







Peening Accessories GmbH
Sales Office in Switzerland +41.44.8312644
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Price List 2027

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Official Agent for:

3M HAVER & BOECKER MFN W.S. TYLER SUHNER PantaTec

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PA magneticValve - 7 Versions



Easy retrofitting!
(same dimensions as existing suppliers)

Flow rate control valve for steel shot media and cut wire for peening and blasting machines

- +/-10% accuracy on set point, +/-5% full scale (depending on type)
- Power off: valve closed
- FPGA technology, closed loop in real-time (depending on type)
- Shock resistant Touchscreen for improved troubleshooting
- No moving parts for low-maintenance operation
- Meets AMS 2432 specifications (depending on type)
- Digital signal: no data transmission lost
- Less cable: Only one (1) cable per valve
- 24V DC
- Anti-leakage protection (if disconnected to FlowMaster)
- Includes a 1 meter plug and cable (option 0.5, 5 and 10 m)
- CE compliant
- Patented in USA

Watch installation on Youtube! **peeningaccessories**

For more information, please request detailed catalogue at info@peening.ch

Power:	24 Vdc @ 2A (50 VA)
Media:	Ferrous media except cast stainless steel
Maximum pressure:	7 bar (100 PSI)
Mode:	Manual/Auto
Temperature range:	5° – 48 ° C (40 ° – 110 ° F)
Analog input:	0 – 10 Vdc
Valve ON signal supply:	24 Vdc
Flow sensor output:	0 – 10 Vdc

	Article-No.
PA5 magneticValve: Range 0.5 to 5 kg/min (1.1 to 11 lb)	822 201
PA15 magneticValve: Range 1.5 to 15 kg/min (3.3 to 33 lb)	822 202
PA45 magneticValve: Range 4.5 to 45 kg/min (9.9 to 99 lb)	822 203
PA160 magneticValve: Range 16 to 160 kg/min (35 to 352 lb)	822 204
PA160NS magneticValve: Range 16 to 160 kg/min (35 to 352 lb)	822 205
PA500 magneticValve: Range 50 to 500 kg/min (110 to 1102 lb)	822 206
PA500NS magneticValve: Range 50 to 500 kg/min (110 to 1102 lb)	822 207

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PA microwaveValve



µWValve-07: Range 0.7-7 kg/min (non-ferrous)

Flow rate control valve for non-ferrous and ferrous media for peening and blasting machines

- ±10% accuracy under a Suction Blast System only
- FPGA technology, closed loop in real-time
- Shock resistant Touchscreen for improved troubleshooting
- Meets AMS 2432 specifications
- Digital signal: no data transmission lost
- Only one cable per valve
- Able to include 4 media calibrations in one valve
- Includes a 5 meter wire (optional: 1 m)
- 24V DC
- CE compliant
- Patented in USA and China

For more information, please request detailed catalogue at info@peening.ch

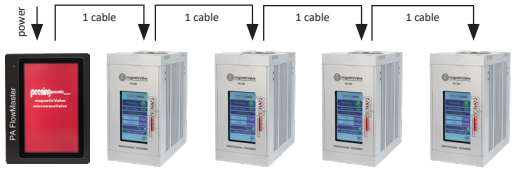
Power:	24 Vdc @ 4A (100 VA)
Media:	Ferrous media and Non-ferrous media
Maximum pressure:	6 bar (100 PSI)
Mode:	Manual/Auto
Temperature range:	5° – 48 ° C (40 ° – 110 ° F)
Analog input:	0 – 10 Vdc
Valve ON signal supply:	24 Vdc
Flow sensor output:	0 – 10 Vdc

	Article-No.
PA µWValve-07: Range 0.7-7 kg/min (non-ferrous)	822 210

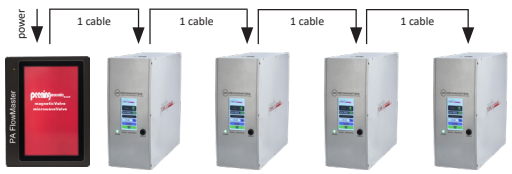
PA FlowMaster - Media Flow Controller







Easy plug & play system with a minimum of cables. Valves connect in serial order.



Easy plug & play system with a minimum of cables. Valves connect in serial order.

