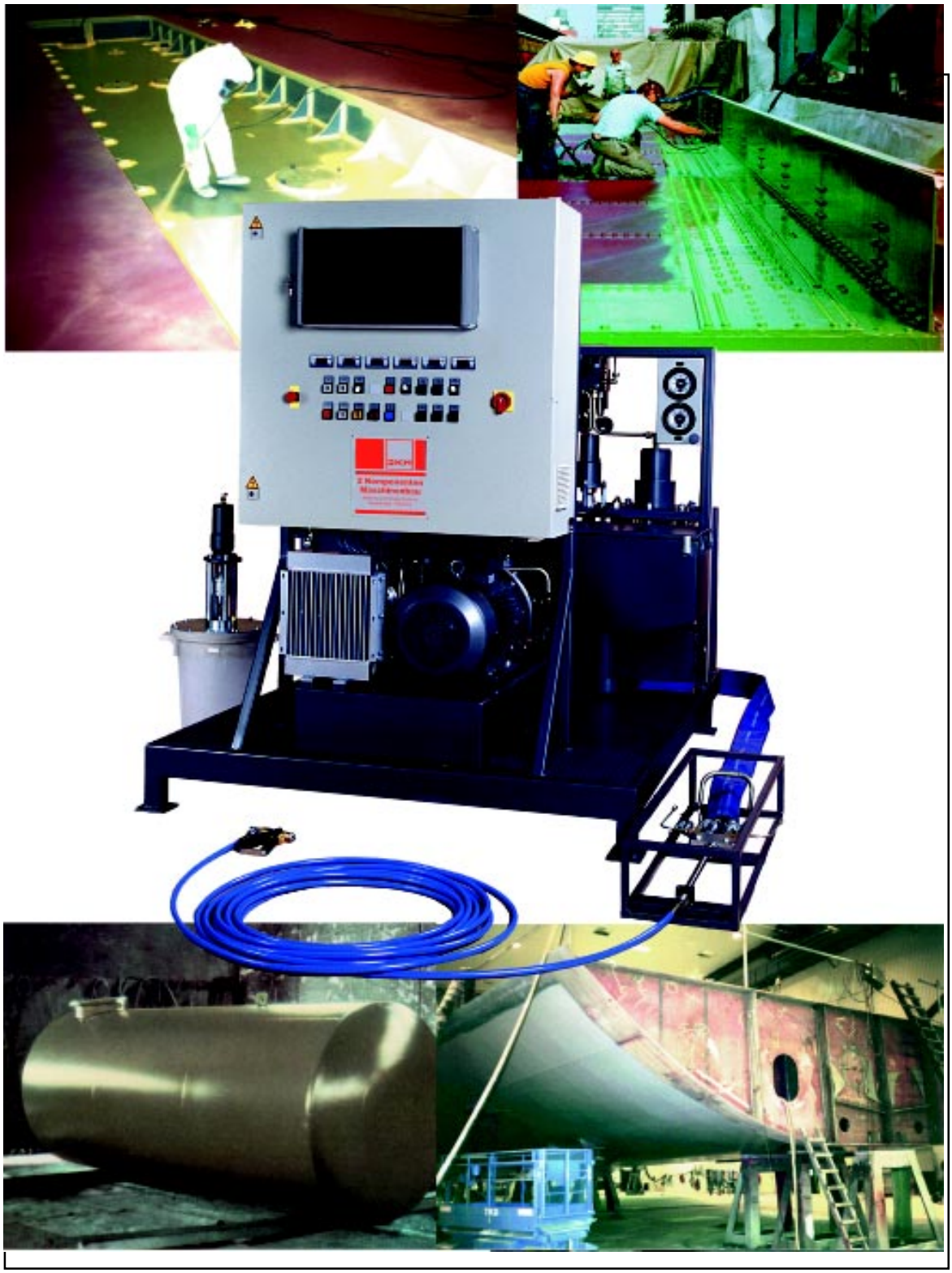
2 Komponenten Maschinenbau

Metering and Mixing Systems



High-Pressure Piston-Type Metering and Mixing Units

2KM POWER SPRAY™

High-Build Systems

2KM PowerSpray™ high-pressure metering and mixing units have been preferred for many years for processing of multi component high-build systems for heavy-duty corrosion protection.

