Marking Systems

- Paint Spray Systems
- Marking Blocks
- Paints & Inks
Automated Dot Matrix Marking

Whenever swift and efficient logistical grouping along with overall control is a major requirement, the application of automated dot matrix methods is usually the ideal solution to ensure safe product identification.

WALTHER PILOT dot matrix and marking block systems are designed for operation in combination with an appropriate control CPU. They will apply the relevant alphanumeric identification codes in continuous operation onto your strips, panels, plates, pipes, tubes, coils, etc.

A step sequencing unit provides for synchronization between the marking phase and the work transfer speed so as to ensure constant spray pattern reproduction, even at varying transfer speed rates. Minimum operating cycle durations provide for high transfer speed rates.

Character heights can range between 30 and 200 mm, with the dot size and paint application thickness individually adjustable at each gun. Our dot marking systems also allow for the application of heat-resistant paints, unlike many other identification systems.

Several Uses for Multiple Industries

• Work orientation marking - i.e. marking where a pipe is to be bent or where a weld run is located
• Workpiece defect marking - where an automatic system detects and triggers the gun exactly where the defect is located
• Sealing of PCB-surfaces with protective varnish
• Application of locking cement
• Metered addition of hardeners and adhesive compounds
• Color coding of steel bars with lines or dots

Don’t forget your ink!

• Multiple types for varying applications
• Quick drying
• Multiple shades available

Sizes:
• 1 quart container (fits inside MDG 3)
• 1 gallon container (fits inside MDG 12)
Automatic Spray Guns
for Marking Systems

PILOT Signier - Versatile and extremely reliable.

A fully automatic spray gun for dot matrix or line marking. Gun body is nickel-plated brass. Needle & nozzle are stainless steel. Round or wide air caps available.

Additional models available: recirculation version, flushing version, recirculation version with flushing function

Nozzle sizes available:
0.3 / 0.5 / 0.8 / 1.0 / 1.2 / 1.5 Ø

PILOT WA 200

Fully automatic spray marking gun with stainless steel front material passageways. Needle & nozzle are also stainless steel. Round or wide air caps available.

Model made completely of stainless steel available on request.

Nozzle sizes available:
0.3 / 0.5 / 0.8 / 1.0 / 1.2 / 1.5 Ø

Low on Space? Try our compact models.

Spraying abrasive, moisture-curing, or aggressive media? Try our special material models.

PILOT WA 51

Miniature spray gun with external control. Needle & nozzle are stainless steel. Round or wide jet air caps available.

Nozzle sizes available:
0.3 / 0.5 / 0.8 / 1.0 / 1.2 / 1.5 Ø

PILOT Signier Membrane

An extremely robust, fully automatic spray gun that features a diaphragm instead of a needle seal packing which significantly lengthens service life, especially when handling abrasive media. High cycle rate. Wide or round jet air caps available.

Nozzle sizes available:
0.3 / 0.5 / 0.8 / 1.0 / 1.2 / 1.5 Ø

Automatic spray guns with a diaphragm

The PILOT Signier is available as a membrane spray gun. In this special version, a diaphragm replaces the needle seal packing for an extended high quality spray performance life when spraying abrasive or aggressive materials.

PILOT WA 210-H

Fully automatic spray gun with front material passageways and all wetted parts made of Hastelloy®. This special alloy is especially suited for acids, lyes, or moisture-curing media. Mesamoll lubrication is also utilized to effectively reduce needle packing wear. Round or wide air caps available.

Nozzle sizes available:
0.3 / 0.5 / 0.8 / 1.0 / 1.2 / 1.5 Ø
**Complete Systems**

**Select 1 System / Model V45**

Select 1 System / Model V45

- 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**

1. **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
2. **Miniature material pressure tank, 45 ml, stainless steel, max. 3 bar**
3. **Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available**
4. **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)
5. **Hose kit (2 meters), incl. fittings for both the air and material hoses**

**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

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**Model of the system**

- **Spray gun holders**
- **Compressed air manifold for small systems**

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**Options**

1. **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
2. **Miniature material pressure tank, 45 ml, stainless steel, max. 3 bar**
3. **Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available**
4. **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)
5. **Hose kit (2 meters), incl. fittings for both the air and material hoses**
Select 2 System / Model V750

- 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

- 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
- Material pressure tank, 750 ml, lightweight alloy, max. 3 bar
- Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available
- 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)
- 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
Complete Systems
Select 3 System / Model V1000

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

1. 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
2. MDG 1 material pressure tank, 1,100 ml, stainless steel, max. 3 bar
3. Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available
4. 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)
5. Hose kit (2 meters), incl. fittings for both the air and material hoses

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

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
Select 4 – recirculating / Model V 1000

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.