Special Features:
- Cost savings: One control handles up to four valves!
- 7" touchscreen: reduces hardware button damage; flexible on design.
- Six languages as standard configuration: English, French, German, Spanish, Japanese and Chinese. Additional languages on request.
- Up to 64 recipes that can contain flow rate and product name
- Instant adjustments to up to four different shot sizes (optional)
- Instant switch from kg/min to lb/min or vice versa
- Alarm - if connection lost to valve
- Adjustable alarm supervision delay for starting the process

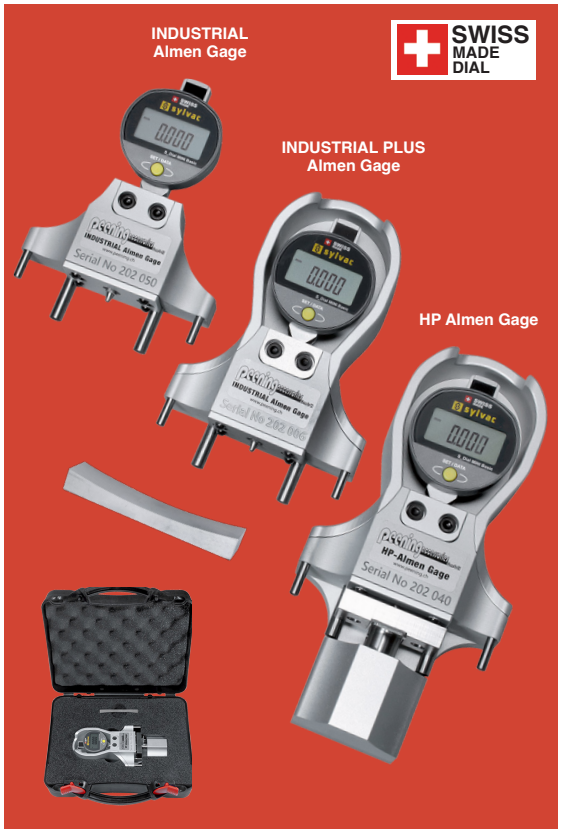
Standard Features:
- Displays product info: flow rate, valve status, configuration, alarm, settings, recipes
- Alarm system: flow rate upper/lower limit, connection lost
- Closed loop system, with FPGA technology, closed loop in real-time
- Remote commands and recorder output
- Digital I/O and analog signal card
- CE compliant
- Patented in USA and Europe

Watch installation on Youtube! **peeningaccessories**

Power:	24 Vdc @ 0.5 A
Analog input:	0 – 10 Vdc
Flow recording output:	0 – 10 Vdc
Flow enable output:	24 Vdc @ 10 mA
Temperature range:	32 – 122 ° F (0 – 50 ° C)
Dimensions:	188 mm (W) x 143 mm (H) x 90 mm (D)

	Article-No.
PA FlowMaster	request detailed catalogue at info@peening.ch or online at www.peening.ch

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INDUSTRIAL Almen Gage

- for A, N, C & Aluminium Strips
- digital display (0.001 mm, 0.00005" resolution)
- SPC data port
- water resistant
- Swiss made digital indicator (dial)
- convenient replacement of battery (no data lost)
- support balls for strip made of ceramic (basically no wear)
- mechanical positioning system for strip
- no magnets which attract metallic residues, shot, etc.
- meets SAE J442, AMS 2430 and AMS 2432
- separate curved zero block included, flatness 0.005 mm
- 1 year warranty

Watch on Youtube!
peeningaccessories

INDUSTRIAL PLUS Almen Gage has in addition:

- protective nickel plated/sand blasted casing for digital indicator

HP Almen Gage (High Precision) has in addition:

- protective nickel plated/sand blasted casing for digital indicator
- spring loaded support block to insure uniform pressing pressure for the Almen strip

Type	Ref. No.:
INDUSTRIAL Almen Gage	800 000
INDUSTRIAL PLUS Almen Gage	800 150
HP (High Precision) Almen Gage	700 000



Almen Strips (A, N, C type)

- directly from the manufacturer
- corrosion protection
- packing in resistant 50 Pcs carton boxes or 500 Pcs boxes (depends on requirement & quality)
- strips are vacuum packed for shipment
- no mechanical deformation after heat treatment to meet flatness requirements
- tighter hardness tolerances for Aero strips, HRC 45-48 or HRA 73-74.5
- strips to any specification provided
- with COC J442, AMS 2430 or AMS 2432

New Generation of PLUS Quality!

