

Automatisieren
Dosieren
Messen
Montieren

EXACTLY YOUR **SOLUTION!**

PERFORMANCE OVERVIEW

www.dptechnik.de



DOSIER- UND PRÜFTECHNIK

WHO WE ARE

D+P, Dosier- u. Prüftechnik GmbH has been developing and producing customer-specific systems, plants and devices for the dosing and testing industry as well as special machines for assembly and automation technology for more than 35 years. These are mainly used for conveying, dosing and application of liquids, greases and pastes as well as for assembly of components and functional testing.

Our products are used in the automotive industry, in machine construction, assembly technology, and the chemical, aeronautical, and electrical industry, among others.

1986
FOUNDED

35 YEARS OF
EXPERIENCE

75 MOTIVATED
EMPLOYEES

WHAT WE DO

Our expertise at a glance:

OUR OWN DEVELOPMENT AND PRODUCTION FACILITIES

- ▶ Dosing and testing technology (customer-specific systems, installations and equipment)
- ▶ Special machinery (assembly and automation technology)
- ▶ Standard cells (assembly and palletizing cells)
- ▶ Contract manufacturing

AREAS OF APPLICATION

- ▶ For conveying, dosing and application of liquids, greases, pastes and adhesives
- ▶ For assembly of components and for functional testing

AREAS OF APPLICATION

- ▶ Automotive Industry
- ▶ Mechanical engineering
- ▶ Chemical industry
- ▶ Electrical industry
- ▶ Toy industry
- ▶ Tool industry
- ▶ Aerospace

THIS IS WHAT WE VALUE

HIGHEST LEVEL OF DIVERSITY...

Everything under one roof, we accompany our orders completely from the idea, to the development and production and up to start-up including the comprehensive handover on site. Our specialist departments work very closely together and therefore ensure competent advice and support at all times. Our products and the tasks assigned to us require a high degree of expertise, innovation and modern production technology. Qualities that characterize us as a highly specialized company and to which we remain faithful in the future.

TAILOR-MADE AND PERFECTLY FITTING ...

Because we focus on what we can do, we develop and produce tailor-made and perfectly fitting systems that are consistently geared to the needs of our customers.

EVERYTHING UNDER ONE ROOF....

Idea > development > manufacture > start-up > comprehensive handover on site > service. We follow this entire path together with our customers!



REMOVING CONVEYING

Barrel pumps

Pressure vessels

Cartridge emptying systems
and much more



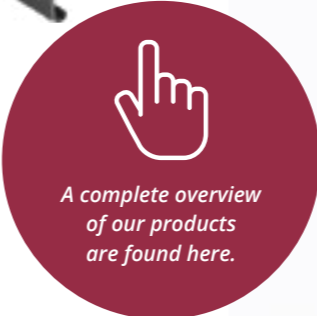
HIGH PRESSURE BARREL PUMPS



FOR CONTAINERS FROM 1 TO 200 LITERS
The use of barrel pumps with follower plate ensures optimal emptying of the barrels. In addition, in contrast to manual emptying there is no pollution in the environment of the container.

AREA OF APPLICATION
D+P barrel pumps are suitable for all viscous media, e.g., greases, silicones, pastes, etc. In addition to the barrel pumps we supply on request elements such as pressure reduction valves, outlet and dosing valves, HP hoses, pressure switches, fittings, etc., which are necessary or required.

- RANGE OF SERVICES**
- ▶ Containers up to 200 kg
 - ▶ Pressure range up to 270 bar
 - ▶ Throughputs up to 4750 cm³ / min.
 - ▶ Redundant solutions
 - ▶ Customer-specific solutions



*A complete overview
of our products
are found here.*

MATERIAL PRESSURE RESERVOIR

With the aid of the material pressure reservoir low viscosity media can be conveyed easily and protected.

- The containers made of stainless steel and TÜV tested contain:
- ▶ a pressure regulator and quick ventilation valve
 - ▶ a float switch with two switching points
 - ▶ a quick connect for refilling



DIFFERENT VARIANTS ON REQUEST
Pressure vessel with additional lockable pressure gauge or Viton cover sealing in all 3 sizes available.



DOSING APPLYING

Volumetric dosing

Time, pressure controlled
dosing

Rotational greasing

DOSING



A complete overview
of our products
are found here.

