sweating” on external piping, which can occur on non-insulated cooled surfaces in humid conditions.

The heat exchanger supports the pre-cooling, which would otherwise have to be taken over completely by the refrigeration system, in this way, both the dimensions and the energy consumption of the refrigerating circuit as a whole are reduced.

On larger PoleStar Smart dryers (PST460 and above), the heat exchanger block is multiplied up and installed in a modular fashion along an inlet/outlet manifold, up to a maximum of 6 modules in a row.

Several heat exchangers can be connected as a compact, higher capacity device, for larger dryers, such as the Polestar Smart (PST/750) shown here. Here, each unit is insulated by special heat shield insulation (on the basis of TSI poly-phenylethene), in order to achieve an even higher level of efficiency through higher heat retention.



### 2 Air-to-refrigerant heat exchanger (evaporator)

The air-to-refrigerant heat exchanger takes the pre-cooled air from the air to-air heat exchanger and cools it to the required dew-point, by transferring heat into the evaporating refrigerant.

After cooling, the air directly enters the high efficiency stainless steel demister separator where liquid water is removed, falling into the generously dimensioned drainage chamber or sump.

### 3 Maintenance-free demister separator

No connections between pipes are necessary, thanks to the geometric shape of the aluminium module, while unimpeded flow through the heat exchanger matrix is guaranteed, so that the air speed is low and the heat transfer is improved. The low air speeds even permit the installation of a slow flow high performance demister separator of stainless steel above the water drainage tank.

This demister contributes to the low pressure drops within the SmartPack module, typically up to four times larger than standard separating demisters in which sufficient precipitation can frequently only be achieved with difficulty at high air flows, in comparison to normal centrifugal type demisters, while can only maintain the required precipitation performance with difficulty at low air flows.

Parker Hiross demisters achieve a constantly high level of precipitation across the whole range of flows in the dryer. The contribution of the larger demister to the need for less refrigerant in the refrigerator circuit of the dryer is an additional feature. The need for refrigerant is 15% below that of our competitors in most cases.

#### 4 Large drainage chamber (sump)

The generously dimensioned large drainage chamber serves as a sump for the intermediate storage of fluid water until its disposal.

#### 5 Condensate drain

PST075 to PST095 are available provided with the automatic electric timed drain CDV.

The zero loss drain (SmartDrainer) is synchronised to open automatically when it senses the level of condensate present in the drainage tank. The valve only opens to evacuate liquid condensate and closes before any air can escape. The self-diagnostic troubleshooting software will signal an alarm and the drain will continue to function in a pre-programmed timed mode, returning to zero loss operation when the fault has been rectified, in the unlikely event of a fault during operation.

#### Product Features:

- Suitable for all compressed air applications
- Suitable for all compressor types, including variable flow
- The most energy efficient compressed air fridge dryer
- Low pressure drops for lower operational costs
- Cost of ownership reduced
- Significantly contributes to the indirect reduction of CO<sub>2</sub> into the environment

## Zero loss drain (Smart Drainer)

The diagram illustrates the Smart Drainer system with four key components labeled A, B, C, and D. Component A is the Drainage Chamber, shown in a cutaway view. Component B is the Level sensor, shown as a small probe. Component C is the Microprocessor Control panel, shown as a digital display with buttons. Component D is the Drain valve, shown as a mechanical valve. The diagram also includes a photograph of the internal components of the dryer and a photograph of the external drain valve.

- Microprocessor Control
- Three-phase models
- Zero loss capacitive drain mode
- Timed drain mode (selectable)
- Configurable open/close drain operation

- Electronic Control
- Single-phase models
- Timed discharge
- Configurable open period

**A** Drainage Chamber

**B** Level sensor – located within the drainage chamber (easily accessible)

**C** Microprocessor controls on the front of the dryer.

**D** The drain valve, fitted into the drain alcove and accessible from outside the dryer.

Drain valve, located in the drain niche. Easily accessible from the outside of the dryer to conduct maintenance.

# 50 Bar Refrigeration Dryers

Recent technological advances and the use of highly sophisticated production processes have led to increased market demand for compressed air at pressures of up to 50 barg.