Equipment

- 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
- MDG 1 material pressure tank, 1,100 ml, stainless steel, max. 3 bar, recirculating version
- Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available
- Solenoid valve, 2-port, 2-position, 24 V DC; other voltages available
- MBP 2812 diaphragm pump
  - Acetyl (other versions possible)
- Pneumatic control cabinet with pressure gauge
  - To connect one pressure tank, one marking gun, one diaphragm pump
- 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
Complete Systems
Select 5 System - flushable / Model V3003

Equipment

1. 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
2. Flushing valve, Model 20-369
   Body: Nickel-plated brass
3. MDG 3 material pressure tank, 2,500 ml, stainless steel, max. 3 bar, without agitator, for paint / ink
4. MDG 3 material pressure tank, 2,500 ml, stainless steel, max. 3 bar, without agitator, for cleaning agent
5. Solenoid valve, 3-port, 2-position, 24 V DC; other voltages available (one flushing valve, one marking gun)
6. Solenoid valve, 2-port, 2-position, 24 V DC; other voltages available (one flushing valve)
7. Pneumatic control cabinet with pressure gauge
   To connect two pressure tanks, one marking gun, one flushing valve
8. 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

System variants

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.
Select 6 – recirculating – flushable / Model V 8008

Equipment

- 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
- Flushing valve, Model 20-369
  Body: Nickel-plated brass
- MDG 8 material pressure tank, 6,400 ml, stainless steel, max. 4 bar, without agitator, for paint, recirculating version
- MDG 8 material pressure tank, 6,400 ml, stainless steel, max. 4 bar, without agitator, for cleaning agent
- MBP 2812 diaphragm pump
  Acetyl (other versions possible)
- Solenoid valve, 3-port, 2-position
  24 V DC; other voltages available
  (one flushing valve, one marking gun)
- Solenoid valve, 2-port, 2-position
  24 V DC; other voltages available
  (one flushing valve, one diaphragm pump)
- Pneumatic control cabinet with pressure gauge
  To connect two pressure tanks, one marking gun, one flushing valve
- 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.

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

Simple operation, low maintenance

We would be happy to provide planning and assembly services, right through to integrating the system into your assembly line.
Dot Matrix Marking Blocks

Versatility
Walther PILOT marking block systems can be used for a variety of functions including:
- Marking ingots, strips, plates, pipes, profiles, coils, containers, etc.
- Color coding
Also, in contrast to other identification systems, these can be used to apply heat-proof paints.

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

Features
- Characters can be between 40 and 200 mm in height. The size of the dots can be adjusted.
- Maximum lettering speed is 54 meters per minute.
- Blocks with flushing features are available for easy cleaning or for systems spraying quick-drying material or longer interruptions between marking cycles.
- Marking blocks can be fitted with any desired number of spray guns.

Example of a Marking Block System
Pressure versions for air-atomizing spray guns:

**Conventional atomizing:**
Spraying material is atomized at pressures of between 1.5 and 8 bar.

**Medium-pressure and HVLP Plus:**
Spraying material is atomized at pressures of between 0.7 and 1.5 bar. HVLP Plus achieves especially fine atomization.

**HVLP:**
Spraying material is atomized at pressures of up to 0.7 bar.

The air input pressure in medium-pressure, HVLP plus and HVLP is approx. 3.5 bar. HVLP and HVLP Plus allow you to achieve a particularly high transfer efficiency, thus saving material and compressed air.

NEW PRODUCT

**PILOT WA 900**

The Pilot WA 900 will be our newest, lightweight, compact automatic spray gun. It will feature a stainless steel front body and needle/nozzle. The rest of the gun body will be PTFE-coated for convenience and easy cleaning. The same gun model can be used for both normal and recirculation systems by just adding or removing the plug pin on the adapter plate.

- Internal and External Control models available
- Conventional, HVLP, and HVLP Plus models available
- Abrasive Resistant (AR) model also available

Additional Features:
- Models with internal or external control
- Features a quick-change adaptor plate design for easy dismounting / changing
- 2 types of adaptor plate available (regular: nickel-plated aluminum and low-profile: stainless steel; see left)
The Complete Product Range

Equipment to apply sprayable media

Application Technology
- Manual Spray Guns
- Automatic Spray Guns
- Non-Contact Marking
- Adhesive Application

Tanks and Material Delivery
- Material Pressure Tanks
- Paint Mixing Tanks
- Mixing Stations, Agitators
- Fill Level Measurement Technology
- Diaphragm and Piston Pumps

Equipment 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 Tanks
- Two-component RatioMaster Hose Pump System

Marking Systems
Marking faults, good parts, bending lines; alphanumeric printing

Application Technology
- Automatic Color Marking Systems
- Marking Blocks for Lettering

Tanks and Material Delivery
- Material Pressure Tanks
- Agitators

Other Fields
- Solvent Distillation Units
- Compressed Air Manifolds
- Filter Technology
- Cleaning Technology
- Extensive Accessories

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