Improper handling in the wrong position or (viscous) fluids applied in the incorrect quantity can immediately lead to defective products or significantly shorten their service life in real operation.

Therefore use our **dosing and application equipment**. They facilitate a positionally accurate, uniform dosing. In this way they help you maintain the high quality of your product.

D+P develops and manufactures in house **dosing, greasing and application systems** for surface, contour line and spot application! Depending on the requirement we develop

especially aligned system for our customers, that can precisely apply greases, oils, silicone, sealants, adhesives or pastes.

SURFACES & CONTOURS

- ▶ O-Ring
- ▶ Shell surfaces (interior and exterior)
- ▶ Face surfaces
- ▶ Teeth
- ▶ Threads
- ▶ Smooth surfaces
- ▶ Bearing points

DOSING EQUIPMENT

Contour greasing with greases, pastes or oils

GREASING AND OILING EQUIPMENT FOR:

O-rings, radial shaft seal, bearing points, ball and plain bearings, toothed gear shafts, charge air ducts, wheel hubs, actuating lever bearings, housings, plastic components, needle bearings and much more.



VOLUMETRIC DOSING VALVES

CHARACTERISTICS

- ▶ Are designed for repeatably accurate dosing
- ▶ Dosing quantities and speeds are easily adjustable
- ▶ The dosing valves all work according to the volume dosing principle and cover a dosing range of 0.003 to 12 cm³.

OUR SOLUTIONS

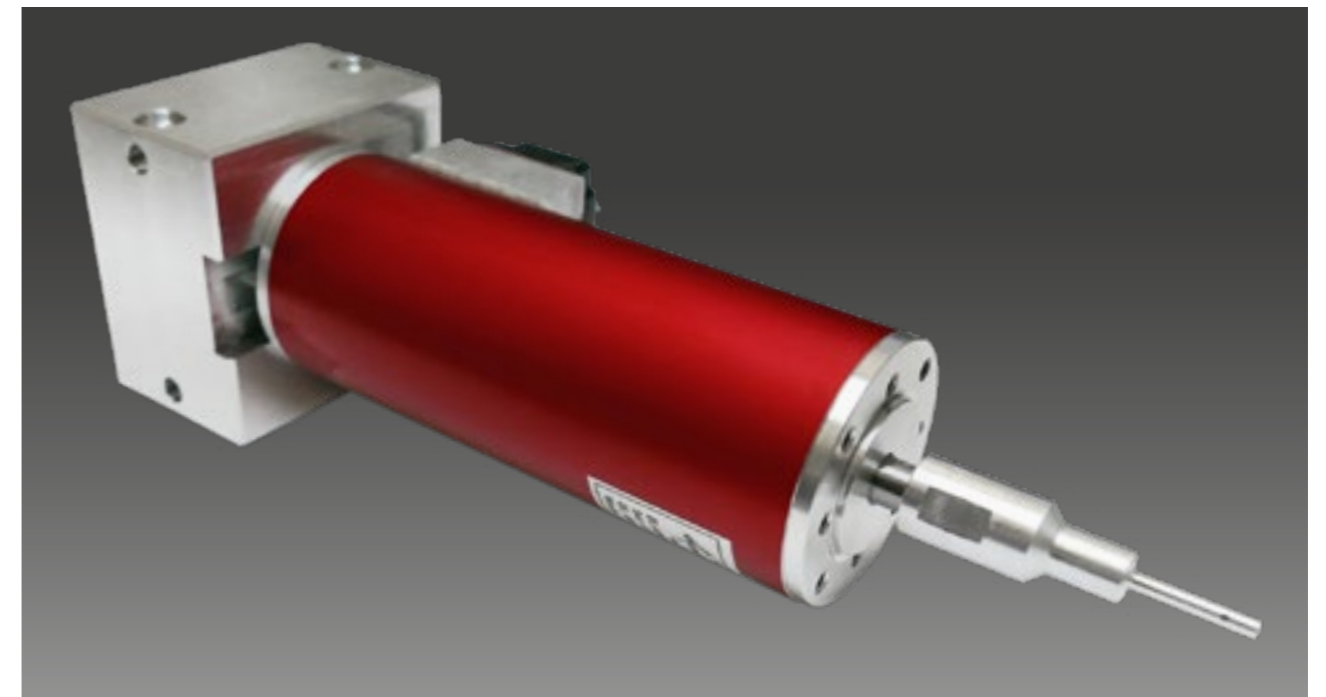
- ▶ Can be used in all areas of industry
- ▶ Pneumatic or electromechanical drives
- ▶ Volumetric dosing principle
- ▶ Adjustable dosing volume
- ▶ Simple integration



