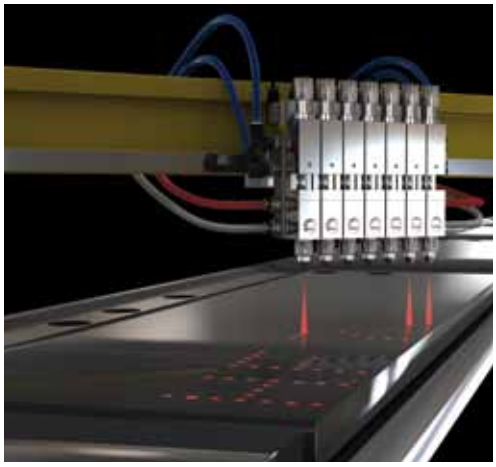
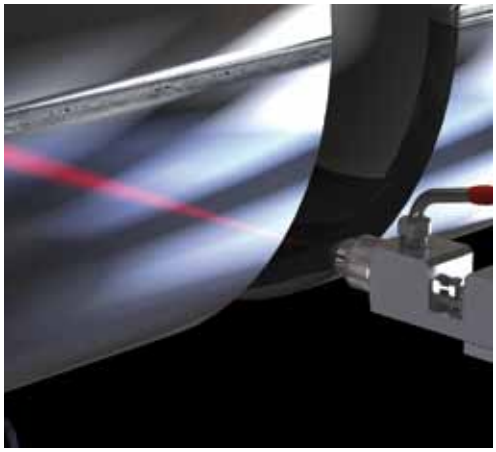
WALTHER PILOT



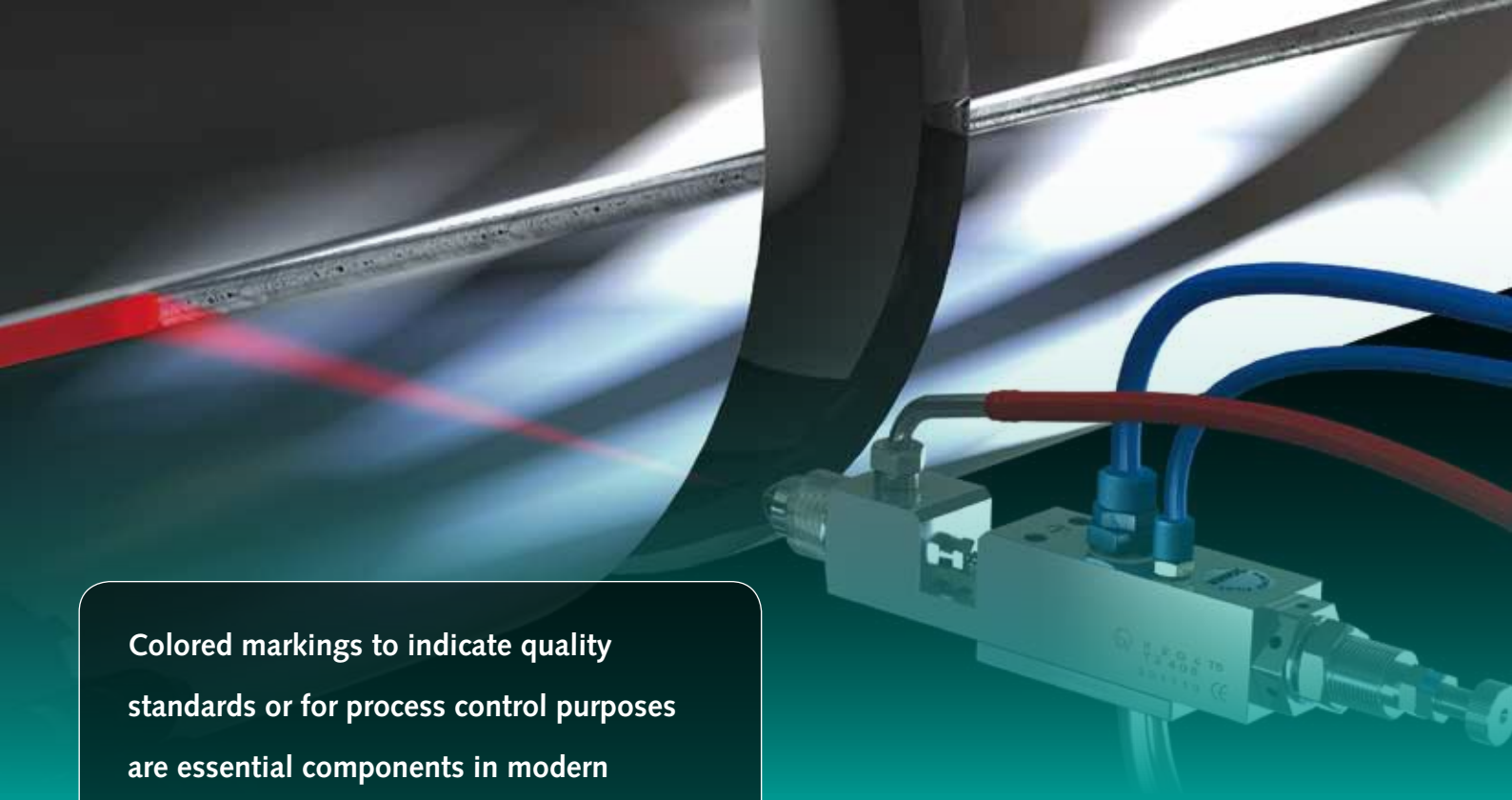


Dot Marking Systems

■ Paint Spray Systems ■ Marking Blocks
■ Printing Systems ■ Paints and Inks

WALTHER PILOT®

The Coatings Experts



Colored markings to indicate quality standards or for process control purposes are essential components in modern production systems. WALTHER PILOT uses tailor-made systems and high-quality components to create exactly the conditions you expect, in the interest of future-proof marking technology.

The company is headquartered in the Vohwinkel borough within the City of Wuppertal. Spray guns and marking blocks are manufactured here. Pressure tanks and spray booths are manufactured at the Neunkirchen-Struthütten plant in the Siegerland region.

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With WALTHER PILOT you always see the big picture.

WALTHER PILOT is a member of the Wagner Group.

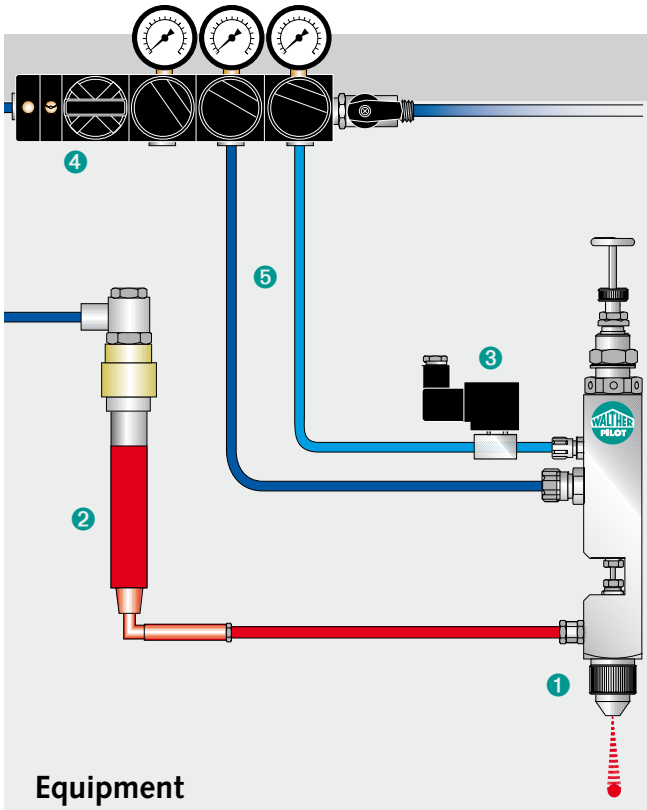
A wealth of application options

Marking

- Marking to document inspections of weldments in sheet metal and pipe
- Marking rejects
- Marking complying parts
- Marking following leak testing
- Marking as an orientation aid (indicating the installation position)
- Identifying similar-looking but differing models
- Marking cutting and bending lines
- Marking lines used for manufacturing purposes

