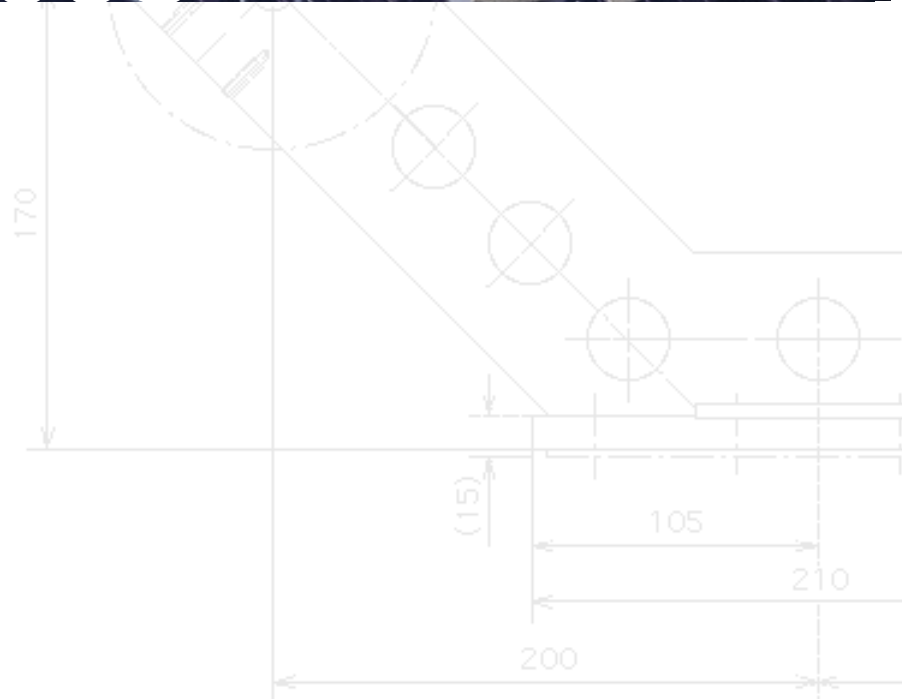




# Perfect Surfaces



**munk**  
**+ schmitz**



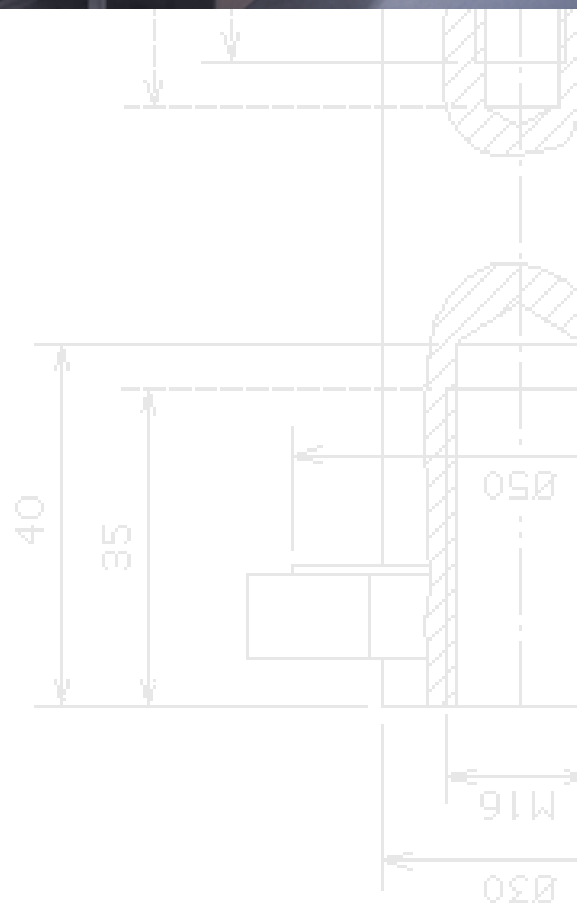
*Munk + Schmitz engineering department*

As medium-sized company Munk + Schmitz has both the capacity and flexibility to provide individual solutions and meet particular needs of its customers.

In addition to well-proven standard products as the Problast closed-circuit machines, cabinet machines and blast rooms a wide variety of purpose-designed machines has been developed and built during the last decades.

By providing also a wide range of specialized surface contract services Munk + Schmitz has gained additional know-how and experience and can offer practical solutions to any abrasive blasting problem.

With its headquarters at Cologne situated in the center of Europe Munk + Schmitz is well placed to serve world-wide markets.



*Machine with 16 satellite stations for fittings*





## **Dust-free blasting with *problast*® closed-circuit machines**



*Blast gun with ceramic insert*

Problast machines are available as pressure-fed and suction-fed versions.

- In the pressure-fed version abrasive is stored in a pressure vessel and metered by a feed valve into the air stream which carries it via the blast hose to the nozzle where it is discharged at high velocity against the workpiece (up to supersonic speed).
- In the suction-fed version abrasive is stored in a hopper and drawn via the blast hose to the nozzle where it is discharged together with the air against the workpiece.



*Cleaning of a weld*

Problast machines feature a closed-circuit system allowing blasting to be carried out at any place, in open or closed working environments, with no pollution and without interfering with other activities nearby.

