



GARDNER DENVER
Drum

OIL FREE SCREW COMPRESSORS

XK RANGE

XK-12

XK-18

The Range

XK machines are a range of contactless, oil free, screw type compressors designed to discharge all types of dry products from road tankers.

This leading design was achieved through a combination of our own design knowledge, complimented through leverage of the best available expertise in the industry (University and other consultants) providing market leading reliability, performance, installation and other benefits to the tank-truck markets.

Multiple Configurations

Allows package to be accommodated on different chasis.

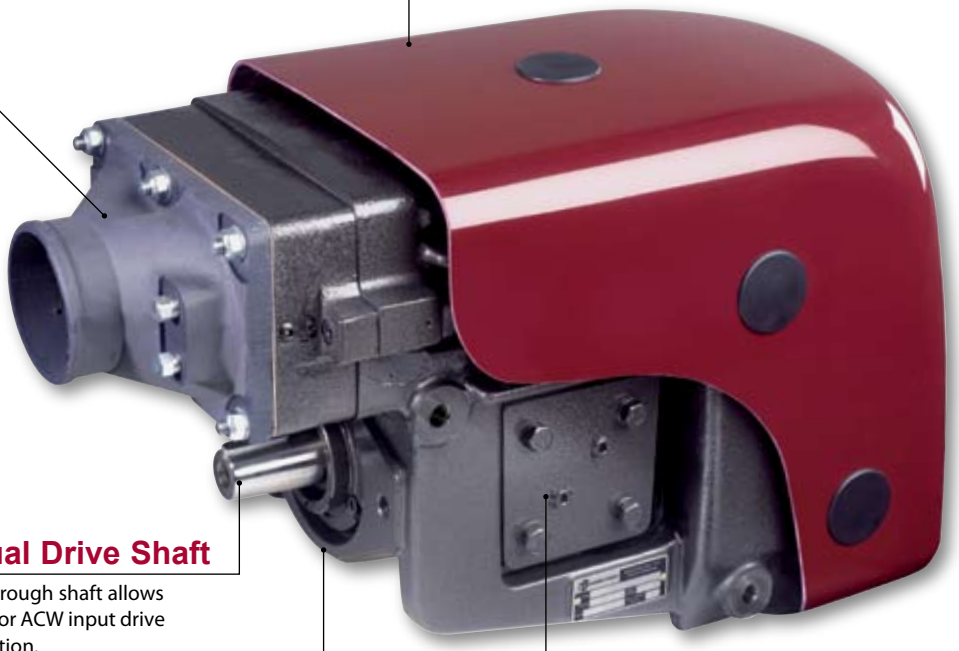


Inlet Flange

A low profile inlet flange reduces the installation envelope.

Moulded Cover

The highly styled GRP cover directs the cooling air over the machine and helps protect the compressor against the worst environmental conditions.



Lightweight

A lightweight cover allows an increased payload.



Dual Drive Shaft

A through shaft allows CW or ACW input drive rotation.

Connecting Flange

A 2 bolt connecting flange allows alternative drives to be used (eg. Hydraulic).

Outlet Ports

An optional outlet flange on either side of the machine increases mounting flexibility.

XK-18 Compressor Shown

Ease of Fitting

Best in class.
With dual input drive rotation, multi outlet port positions, direct PTO input drive speed range and slim profile, the machine is designed to fit within the chassis.
Purpose designed ancillaries including mounting brackets, absorptive or reactive silencers and discharge cooler/inlet filter modules provided separately or in several ready-to-fit packages all add to the ease of fitting.

Low Noise

Equal ***best*** in class
The high efficiency and special design of the body, rotors, gears and inlet/outlet ports all translate into a very smooth, low noise basic machine, normally removing the necessity for expensive acoustic enclosures.

Robust Design

Best in class
Designed exclusively for the truck market and utilising the 40 years of experience in manufacturing equipment for tank trucks, the XK range gives the robustness required for the truck operation under all conditions.

	XK-12	XK-18
Ambient Temperature Range	-40 to +50°C	-40 to +50°C
Maximum Inlet Depression	100mbar	100mbar

Low Discharge Temperature

Best in class.
The special design of the 5-3 rotor configuration and porting results in high efficiency giving the machines the lowest outlet temperatures of any comparable truck mounted compressor. The necessity for air discharge coolers is significantly reduced.

	XK-12	XK-18
Input Speed Range	1000 - 1600rpm	1000 - 1800rpm
Temperature Rise at 1 bar g	107 - 112°C	102 - 113°C
Temperature Rise at 2 bar g	164 - 167°C	156 - 162°C

Cooler

Integrated Air cooler and Ancillary Package shown with the direct driven machine inside and ancillaries outside the chassis.