Substrates: metal, plastic, glass, paper, cellulose, cork, stone, ceramics, wood, cardboard, rubber, textiles

Contents



Select 1 System / Model V 45

- Small spray system with miniature material pressure tanks, to apply about 3,500 dots (dots 5 mm in diameter)
- Simple operation, low maintenance
- For dots of from 3 to 30 mm in diameter
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

Equipment

❶ Marking spray gun, Model 20-360, with pull rod for manual activation (e.g. for spray trials)
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ Miniature material pressure tank, 45 ml, stainless steel, max. 3 bar

❸ Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available

❹ Compressed air manifold with pressure gauges and safety valve
Combination of all compressed air control functions for simpler marking systems (control and spraying air for the spray gun, tank pressurization air)

❺ Hose kit (2 meters), incl. fittings for both the air and material hoses

Model of the system

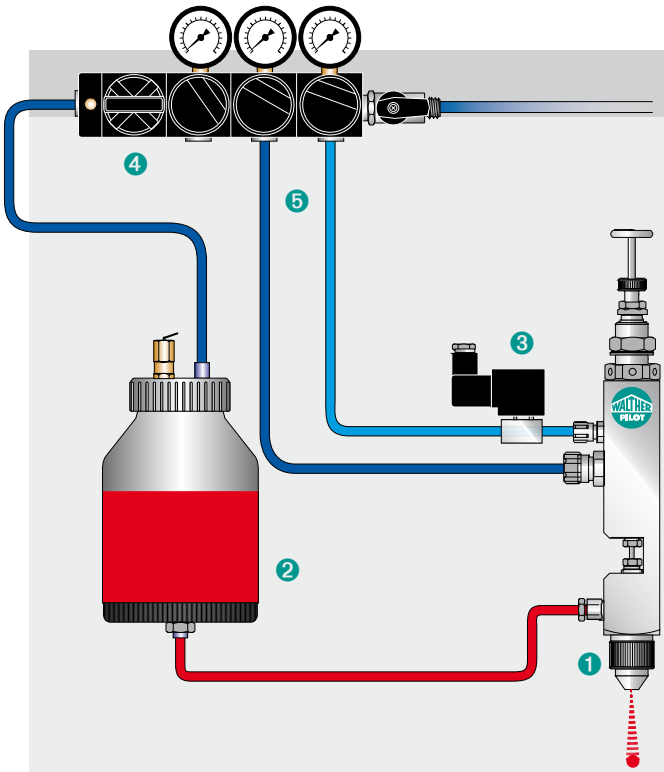
Options

- The miniature material pressure tank is attached directly to the spray gun, without a connector hose.
- Holders for marking guns
- Spray booths 'Air on demand'. Overspray exhaust systems are mandatory even if applying only tiny amounts of paint. We have an affordable solution.
- Color sensors and measurement transducers for function monitoring
- Integration of the system into your assembly line

Compressed air manifold for small systems

Spray gun holders

Select 2 System / Model V 750



- Small spray system with pressure cup, to apply about 55,000 dots (dots 5 mm in diameter) or 3,300 meters of lines (5 mm wide)
- Compact design for simple integration into the process
- Simple operation, low maintenance
- For dots of from 3 to 30 mm in diameter
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

Equipment

❶ Marking spray gun, Model 20-360, with pull rod for manual activation (e.g. for spray trials)
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ Material pressure tank, 750 ml, lightweight alloy, max. 3 bar

❸ Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available

❹ Compressed air manifold with pressure gauges and safety valve
Combination of all compressed air control functions for simpler marking systems (control and spraying air for the spray gun, tank pressurization air)

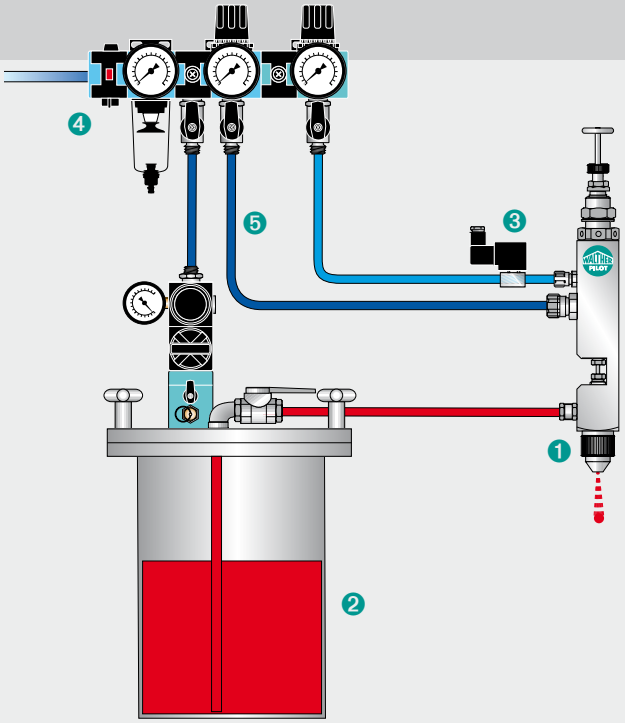
❺ Hose kit (2 meters), incl. fittings for both the air and material hoses

Options

- Holders for marking guns
- Spray booths 'Air on demand'. Overspray exhaust systems are mandatory even if applying only tiny amounts of paint. We have an affordable solution.
- Color sensors and measurement transducers for function monitoring
- Control cabinets
- Integration of the system into your assembly line

Small marking unit with integrated 750 ml pressure cup for manual operation. These compact devices can also be set up for external control when shipped from the factory.