Immediately after the abrasive has been thrown onto the workpiece it is recovered inside the blast gun for recycling.

The recycling system incorporates a cyclone with adjustable air wash.



*Pressure-fed Problast 80 DVK*

*Suction-fed Problast 40 SL*

Problast machines are mainly used for dust free blast cleaning of workpieces with a flat surface such as rollers.

Another typical application is the edge cleaning and weld preparation such as the removal of primers on plates and sections used in the shipbuilding industry.

Problast machines can be ideally used as Power Packs to process hollow bodies such as cylinders, boilers and tubes.

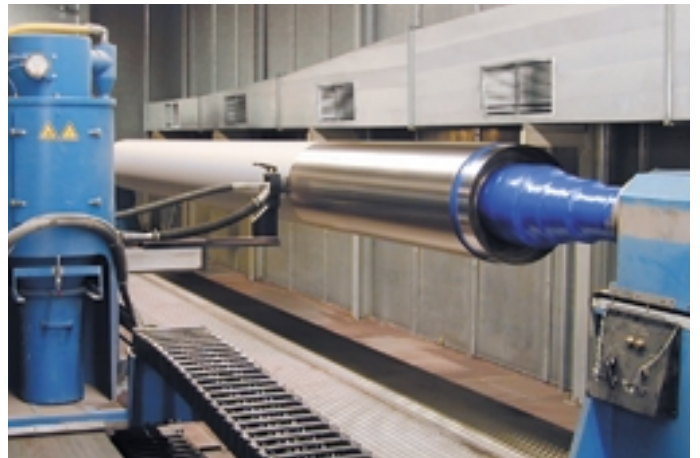
Problast machines are suitable for all kinds of abrasive and sizes from 0.1 to 1.5 mm.

## ***Blasting of rollers***

Problast closed-circuit machines are ideally suited to process rollers or other rotationally symmetric workpieces.

Blasting of rollers in-situ is generally a cleaning using glass beads or an etching using aluminium oxide.

Blasting of rollers to roughen the surface for a subsequent coating is usually done in a standard lathe or – in the case of very large rollers – in a special turning gear.



*Roughening a roller prior to coating*



*6-station cleaner for pressure gas bottles*

## ***Blasting of cylinders (bottles)***

After production pressure gas bottles are blastcleaned to remove scale deposits. Other types of bottles (such as oxygen bottles) are blastcleaned at regular intervals as preventive measure against corrosion.

For the internal cleaning of bottles special nozzles have been developed. Handling of bottles is either manually or by robots.

## ***Blasting of water heaters (boilers)***

Boilers are processed to roughen the interior surfaces prior to enamelling. Generally, the blasting equipment is integrated in a production line. Boilers are treated in two separate stations:

In the blasting station a lance with special nozzle is used to roughen the upper and lower bottoms as well as the cylindrical part. In the cleaning station the boiler is airpurged clean of residual debris and vibrated.



*4-station cleaner for water heaters*

## ***Blasting of sections, strips and edges***

Cleaning of sections, strips, edges and saw blades is another field of application of the Problast closed-circuit machines.

High output is achieved by specially engineered pass-through machines with continuous feed of workpieces.

After blasting workpieces are air purged clean of dust and debris in a separate box.



*Cleaning the edges of sections at a shipyard*

## ***Blasting of straight and bent tubes***

Internal cleaning of straight and bent tubes serves to remove scale deposits after heat treatment.

Small bore tubes are cleaned by means of a Venturi nozzle according to the blow-through method and large bore tubes according to the pass-through method using either a rotating nozzle or by rotating the tube.

Tubes are either handled by means of transport chains or roller conveyors.



*12-station plant to clean copper tubes*

## ***Shot peening***

The automotive and aerospace industries are the main users of the shot peening process to improve the fatigue resistance of highly stressed components such as gears, springs or turbine blades.

In most cases, components are processed in automated rotary table machines. An in-cycle shot recovery, classification and recycling system ensures that shot size and shape is closely governed to maintain peening consistency.



*Shot peening of a turbine wheel*





*View of the Munk + Schmitz production and development facilities*

Founded in 1880 Munk + Schmitz originally built apparatus and tanks for the chemical industry. Later on, the activities focussed on the production of large tanks for the beverage industry.

These tanks are protected against corrosion by applying a special cold-curing epoxy lining (brand name: Munkadur). Longevity of this lining necessitates a thorough preparation of the surface by blasting.

In the course of this production step Munk + Schmitz acquired extensive knowledge with regard to the treatment of surfaces by blasting at a very early stage. In 1956 Munk + Schmitz decided to use its expertise to design and build its own abrasive blasting machines.

Today, the development and production of abrasive blasting machines is the core of the Munk + Schmitz business.

---

Oberflächentechnik  
Munk + Schmitz GmbH & Co.

Poller Kirchweg 92-104  
51105 Cologne/Germany

Phone +49 (0)221 - 8 39 08-0  
Fax +49 (0)221 - 8 39 08-39

[www.problast.com](http://www.problast.com)  
[info@munk-schmitz.de](mailto:info@munk-schmitz.de)