Cooling Fan

A centrifugal cooling fan guarantees continuous effective gearbox cooling.

Hot and Cold Connections

Provide air temperature certainty.

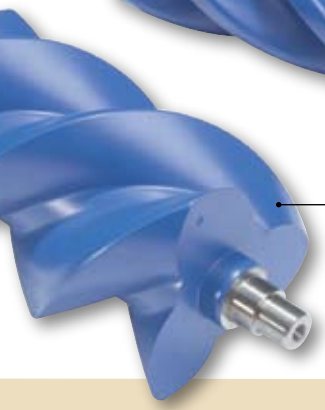


Dual Drive Shaft

A through shaft allows CW or ACW input driver rotation.

Shaft Cover

The shaft cover protects both the user and shaft against damage.



Rotors

Coated steel screw rotors provide the maximum strength, performance and corrosion resistance.



Packages

XK machines are available in multiple packages to suit different markets, vehicles and customers with integral or remote coolers, reactive or absorptive silencers.

Value for Money

Best in class

The XK machines are, by design, the most efficient on the market which is borne out by the low power required for the airflow and pressures produced. Cubic metre for cubic metre, these are the lowest operating cost machines on the market. No extra drive ancillaries, e.g. step-ups, oil coolers or other hidden costs are required with the machines.

Flexibility

Best in class flow range, ***best*** in class pressure range.

The machines will operate continuously at any pressure and flow within the ranges given allowing all common powders, granules, pellets and feeds to be discharged at optimum rates.

	XK-12	XK-18
Input speed range	1000 - 1600 rpm	1000 - 1800 rpm
Discharge flow range1 bar g	390 - 665 m^3/hr	541 - 1105m^3/hr
Discharge flow range2 bar g	352 - 625 m^3/hr	508 - 1068m^3/hr

Reliability

Unprecedented design and testing regime (Pas) provides assured reliability.

Lightweight

Best in class.

Utilising state of the art 3D modelling design and analysis equipment together with modern materials the XK range is the best in class for weight per cubic meter of air delivered.

XK-12 Compressor

Maximum discharge pressure - 2.5 bar g.
Discharge flow rate 330m3/hr - 610 m3/hr (at 2.5 bar g)

Market

The XK-12 is a robust, medium flow, oil free, contactless, low maintenance screw compressor designed for the contaminant free discharge of dense bulk powder products (eg. cement, flour and lime), usually at 1.5-2.0 bar g (at the tank) and at up to 2.5 bar g as the tank permits.

Specification

General design

The XK-12 is an oil free screw compressor comprising synchronised screw rotors, combined main body/step up gearcase assembly and inlet bearing carrier.

Mounting

The compact shape and size of the XK-12 make it ideal for mounting inside the chassis on most vehicles to enable low cost direct PTO driving.

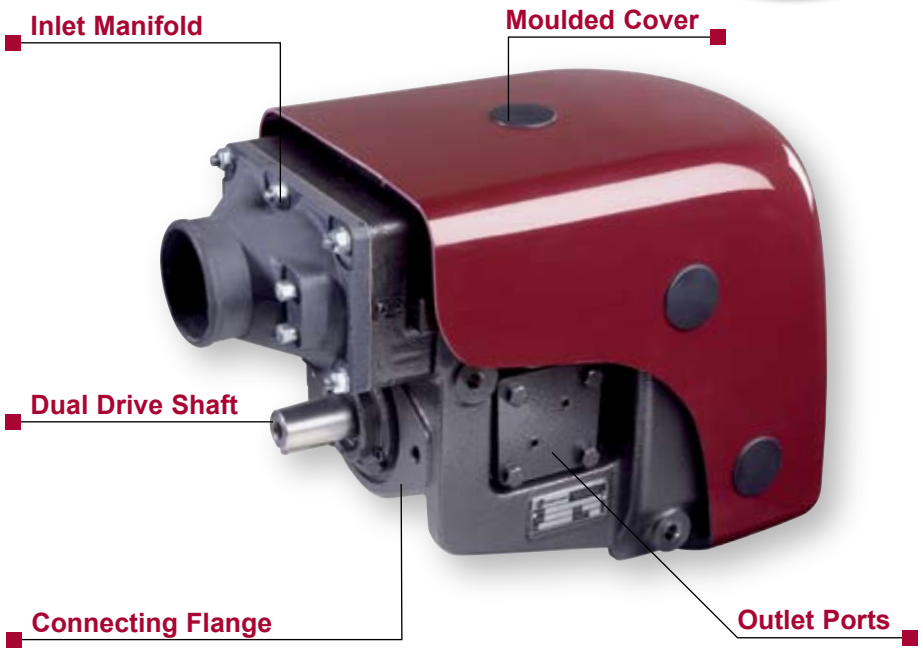
A through shaft allows CW or ACW input drive rotation with mounting points on either side of the machine to provide further flexibility.