Select 3 System / Model V 1000



- Small spray system with miniature material pressure tanks, to apply about 70,000 dots (dots 5 mm in diameter) or 4,500 meters of lines (5 mm wide)
- Compact design for simple integration into the process
- Simple operation, low maintenance
- For dots of from 3 to 30 mm in diameter
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request.
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

Equipment

❶ Marking spray gun, Model 20-360, with pull rod for manual activation (e.g. for spray trials)
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ MDG 1 material pressure tank, 1,100 ml, stainless steel, max. 3 bar

❸ Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available

❹ Compressed air manifold with pressure gauges and safety valve
Combination of all compressed air control functions for simpler marking systems (control and spraying air for the spray gun, tank pressurization air)

❺ Hose kit (2 meters), incl. fittings for both the air and material hoses

System variants

Model V 2000; like V 1000 but with MDG 2 tank; net contents 1,800 ml

Model V 3000; like V 1000 but with MDG 3 tank; net contents 2,500 ml

Model V 4000; like V 1000 but with MDG 4 tank; net contents 3,100 ml

Option: Pneumatic, geared agitator, 0.16 kW

Options

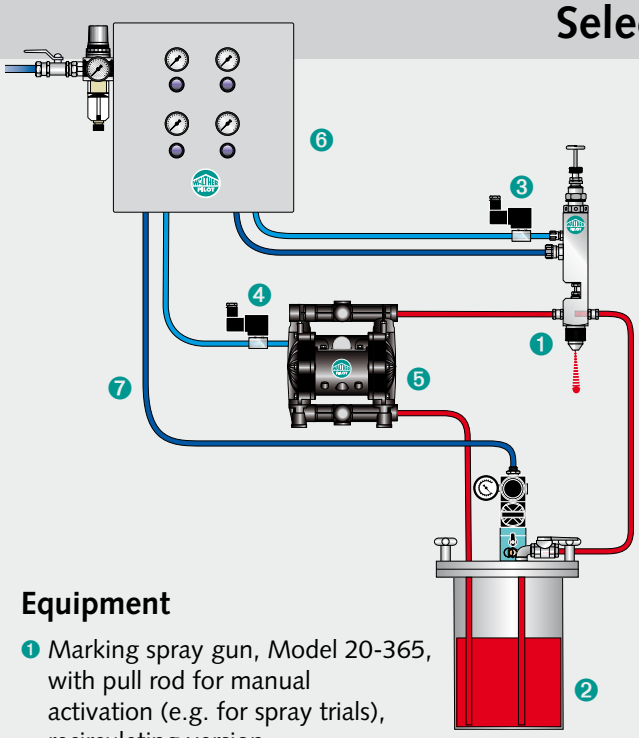
- Holders for marking guns
- Agitators and fill level measurement sensors
- Spray booths 'Air on demand'
- Color sensors and measurement transducers to monitor functions
- Control cabinets / pneumatic control cabinets
- Integration of the system into your assembly line

Pressure tank with agitator, capacitive fill level sensor and material drain at the bottom

Fill level measurement sensors for the pressure tank

Pressure tank fitting for media containing solvents

Select 4 – recirculating / Model V 1000



Equipment

❶ Marking spray gun, Model 20-365, with pull rod for manual activation (e.g. for spray trials), recirculating version
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ MDG 1 material pressure tank, 1,100 ml, stainless steel, max. 3 bar, recirculating version

❸ Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available

❹ Solenoid valve, 2-port, 2-position, 24 V DC; other voltages available

❺ MBP 2812 diaphragm pump
Acetyl (other versions possible)

❻ Pneumatic control cabinet with pressure gauge
To connect one pressure tank, one marking gun, one diaphragm pump

❼ Hose kit (2 meters), incl. fittings for both the air and material hoses

Options

- Holders for marking guns
- Agitators and fill level measurement sensors
- Color sensors and measurement transducers to monitor functions
- Control cabinets / pneumatic control cabinets
- Integration of the system into your assembly line
- Compressed air manifold instead of pneumatic controls

- This system is preferred for use in particular with materials which will settle out or dry quickly. This is why these materials are kept in circulation. A dual diaphragm pump is used for this purpose.
- This is a small spray system with a material pressure tank, to apply about 70,000 dots (dots 5 mm in diameter) or 4,500 meters of lines (5 mm wide)
- Simple operation, low maintenance
- For dots of from 3 to 30 mm in diameter
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request.
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

System variants

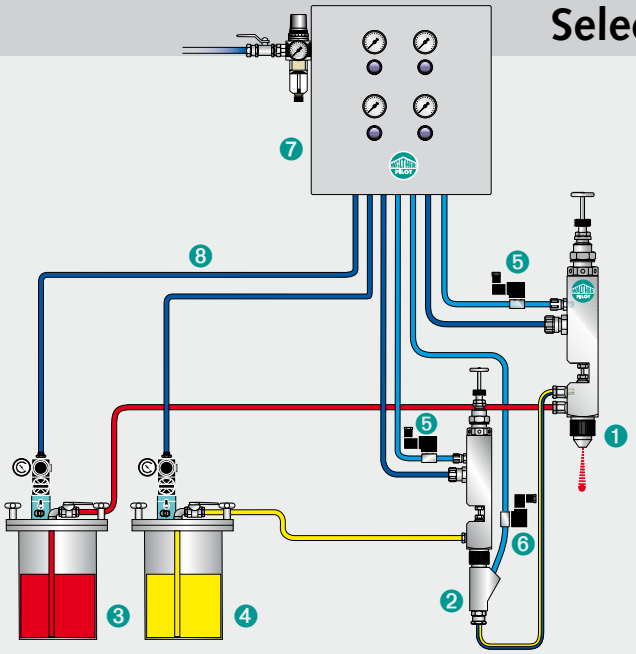
Depending on production requirements, material delivery to a marking system may comprise multiple material pressure tanks and diaphragm pumps. We will work out a concept customized to suit your operations.

MDG 2 (1,800 ml), MDG 3 (2,500 ml), MDG 4 (3,100 ml) tanks or tanks from the LDG series may be used instead of the MDG 1 material pressure tank.

Pneumatic control cabinet

Compressed air manifold

Select 5 – flushable / Model V 3003



Equipment

❶ Marking spray gun, Model 20-360, with pull rod for manual activation (e.g. for spray trials), flushing version.
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ Flushing valve, Model 20-369
Body: Nickel-plated brass

❸ MDG 3 material pressure tank, 2,500 ml, stainless steel, max. 3 bar, without agitator, for paint / ink

❹ MDG 3 material pressure tank, 2,500 ml, stainless steel, max. 3 bar, without agitator, for cleaning agent

❺ Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available (one flushing valve, one marking gun)

❻ Solenoid valve, 2-port, 2-position, 24 V DC; other voltages available (one flushing valve)

❼ Pneumatic control cabinet with pressure gauge
To connect two pressure tanks, one marking gun, one flushing valve

❽ Hose kit incl. fittings
for both the air and material hoses

Options:

- Holders for marking guns
- Agitators and fill level measurement sensors
- Color sensors and measurement transducers to monitor functions
- Control cabinets / pneumatic control cabinets
- Integration of the system into your assembly line
- Overspray extraction: Air on demand

- Systems of this type are always used whenever the nozzle and air cap are exposed to extreme material build-up. This is why the system is fitted with an additional flushing valve. After the spray cycle a mix of air and cleaning agent is pressed into the circular gap between the nozzle and the air cap.
- This is a small spray system with a material pressure tank, to apply about 210,000 dots (dots 5 mm in diameter) or 13,500 meters of lines (5 mm wide)
- Simple operation, low maintenance
- For dots of from 3 to 30 mm in diameter
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request.
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

System variants

Flushing valves with tandem connectors to clean the nozzles of a total of six marking guns