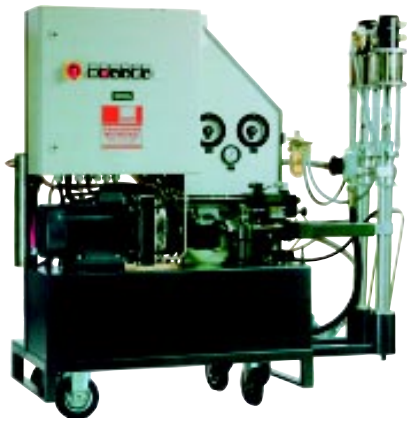
Typical fields of application of these high-build systems are:

- ✓ Interior and exterior pipe coating, interior and exterior tank coating, coating of ship's Hulls and superstructures
- ✓ Coating of steel structures such as oil platforms, lock gates
- ✓ Coating of buildings

2 component high-build systems offer reliability and economy in corrosion protection and also have the following additional benefits:

- ✓ High resistance to water and many chemicals, solid, pasty and liquid foodstuffs, cleaning agents and disinfectants
- ✓ Mechanical resistance, resistance to lifting, shock and impact
- ✓ Temperature-resistant up to +100 C, depending on the medium, when dry
- ✓ Excellent adhesion to steel, stainless steel, aluminum and mineral surfaces

2KM POWER SPRAY™ 2051 Warm Spray Unit



General

The 2KM PowerSpray™ 2051 high-pressure metering and mixing unit has been developed as a compact unit for use in corrosion protection.

Fields of applications in which multi component warm spray systems are applied by the airless method, comprise the coating of

- ✓ concrete and steel bridges
- ✓ battery trays and steel structures
- ✓ pipes (interior and exterior), tanks and many more.

As a compact version of the existing PowerSpray™ 4050 high-performance range used in heavy-duty corrosion protection, the structure of the PowerSpray™ 2051 is restricted to the assemblies that are essential for working in particularly demanding conditions. This hydraulically powered unit is portable so that it can also be used with great flexibility on construction sites.

Structure

The following assemblies come as standard:

Feeding Pumps

Material is fed by hydraulically operated reciprocating pumps mounted on a telescopic mounting to facilitate positioning in the material containers.

Metering Pumps

The metering pumps are coupled together mechanically and jointly driven by a hydraulic cylinder. The metering ratio of the A and B components is set by selecting the pump combinations. The hydraulic unit which powers the pumps is driven by a 4 kW electric motor.

Material Feed / Heater

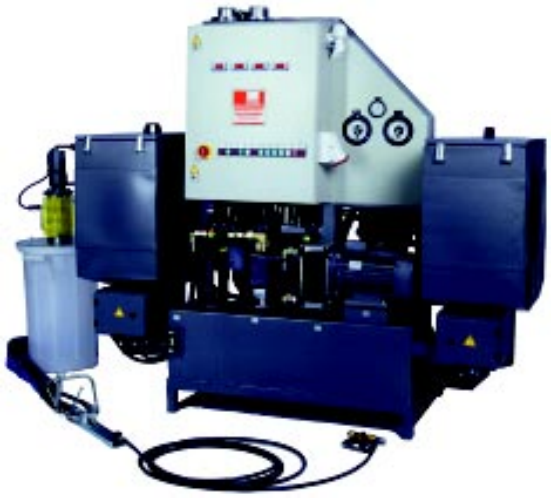
The A and B components are fed to the material distribution block via the feed and metering pump. The A component temperature is controlled by an in line heater. A hose bundle up to 40 m long leads to the spray gun from the material distributor block. The electric heating for the hose bundle is self-limiting up to 50 C,eliminating the need for a costly control system. The hose bundle provided with insulation and protection may be longer in length, if required. The material can be circulated via a bypass.

Material Mixing

The A and B components are separately fed to the mixing block through the hose bundle and then uniformly mixed by a static mixer. An airless spray hose with spray gun, for example, is then connected to this mixer. This hose is 2 m long as standard, but longer lengths are available on request.

Cleaning

The mixing section is cleaned by a high-pressure scavenging pump.



Hot Injection Equipment

2KM POWER SPRAY™ 2051 Compact Unit

Designed to hot-spray 2 component high-build systems, the basic compact PowerSpray™ 2051 machine is fitted with assemblies which enable materials to be sprayed at 70 C.

Downdraught Heaters

6.5 kW downdraught heaters are used to pre-heat the components during the suction phase. The temperature can be steplessly set up to 100 C.

High-Pressure Heaters

The material manufacturer will specify a particular processing temperature so that the material becomes flowable and/or sprayable. High-pressure heaters are used for the A and B components for these applications and may also be set up to 100 C like the downdraught heaters.