The Standard Package

The standard package consists of the following equipment:

- Basic XK-12 machine and mounting/ flange pack
- Inlet kit including a cyclonic inlet filter
- Commissioning filter
- Relief valve
- Check valve and flange pack
- Outlet silencer - reactive or absorptive.
- Torque limiting coupling

Note: The machine is also available in a high input speed version (1800 - 2900 rpm) for diesel engine and electric motor drives.

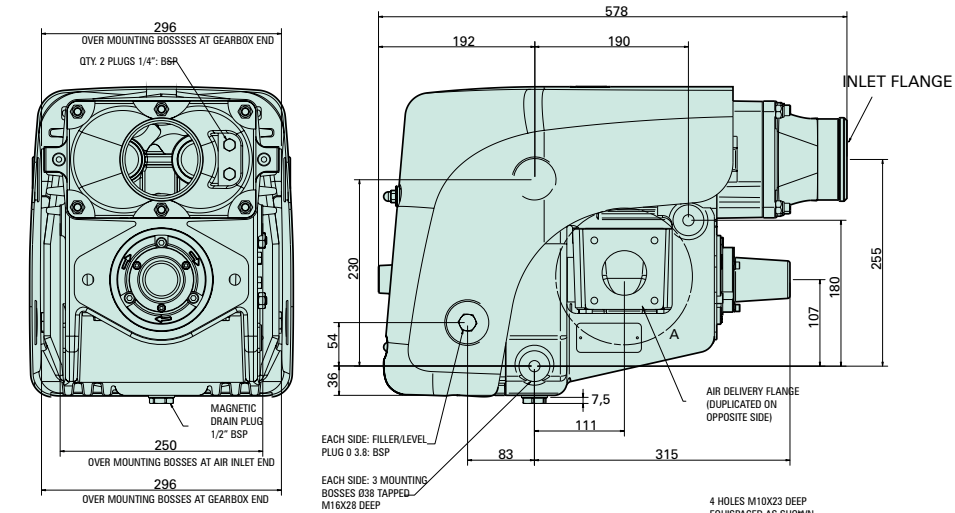


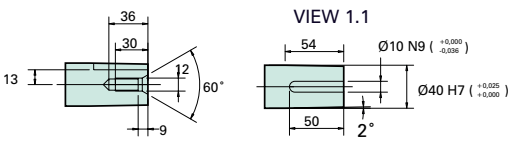
Optional Ancillaries

- Various drive flanges
- Various flange pack materials
- Absorptive or reactive silencer
- Remote Air cooler pack
- Delivery filter

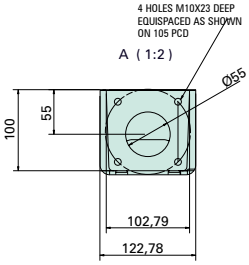
Drive Options

Prop. shaft drive: Direct from a vehicle PTO
Hydraulic drive: Several drives can be offered depending on the application
Electric motor: Packages on base frames utilising the high input speed version
Engine drive: Packages on base frames utilising the high input speed version





SHAFT END DETAILS



DELIVERY FLANGE DETAILS

Weight XK12: 117Kg

All dimensions in mm.

GARDNER DENVER Drum

XK-18 Compressor

Maximum discharge pressure - 2.2 bar g.
Discharge flow rate 500m3/hr - 1060 m3/hr (at 2.2 bar g)

Market

The XK-18 is a robust, high flow, oil free, contactless, low maintenance screw compressor designed for the contaminant free discharge of a wide range of product types including:

- Granular, pellet, random particle products at 1 - 1.5 bar g (e.g. sugar, plastic granules and animal feeds) with a higher pressure availability to dislodge any blockages in conveying pipes during the discharge.
- More dense bulk powder products (e.g. cement, flour and lime), usually at 1.5 - 2.0 bar g (at the tank) pressure in 3", difficult or large bore conveying pipe.

Specification

General design

The XK-18 is an oil free screw compressor comprising synchronised screw rotors, combined main body/ step up gearcase assembly and inlet bearing carrier.