The excellent dewpoint stability from stainless steel compressed air circuits in conjunction with the numerous complex tests which each air dryer must undergo, means that PoleStar Smart HP can guarantee the highest possible quality of finished product.

These also include the most complex technological processes, such as the production of bottles in PET recyclable plastic. In other words, maximum performance at minimum cost.

PoleStar Smart HP furthermore conforms to all major international directives and regulations, including the European PED 97/23 directive and North American ASME standards.

Parker Hiross offers a complete range of products (filters, separators, refrigerants and condensate drains) providing optimal treatment of compressed air and gas even at 50 barg pressure.



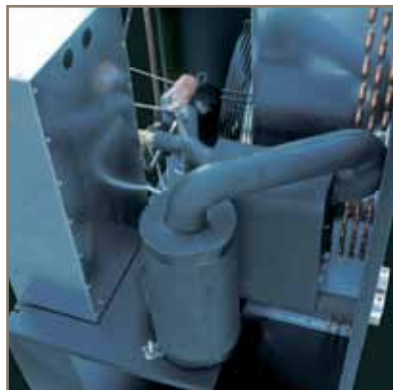
## Operation

Cycling refrigeration dryers for high-pressure applications.

### The range PoleStar Smart® HP PSH030-1200

The standard model features:

- Maximum 50 barg operational pressure
- Ambient temperature up to 50°C.
- Inlet air temperature up to 65°C.
- Environmentally friendly R407C refrigerant in all models.
- Performance-enhancing condenser prefilter in PSH120 models and upwards.
- The heat exchanger is made of copper brazed stainless steel plates.
- Inlet and outlet air collectors and condensate separator are entirely made of stainless steel to increase resistance to corrosion effects.
- Integrated timed drain on all models across the range.



The pneumatic circuit, including a heat exchanger with copper brazed plates and condensate separator, is made of stainless steel to increase resistance to corrosion, which is common in certain environments and processes.

Models from PSH030 to 1200 are controlled by an electronic board, models from PSH120 to 630 by the SmartControl microprocessor.



PSH120 models and upwards are enhanced by compliant scroll compressors.

Integrated timed condensate drain located in a niche for easy access and maintenance.

The integral drain is controlled by the electronic board of the dryer.

# Starlette Plus (SPL) Data

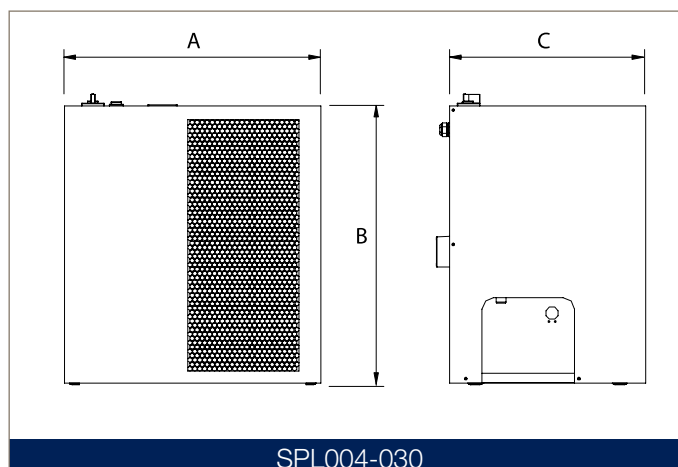
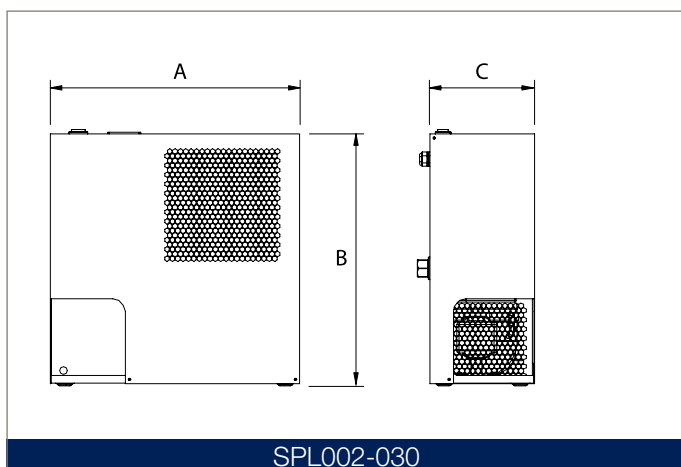
Dryer Model	Technical data				Dimensions (mm)			Weight (kg)	The installation of original Parker pre & post filters is highly recommended. Any direct or indirect damage to the dryer due to the lack of the pre-filter will nullify the warranty.	
	Air Flow		abs. power	air	width	height	depth			
	m <sup>3</sup> /h	m <sup>3</sup> /min	kW	Connec.	A	B	C	Pre-filter		
<b>SPL004</b>	24	0.4	0.13	1/2"	450	430	210	19	AO010CBFX	AA010CBFX
<b>SPL006</b>	36	0.6	0.17	1/2"	450	430	210	19	AO010CBFX	AA010CBFX
<b>SPL009</b>	54	0.9	0.25	1/2"	500	505	210	23.5	AO015CBFX	AA015CBFX
<b>SPL012</b>	72	1.2	0.25	1/2"	500	505	210	23.5	AO015CBFX	AA015CBFX
<b>SPL018</b>	108	1.8	0.47	3/4"	520	565	225	26.5	AO020DBFX	AA020DBFX
<b>SPL024</b>	144	2.4	0.57	3/4"	520	565	225	31	AO025DBFX	AA025DBFX
<b>SPL030</b>	180	3	0.78	3/4"	520	565	225	35	AO025DBFX	AA025DBFX
<b>SPL040</b>	240	4	0.71	1 1/2"	555	600	425	52	AO030GBFX	AA030GBFX
<b>SPL050</b>	300	5	0.85	1 1/2"	555	600	425	58	AO030GBFX	AA030GBFX
<b>SPL060</b>	360	6	1.05	1 1/2"	555	600	425	60	AO030GBFX	AA030GBFX

