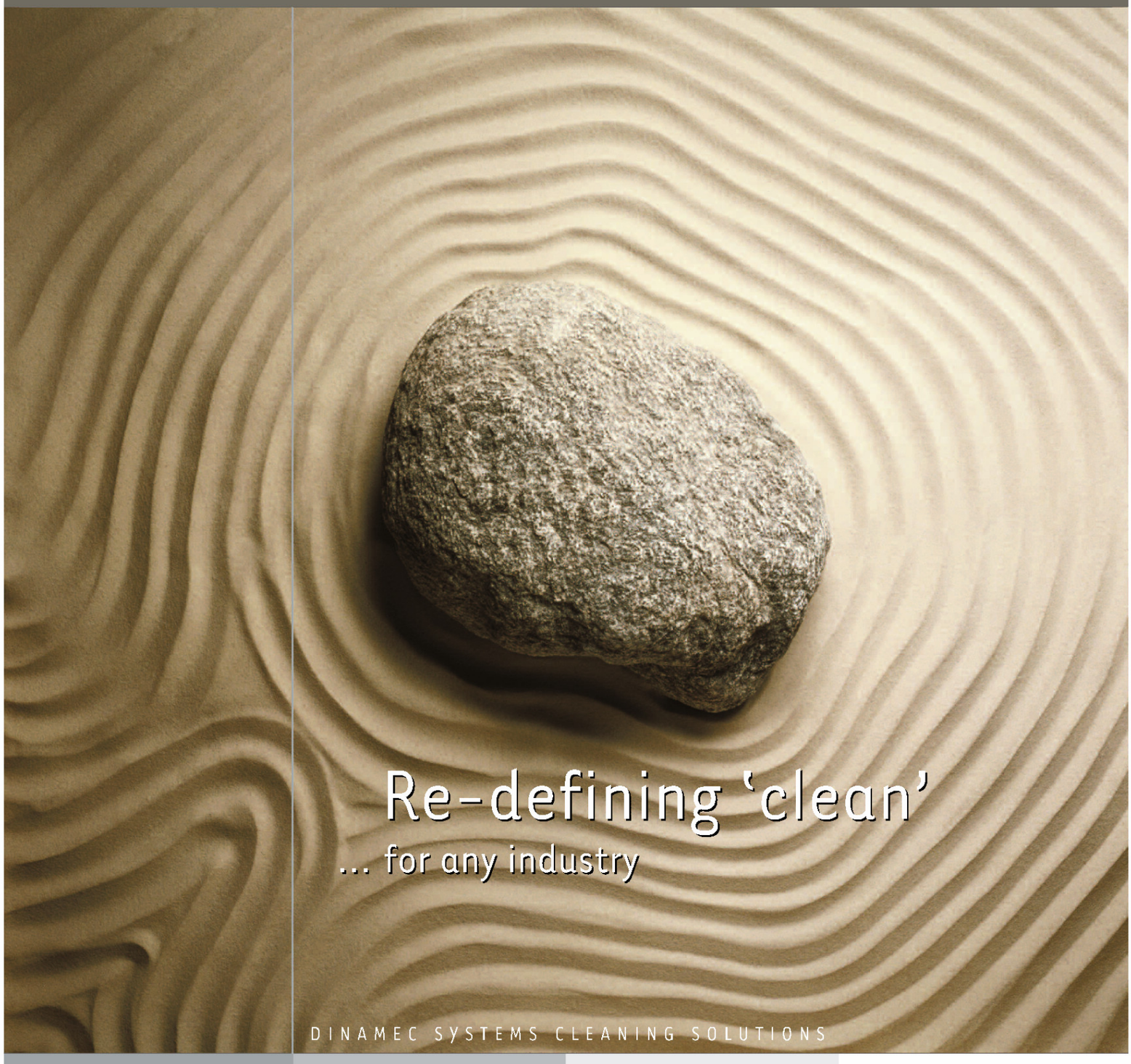
THOROUGH, FAST & SAFE CLEANING OF METAL PARTS



Re-defining 'clean'

... for any industry

DINAMEC SYSTEMS CLEANING SOLUTIONS

Dinamec Fluid Clean

DinamecSystems

Re-defining 'clean'

Another dimension in cleaning metal parts

Today almost every industry is involved with organic substances such as paint, powder coating, plastic or rubber at some stage of its production process.

Removing plastic or paint coatings from metal parts, finished products or production components made of metal is a wide spread problem.

Modern coatings and plastic bond very strongly and traditional cleaning and stripping methods are becoming outdated. They demand costly labor and energy as well as possible health hazards for the operators. These traditional methods often damage or deform parts and can result in water and air pollution.

Dinamec Systems is a world leader in fluidized bed cleaning with over 700 installations worldwide supported by first class after sales parts and service. The Dinamec Fluid Clean is a unique and total cleaning solution for a wide variety of organic substances in all industries, providing a combination of thorough cleaning, short cleaning cycles and ease of operation.

There is more to the Dinamec Fluid Clean. As well as cleaning your metal parts thoroughly, our installations also ensure a clean and healthy solution for both the environment and your operators.

That's why clean takes on a much broader meaning in a Dinamec Fluid Clean installation.

Dinamec Fluid Clean installations safely remove

All organic substances

Any type of paint, powder coating, varnish, polymers, polyesters, wax, rubber, etc.

From all kinds of metal parts

The above organic substances can be thoroughly removed from most metal alloys, whether from finished products or from production line equipment and tooling.

In no matter what industry.

