



Cobra®

HIGH PRESSURE DIAPHRAGM PUMPS



- Fast return on investment
- High reliability
- No application limits

Great benefits

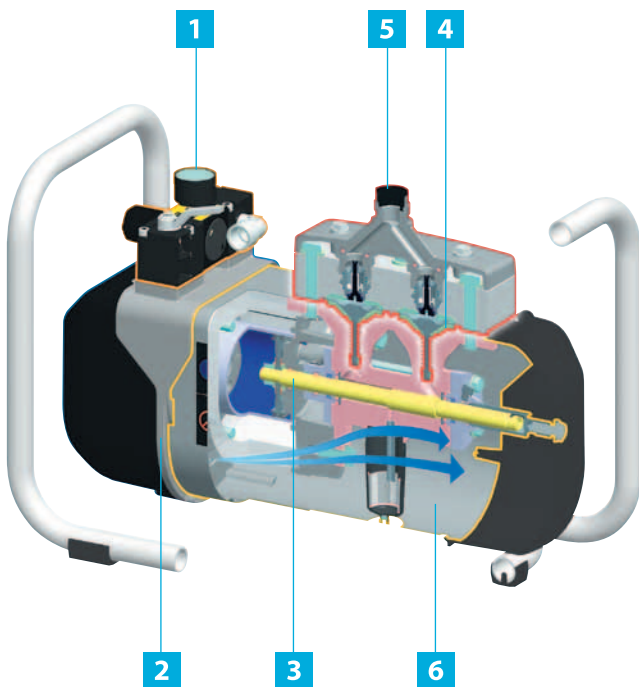
WAGNER Cobra®

Cobra® is an exclusive high pressure double diaphragm pump suitable for Airless and AirCoat applications up to 250 bar. Cobra® is the first high pressure pneumatic pump without packing. The lack of contact between the material and the external atmosphere (the pump is completely sealed), the absence of friction in the fluid section and the minimum shear make it perfect for any kind of material including the most critical ones such as reactive paints (UV paints, isocyanates, acrylics) or highly abrasive materials. The pump works with extremely low pulsation and creates a uniform paint flow, achieving a perfect spray pattern and superb surface quality. With its minimized internal volumes, the pump is designed to greatly reduce solvent consumption and material waste during flushing and color-change operations.



Revolutionary working principle

An IceBreaker® pneumatic motor pressurizes the hydraulic section with a ratio of 40:1. The oil contained in it, transmits the pressure to the pumped fluid through the two diaphragms. While one diaphragm creates a suction, the other delivers the material. Special inlet valves and the sturdy diaphragm construction allow high frequency operation. While this would be problematic for the fluid section of a standard piston or bellows pump, it is readily mastered by the Cobra® high speed. A high delivery rate is therefore achievable with a very small pump volume.



- 1 Pressure regulator
- 2 Pneumatic IceBreaker® motor
- 3 Oil piston
- 4 Diaphragm
- 5 Material inlet
- 6 Forced-air cooling (patented)

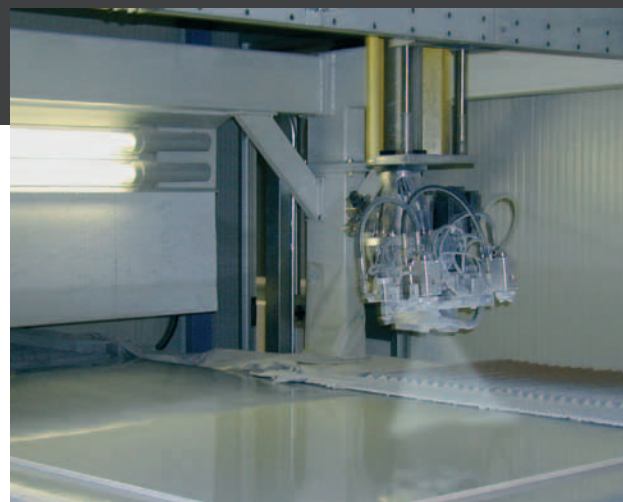
Cobra® 40-10

Cobra® 40-10 is the ideal solution for working with small quantities and frequent color changes – recommended for single-gun up to three-gun applications in the wood and furniture industry, small carpentry shops and joineries, and the general metal industry. Cobra® 40-10 is also ideal for feeding base or hardener for 2K mixing units (FlexControl and FlexControl Plus).