Mounting

The compact shape and size of the XK-18 make it ideal for mounting inside the chassis on most vehicles to enable low cost direct PTO driving.

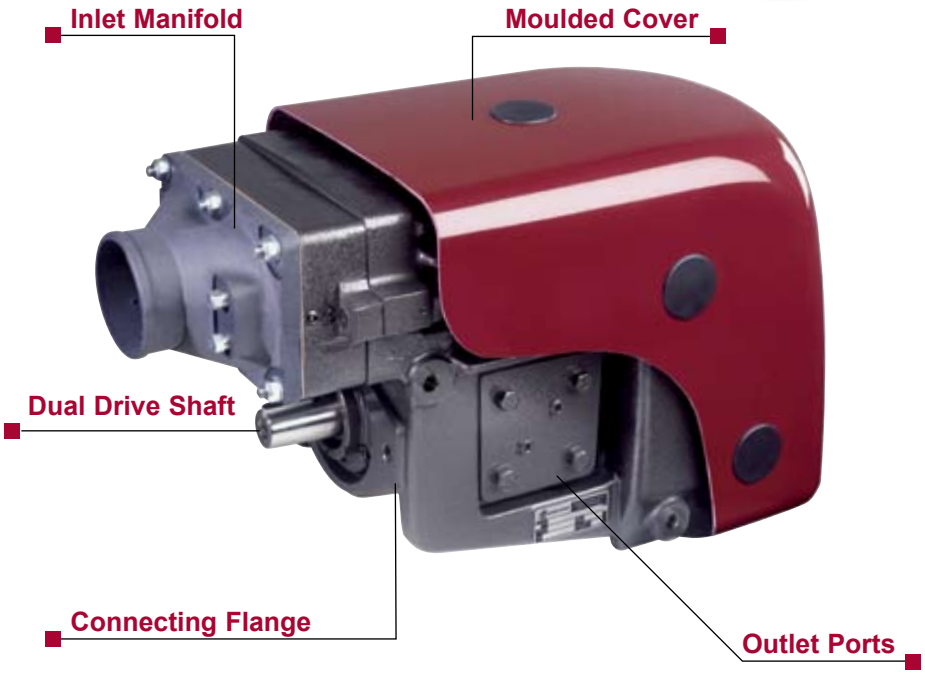
A through shaft allows CW or ACW input drive rotation with mounting points on either side of the machine to provide further flexibility.

The Standard Package

The standard package consists of the following equipment:

- Basic XK-18 machine and mounting/ flange pack
- Inlet kit including a cyclonic inlet filter
- Commissioning filter
- Relief valve
- Check valve and flange pack
- Outlet silencer - reactive or absorptive.
- Torque limiting coupling

Note: The machine is also available in a high input speed version (1800 - 3260 rpm) for diesel engine and electric motor drives.

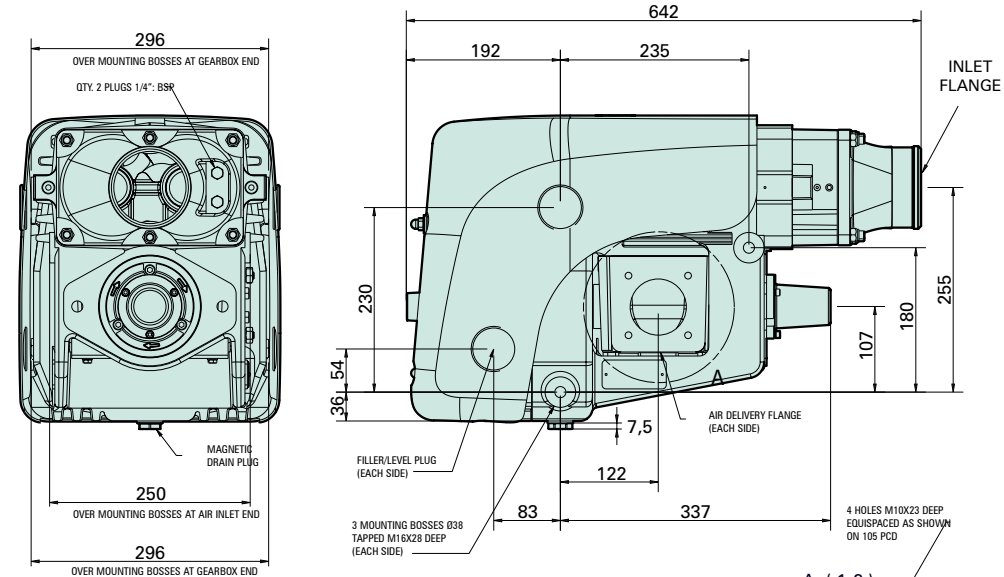


Optional Ancillaries

- Various drive flanges
- Various flange pack materials
- Absorptive or reactive silencer
- Remote Air cooler pack
- Delivery filter

Drive Options

Prop. shaft drive: Direct from a vehicle PTO
Hydraulic drive: Several drives can be offered depending on the application
Electric motor: Packages on base frames utilising the high input speed version
Engine drive: Packages on base frames utilising the high input speed version



Weight XK18: 127Kg

All dimensions in mm.