Our installations serve OEMs and end-users in Automotive • Aviation Services • Blow-moulding • Chemical • Clothing & Textile • Compounding • Defence • Extrusion (granulate, foil, piping) • Fibre • Foundry • Furniture • Home Appliances • Information Technology • Injection Moulding • Laboratory • Luggage • Machinery • Marine • Medical • Military • Packaging • Petrochemical • Pharmaceutical • Plastic compounding • Plastic processing • Power plant • Railway • Recycling • Refinery • Service Cleaning • Service coating • Sub-automotive • Surface finishing • Telecom • Toy • Trading • Wire & cable and many more

Please contact your local Dinamec Systems office for more information or an on site evaluation of how the Dinamec Fluid Clean can be of use to your particular industry or production process. You can also let us prove our cleaning efficiency by sending parts for a trial cleaning at one of our testing facilities.

Fluidized Bed Technology & cleaning cycle

8. Immersion of basket with contaminated metal parts in hot sand.

7. The bed temperature can be adjusted using an automatic temperature regulator, which controls the gas flow.

6. Normal operating temperatures (≈ 780 to 850° F)

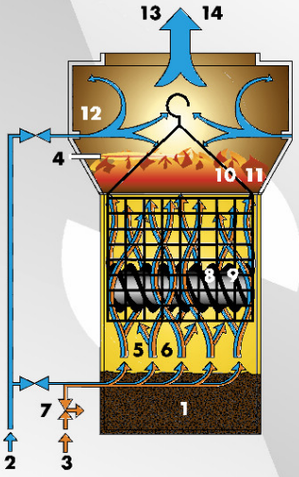
5. Excellent heat transfer in the bed itself – the fluidized bed is heated quickly and uniformly.

4. A pilot burner above the surface of the bubbling sand bed ignites the gas-air mixture – the flame spreads across the whole surface.

3. In order to warm up the sand, gas is mixed into the primary air.

2. The sand particles are brought to a bubbling state by injecting air at the bottom.

1. A fluidized bed consists of a reservoir filled with calibrated quartz sand.



The bonded organic substances are gasified. **9.**

These process gases rise through the fluidized bed and are directly burned by a flame-shield. **10.**

This energy is also directly absorbed by the sand – direct energy recovery – the external gas supply is correspondingly reduced. **11.**

Total burn out of the gases by injecting secondary air into the combustion chamber. **12.**

Inorganic particles are also removed from metal parts (without damage) by slight movement of the sand and are carried along with the flue gas stream. **13.**

These inert dust particles are separated from the flue gases by de-dusting through a cyclone battery or ceramic filter. The particles fall into the collector reservoir under the cyclone or ceramic filter and can easily be removed. **14.**

The next cleaning cycle can begin immediately, by immersing another basket in the fluidized bed with the hoisting sytem.

Hoisting systems

To bring the baskets, containing the parts to be cleaned, to and from the Dinamec Fluid Clean installation, several hoisting systems are available, depending on user frequency, size of the installation and the specific floor space.


1


2


3

1. Scissors hoisting
2. Monorail hoisting
3. Bridge Crain

Dinamec flue gas cleaning

A clean air concept

- **Filtering of inorganic dust particles**

Dinamec Fluid Clean installations can be supplied with an integrated cyclone or ceramic filter to remove dust particles from flue gasses.

- **Neutralising acidic effluents - Dry sorption injection**

When removing specific substances like PVC, rubber or Teflon, a dry sorption system can easily be included before the ceramic filter. A dry powder is injected and acts as a reagent to neutralise acid gasses (HF, SO_2, HCl). The products of the reaction as well as dust are separated by means of a cyclone or ceramic filter.
Typically, calcium hydroxide is used for acid gas removal.

Dinamec Fluid Clean machine configurations

A range of standard fluidized bed configurations is available to comply fully with your particular cleaning needs. Our high-level experienced engineering department, combined with a flexible production organisation allows us to offer custom-made installations for special projects.



Fluidized Bed Dimensions

Inside of Bed

Standard Machines

All Models Are Available in RAN (flat hood) and ICV (clam shell hood)

Type	Length in(mm)	Width in(mm)	Depth in(mm)
D-866	31.5"(800)	23.6"(600)	23.6"(600)
D-1666	63.0"(1600)	23.6"(600)	23.6"(600)
B-1818	70.9"(1800)	39.4"(1000)	31.5"(800)
B-2488	94.5"(2400)	31.5"(800)	43.3"(1100)
B-2111	78.8"(2000)	39.4"(1000)	43.3"(1100)
B-3111	118.1"(3000)	39.4"(1000)	43.3"(1100)
B-21611	78.8"(2000)	64"(1600)	43.3"(1100)
B-34111	138.8"(3400)	39.4"(1000)	43.3"(1100)
B-241611	78.8"(2400)	64"(1600)	43.3"(1100)
B-4111	157.5"(4000)	39.4"(1000)	43.3"(1100)
B-341414	138.8"(3400)	55.2"(1400)	55.2"1400)
B-321616	126.0"(3200)	64"(1600)	64"(1600)
B-541613	212.6"(5400)	64"(1600)	51.2"(1300)

Re-defining clean for you:

Please contact your local Dinamec Systems representative to check which Dinamec Fluid Clean configuration would best suit your specific cleaning needs. Our experienced staff will be glad to discuss your specific requirements and guide you to the best Dinamec Systems solution, guaranteeing a good cleaning result that will meet the most stringent, local emission requirements.
Put us on trial with a test clean at one of our testing facilities, spread across the world.

Contact us at

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