

**ENERPAC** 

***XA-Series***

# Air Driven Hydraulic Pumps

The breakthrough in hydraulic pump technology & ergonomics.  
700 bar pumps with Xvari® Technology, exclusively from Enerpac!



**XVARI**<sup>®</sup>  
TECHNOLOGY

- *Ergonomic design for less operator fatigue*
- *Variable oil flow & fine metering for precise control*
- *Higher oil flow for increased productivity*

***XVARI ~ Be in control***



### Hydraulic pump technology is undergoing a definitive change

Tremendously high oil delivery, precise control and ergonomic operation; three characteristics of the new XVARI<sup>®</sup> Technology pump developed by Enerpac. Never before have these three vital product characteristics been combined in one hydraulic pump. With XVARI<sup>®</sup> Technology, Enerpac has again set a new industrial standard for succeeding the 50-year old technology of current air-over-hydraulic foot pumps.

The XVARI<sup>®</sup> Technology replaces the popular and widely-used linear air motor technology with improved ergonomics, precise metering of the hydraulic oil flow and also offers a higher oil delivery for increased productivity and efficiency.

### XVARI ~ Be in control

XVARI<sup>®</sup> Technology enables users to continuously and precisely control the amount of hydraulic oil flow in advance and retract mode and thereby the speed of the hydraulic cylinder or tool that the pump is powering - specifically for jobs that require accurate load positioning, aligning and controlled descend.

XVARI<sup>®</sup> Technology enables the user to better control the hydraulic application, improves productivity, enhances process quality and makes the workplace safer.

### Stay balanced

Enerpac is 'breaking the mould' by applying a two pedal design: one for tool advance (pressure) and one for tool retract (release). This two pedal design meets the objectives of an ergonomically better product. The pedals are depressed with the ball of the foot, whereby the heel stays on the ground. The bodyweight therefore rests on two legs during the operation. This causes less fatigue and provides increased stability and better control over the degree of pressing and thus the control of the pump. To control the pressure, the pump can be optionally equipped with an integrated pressure gauge.

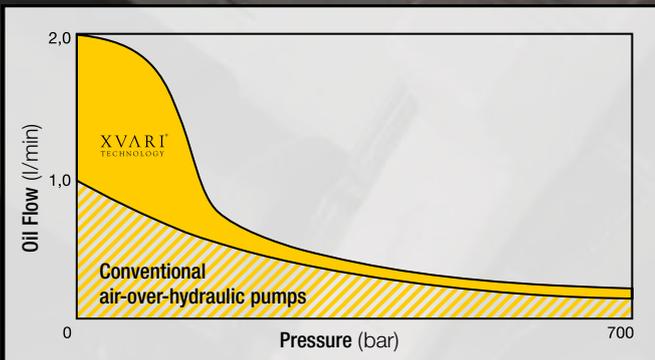
The completely closed housing is manufactured from durable glass-filled nylon and provided with extra protection on the corners in the form of stiff cast rubber corner pieces.



# in Air Driven Hydraulic Pump Technology

## Under the 'cover'

The heart of the XA-Series is a revolutionary machine of technology, which patents have been applied for. Proven technologies and functions were used in the construction. It was clear from market research that many users wanted a higher hydraulic delivery. With the new pump, the hydraulic delivery is up to 50% higher than with conventional air-over-hydraulic pumps. Enerpac has achieved the air driven pump segment leading oil flow, by using a rotating air motor and a rotating two-stage pump element instead of a linear air motor driving a single hydraulic piston. By pressing the pedal further down the speed of the rotating air motor can be accurately controlled.