Cobra® 40-25

Cobra® 40-25 is suitable for high flow rates applications (up to 5 l/min) such as multi-gun operations or for very large nozzles. It is also an excellent solution for feeding automatic spraying systems in wood coating lines or for heavy-duty applications in carpentry, the metal industry, and leather coating. Cobra® 40-25 is ideal for feeding base or hardener for 2K mixing units when high delivery is needed.



Cobra® 2K

Cobra® 2K is the perfect solution for highly reactive 2K materials such as polyester (primer or finishing, short and long pot-life) and is ideal for applications on old-style furniture, coffins, musical instruments, and boat and yacht interiors.



WAGNER Cobra®: Innovative technology

WAGNER Cobra® is the only high pressure pneumatic diaphragm pump on the market. The pump was specifically designed to ensure the highest reliability and the best performance.

- 1** A drastic reduction in solvent consumption during flushing operations thanks to its smaller displacement volume and the easy-to-clean design.
- 2** High reliability and low maintenance costs: special long-life diaphragms and tungsten carbide inlet valves.
- 3** Better finishing results: very low pulsation for consistent fluid output.

- 4** No ice problems: proven WAGNER IceBreaker® air motor technology. Excellent reliability and minimal ice formation, even at the highest operating speeds.
- 5** Easy operation: integrated recycle valve.
- 6** Versatile: all Cobra® pumps can work in either a horizontal or vertical position.
- 7** A variety of suction systems can be mounted: hopper, flexible suction hose, rigid suction pipe.



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Enjoy working with Cobra®!

FAST RETURN ON INVESTMENT

The reduced paint section displacement and low operative costs ensure enormous benefit in terms of savings:

- Reduced solvent consumption: up to 60 % savings during flushing procedures compared to piston pumps
- Less paint waste
- Easy and fast color change
- Lower maintenance due to extremely low wear

HIGH RELIABILITY

The long-life diaphragms and the absence of packings in the fluid section guarantee high reliability, even under the most taxing working conditions. The air-cooling system for the hydraulic stage keeps the hydraulic oil at a constant temperature and viscosity.

NO APPLICATION LIMITS

Piston pumps and bellows pumps have the following limitations:

- 1 They generate a certain amount of friction heat. This limits their usage for reactive and abrasive materials. Cobra® is friction-free and can handle all critical materials.
- 2 They produce a high shearing effect and are therefore are not recommended for shear-sensitive materials. The shearing effect is minimized in the Cobra®.
- 3 They produce deep pulsations during the switch-over phase. This affects the stability of the paint flow and finishing quality. The reduced pulsation of the Cobra® ensures a constant paint flow and better finishing.
- 4 They achieve high delivery rates. This requires a large paint section. In contrast, Cobra® pumps use high-speed operation and very small fluid chambers to bring about a dramatic reduction in solvent consumption.



Diaphragm Technology

Unique Cobra® technology

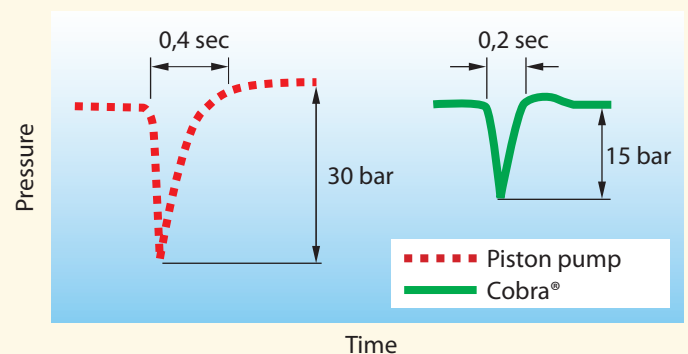
PUMP SPEED

The recommended working speed for piston pumps is 30 DS/min. In contrast, Cobra® pumps can run at 200 DS/min. This makes it possible to dramatically reduce the fluid section volume and achieve good performance in terms of the delivery rate:

	Cobra® 40-10	Piston pump
Max. speed	200 DS/min	30 DS/min
Pump volume	10 cc/DS	65 cc/DS
Max. flow rate	2.0 l/min	2.0 l/min

PULSATIONS

Compared to standard piston and bellows pumps, the double diaphragm technology combined with small fluid chambers ensures far lower pulsation and a constant material flow.



The example refers to a 150 bar application with water.