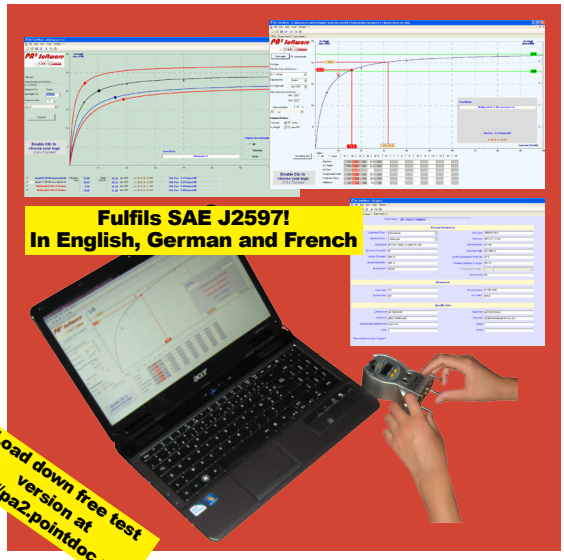
- arc height performance test for every lot for repeatability
- each strip is measured for flatness, results printed on strip
- each strip comes with a tracking no.
- Almen strips with no burrs: additional mass finishing to grind away burrs
- bright surface: helps to identify irregular coverage

Type		Minimum Order	Ref. No.:
A Strip	AERO-Grade 1S ±0.013 mm, HRC 45-48, SAE J442, SAE AMS 2430, SAE AMS 2432	100 (50/box)	200 101
A Strip	INDUSTRIAL-Grade 1 ±0.025 mm, HRC 44-50, SAE AMS 2430, SAE J442	100 (50/box)	200 202
A Strip	INDUSTRIAL-Grade 1 BULK ±0.025 mm, HRC 44-50, SAE AMS 2430, SAE J442	4'000 (500/box)	200 303
N Strip	AERO-Grade 1S ±0.013 mm, HRA 73-74.5, SAE J442, SAE AMS 2430, SAE AMS 2432	100 (50/box)	300 101
N Strip	INDUSTRIAL-Grade 1 ±0.025 mm, HRA 72.5-76, SAE AMS 2430, SAE J442	100 (50/box)	300 202
N Strip	INDUSTRIAL-Grade 1 BULK ±0.025 mm, HRA 72.5-76, SAE AMS 2430, SAE J442	4'000 (500/box)	300 303
C Strip	AERO-Grade 1S ±0.013 mm, HRC 45-48, SAE J442, SAE AMS 2430, SAE AMS 2432	50 (25/box)	400 101
C Strip	INDUSTRIAL-Grade 1 ±0.025 mm, HRC 44-50, SAE AMS 2430, SAE J442	50 (25/box)	400 202
C Strip	INDUSTRIAL-Grade 1 BULK ±0.025 mm, HRC 44-50, SAE AMS 2430, SAE J442	2'000 (250/box)	400 303

Material: Spring Steel SAE 1070

	Dimension	Shipping Weight
A Strip	L=76.1 mm W=18.95 mm D=1.295 mm	1000 Pcs 15.3 kg
N Strip	L=76.1 mm W=18.95 mm D=0.785 mm	1000 Pcs 9.5 kg
C Strip	L=76.1 mm W=18.95 mm D=2.385 mm	1000 Pcs 28.5 kg

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Almen Saturation Curve Software PA²

- Displays up to 6 Almen curves on the same graphic chart
- Display the different Almen curves for several Almen strip holders on the same component
- Editable datasheet
- Compare the effect of different peening parameters sets
- Possibility to input data in any order and sort after wise
- Prediction and display of arc height for any exposure value
- Direct input and integration of the pre-bow
- Displaying automatic error messages
- Fulfils SAE J2597 specification for computer generated shot peening saturation curves

Type	Ref. No.:
Almen Saturation Curve Software PA²	100 140
2nd Licence of PA²	100 350