YOUR ADVANTAGES

- ▶ High precision
- ▶ Very high repeatability
- ▶ High quality standards
- ▶ Simplicity and Reliability
- ▶ Insensitive to fluctuations in pressure and viscosity

ROTARY GREASING



D+P ROTARY GREASING UNIT RBE03

Our new development with innovative material feed for contactless application of viscose media in the smallest interior contours or diameters.

OUR SOLUTIONS

- ▶ Smallest rotor diameters
- ▶ Continuous rotor shaft
- ▶ Innovative material feed
- ▶ Reliable process monitoring
- ▶ Compact design
- ▶ Application-specific rotor shapes
- ▶ Plug & Play unit



YOUR ADVANTAGES

- ▶ Spraying of the smallest interior contours and diameters from 5 mm up
- ▶ Optimized tear behavior even from very tough media
- ▶ Robust total system
- ▶ Precise, homogeneous dosing results
- ▶ High flexibility

TIME / PRESSURE CONTROLLED DOSING VALVES

SUITABILITY

The D + P timed dosing valves are designed for spot, caterpillar and surface application. The dosing quantities are set via the opening stroke, the dosing time and the incoming material pressure.

OUR SOLUTIONS

- ▶ Can be used in all areas of industry
- ▶ Pneumatic drives
- ▶ Various nozzle inserts
- ▶ Contactless application
- ▶ Customer-specific unique configuration



YOUR ADVANTAGES

- ▶ Extremely short dosing times
- ▶ Complex component geometries can be illustrated
- ▶ Insensitive to component tolerances
- ▶ High flexibility



CONTROLLING MEASURING

Dosing controls

Ultrasound flow sensor

Volume sensor

Pressure sensors



DOSING CONTROLS

The dosing controls from D+P are characterized by modern and efficient technology. Individual quality requirements can be monitored using versatile sensor systems and continually guaranteed. D+P dosing controls are even in complex dosing processes easy and clear in their application.

OUR SOLUTIONS

- ▶ One control system for all applications
- ▶ Simple interface to the dosing system
- ▶ Various interfaces possible
- ▶ Synchronized process sequences
- ▶ Modular system

YOUR ADVANTAGES

- ▶ No complex programming required
- ▶ Simple Plug & Play connection via interface
- ▶ No additional hardware components necessary
- ▶ Increase of process reliability
- ▶ Autonomous system





ULTRASONIC FLOW SENSOR

The ultrasonic flow sensors UDS03 and UDS04 are suitable due to their small shape for space saving installations. They have a repeat accuracy up to $\pm 0.1\%$ (depending on the boundary conditions), without direct contact with media

OUR SOLUTIONS

- ▶ Visual grease quantity monitoring
- ▶ Can be used in all common dosing systems



YOUR ADVANTAGES

- ▶ No contact with the medium
> no pressure loss with the medium
- ▶ No wear in the sensor
> no maintenance required
- ▶ No modification of the duct
> simple installation



VOLUME SENSOR

The volume sensor measures the moving dosing volume of liquids according to the gear wheel principle. A very precisely fitted gear pair in the housing forms the measuring mechanism. The rotation of the mills is measured contactless by a signal sensor system and converted into digital pulses.

The integrated sensor with either PNP or NPN output generates one pulse per tooth with a value of 0.04 cm^3 .