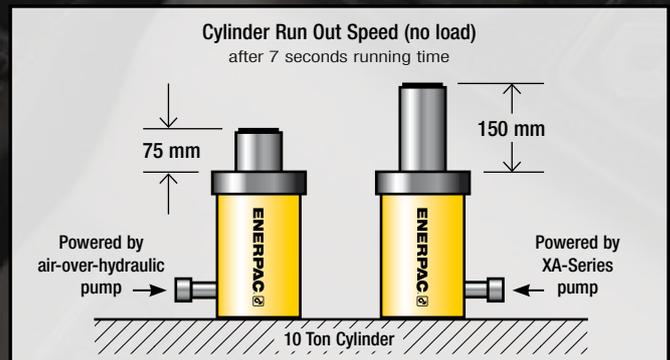


XVARi® Technology, Hydraulic Flow Performance

This provides a variable oil flow, so that the speed and positioning of the hydraulic cylinder or tool can be controlled much more precisely. The advantage is that the user has more control over the hydraulic pump and work being performed. Higher piston speeds result in a smooth oil flow compared to the pulsating oil flow of the conventional air-over-hydraulic technology. A closed oil reservoir prevents leakage and eliminates internal contamination from air borne particles. Stability of the XA-Series pump is second to none with a slightly larger base area.

## Time is money

With the higher oil flow, the time required to run out the cylinder or tool and build to maximum pressure has been considerably reduced. Compared to many conventional air-over-hydraulic pumps the XA-Series is up to 2 times as fast. Enerpac developed a special hydraulic release valve for the retract function. This valve is accurately controlled by the release pedal. The more the pedal is depressed, the faster the hydraulic pressure reduces and the cylinder or tool retracts. This product characteristic results in a much better control over the retract function, think for example of a load that must be lowered slowly and in a controlled manner.



XVARi® Technology, Cylinder Run Out Speed

The time is now to swap your pump for the new XA-Series with XVARi® Technology.

**XVARi**<sup>®</sup>  
TECHNOLOGY

**XVARi ~ Be in control**

# XA-Series, Air Driven Hydraulic Pumps

**ENERPAC**   
Hydraulic Technology Worldwide

▼ Shown: XA11G



- Ergonomic design for less operator fatigue
- Variable oil flow & fine metering for precise control
- Higher oil flow for increased productivity
- Closed hydraulic system prevents contamination and allows pump usage in any position
- Pedal lock function for retract position
- Ground screw for improved ATEX explosion safety
- External adjustable pressure setting valve.

▼ Easy operated by foot. No need to fully lift up foot – rest bodyweight on heel, resulting in a handsfree and stabile working position.



**XVARI**<sup>®</sup>  
TECHNOLOGY

## Productivity & Ergonomics



### Optional Pressure Gauge

Integrated gauge with calibrated scale reading in bar, psi and MPa for actual pressure reading.



### 4/3 Control Valve

For powering double-acting hydraulic cylinders and tools.



### 2 Litres Reservoir

Double oil capacity for powering larger hydraulic cylinders and tools.



### Pedal Safety Guard

Customer installed frame protects both pedals against accidental activation.

Order model number <sup>1)</sup>

**XPG1**



### "Joy-stick" Lever Kit

Customer installed set of handles for manual operation of both pedals.

Order model number <sup>1)</sup>

**XLK1**



### Hydraulic Swivel Connector

Customer installed swivel connector for optimal orientation of the

hydraulic hose.

Order model number <sup>1)</sup>

**XSC1**

<sup>1)</sup> Accessories must be ordered separately.

# XA-Series, Air Driven Hydraulic Pumps



## XVARI® Technology Production Application

XA11 pump is used with a 13 tons hollow cylinder to compress and position diesel engine valve springs.

The operator benefits from the fine metering capacities of the XVARI® Technology to apply the mandatory precise stroke and force.