Model V 1001; like V 3003 but with MDG 1 tank; net contents 1,100 ml

Model V 2002; like V 3003 but with MDG 2 tank; net contents 1,800 ml

Model V 4004; like V 3003 but with MDG 4 tank; net contents 3,100 ml

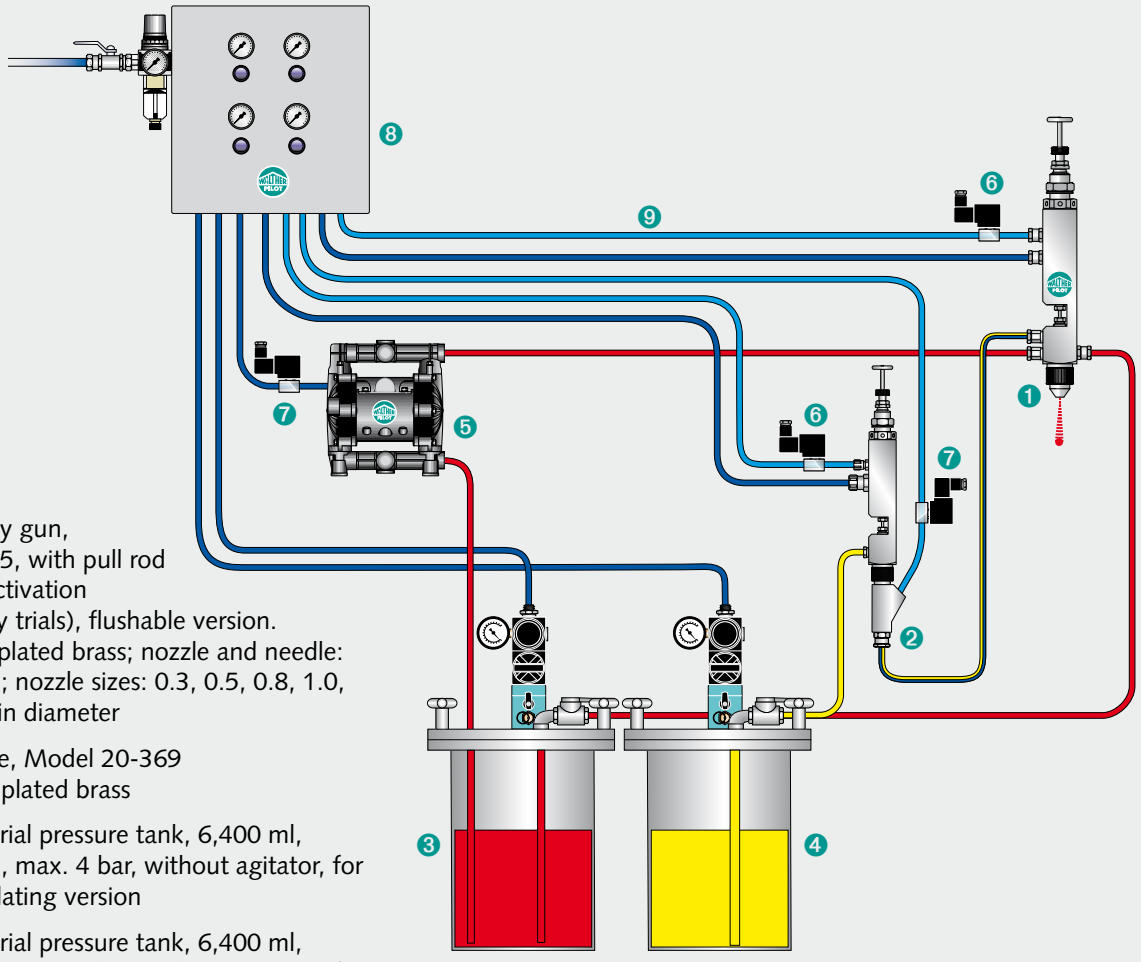
Option: Pneumatic agitator

Flushing sequence

1. When the marking process is finished, the solenoid valve is used to shut off the marking gun.
2. Use the solenoid valve to open the flushing valve for about 3 to 5 seconds. A mix of air and solvent cleans the area between the nozzle and the air cap.
3. Use the solenoid valve to close the flushing valve after flushing is finished.
4. Open the solenoid valve for about 5 seconds to dry the nozzle and air cap area.
5. Close solenoid valve; cleaning process is complete.

Geared agitator for small pressure tanks, MDG 1 and larger

Select 6 – recirculating – flushable / Model V 8008



Equipment

❶ Marking spray gun,
Model 20-365, with pull rod
for manual activation
(e.g. for spray trials), flushable version.
Body: nickel-plated brass; nozzle and needle: stainless steel; nozzle sizes: 0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

❷ Flushing valve, Model 20-369
Body: Nickel-plated brass

❸ MDG 8 material pressure tank, 6,400 ml, stainless steel, max. 4 bar, without agitator, for paint, recirculating version

❹ MDG 8 material pressure tank, 6,400 ml, stainless steel, max. 4 bar, without agitator, for cleaning agent

❺ MBP 2812 diaphragm pump
Acetyl (other versions possible)

❻ Solenoid valve, 3-port, 2-position
24 V DC; other voltages available
(one flushing valve, one marking gun)

❼ Solenoid valve, 2-port, 2-position
24 V DC; other voltages available
(one flushing valve, one diaphragm pump)

❽ Pneumatic control cabinet with pressure gauge
To connect two pressure tanks, one marking gun, one flushing valve

❾ Hose kit incl. fittings
for both the air and material hoses

Options: as for the Select 5, see page 8

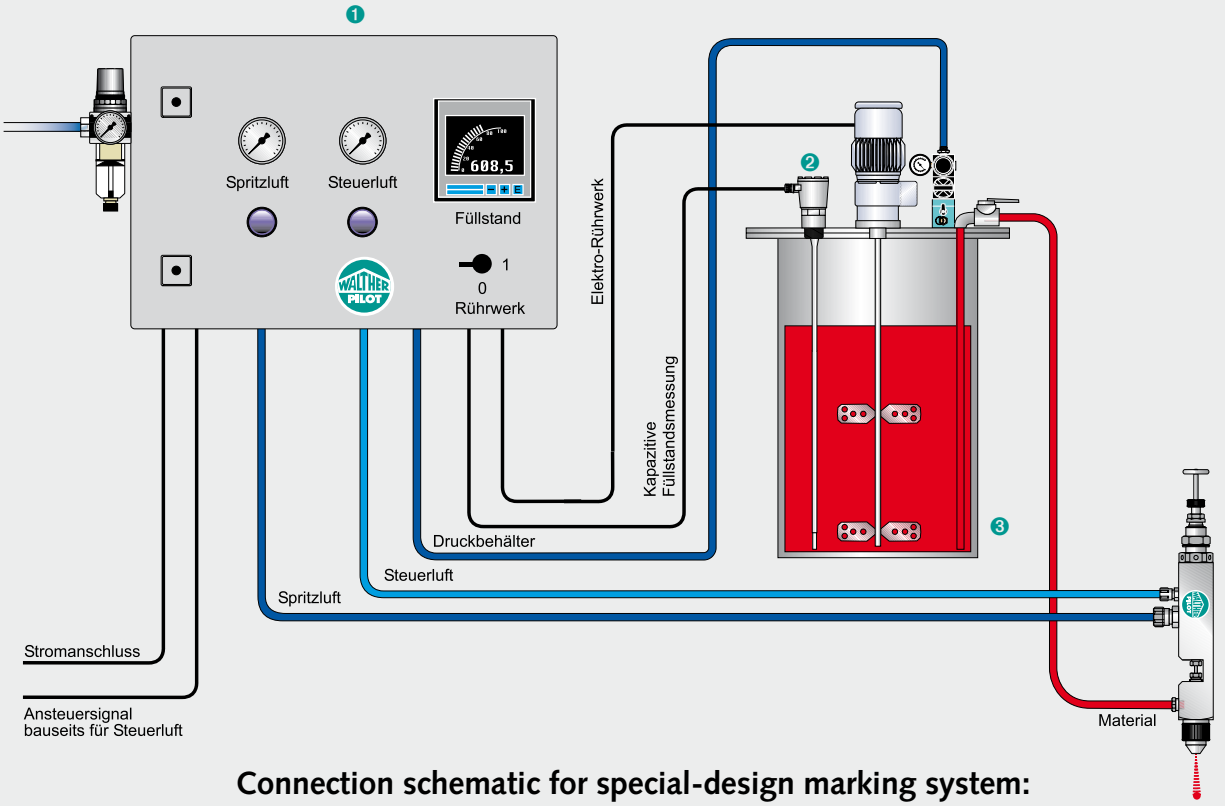
- This system is designed to process materials which will settle out or dry quickly. A dual diaphragm pump is used to keep these materials in circulation. A supplementary flushing feature prevents performance losses due to material build-up collecting at the nozzle and air head.
- This is a spray system for larger quantities of materials, with a material pressure tank sufficient to apply about 37,000 meters of lines (5 mm wide) and an additional material pressure tank for the cleaning agent.
- With flushing valve to clean the nozzle on the marking gun
- A solenoid valve is used to trigger the spray gun. WALTHER PILOT can also deliver the controls, upon request.
- Simple operation, low maintenance
- We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.