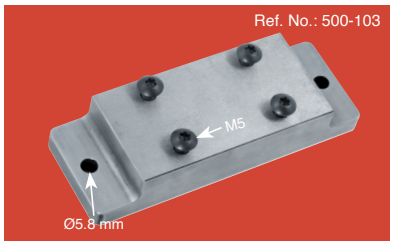


Almen Test Strip Holder (SAE J442)
Type: Threaded, Ref. No.: 500-101

Shipped with 4 Pcs of M5 screws (L=12mm), which thread into tapped holes to secure the Almen strip in place.
Replacement Screws: **Ref. No.: 500-112**

Almen Test Strip Holder (SAE J442)
Type: Non Threaded Ref. No.: 500-102

Shipped with 4 Pcs of M5 screws that are installed through a clearance hole in the holder to secure the strip in place. Includes 4 Pcs M5 nuts to be installed from the bottom side of the holder. Operator must have access to bottom of holder for installation of nuts. Replacement Screws: **Ref. No.: 600-212**

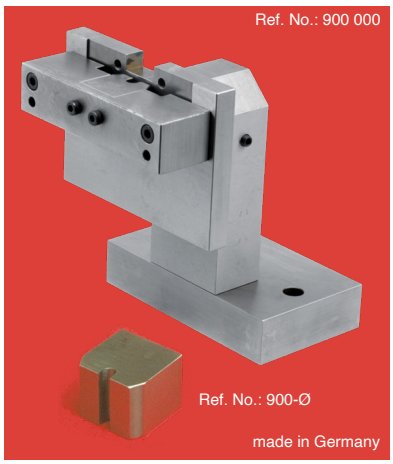


New: Almen Test Strip Holder (SAE J442)
Type: Threaded with flange, Ref. No.: 500-103

Shipped with 4 Pcs of M5 screws (L=12mm), which thread into tapped holes to secure the Almen strip in place, flange hole Ø: 5.8 mm, flange hole distance: 95.3 mm, length: 109 mm
Replacement Screws: **Ref. No.: 500-112**

Almen Strip Holder for A, N and C strips

- directly from the original manufacturer
- according to SAE J442 (industry standard)
- hardened to Rockwell C 58 or higher
- with screw & nut or threaded type
- corrosion protection
- screws for strip attachment included
- dimensions: L x W x D = 76.4 x 38 x 19 mm (3" x 1.5" x 0.75")
- M8 size screw thread on the back side of the holder for mounting purpose (not for flange type)



Type	Ref. No.:
Almen Strip Holder for Internal Peening (IN-19), excluding Replacement Blocks	900 000

Type	Ref. No.:
Replacement Block, available in Sizes: Ø2.5 mm, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5,13, 13.5, 14, 14.5, 15, 15.5, 16, 16.5, 17, 17.5, 18, 18.5, Ø19 mm	900-Ø E.g. Block Ø2.5 mm= 900-025

Almen Strip Holder for Internal Peening (IN-19)

- eliminates the need for costly and time-consuming custom designed Almen strip holders
- free standing device with adjustable angle
- represents actual intensity accurately
- more than 30 hardened replacement blocks that represent the different hole diameters up to 19 mm
- U.S. Patent No. 6,502,449 B1



Adhesive Masking Tapes

Abrasive Resistant
for Peening & Blasting

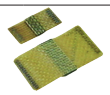
3M

Ref. No.	Width
640 501	6 mm
640 502	12.7 mm
640 503	19.1 mm

Ref. No.	Width
640 504	25.4 mm
640 505	50.8 mm

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Accessories for Flap Peening

Flaps 

Ref. No.	Flap Size
600 100	9/16 x 1
600 101	9/16 x 1 1/4
600 102	1 x 2

shipping weight: 15 g/flap
Flap Size 9/16 x 1 for ½"-¾" hole Ø
Flap Size 9/16 x 1 1/4 for ¾"-1¼" hole Ø
Shot Size for all Flaps: S330

Mandrels 

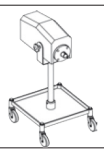
Ref. No.	For Flap Size
600 200	9/16 x 1 (*)
600 201	9/16 x 1 1/4 (*)
600 202	1 x 2 (**)

(*): shaft Ø6.35 mm, L=7,7 cm
(**): shaft Ø9.5 mm, L=20,2 cm
Conformance to AMS 2592 and AMS 2590

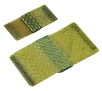
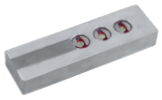