Select your Cobra®

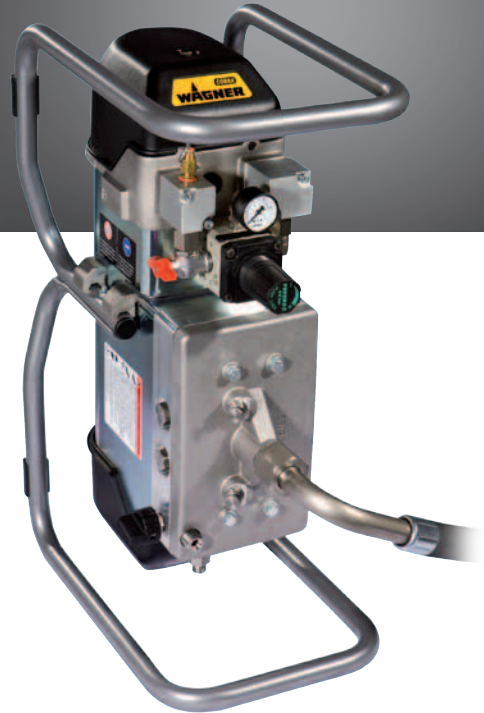
Cobra® 40-10

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APPLICATION AREAS

- Wood and furniture industry
- Carpentry shops and joineries
- Agriculture, construction and earth moving
- General metal industry
- Leather coating

PROCESSABLE MATERIALS

- Water and solvent-based paints
- Wood coatings
- Moisture-sensitive materials, isocyanates
- Shear-sensitive coatings
- UV-cure materials
- Temperature reactive materials (acrylics, for example)
- Zinc primers

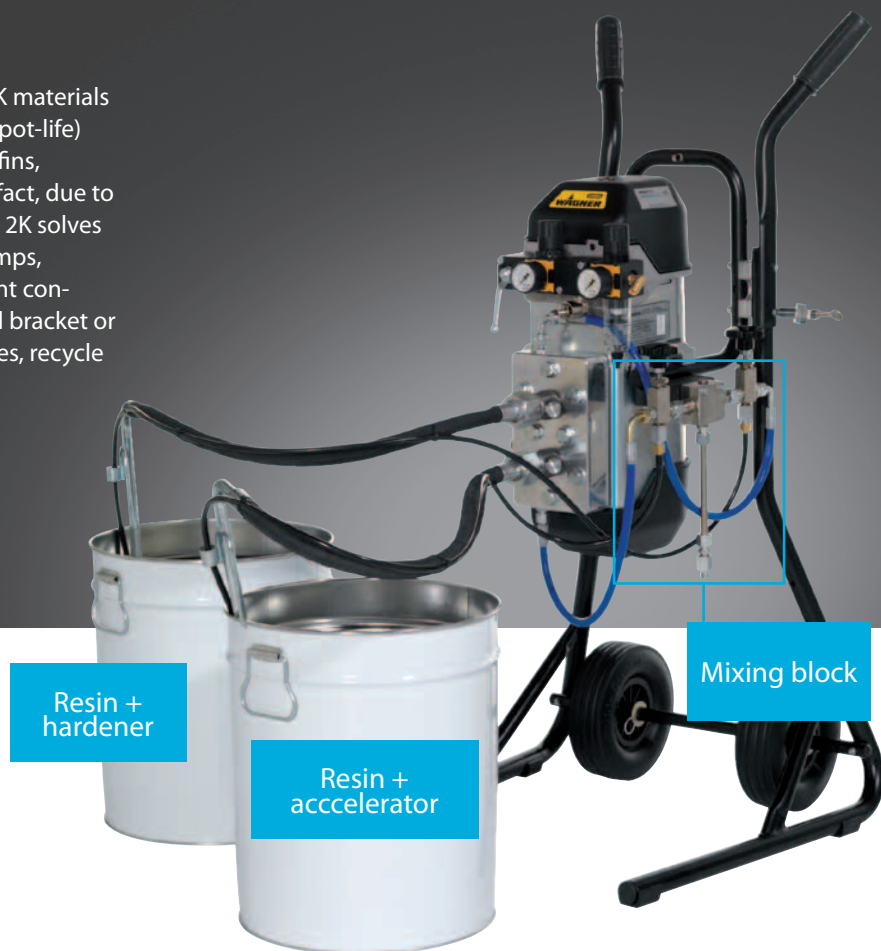
Technical Data

Cobra®

	Cobra® 40-10	Cobra® 40-25
Pressure ratio	40 : 1	40 : 1
Max. fluid pressure	250 bar	250 bar
Volume per DS	10 cc	25 cc
Max. pump speed	200 DS/min	200 DS/min
Max. flow rate	2.0 l/min	5.0 l/min
Weight	19 kg	32 kg
Fluid outlet	3/8" NPS	3/8" NPS