Performances refer to air at FAD 20 °C / 1 bar A, at working conditions: air suction 25 °C / 60 %RH, 7 barg working pressure, pressure dew point in accordance with ISO8573-1, 25 °C cooling air temperature, 35 °C compressed air inlet temperature. All indicated data is according to DIN ISO 7183. All models supplied with refrigerant R134a and for operation up to 16 barg. Starlette Plus can operate up to ambient temperatures of 50 °C and inlet temperatures of 65 °C. Power Supply: 230V / 1ph / 50Hz.

Airflow correction factors for differing working conditions															
Working Pressure	bar	3	4	5	6	7	8	9	10	11	12	13	14	15	16
correction factors	(A)	0.73	0.83	0.9	0.95	1	1.03	1.07	1.09	1.12	1.13	1.15	1.17	1.18	1.19
Ambient Temperature	°C	20	25	30	35	40	45	50							
correction factors	(B)	1.05	1	0.94	0.88	0.81	0.75	0.68							
Air inlet temperature	°C	30	35	40	45	50	55	60	65						
correction factors	(C)	1.22	1	0.83	0.69	0.58	0.49	0.46	0.43						

To obtain the actual air flow multiply the value at nominal conditions by the above correction factors (i.e. air flow x A x B x C). The above correction factors are approximate; for precise information, always refer to the software selection program.