SHAFT END DETAILS

DELIVERY FLANGE DETAILS

Air Cooler & Ancillary Package

Market

The air cooler and ancillary package is a modular assembly designed to combine with the XK-12 and XK-18 compressors and supply cool air for discharging products sensitive to high temperature (e.g. sugars and plastics).

Specification

General design

The air cooler itself comprises a cooling fan, radiator and cooling duct. This is assembled/located inside a GRP enclosure module also housing the inlet filter, filter blockage indicator, relief valve, reactive discharge silencer and check valve.

The electrically operated cooling fan (24V DC) provides a continuously high cooling rate throughout the discharge flow range of the compressor.

Cooling Performance

There are many different factors effecting the best cooling rate, but the maximum temperature rise at 2 bar g should not exceed 89˚C above the fan and air inlet temperature throughout the XK-12 and XK-18 operating ranges.

Mounting

The common machine/cooler mounting bracket allows the air cooler to be mounted parallel to the chassis, but also includes provision to alter the drive axis angle of the compressor to match that of the PTO.

The package can be mounted on the left or right hand side of the vehicle chassis with a forward or rearward build and the compressor fitted to offer a CW or ACW input drive rotation (as required).

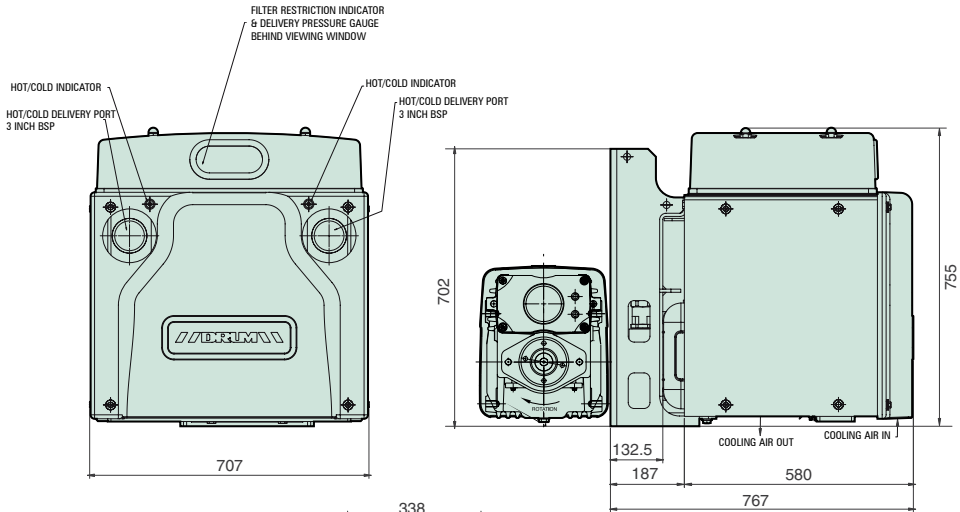
The Standard Package

The cooler package and bracket will be combined with the compressor prior to despatch to allow the assembly to be lifted out of the box and be fitted directly to the vehicle.

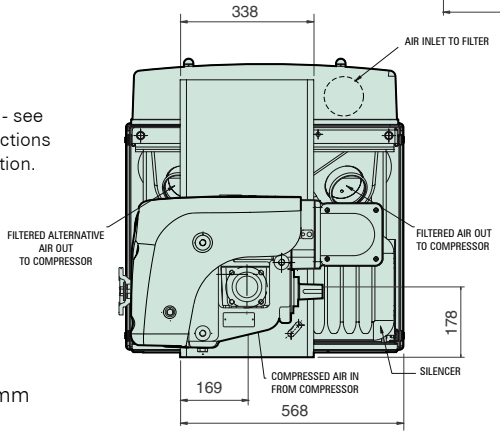


Drive Options

Prop. shaft drive:	Direct from a vehicle PTO
Hydraulic drive:	Several drives can be offered depending on the application
Electric motor:	Packages on base frames utilising the high input speed version
Engine drive:	Packages on base frames utilising the high input speed version



Note:
Four other build options available - see installation instructions for more information.