System variants

Model V 12.012; like V 8008 but with MDG 12 tank;
net contents 11,800 ml

Model V 22.022; like V 8008 but with MDG 22 tank;
net contents 19,500 ml

We have the answers whenever complex system configurations are required.



Connection schematic for special-design marking system:

1. Electro-pneumatic control cabinet
2. Fill level measurement equipment
3. Material pressure tank with agitator

Control cabinets and control technology

We will design a configuration matched to your specific production requirements.

- Pneumatic control cabinet
- Electro-pneumatic control cabinet
- Electrical control cabinet

All the components required to integrate these control elements into the system – such as mounting stands or frames – can also be obtained from us.

Electrical control cabinet

Pneumatic control cabinet

Mounting frame

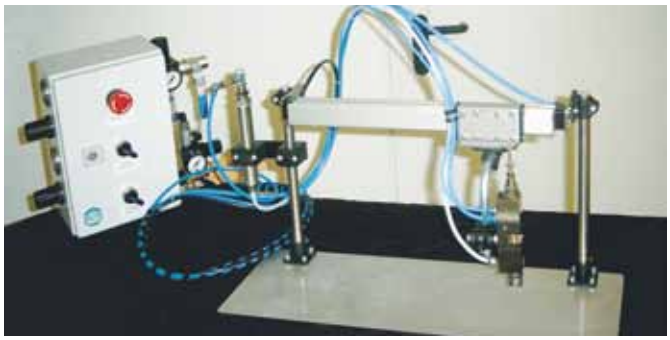
Touch panel for convenient parameter specification (PLC)

Application technology, material delivery, spray booths, function monitoring

Our equipment and services:

- Material delivery technology to suit specific requirements: Pressure tank with agitator and fill level measurement sensors, diaphragm pumps for materials recirculation, and all the required hoses.
- Cabinets for the materials delivery technology including, if indicated, controls for regulated exhaust of noxious gases or fumes that could be released when pressure tanks are opened; sumps for use when handling hazardous liquids.
- Marking guns with flushing system to clean the outside of the nozzles after each spray cycle.
- Spray booths for solvent fumes and overspray. Multi-layer paper filters with high absorption capacity.
- Color sensors and measurement transducers to monitor functions. They provide assurance that the dot or bar code was actually applied and avoids faulty coatings and rejects.
- Control technology: Control cabinets (pneumatic, electro-pneumatic, electrical) exactly suited to your needs.
- Space-saving integration of the marking system into existing or projected production lines. Expert engineering, all from a single source.

Using color sensors makes for unvarying process reliability.

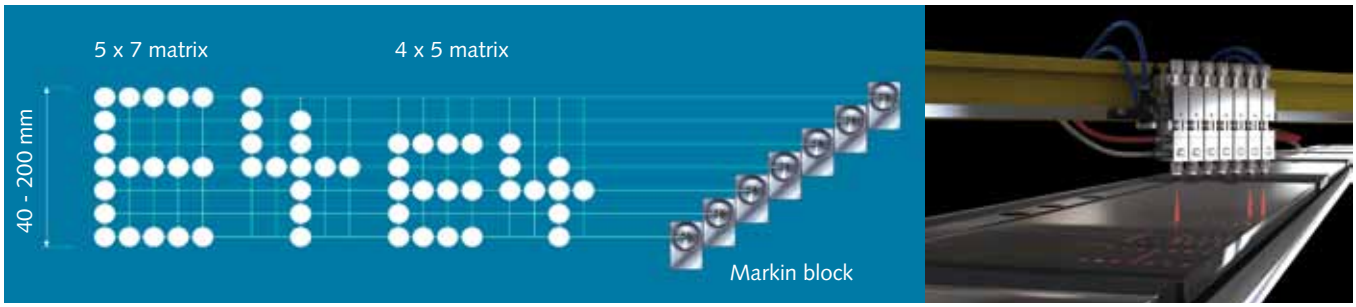


Small spraying system with linear drive

Spray booth

Cabinet with material delivery system (pressure tank with shelf consoles for the cover, dual-diaphragm pump, sump and fill level measurement probe)

Marking blocks



Matrix for marking blocks

The characters may be between 40 and 200 mm in height. Among the primary users are steel mills that identify their products with the appropriate batch numbers.

The characters can be read from a great distance.

Applications

- Marking ingots, strips, plates, pipes, profiles, coils, containers
- Color coding