Economical Motor Kit for Flap Peening		Ref. No.:
 Bench Style with Built Speed Control	The Series SR has all the features most people need and want in a flex shaf tmachine - hence your best choice for General Use applications. Power: The 1/6 hp, ball bearing Series SR runs up to 18000 RPM with all the power needed to accomplish most any job on nearly any material without stalling or slowing down while under normal load. Versatile: Available in 115 Volt and 230 Volt. Hand Piece (660 999) is needed for operation!	660 990 (for 220V) 660 955 (for 110V)
	Hand Piece (will be connected to flexible shaft) Important: Only for 6.35 mm (1/4") mandrel	660 999

High End Motor Kit & Controller for Flap Peening		Ref. No.:
  Flaps shown on picture not included	The Suhner ROTOMAX 2.2 - Flexible Shaft Machine, which comes including a stand is a most powerful drive for various tasks. A keypad on top of the housing makes selecting the desired speed – shown in a display – both quick and easy. High end motor for the AVIATION industry. Build in speed control and display (in 100 RPM steps). RPM accuracy within +/-2%(*)! RPM: 500-13'000 RPM, continuously adjustable, power output 2000W, type of protection IP45, 1-phase AC motor, voltage 230/240V, 50/60 Hz. (*): Including certificate for +/-2% RPM tolerance for the range of 500-10'000 RPM. Important: Fulfills Nadcap Audit requirements such as: Is there equipment to check flapper rotation speed? Is flapper peening equipment capable of maintaining required RPM to consistently conform to the required intensity level? **Fulfills Nadcap Audit and AMS 2590 and AMS 2592 Requirements!**	710 990 (for 220V) 710 880 (for 3x480V) North America
	FH7 hand piece with 6.35 mm (1/4") & 9 mm(**) chuck (**) Important: 1x2" mandrel (not included) needs to milled to Ø9 mm (from Ø9.5 mm) to fit 9 mm chuck	710 999
	Flexible Shaft: NA 7 x 2000 DIN 10/G22	710 800

	OPTION: Foot switch for ROTOMAX motor with ON/OFF function	710 700
	OPTION: Stand on Wheels	710 600

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	Flap Peening Items / Kits	Ref. No.:	Kit 1	Kit 2	Kit 3
	Flap 9/16 x 1 1/4 Conformance to AMS 2592 and AMS 2590 3M	600 101	✓	✓	✓
	Mandrel for Flap 9/16 x 1 1/4 Conformance to AMS 2592 and AMS 2590 3M	600 201	✓	✓	✓
	Digital Tachometer including Certificate of Compliance	600 300	✓	✓	–
	Digital Tachometer, High End Model, Testo 460 with ISO Test Certificate and Certification Sticker on Device, up to 10000 RPM	600 320	–	–	✓
	10 x Magnifying Glass	600 401	✓	✓	✓
	20 x Magnifying Glass	600 402	✓	✓	✓
	A-Almen Strips Aero Plus	200 101	✓	✓	✓
	Magnetic Almen Strip Holder (178 x 51 x 25.4 mm) Fulfills AMS 2590	600 400	✓	✓	✓
	Industrial Almen Gage Digital, meets AMS 2432 and SAE J442	800 000	✓	–	–
	Industrial PLUS Almen Gage Digital, meets AMS 2432 and SAE J442	800 150	–	✓	–
	HP (High Precision) Almen Gage Digital, meets AMS 2432 and SAE J442	700 00	–	–	✓
Flap Peening Kit 1 (plus Tachometer and Industrial Almen Gage)	Including 1 Flap (9/16 X 1 1/4), Mandrel (9/16 X 1 1/4), Standard Digital Tachometer , 2 pcs of Loupes 10X & 20X, 50 pcs of A-Almen Strips AERO Plus, Magnetic Almen Strip Holder, Industrial Almen Gage	660 500			
Flap Peening Kit 2 (plus Tachometer and Industrial PLUS Almen Gage)	Including 1 Flap (9/16 X 1 1/4), Mandrel (9/16 X 1 1/4), Standard Digital Tachometer, 2 pcs of Loupes 10X & 20X, 50 pcs of A-Almen Strips AERO Plus, Magnetic Almen Strip Holder, Industrial PLUS Almen Gage	660 600			
Flap Peening Kit 3 (plus High End Tachometer and HP Almen Gage)	Including 1 Flap (9/16 X 1 1/4), Mandrel (9/16 X 1 1/4), High End Digital Tachometer, 2 pcs of Loupes 10X & 20X, 50 pcs of A-Almen Strips AERO Plus, Magnetic Almen Strip Holder, HP Almen Gage	660 700			