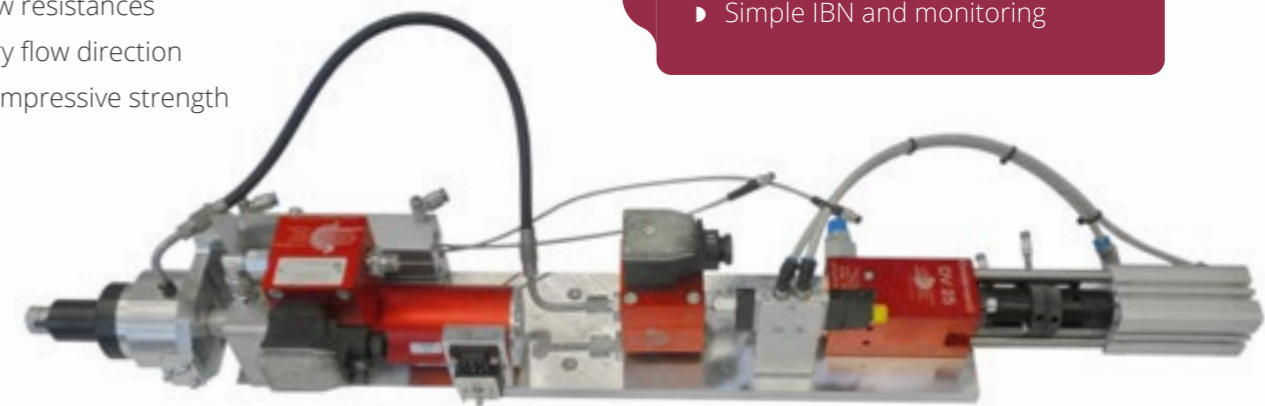
OUR SOLUTIONS

- ▶ Visual grease quantity monitoring
- ▶ Low flow resistances
- ▶ Arbitrary flow direction
- ▶ High compressive strength



YOUR ADVANTAGES

- ▶ Increase of process reliability
- ▶ Simple IBN and monitoring



PRESSURE SENSORS

ELECTRONIC PRESSURE SENSOR WITH DISPLAY

Thanks to two switching thresholds of the pressure sensor, it can be both monitored as to whether sufficient pressure is present for process-reliable operation of the dosing equipment, as well as also whether too much pressure is present (which can lead to undesired holding pressure or damage of dosing equipment).



YOUR ADVANTAGES

- ▶ Two switching thresholds
- ▶ Easy to configure



SPECIAL MACHINERY

Dispensing

Automating / Assembling

Measuring / Testing

Robotics

Custom solutions



DISPENSING

ASSEMBLY, DOSING AND TESTING SYSTEMS FOR INDEXABLE INSERTS

- ▶ Robot cell for position-oriented placing of hard material segments
- ▶ Stacking up and unstacking for customer trays
- ▶ **Flexible** and **position-oriented feed** of the hard material segments using vibration and camera system
- ▶ **Spot-on dosing** of very small quantities
- ▶ **Spot** or **bead shaped** soldering paste application adapted to the component contour
- ▶ **Inline measurement** during the joining process, to actively act upon the positioning
- ▶ 100% control of the finished components
- ▶ Positioning using laser profile sensor
- ▶ Dosing using camera system



A video of the system in action is found here.



NC DOSING PORTAL

- ▶ Through the electrical 3-axis portal with integrated interpolation capability, every contour (linear, point, circular movement) can be applied
- ▶ The creation of new contours can be done using externally created CNC programs or through reading in DXF files
- ▶ An interaction between dosing and axis speed is given, to guarantee a clean and consistent dosing bead

AUTOMATING / ASSEMBLING



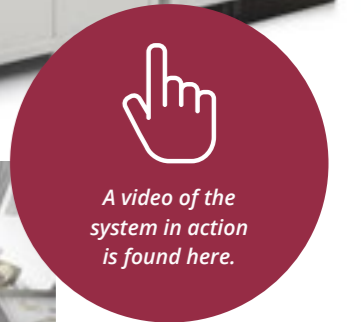
JOINING AND ASSEMBLY SYSTEM FOR SERVOMOTORS

- ▶ Designed for various sizes and lengths
- ▶ The largest motor has a weight of **70 kg**
- ▶ Worker guide via **structured visualization**
- ▶ **Force, distance and torque monitoring** of the assembly processes
- ▶ Fastening technology integrated in the assembly sequence
- ▶ Automatic carrying and cutting to length of the connection strands during the joining process