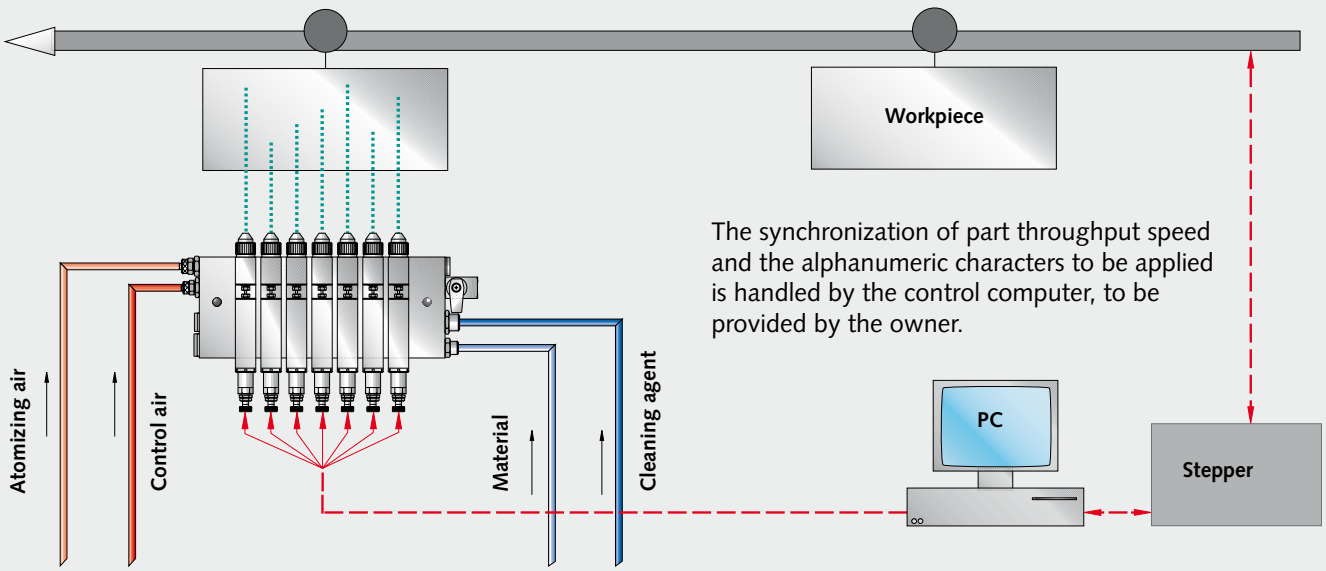
Advantages

In contrast to other identification concepts, marking systems make it possible to apply heat-proof paints.

The individual spray guns can be removed from the block, both quickly and easily, for cleaning and maintenance work.

In the event that fast-drying paints are used or where there will be longer interruptions between marking cycles, we recommend using marking blocks with flushing equipment. This special WALTHER PILOT development ensures that paint residues are removed from the nozzle and air cap after the marking cycle. Thus the guns in the block remain functional at all times.

- Great range of models to meet nearly every requirement
- All the technology from a single source – spray guns, pressure tanks, hoses, solenoid valves, compressed air maintenance units
- High part conveyance speeds thanks to short spray gun actuation times
- Flushing device for the nozzle and air cap on request
- Rugged design – low wear
- Easy cleaning and maintenance



The synchronization of part throughput speed and the alphanumeric characters to be applied is handled by the control computer, to be provided by the owner.

Pneumatically controlled marking blocks

Compact, space-saving design

Low-wear, diaphragm-type guns are used here. Their service lives are many times those of spray units with needle closures. It makes good sense to select diaphragm guns when marking hot objects or working paints containing sharp-edged pigments.

- Characters can be between 40 and 200 mm in height. The size of the dots can be regulated by a fine-detent adjustment system.
- Maximum lettering speed is 54 meters per minute.
- The block can be delivered with a flushing feature if desired.
- Pneumatic marking blocks may be fitted with any desired number of spray guns.

Marking block with seven spray guns and ports for control air, spraying air, marking material and cleaning agent (left to right).

Four-gun block with individual connectors and flushing connector. A variety of paints may be used.

Marking block with ten spray guns and connections for paint and cleaning agent.

Electromagnetically controlled marking blocks (Series ES)

High speed with paint jet

The new "paint jet" is small, lightweight and achieves unexcelled speed. Direct control of the nozzles using special solenoids makes possible cycling periods of 3 milliseconds from one dot to the next.

- Characters may be between 40 and 200 mm in height. The size of the dots can be regulated by a fine-detent adjustment system.
- Maximum lettering speed is 360 meters per minute.
- The flushing feature is standard for this block.
- Systems with 7 or 9 nozzles are available as standard designs. Special solutions with a differing number of nozzles can be made up without difficulty.

Paint application on the spot and with precise edges

Marking guns and marking blocks can be used in a number of applications. Paint will often be involved, but other materials may be processed, too, including adhesives, release agents, lubricants, casting compounds and even cosmetics.

The WALTHER PILOT material pressure tanks and pumps are your best choices for material delivery.

Particularly whenever demanding tasks are to be mastered, that's where WALTHER PILOT is the specialist you need to contact. Get in touch with us. Spray systems for fine work are usually not available from stock.

Sealing chips on a printed circuit board

Application examples

- Applying screw lock lacquer
- Applying lubricant during drilling and milling, for instance
- Applying release elements for rubber profiles
- Gluing the ends of rolls of paper
- Painting collars for gas cartridges
- Defined application of adhesives (edge veneers)
- Metering hardeners and adhesives
- Sealing circuit boards with protective lacquer
- Enclosing circuit board components in cast material
- Lacquering small components with complex geometries
- On-the-dot paint application with a clean edge

These paint application systems can carry out a wealth of painting and gluing work – right on through to applying dyes to artificial flowers.

Processing foodstuffs using individual spray guns guided by a robot

Applying lubricant

Sharp-edge paint application without a stencil

Coating small components

Implementing innovative painting concepts

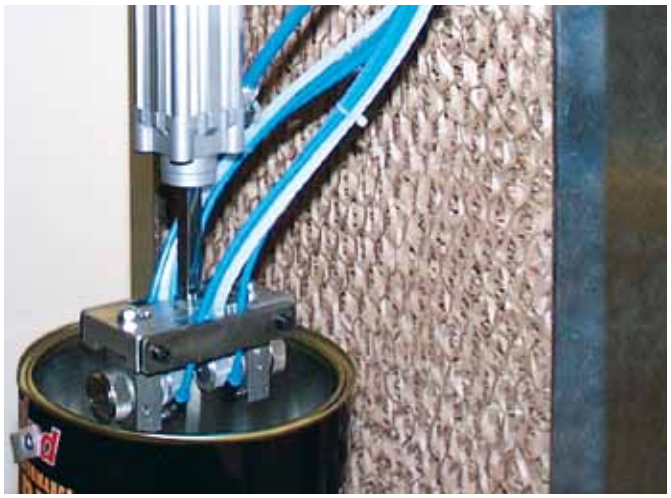
Since paint is applied with a sharp edge, the marking gun is an excellent tool for coating small components, largely free of overspray. In the example used here it is a matter of painting the threads on a bolt. Due to the sharp-edged painting and virtually no overspray, it is possible to use the robot to hold the object being painted – instead of the usual configuration where the spray gun is held.

Do you also need innovative solutions in regard to coatings?

We would be glad to provide consulting support.

If necessary, we will conduct tests in our applications laboratory using your workpieces and the coating materials in question. This gives you full assurance that the ideal application technology will be employed.

Painting at inaccessible locations



Particularly compact spray guns for external control are built in such a way that they can also reach into cavities and recesses and apply dot-shaped coatings there.

Example: Touch-up painting in inside a packaging tin. Two miniaturized, automatic spray guns apply enamel dots near the lugs for the handle.

Even though the amount of paint is very small – exhaust capability to remove overspray is provided for.

Applying a printing background

Paint, usually white, is applied with a spray gun as a printing substrate. The objective is to improve the legibility of information applied with an inkjet printer.

Purpose: The contrast between the lettering or encoding and this background is significantly higher than would otherwise be the case. The lettering can be better sensed by the reading unit.

Shown here: Sprayed backing on a catalytic converter.

Spray guns for paint markings

PILOT Signier Standard

Standard model

Fully automatic spray gun for many kinds of fine spraying work.