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TYLER-Test Sieve Shaker: Ro-Tap 8"=RX-29 / 12"=RX-30



"Device comes without sieves"



Option:
Sound Enclosure
(stand not included)

Technical Data:
Operating voltage: 230 Volt, 50 Hertz or 110 Volt, 60 Hertz
Time Switch: 0-99 minutes - digital
Revolutions/min: 278
Tappings/min: 150
Sound emission: 86 dB_A
Weight: approx. 112 kg
Dimensions: 710 x 540 x 640 mm (w x d x h)
Feed quantity: max. 3 kg
RX29:
6 standard or 13 half height test sieves Ø8" / Ø203 mm or Ø200 mm and one sieve pan
RX30:
5 standard or 8 half height test sieves Ø12" / Ø305 mm or Ø300 mm and one sieve pan

Official Agent of
HAVER & BOECKER
W.S. TYLER

Only available for outside Europe	Article-No.
RX29-10 230 Volt, 50 Hertz - (not conform to CE-Standard)	650 351
RX29 110 Volt, 60 Hertz - (not conform to CE-Standard)	650 352

Sound Enclosure (from 85 dB to 78 dB) All controls inside /	650 355

TYLER-Test Sieve Shaker: Ro-Tap 8"=RX-29 / 12"=RX-30



"Device comes without sieves"

Technical Data:
Operating voltage: 230 Volt, 50 Hertz or 110 Volt, 60 Hertz
Time Switch: 0-99 mintues - digital
Revolutions/min: 278
Tappings/min: 150
Sound emission: ≥70 dB_A
Weight: approx. 154 kg
Dimensions: 710 x 530 x 635 mm (w x d x h)
Feed quantity: max. 3 kg
RX29:
6 standard or 13 half height test sieves Ø8" / Ø203 mm or Ø200 mm and one sieve pan
RX30:
5 standard or 8 half height test sieves Ø12" / Ø305 mm or Ø300 mm and one sieve pan

	Article-No.
RX29 230 Volt, 50 Hertz - conform to CE-standard	650 420
RX30 230 Volt, 50 Hertz - conform to CE-standard	650 421



Test Sieves (Brass Frame with Stainless Steel Mesh)

	Article-No.	€/pcs
Haver Test Sieves Ø8" (Ø203 mm) HALF HT. 1-5/8" or FULL HT. 2-5/8"	------	ask for separate price list
Haver Test Sieves Ø12" (Ø305 mm) HALF HT. 2-5/8" or FULL HT. 4-1/4"	------	
Haver Test Sieves Ø200 mm HALF HT. 1-7/8" or FULL HT. 2-5/8"	------	
Haver Test Sieves Ø300 mm HALF HT. 2" or FULL HT. 3"	------	
TYLER Test Sieves Ø8" (Ø203 mm) HALF HT. 1-5/8" or FULL HT. 2-5/8"	------	
TYLER Test Sieves Ø12" (Ø305 mm) HALF HT. 2-5/8" or FULL HT. 4-1/4"	------	
TYLER Test Sieves Ø200 mm HALF HT. 1-7/8" or FULL HT. 2-5/8"	------	
TYLER Test Sieves Ø300 mm HALF HT. 2" or FULL HT. 3"	------	

IMPORTANT: Sieves are based on working specifications. Customer is requested to provide exact sieve & mesh size.