All dimensions in mm

Weight XK-12 Compressor with air cooler and ancillary package: 279kg
Weight XK-18 Compressor with air cooler and ancillary package: 290kg

Installation

Installation

The compressor size, input speeds and ancillaries are designed so that the machine can be installed inside the chassis and driven directly by a PTO/prop.shaft on all 4 x 2 Tractor Units. This removes the necessity for more costly, heavier and higher maintenance drives and leaves the top and sides of the chassis clear to allow the tractor unit to be used for other trailer pulling activities or free to carry greater fuel.

If direct drive is still not possible (such as on some 6 x 2 chassis'), the unit can be hydraulically driven inside the chassis which can still leave the top and sides of the chassis clear.

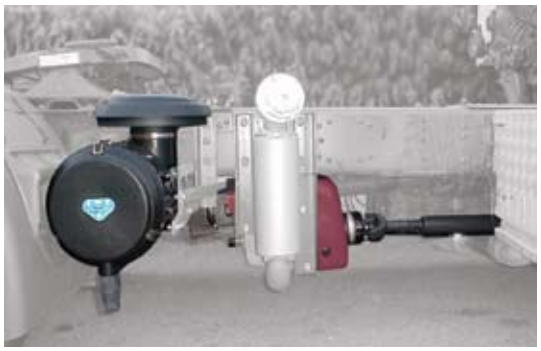
Other Packages

Other fully assembled designs are available if required including basic designs on brackets, ancillary module (non-cooler) and a bevel gearbox drive assembly.

Please ask if you have other requirements.



XK-18 Hydraulic Drive Skid Pack



XK-18 package 1 with absorptive discharge silencer.



XK Machine Inside a Tight Chassis

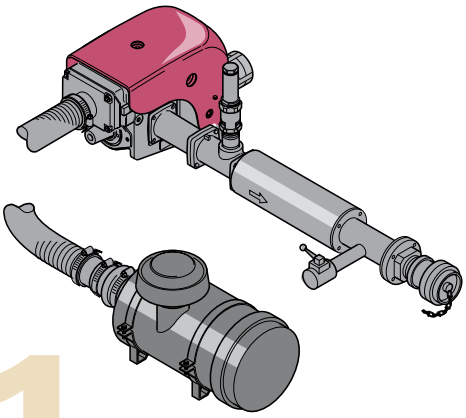


XK-12 Pack 5 Machine



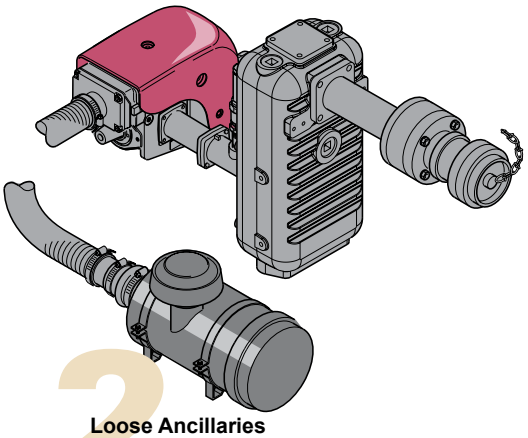
XK-12 package 1 with absorptive discharge silencer.