Spray gun body: Chrome-plated brass; nozzle: stainless steel; needle: stainless steel or sintered carbide, air caps: round or wide jet cap

Nozzle sizes as required:
0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

Wide-jet spray cap

Wide-jet spray cap

PILOT marking gun with additional cleaning agent connection

Optional:
Plug-type connectors for compressed air

PILOT Signier variations:

PILOT Signier – version for recirculating mode
Like the PILOT Signier Standard, but with additional hose connectors for material recirculation

PILOT Signier – flushable version
Like the PILOT Signier Standard, but with additional connector for cleaning agent feed

PILOT Signier – version for recirculating mode – flushable:
Like the PILOT Signier Standard, but with additional connector for cleaning agent feed and hose connectors for material recirculation

PILOT WA 51

Special-design spray guns for limited spaces

Spray nozzles of the smallest possible dimensions, with external control of the atomization parameters. All the wetted components are made of stainless steel. Material volume regulation. Round or wide jet nozzles available.

Nozzle sizes as required:
0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

Nozzle extensions

Nozzle extensions for hard-to-reach locations on request

PILOT Signier-Membrane

Diaphragm instead of needle seal

Special-design spray guns for special materials

Rugged, fully-automatic marking guns using a diaphragm instead of a needle seal. Particularly suitable when processing abrasive or moisture-curing materials. High cycle rate. Air caps: round or wide pattern.

Nozzle sizes as required:
0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

A marking gun has to withstand the most extreme loading: continuous opening and closing at the shortest possible intervals. This will cause accelerated wear at the needle seal, particularly when handling abrasive media. Substituting a special diaphragm for the needle will lengthen service life significantly. We would be glad to provide information on the technical details.

Additional alternates when using moisture-curing materials: spray guns using Mesamoll lubricant

PILOT WA 210-H

Special-design spray guns for special materials

Fully automatic spray gun. Forward body and all wetted components made of Hastelloy alloy. Especially suitable for use with acidic or basic materials. Mesamoll lubrication effectively reduces needle packing wear. Material volume regulation by way of detent adjustment.

Nozzle sizes as required:
0.3, 0.5, 0.8, 1.0, 1.2, 1.5 mm in diameter

Mounts and marking brackets

We can also supply the mounts needed to align the marking guns where simultaneous, multiple encoding is required. Over and above that, we offer tailor-made, comprehensive solutions such as marking brackets.

Stainless steel pressure tank models MDG 4, 2 and 1

Pneumatic geared agitator, 0.16 kW, for small tanks

Stainless steel pressure tank models LDG 20, 5 and 10 (lightweight design) Max. operating pressure: 6 bar

LDG 20 with electrical geared agitator, 0.12 kW

LDG 10 with pneumtic geared agitator, 0.36 kW

Small MDG / LDG tanks

Small tanks, Model MDG or LDG, made of stainless steel are often used for marking tasks. They ensure pulse-free delivery of the material.

The tanks are suitable for accepting the original drums. We can also provide consumables (paints, inks, cleaning agents).

Over and above that, WALTHER PILOT can supply tanks in many standard and special sizes. In regard to safety, too, our tanks are designed to satisfy every requirement (Pressurized Vessel Regulation / ATEX Explosion Protection Directive). Agitators and fill level measurement sensors can also be installed in the smaller tanks without difficulty.

Model	Max. operating pressure	Net volume approx.	Design
MDG 1	3 bar	1.1 liter	Without agitator
MDG 1	6 bar	1.1 liter	Without agitator
MDG 1	6 bar	1.1 liter	With pneumatic agitator*[1]
MDG 2	3 bar	1.8 liter	Without agitator
MDG 2	3 bar	1.8 liter	With pneumatic agitator*[1]
MDG 2	6 bar	1.8 liter	Without agitator
MDG 2	6 bar	1.8 liter	With pneumatic agitator*[1]
MDG 3	3 bar	2.5 liter	Without agitator
MDG 3	3 bar	2.5 liter	With pneumatic agitator*[1]
MDG 3	6 bar	2.5 liter	Without agitator
MDG 3	6 bar	2.5 liter	With pneumatic agitator*[1]
MDG 4	4 bar	3.1 liter	Without agitator
MDG 4	4 bar	3.1 liter	With manual agitator
MDG 4	4 bar	3.1 liter	With pneumatic agitator*[1]
LDG 5	6 bar	3.5 liter	Without agitator
LDG 5	6 bar	3.5 liter	With manual agitator
LDG 5	6 bar	3.5 liter	With pneumatic agitator*[1]
LDG 10	6 bar	9 liter	Without agitator
LDG 10	6 bar	9 liter	With manual agitator
LDG 10	6 bar	9 liter	With pneumatic agitator*[2]
LDG 10	6 bar	9 liter	With electric agitator*[3]

*[1] (0.16 kW, 400 r.p.m.)
*[2] (0.36 kW, 200 r.p.m.)
*[3] (0.12 kW, 60 r.p.m.)

Other sizes on request

Diaphragm pumps for use in recirculating systems

Miniature material pressure tank, 45 ml, 3 bar, made of stainless steel. The tank is mounted directly on the spray gun. See page 4 for the Select 1 System.

Lightweight alloy pressure tank, 750 ml, 3 bar. See page 5 for the Select 2 System.

For LDG 5 and 10: Inliners made of thin, rugged polypropylene protect against material build-up. Only the outlet tube, agitator shaft and agitator blades need be cleaned.

WALTHER standard paints, inks, thinners

- The pigments in marking paints are especially finely ground so that, when compared with other surface coatings, they are more resistant to settling out and to clogging in and at the nozzle. These are all eco-friendly products, e.g. alcohol-based. Advantages: fast drying, clear marking dots, good UV resistance.
- The paints can be used on surfaces that are wet or dry, hot or cold, light or dark, porous or smooth, and even on greasy surfaces.
- They can be used, for instance, on sheet metal, pipes, plastics, textiles, glass, stone, wood, paper, ceramics and rubber.
- All the standard shades and fluorescent paints are available. Special shades and applications on request.

Type WPF 1922

Alcohol-based marking paint with reduced settling, fast-drying, various shades as required.
Suitable thinner: WPV 0218.

Type WPF 0232

Solvent-based marking paint with reduced settling, extremely fast drying. Suitable thinner: VPV 0222.

Typ WPT 1800

Marking ink, alcohol-based, non-settling, fast-drying.

Marking paint **Thinner** **Marking ink**

Container sizes and matching material pressure tanks

1 liter bottle, matching the MDG 3 material pressure tank

1 liter tin, matching the MDG 1 material pressure tank

2 liter tin, matching the MDG 4 material pressure tank

10 liter canister, matching the MDG 22 material pressure tank (not shown). Larger containers on request.

WALTHER PILOT HRI

The high-resolution inkjet printer is used for marking and lettering with user-programmable copy, consecutive numbering, date, time of day, graphics, data matrix code, barcodes and logos. It was developed specifically for the extreme demands found in the industrial environment.

The oil-based ink system permits use on all absorbent surfaces, at resolution of 180 dpi. The control technology, touch panel, printing technology and ink supply are all integrated into a stainless steel housing.

High-quality, rugged aluminum stands. Various languages are provided by default.

Technical data	HRI
Printing speed	Up to 40 m/min
Character height	17 mm, 34 mm, 70 mm
Resolution	180 DPI
Electrical supply	110/220 V 50 - 60 Hz
Interfaces	USB, WIFI, Ethernet
Ink colors	Black, red, blue, yellow

WALTHER PILOT HRI-UV

Like the WALTHER PILOT HRI (above) but with UV ink system, enabling use on almost all surfaces.