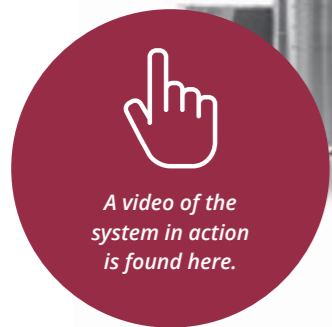
ROBOTICS

ROBOT CELL WITH FLEXIBLE COMPONENT FEEDS

- ▶ **Fully automatic robot cell** incl. pad printing and assembly station
- ▶ **3D position detection** of loose shaken components via **handle in the crate / 3D bin picking**
- ▶ Maximum possible amount of flexibility with increased variant variety
- ▶ Components are placed in the tenths of a millimeter range on the rotary indexing table thanks to **fully automatic, collision-free track planning**
- ▶ Flexible component feed using feeder system and camera technology for the small parts
- ▶ Using **simple integration capability** of new component types, **increased customer benefits** are guaranteed even over the life cycle of individual products



MEASURING / TESTING



TEST UNIT FOR WOODEN BLOCKS

- ▶ **100% control** for wooden blocks
- ▶ Various component shapes, cube, rectangular, triangular, half-moon, etc.
- ▶ Components are controlled for burns, break-outs, rough areas, etc. and selected as OK and NOK
- ▶ **Cycle time:** 180 – 200 pieces / minute
- ▶ A total of six **high-resolution camera systems** for each side of the building blocks
- ▶ **Integrated lighting system** adapted to the building block color

CUSTOM SOLUTIONS

CUTTING AND SEPARATION SYSTEM FOR HARD METAL RODS

- ▶ Manual width adjustment for trays or workpiece carriers possible (this can also be done optionally automatically through recipe selection on the touch panel)
- ▶ Charging and removing side via **Paternoster units**
- ▶ Both paternoster units can be charged and unloaded during operation (**no machine interruption when loading and unloading**)
- ▶ Removal belt adapts automatically to the extruder speed based on the sensor system used





SERVICES

Contract manufacturing

Service

Training

SERVICES



CONTRACT MANUFACTURING

Do you have unique requirements? We have the right, high-quality machines!

Use the possibility to produce your ideas and specifications with us.

WE OFFER

- ▶ Individual manufacture according to the relevant customer requirements
- ▶ **Center of mass:** Single or small series challenging workpieces



*A small glimpse
into our production
you find here.*

YOUR ADVANTAGES

- ▶ Many years of experience in manufacturing
- ▶ Close teamwork with the mechanical design
- ▶ We can implement technical challenges and extraordinary jobs very quickly and precisely
- ▶ Cutting-edge and high-quality equipped machine park for precision components: Various lathes, milling and grinding machines, efficient production strategies with CAM systems
- ▶ We are able to produce simple to highly-complex components ourselves
- ▶ Experienced, qualified employees
- ▶ High quality standard
- ▶ Guarantee of fast reaction and punctual delivery times

SERVICE / MAINTENANCE

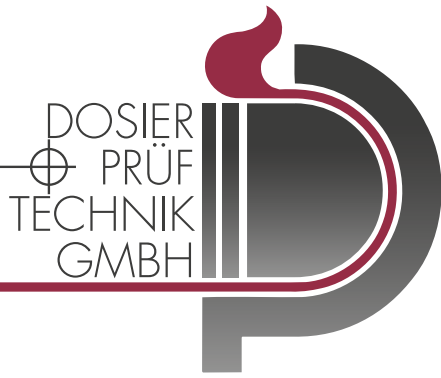
SERVICE is a priority at D+P as always

PROFIT FROM OUR COMPREHENSIVE SERVICE FROM D+P SPECIALISTS:

- ▶ Our D+P assembly team is available for you during start-up directly on site
- ▶ Our service is valid domestically and internationally
- ▶ After-Sales Service: For maintenance or fault cases, we will respond within the shortest possible time
- ▶ Central coordination in case of service with forwarding to the installers and technicians in your facility

YOU HAVE 3 OPTIONS FOR CONTACTING OUR SERVICE DEPARTMENT:

- ▶ **Service hotline: 09081 / 27593-25**
Select the D+P Service hotline for all questions about service, maintenance or malfunctions. We will react quickly.
The hotline is available to you from Monday to Friday from 7:00 am to 12:00 noon and from 1:00 pm to 4:00 pm.
- ▶ Or send us an email:
service@dptechnik.de
- ▶ You can also send your service request via our **Service Form** directly to us.



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CONTACT

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