[www.xvari.com](http://www.xvari.com)

## XA Series



Reservoir Capacity:

**1,0 - 2,0 litres**

Flow at Rated Pressure:

**0,25 l/min**

Air Consumption:

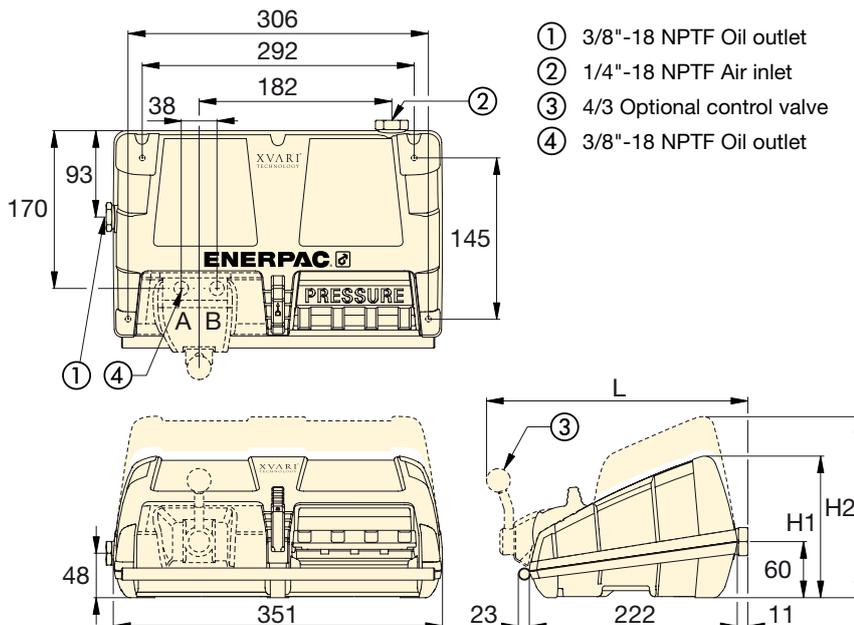
**283 - 991 l/min**

Maximum Operating Pressure:

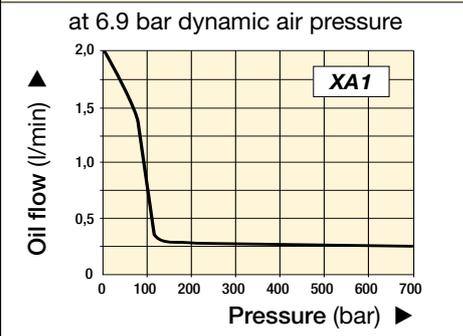
**700 bar**

### ▼ XA-SERIES PERFORMANCE CHART

Maximum Pressure (bar)	Output Flow Rate l/min		Pump Series	Valve Function	Dynamic Air Pressure (bar)
	No load	Load			
700	2,0	0,25	<b>XA1</b>	Advance/Hold/Retract	2,1 - 8,6



### FLOW CHART



### Regulator-Filter-Lubricator

Recommended for use with all XA-Series Air pumps. Provides clean, lubricated air and allows for air pressure adjustment.

pressure adjustment.

Order model number 1)

**RFL102**

### ▼ SELECTION CHART

For use with cylinder or tool	Usable Oil Capacity (litres)	Model Number 1)	Pressure Gauge	3-way 3-pos. Valve	4-way 3-pos. Valve	Dimensions (mm)			 (kg)
						H1	H2	L	
Single-acting	1,0	<b>XA 11</b>	–	•	–	152	–	–	8,6
	2,0	<b>XA 12</b>	–	•	–	–	170	–	10,2
Single-acting	1,0	<b>XA 11G</b>	•	•	–	152	–	–	8,8
	2,0	<b>XA 12G</b>	•	•	–	–	170	–	10,4
Double-acting	1,0	<b>XA 11V</b>	–	–	•	152	–	279	10,1
	2,0	<b>XA 12V</b>	–	–	•	–	170	279	11,7
Double-acting	1,0	<b>XA 11VG</b>	•	–	•	152	–	279	10,3
	2,0	<b>XA 12VG</b>	•	–	•	–	170	279	11,9

1) High-Flow coupler CR400 and accessories must be ordered separately.

# XA-Series, Air Driven Hydraulic Pumps

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