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Fluorescent Tools to check Coverage		Ref. No.:
 Official Agent of	Peenscan Pens provide a convenient method for applying a thin coating of tracer fluid to very specific areas of a part without the need for masking. This has proven useful during initial engineering set-up of a part for shot peening as well as for monitoring critical areas (gear teeth, etc.) during production shot peening. It is available with two fluorescent tracer fluids and selection of the appropriate fluid is dependent on the hardness of the metal and the intensity of the shot peening process. The Peenscan 220-2 pen should be used for softer base metals, softer shot and lower peening intensities. The 220-6 pen should be used for harder base metals, harder shot and higher peening intensities. Minimum Order: 1 box = 6 pieces	750 200 (Peenscan 220-2) 750 210 (Peenscan 220-6)
	Fluoro-Finder III (DRY), has a pigment which fluoresces under ultraviolet light making the determination of the degree or percentage of coverage quick, easy and foolproof. Use of this tracer eliminates the need for 200-percent coverage in order to be assured of complete peening. In order to save on shipping costs this item is shipped in powder form. Must be mixed by user. It must be mixed with one pint of methyl ethyl ketone (MEK) by the user before use. Packaging: One Pint (473.2 ml cans)	750 300 (1 pint can) 750 310 (1 carton=4 pints)

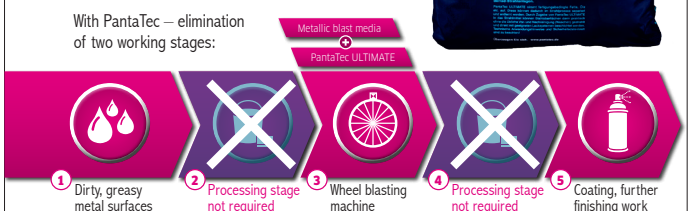
LED UV Lamp		Ref. No.:
	The EV6000 LED UV lamp is a portable, hand-held UV lamp for fluorescent non-destructive testing applications like fluorescent penetrant testing and fluorescent magnetic particle inspections. Maximum Irradiance: 5,000 µW/cm² Peak Wavelength: 365 ±5 nm Typical Beam Profile: Circular spot, 2 3cm diameter, > 1,000 µW/cm² UV-A intensity Excitation Irradiance (347-382 nm): ≥ 2,000 µW/cm² Lamp Cord Length: 5.18 m Power Supply Cord Length: 2.75 m Weight: 0.9 kg Power In: 100-240 VAC / 50-60 Hz / < 1 A	750 400

New Blast Media Additive: Skip the washing stage. Straight from wheel blasting to the paint shop.

Official Agent of PantaTec
FAST METAL CLEANING SYSTEM



With PantaTec – elimination of two working stages:



Cleaning agent for blasting processes in wheel blasting systems using metallic blasting media

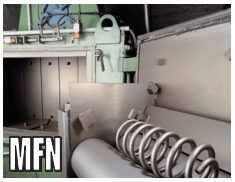
Ask for more details!

The technical benefits:
- No pre- or post-cleaning required
- Circulating blast media stays free flowing and usable for longer
- Less soiling of the blasting system
- Easy removal of impurities from the process
- The right levels of surface cleanliness and roughness become easier to achieve
- Fully-approved by renowned coating manufacturers in terms of surface-preparation quality (e.g. Sa 2.5)
- Significant reduction in processing times
- Far-lower staffing requirements
- Reliable preparation for conformity even with enhanced corrosion-resistance category C5
- Improved operating reliability, thanks to a more-stable process
- Reduced risk of fire

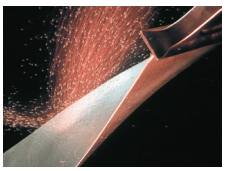
The economic benefits:
- Outstanding reductions in staffing and material costs
- Much less time-consuming
- Lower warranty-claim costs, thanks to improved processing reliability
- No extra investment required