Cobra® 2K: Perfect for mixing and applying polyester

Cobra® 2K is the perfect solution for highly reactive 2K materials such as polyester (primer or finishing, short and long pot-life) and is ideal for applications on old-style furniture, coffins, musical instruments, and boat and yacht interiors. In fact, due to the packing-free and no-friction construction, Cobra® 2K solves the typical problems of the traditional 2K bellows pumps, reducing drastically the maintenance costs and solvent consumption. Cobra® 2K is available on a base frame, wall bracket or trolley, and is fully equipped with double suction hoses, recycle valves and a static mixer.



Technical Data

Cobra® 2K

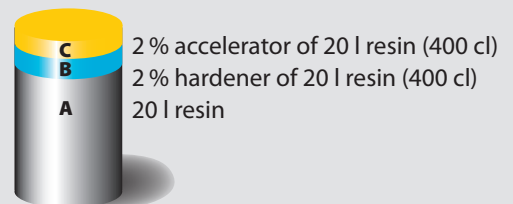
Mixing ratio	1 : 1
Pressure ratio	40 : 1
Max. fluid pressure	250 bar
Max. flow rate	2.0 l/min

COBRA® 2K ADVANTAGES

- Mix only what you spray: the mixture is always fresh
- Suitable for everything from small jobs to full time use
- The packing free construction does not create friction and thus reduces maintenance
- Easy to clean
- High pressure application: smoother surfaces to reduce the orange peel effect and sanding time
- Suitable for AirCoat and Airless: less overspray, high transfer efficiency

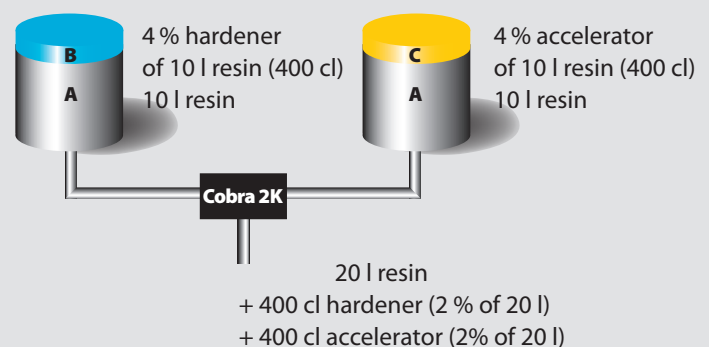
HOW TO PREPARE POLYESTER FOR COBRA® 2K

Manual mixing:



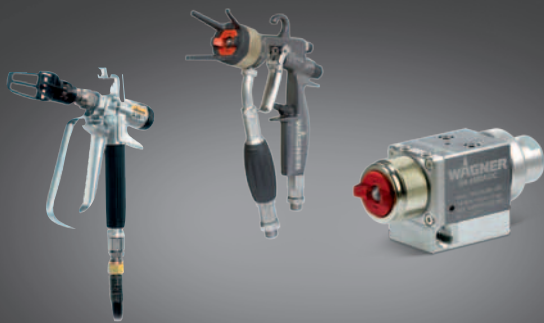
With Cobra® 2K:

Split the 20 l into two containers of 10 l each and add hardener and accelerator in proportion.



Expertise in application

The WAGNER spray-gun program optimally combines economical coating with high surface quality. We offer manual and automatic guns for the Airless, AirCoat and air atomization processes, with or without electrostatic support or high speed rotary atomizers.



Low pressure diaphragm pumps

Zip pumps

Besides Cobra®, WAGNER produces a wide range of air-operated diaphragm pumps (Zip line).

The WAGNER low pressure diaphragm pumps are suitable for low pressure applications and characterized by a high delivery rate and maximum reliability.

WAGNER – the 2K specialist

WAGNER offers a wide range of advanced mixing and dosing systems. Besides the innovative TwinControl 2K units, the FlexControl family offers additional features such as automatic color change, recipe storage, peripheral equipment interfaces, and low and high pressure applications with a very high mixing accuracy.



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Further information on Cobra® and on a wide variety of accessories like air caps, nozzles and hoses can be found in the Complete WAGNER Catalog.