## SPL Dimensions



# PoleStar Smart (PST) Data

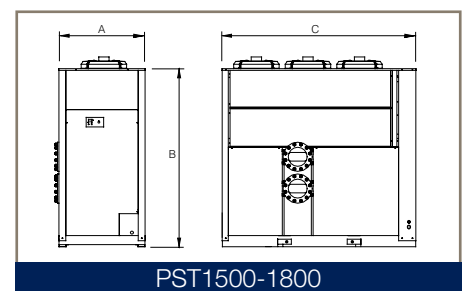
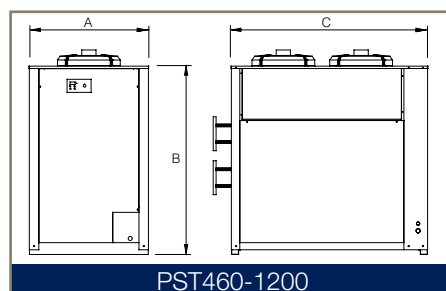
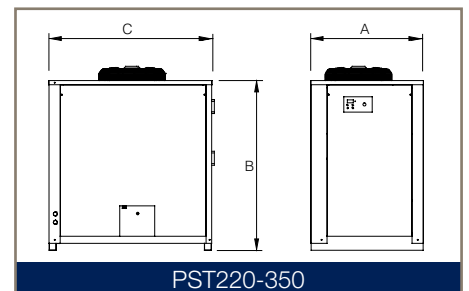
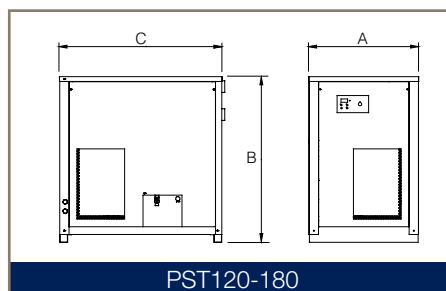
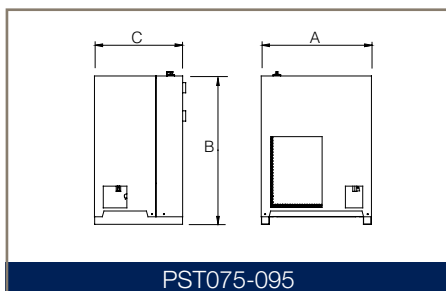
Dryer Model	Technical data				Dimensions (mm)			Weight	The installation of original Parker pre & post- filter is highly recommended. Any direct or indirect damage to the dryer due to the lack of the pre-filter will nullify the warranty.	
	Air Flow		Abs. Power	Air	width	height	depth			
	m <sup>3</sup> /h	m <sup>3</sup> /min	kW	Connec.	A	B	C	(kg)		
<b>PST075</b>	450	7.5	0.9	1 ½"	703	945	562	83	AO035GBFX	AA035GBFX
<b>PST095</b>	570	9.5	1.38	1 ½"	703	945	562	83	AO035GBFX	AA035GBFX
<b>PST120</b>	720	12	1.13	2"	706	1,064	1,046	145	AO040HBFX	AA040HBFX
<b>PST140</b>	840	14	1.14	2"	706	1,064	1,046	145	AO045HBFX	AA045HBFX
<b>PST180</b>	1,080	18	1.46	2"	706	1,064	1,046	155	AO045HBFX	AA045HBFX
<b>PST220</b>	1320	22	1.68	2 ½"	806	1,316	1166	230	AO050IBFX	AA050IBFX
<b>PST260</b>	1,560	26	2.19	2 ½"	806	1,316	1,166	240	AO050IBFX	AA050IBFX
<b>PST300</b>	1,800	30	2.41	2 ½"	806	1,316	1,166	245	AO055IBFX	AA055IBFX
<b>PST350</b>	2,100	35	3.06	2 ½"	806	1,316	1,166	250	AO055IBFX	AA055IBFX
<b>PST460</b>	2,760	46	3.14	DN100	1007	1,690	1,097	470	AO060KBFX	AA060KBFX
<b>PST520</b>	3,120	52	3.54	DN100	1,007	1,722	1,097	490	AO060KBFX	AA060KBFX
<b>PST630</b>	3,780	63	4.64	DN100	1007	1,722	1,657	580	AO060KBFX	AA060KBFX
<b>PST750</b>	4,500	75	5.73	DN150	1,007	1,722	1,657	670	AO350PDFX	AA350PDFX
<b>PST900</b>	5,400	90	7.63	DN150	1007	1,722	1,657	690	AO350PDFX	AA350PDFX
<b>PST1200</b>	7,200	120	8.92	DN150	1,007	2,048	1,657	830	AO350PDFX	AA350PDFX
<b>PST1500</b>	9,000	150	12.35	DN200	1007	2,208	2,257	1100	AO400QDFX	AA400QDFX
<b>PST1800</b>	10,800	180	15.96	DN200	1,007	2,208	2,257	1,190	AO400QDFX	AA400QDFX

Performances refer to air-cooled model with air at FAD 20°C / 1 bar A, at working conditions: air suction 25°C / 60%RH, 7 barg working pressure, pressure dew point in accordance with ISO8573-1, 25 °C cooling air temperature, 35 °C compressed air inlet temperature. All indicated data is according to DIN ISO 7183. All models supplied with refrigerant R407C and for operation up to 12 barg (14 barg for PST075 and PST095). Power supply: PST075-PST095 230V / 1ph / 50Hz; PST120-PST1800 400V / 3ph / 50Hz. PST120-1800 supplied with electronic zero loss integral drain, which can be configured also in timed mode (see user manual). PST075-350 with BSPP-F air connections.