Packages



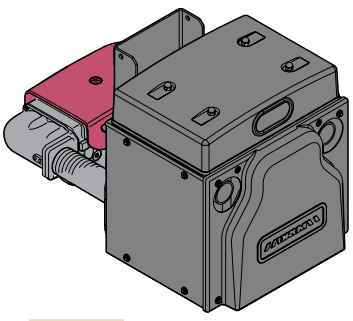
1

Loose Ancillaries
Absorptive Discharge Silencer



2

Loose Ancillaries
Reactive Discharge Silencer



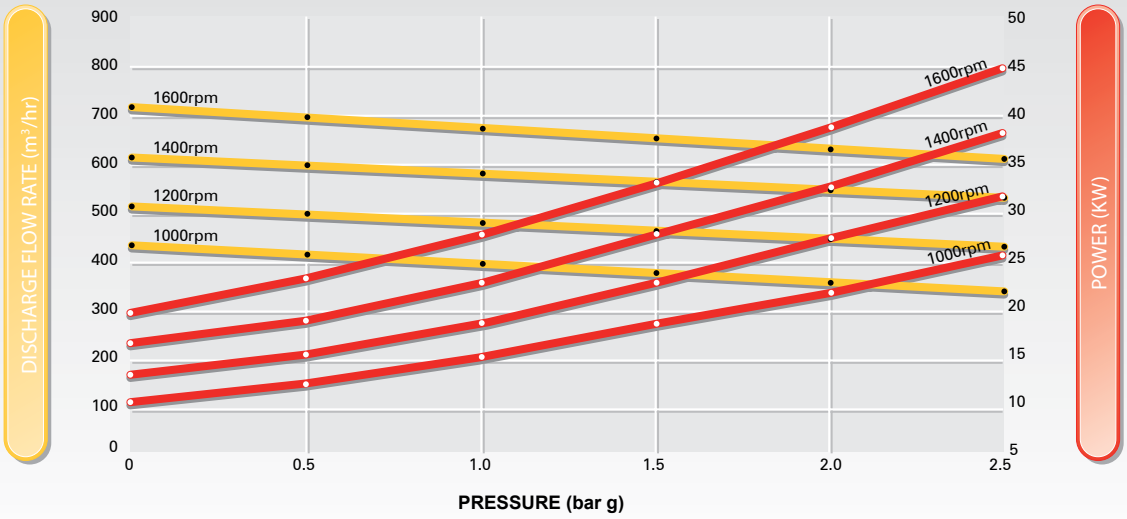
5

Fully assembled with cooler module

Performance

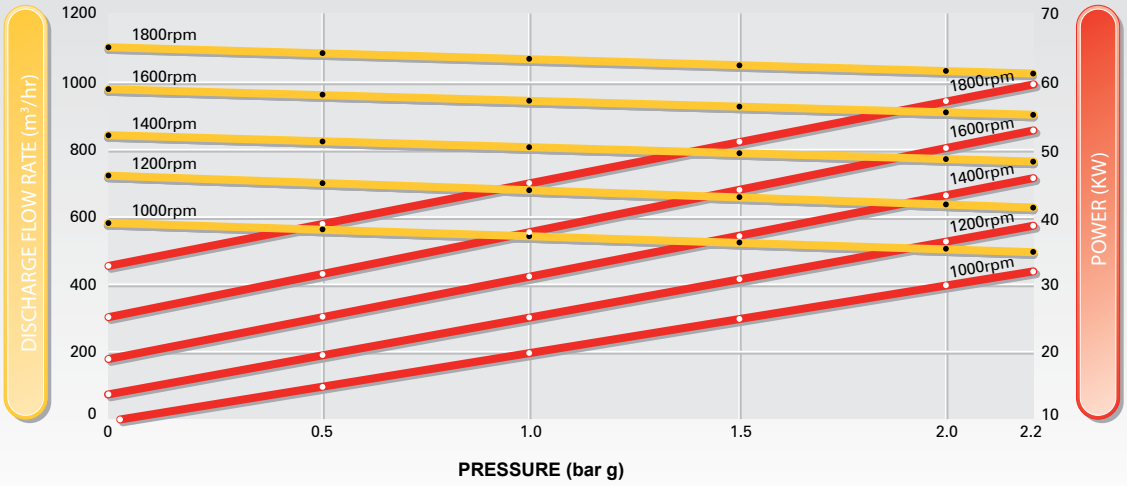
XK-12 Discharge Flow and Input Power





XK-18 Discharge Flow and Input Power

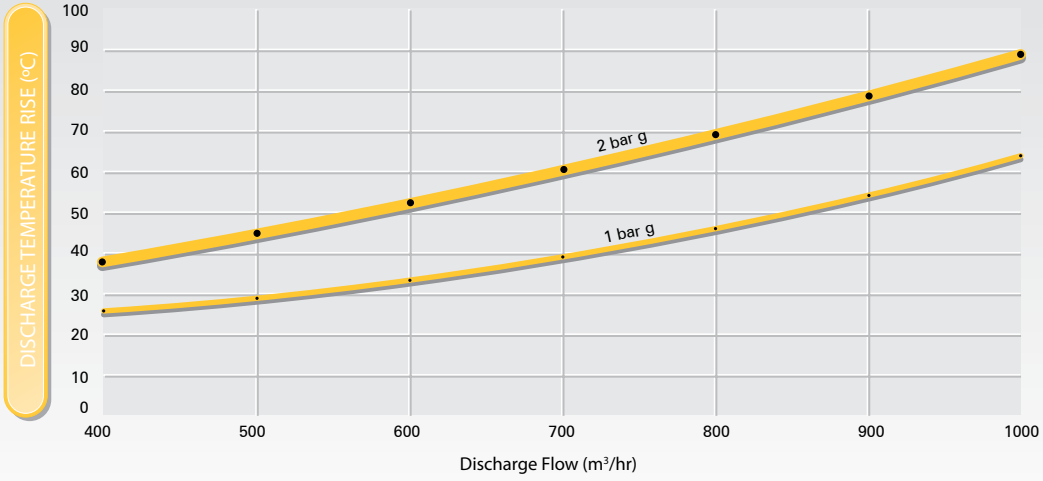




XK-12 & XK-18 Cooler Discharge Temperatures

(above the fan & air inlet temperature)





Discharge flow measured in accordance with BS1042/ISO5167-1/BS150 TR 15377 and referred to inlet conditions.