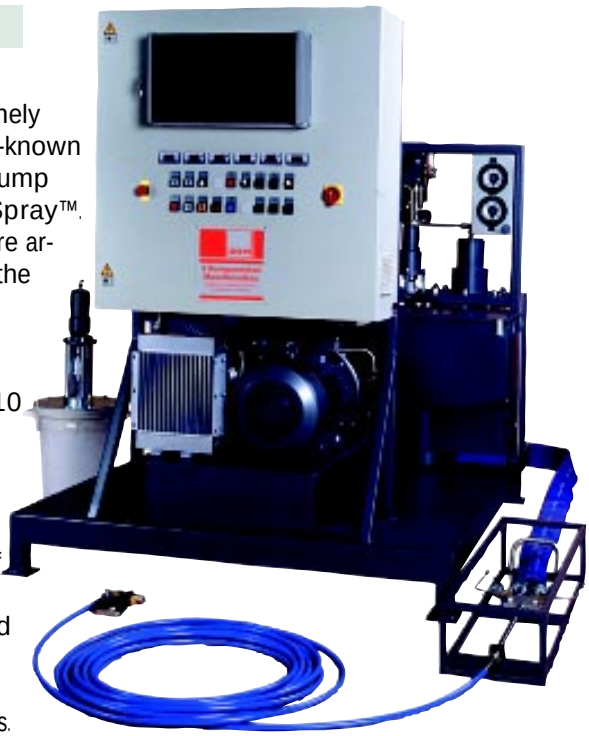
Hose Bundles / Hose Heating

With materials with a short pot life in particular, mixing should take place as close as possible to the outlet nozzle/applicator. Heated hose bundles are used for bridging if the distances between metering system and applicator are long. These are available in lengths of up to 100 m. In this case, a hose drum is available for the hose bundle as an option. The hose heating is integral with the hose bundle and is supplied with the energy required via a 6 kW water heater. The temperature can be steplessly set up to 140 C.

Output

With an output of 3 - 4 litres per minute, the PowerSpray™ 2051 is a versatile machine which is also used in heavy-duty corrosion protection.

2KM POWER SPRAY™ 4060 Heavy-DutyUnit



The PowerSpray™ 2051, 4050 and 4060 models have long been a watchword in heavy-duty corrosion protection. No site can now be without these robust and reliable machines.

System Description

The powerful hydraulic drive remains reliable in even the most adverse conditions. The icing of air motors, for example, which can repeatedly cause breakdowns in these applications simply does not apply with PowerSpray™.

With powerful heaters (11 kW) such as downdraught heaters, high-pressure heaters and hose bundle heating, the material is brought to and maintained at high temperature even if the outside temperatures are low.

In both systems the metering pumps are mechanically connected so that there can be no wear on lever systems, even at extremely high outputs. Nor is the well-known phenomenon of metering pump tilting possible with PowerSpray™, since the metering pumps are arranged centrally one above the other.

Output

With an output capacity of 10 l/min, a heating capacity up to 33 kW and hose bundles up to 100 m long, the PowerSpray™ 4060 sets new standards in the field of hot spraying. Even major applications can be mastered in even less time with this performance which is unmatched by other systems.

Automatic Feed

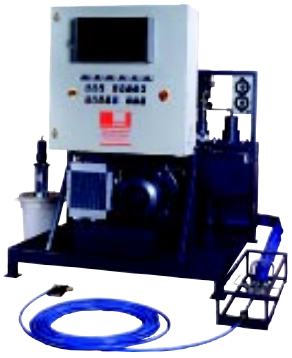
We offer automatic feed systems so that the machine can be supplied with sufficient material despite this high performance. These feed systems may comprise 200 litre drum presses, for example. Level monitoring and automatic feed system switch-over guarantees continuous spraying.

Metering Control DK-2 (Optional)

The DK-2 metering control is an integrable system consisting of two precision flowmeters and a computer and provides continuous monitoring of metering. The computer registers, evaluates and displays the instantaneous metering ratios.

The maximum metering tolerance can be programmed. If this value is exceeded, an acoustic signal sounds or the machine is stopped. The following data may also be read off on the display:

- ✓ Flow / min. of A and B components
- ✓ total consumption of A and B components
- ✓ desired value of the mixing ratio100:x
- ✓ actual value of mixing ratio 100:x
- ✓ shutdown tolerance + in %
- ✓ signal tolerance + in %



Technical Data

2KM POWER SPRAY™

	2051	4060
Capacity		
Processing viscosity	up to 80,000 mPa s	up to 100,000 mPa s
Delivery	3-4 l/min (despending on viscosity)	6-10 l/min (despending on viscosity)
Dosing	Coupled reciprocating pumps	Coupled reciprocating pumps
Electrical control	PLC / relay	PLC / relay
Pump drive	4 kW	4 kW
Consumption / Connections		
Drive	hydraulic	hydraulic
Power	400 V 50 Hz	400 V 50 Hz
Heating	HP downdraught and hose	HP downdraught and hose
Heating capacity	3,3-20 kW	20 KW
Power (according to heating capacity)	16-63 A	63 A
Dimensions / Weight		
Space required, cm	145 x 85 x 155 /	160 x 110 x 160 /
	190 x 85 x 155	210 x 160 x 191
Weight in kg	500-1600	1800-2000
Standard colour	Pebble grey RAL 7032	Pebble grey RAL 7032

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