Airflow correction factors for differing working conditions											
Working Pressure	barg	3	4	5	6	7	8	9	10	11	12
correction factors	(A)	0.74	0.83	0.9	0.96	1	1.04	1.07	1.08	1.11	1.12
Ambient Temperature	°C	20	25	30	35	40	45	50	55	60	65
correction factors	(B)	1.06	1	0.95	0.9	0.83	0.77	0.72	0.67	0.62	0.57
Air inlet temperature	°C	30	35	40	45	50	55	60	65	70	75
correction factors	(C)	1.23	1	0.84	0.7	0.59	0.5	0.45	0.4	0.35	0.3

To obtain the actual air flow multiply the value at nominal conditions by the above correction factors (i.e. air flow x A x B x C). PoleStar Smart can operate up to ambient temperatures of 50°C and inlet temperatures of 65°C. The above correction factors are approximative; for a precise selection always refer to the software selection program.

## PST Dimensions



# PoleStar Smart (PSH) Data

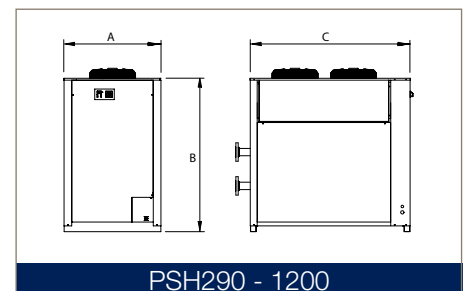
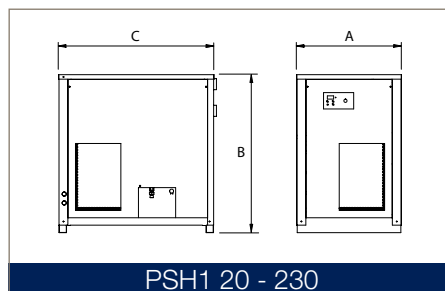
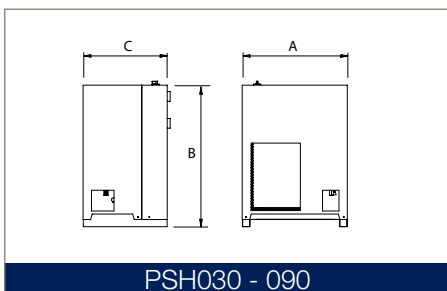
Dryer Model	Technical data				Dimensions (mm)			Weight	The installation of original Parker pre & post-filter is highly recommended. Any direct or indirect damage to the dryer due to the lack of the pre-filter will nullify the warranty.	
	Air Flow		Abs. Power	Air	width	height	depth			
	m <sup>3</sup> /h	m <sup>3</sup> /min	kW	Connec.	A	B	C	(kg)	Pre-filter	Post-filter
<b>PSH030</b>	180	3	0.5	1 ¼"	703	945	562	83	IP50-AO-0095G	IP50-AA-0095G
<b>PSH045</b>	270	4.5	0.6	1 ¼"	703	945	562	83	IP50-AO-0095G	IP50-AA-0095G
<b>PSH065</b>	390	6.5	1.3	1 ¼"	703	945	562	85	IP50-AO-0145G	IP50-AA-0145G
<b>PSH090</b>	540	9	1.4	1 ¼"	703	945	562	85	IP50-AO-0145G	IP50-AA-0145G
<b>PSH120</b>	720	12	1.4	1 ¼"	706	1064	1046	152	IP50-AO-0285G	IP50-AA-0285G
<b>PSH160</b>	960	16	1.4	1 ¼"	706	1064	1046	152	IP50-AO-0285G	IP50-AA-0285G
<b>PSH200</b>	1200	20	1.5	1 ¼"	706	1064	1046	152	IP50-AO-0465G	IP50-AA-0465G
<b>PSH230</b>	1380	23	1.5	1 ¼"	706	1064	1046	152	IP50-AO-0465G	IP50-AA-0465G
<b>PSH290</b>	1740	29	2.9	2 ½" ANSI	1007	1690	1097	356	IP50-AO-0465G	IP50-AA-0465G
<b>PSH380</b>	2280	38	3.2	2 ½" ANSI	1007	1690	1097	356	IP50-AO-0965G	IP50-AA-0965G
<b>PSH460</b>	2760	46	3.4	2 ½" ANSI	1007	1690	1097	356	IP50-AO-0965G	IP50-AA-0965G
<b>PSH630</b>	3780	63	4.1	2 ½" ANSI	1007	1690	1657	455	2 x IP50-AO-0465G	2 x IP50-AA-0465G
<b>PSH800</b>	4800	80	6.6	2 ½" ANSI	1007	1690	1657	610	2 x IP50-AO-0965G	2 x IP50-AA-0965G
<b>PSH1000</b>	6000	100	6.9	2 ½" ANSI	1007	1690	1657	610	2 x IP50-AO-0965G	2 x IP50-AA-0965G
<b>PSH1200</b>	7200	120	7.3	2 ½" ANSI	1007	1690	1657	610	2 x IP50-AO-0965G	2 x IP50-AA-0965G