Market

Gardner Denver Drum XK machines deliver **All Types of Materials** from **All Types of Tanks** in **All Types of Weather** for **All Types of Customers.**









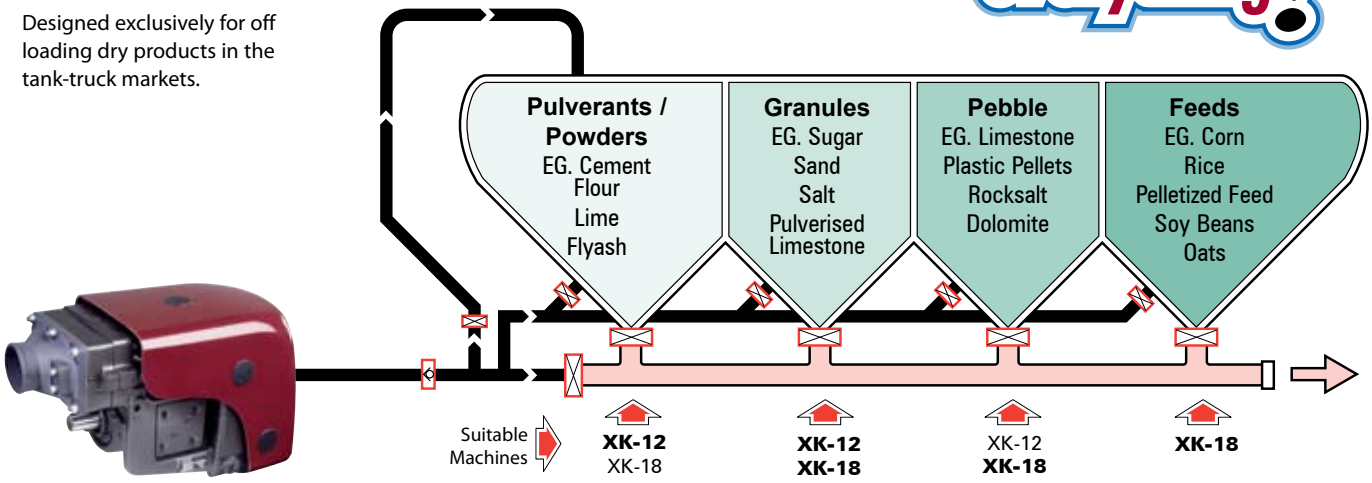






XK MACHINES Discharge everything!

Designed exclusively for off loading dry products in the tank-truck markets.



NB. **Bold** indicates preferred/normal machines

Service

With Gardner Denver regional sales companies, distributors and agents officially representing Gardner Denver products in over 40 countries on 5 continents and close relationships/back-up in many more, Gardner Denver products can truly be described as global.



○ Locations of offices and distribution centres.

Accessories

Remote Air Cooler ►

The remote air cooler ancillary is a modular assembly designed to combine with the XK-12 and XK-18 compressors and supply cool air for discharging products sensitive to high temperature (e.g. sugars and plastics).

Performance characteristics are the same as those shown for the air cooler ancillary package.



Hydrapak & Hydraulic Systems ▼

The Hydrapak oil cooler contains all the necessary ancillaries required in a Blower, Compressor or Pump drive system and allows greater flexibility to install products in the available space, on trailers or close to tanks in the case of Cargo pumps.

The Hydrapak is a compact, low weight (17kg) design containing the reservoir, return filter, radiator, cooling fan and system relief valve so that it simply needs to be mounted on the vehicle and connected to the hydraulic pump and motor. This allows equipment to operate all day at a fraction of the weight of oil tank-cooled systems.



◄ Micronic Filters

The M329 range of stainless steel discharge filters provide a complete air filtration (5μm) and condition monitoring system to prevent the contamination/degradation of liquid and dry products (e.g. foods and plastics) in the tanker off loading industry.



Please contact your Gardner Denver product representative for a Technical Data Sheet or further information on any of these products.

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Bulletin XK10 04/2007

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