Resolution: 180 or 360 dpi, depending on the model.

Technical data	HRI-UV
Printing speed	Up to 30 m/min
Character height	Up to 70 mm
Resolution	180 oder 360 DPI
Electrical supply	110/220 V 50 - 60 Hz
Interfaces	USB, WIFI, Ethernet
Ink colors	Black, blue, red

WALTHER CIJ 4032-F

With vertical resolution of 32 DOT (1 to 4 lines) and printing speed of up to 210 m/min (single line), the Model 4032-F continuous inkjet printer supplied by WALTHER PILOT is perfect for every kind of labeling in industrial operations. Simple operation and text entry via touch panel make for quick and reliable marking of your product with consecutive numbers, date, time of day or a user-programmable text.

A data matrix code, barcode or logo can be printed without difficulty. Even when marking darker surfaces using pigmented ink, the process ensures uninterrupted operation and high-contrast printing.

User-programmable markings

In addition to the standard functions, the printing matrix can be laid out and the copy positioned as desired, using software similar to that for a label printer. Multiple fonts (matrix) can be incorporated into a text. The system is also equipped with automatic malfunction monitoring and warning functions.

Versions:
1. Version for black ink
2. Version for pigmented inks

SGS-CE-tested and certified

Consumables
We can supply inks, solvents and other needs.

Low operating costs:
No compressed air required. This reduces energy expenditures.

Virtually zero-emission operation and low solvent consumption with the integrated solvent recovery system (optional). This can also reduce annoying odors to a great extent.

Technical data	Typ 46-810
Printing speed	Up to 210 m/min (single line)
Character height	2 to 14 mm
Resolutions	Up to 32 dots vertical, 1 to 4 lines
Electrical supply	230 V 6 10% / 50 Hz / 0.5 A
Interfaces	RS 232, Ethernet, USB

WALTHER PILOT cartridge printer

The WALTHER PILOT 300 cartridge printer is a rugged inkjet printer for industrial use.

The cartridge printers are suitable for marking and lettering with user-programmable text, consecutive numbering, date, time of day, barcode and logos. Copy can easily be entered using a PC or a laptop.

The systems can be laid out with black ink for light-colored surfaces or with colored ink for absorbent surfaces.

Simple operation and intelligent software make for great reliability.

Equipment and benefits:

- Integrated unit for less wiring and fewer mounting points
- Unpack and print; user-friendly set-up
- Printing head integrated into the ink cartridge, no soiling with ink, no nozzle maintenance*
- Intuitive entry of the printed copy at the PC screen*
- Graphic depiction of ink consumption; printing costs can be calculated
- Compact housing for easy integration into the production system
- Broad selection of inks for printing on porous and non-porous materials
- Easy color change by simply replacing the cartridge.
- Made of rust-free steel and aluminum
- Up to five lines of printing*
- Up to 600 dpi resolution (depending on model)
- Automatic detection of product movement direction*
- Automatic product speed recognition*
- Assembly bracket included*
- Build-in sensor to trigger printing (photoelectric cell)*
- Up to 3 mm distance to the product
- Printing on both sides (product arriving from the right or left)*

Control system:

- Built into the printing head*
- Independent printing or linked to PC
- RS 232 interface, Ethernet, RS 2332, USB (depending on model)
- Texts can be stored in the PC
- Serial data cable* and software for PC included

Security and the environment

- UL, CE, CASL inspected and approved
- Operation at 10 to 90% relative humidity
- Operation at 5 to 40° C

* WP KD 300 only

Technical data:

Technical data	Model KD 300	Model KD 600	Model KD 1200
Printing speed	Up to 60 m/min	Up to approx. 300 m/min	Up to approx. 300 m/min
Character height	2 to 12.7 mm, max. 5 lines	Up to 25.4 mm	Up to 50.8 mm
Resolution	300 DPI	Up to 600 DPI	Up to 600 DPI
Electrical supply	110/220 V 50 - 60 Hz	85/240 V, 50 - 60 Hz	85/240 V, 50 - 60 Hz
Interfaces	RS 323	RS 232, Ethernet, USB	RS 232, Ethernet, USB
Printing heads	1 head	2 heads	4 heads

Non-contact marking: An overview

Sytems	Select System, pneumatic	PILOT Block , pneumatic	PILOT Block, electro-magnetisch	HRI / HRI-UV	Continous InkJet, small character, matrix	Cartridge printer
						
Printing technoloy	Spray technology	Spray technology	Spray technology	Inkjet technology	Inkjet technology	Inkjet printer
Character height	3 to 30 mm	40 to 200 mm	40 to 200 mm	Up to 70 mm	2 to 14 mm	Up to 100.6 mm
Printing speed	Up to 180 m/min	Up to 54 m/min	Up to 78 m/min	Up to 30 m/min	Up to 210 m/min	Up to 300 m/min
Surface to be marked	Porous and non-porous	Porous and non-porous	Porous and non-porous	Porous and non-porous	Porous and non-porous	Porous and non-porous
Barcodes and data matrix	No	No	No	Yes	Yes	Yes
Logos	No	No	No	Yes	Yes	Yes
Typical applications	Quality assurance, component identification, installation aid	Steel panels, containers	Steel panels, containers	Concrete blocks, textiles, wood, chipboard, foils and films	Tins, bottles, foils and films, metals, plastics	All kinds of lettering, logos
Typical industries and sectors	Beverages, foodstuffs, electronics, automotive	Steel, pipe and sheet metal working industries	Steel, pipe and sheet metal working industries	Construction materials, textiles, foodstuffs	Beverages, foodstuffs, electronics, automotive	all industries

WALTHER PILOT

Product range

Equipment and plant to apply sprayable media

Application technology

- Manual spray guns
- Automatic spray guns
- Airless units / Aircoat units
- Electrostatic spray guns

Tanks and material delivery

- Material pressure tanks
- Paint mixing tanks
- Mixing stations, agitators
- Fill level measurement technology
- Diaphragm and piston pumps

Multi-component technology

- Mechanical mixing and metering plants
- Electronically controlled mixing and metering plants

Spray booths and ventilation systems

- Booths with drying function
- Industrial booths with dry or wet particle separation
- Paint sludge removers
- Air make-up systems
- Drying systems

Equipment and plant to apply adhesives and sealants

Application technology

- Spray guns for adhesives
- Automatic spray guns
- Extrusion guns

Tanks and material delivery

- Material pressure tanks
- Agitators
- Fill level measurement technology
- Diaphragm and piston pumps
- Pumps for high-viscosity media (RAM)

Two-component technology

- Two-component pressure tank systems
- Two-component RatioMaster hose pump system

Spray booths and ventilation systems

- Industrial spray booths
- Air make-up systems

Marking systems

Marking faults, good parts, bending lines; alphanumeric printing

Application technology

- Automatic color marking systems
- Marking blocks for lettering
- Continuous-Inkjet-lettering systems
- DOD lettering systems

Tanks and material delivery

- Material pressure tanks
- Agitators
- Fill level measurement technology
- Diaphragm and piston pumps

Spray booths and ventilation systems

Other fields

- Solvent distillation units
- Compressed air manifolds
- Occupational safety
- Filter technology
- Cleaning technology
- Extensive accessories

The Coatings Experts

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