Performances refer to air-cooled model with air suction of FAD 20°C / 1 bar A, at operating conditions: air suction 25°C / 60%RH, 40 barg working pressure, 25 °C cooling air temperature, 35 °C compressed air inlet temperature and pressure dewpoint in accordance with ISO8573-1. All indicated data refers to DIN ISO 7183. All models supplied with R407C. All models are supplied with timed integrated drain and designed for operation up to 50 barg. Models PSH030-230 supplied with BSPT-F air connections. Flanged models supplied with stainless steel ANSI flanges.

Airflow correction factors for differing working conditions									
Working Pressure	bar	15	20	25	30	35	40	45	50
correction factors	(A)	0.85	0.91	0.94	0.97	0.99	1	1.01	1.01
Ambient Temperature	°C	20	25	30	35	40	45	50	
correction factors	(B)	1.02	1	0.98	0.95	0.93	0.9	0.86	
Air inlet temperature	°C	30	35	40	45	50	55	60	65
correction factors	(C)	1.18	1	0.87	0.77	0.69	0.62	0.56	0.5

To obtain the required air flow multiply the value at nominal conditions by the above correction factors (i.e. air flow x A x B x C). Ambient temperature limit: 50°C . Inlet temperature limit: 65°C. The above correction factors are approximative; for a precise selection always refer to the software selection program.

## PSH Dimensions



## **Parker Hannifin Australasia**

### Sydney

9 Carrington Road  
Castle Hill NSW 2154  
Ph +61 2 9842 5110  
Fax +61 2 9842 5111

### Adelaide

Cnr Rosberg & Lafitte Rds  
WINGFIELD SA 5013  
Ph +61 8 8168 4300  
Fax +61 8 8168 4399

### Brisbane

4/68 Murdoch Circuit  
ACACIA RIDGE QLD 4110  
Ph +61 7 3272 8244  
Fax +61 7 3272 6699

### Mackay

45-47 John Vella Drive  
PAGET QLD 4740  
Ph +61 7 4952 4890  
Fax +61 7 4952 4895

### Melbourne

305 Frankston-Dandenong Road  
DANDENONG VIC 3175  
Ph +61 3 9768 5555  
Fax +61 3 9768 5556

### Newcastle

Unit 1, Number 3 Pippita Close  
Beresfield NSW 2322  
Ph +61 2 4964 2198  
Fax +61 2 4964 2280

### Perth

10 Hodgson Way  
KEWDALE WA 6105  
Ph +61 8 9353 4011  
Fax +61 8 9353 4088

### New Zealand

2 Timaru Place  
MT WELLINGTON, AUCKLAND  
Ph +64 9574 1744  
Fax +64 9573 0475

## **Parker Hannifin Australasia Manufacturing Facility**

### Wodonga

9 Chapple Street  
Wodonga VIC 3690  
Ph +61 2 6055 7100  
Fax +61 2 6056 3099

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