		Article-No.
PantaTec ULTIMATE - Sixpack	6 bags a 3.3 kg (ca. 50 L)	555 420

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MFN Shot Peening, Practical Shot Peening and Flap Peening Training		Ref. No.:
MFN SHOT PEENING LEVEL 1 (BASIC) 	Introduction to Peening: Fundamental theory; History; Applications.. Intensity L1: An understanding of Intensity; how it is determined and verified in production. Coverage L1: Coverage & saturation; Coverage inspection methods. Coverage rates / media size; Influencing parameters. Procedures: Required documentation and "walk-through" of the peening process. Masking: Types available; selection criteria; application and removal methods. Peening Media L1: Types & uses; Size analysis; Sieve test.	760 200(*) (1 day course) 760 210 (FAA approved Certificate of Achievement)
MFN SHOT PEENING LEVEL 2 (INTERMEDIATE) 	Intensity L2: Intensity & stress depth; Constructing a sat curve; Analyzing saturation curves; Shaded strips & hole peening. Preparing for Audits: Types & level of audit; What to expect during audits; Preparing for audit. Peening Machines & Equipment 1: Air peen; Standard nozzles; Special Nozzles. Peening Machines & Equipment 2: Wheel peening machine; Media recovery & separation. Peening Media L2: Manufacturing & procurement specifications; Durability test. Flap Peening: Applications; Set-up & calculations; Demonstration.	760 300(*) (1 day course) 760 310 (FAA approved Certificate of Achievement)
MFN SHOT PEENING LEVEL 3 (ADVANCED) 	Residual Stresses & their Measurement: Definition of stresses; Measurement Techniques and their Limitations; "Walk-through" of X-Ray Diffraction technique. Fatigue in Metals: Fracture mechanics; Stress intensity factor; S-N curves, Fatigue measurement; Fatigue life & Limit; Optimization Of Shot Peening. Fatigue Considerations; Surface finish effects; Pre-stressed Peening; Secondary peening. Peen Forming & Shape Correction: Metal growth; Selecting growth areas; Applications; Limitations. New Technologies: Laser Shock Processing; Ultra-sonic peening; Cavitation peening. Conducting audits for Peening: Selecting criteria; Adequacy / compliance Customer requirements.	760 400(*) (1 day course) 760 410 (FAA approved Certificate of Achievement)
MFN PRACTICAL TRAINING FOR SHOT PEENING 	This practical training gives the opportunity to experience the development of parameters for a shot peening process in real. It will high light the complex interaction between the machine parameters. In addition, it will be shown how to develop the parameters in an economical and secure fashion. This unique practical training will teach first experience to evaluate the process parameters for a given work piece. A sophisticated train of machines will be at the disposal for the students.	760 450 (1 day course)
MFN FLAP PEENING (hands-on) 	A review of your current practices and options; an introduction to shot peening, its parameters and benefits; flap peening: the process, controls and technique, specifications, what to watch out for; demonstrations of set up, intensity control, coverage, capability evaluations; new innovative uses of flap peening (straightening); practical and written tests; summation and discussions **Most Courses are available in German, English, Turkish, Portuguese, French, Italian, Japanese, Chinese and Spanish!** **Ask for more details!**	760 500(*) (1 day course) 760 510 (FAA approved Certificate of Achievement)

(*): All courses are available as either on-site training or at workshops. Ask your local distributor where the nearest workshop is taking place.
For on-site training a minimum of 5 persons is required (travel expenses of teacher charged separately).

Consulting for Shot Peening		Ref. No.:
Consulting for Shot Peening  Official Agent of MFN	To offer a consulting service for Shot Peening is a very demanding task. One of the reasons is, that unlike giving training or a presentation, one can hardly prepare for such a consulting service. The scope of issues to be evaluated and the problems to be solved are always different and may be connected to a whole range of different fields. They may not even be related to shot peening directly, but to material science, process layout, equipment, logistics, audits, specifications, calibration of equipment and much more. So a consultant for shot peening must not only have a deep knowledge of the related topics and an extensive industrial experience, but also needs a fundamental scientific background. In addition he is required to be good communicator in order to bring the best possible benefit to a client.	760 600

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Books / Magazines		Ref. No.:
Book: Shot Peening 	Shot peening is a critical process that, in many industries, needs to be certified before being applied. However, looking at the technical literature available about this process, few useful books can be found on the market. Over a decade ago, the initiative was taken to start publishing a book that teaches about this process. The book is updated on a regular base and this is now the fifth completely revised edition. The book has become a bestseller in the shot peening industry and thousands of copies have been sold to countries throughout the world. Topics: Introduction to peening and theory, peening intensity, effect of peening, Almen saturation curves, peening coverage, exposure time, trouble shooting, process documentation, masking solutions, workpiece fixtures, shape & size inspection of peening media, cut wire, cast steel shot, specifications, shaded strips, peening equipment components, air & wheel peening, machinery types and application examples, hole peening, flap peening, optimization of shot peening for fatigue critical applications, residual stress, XRD measurement, quantitative characterization of the shot peening process, laser peening, shot peening in the automotive industry, shot peening process improvements, additives for peening and blasting; also introducing deep rolling, etc.	760 710
Magazine: MFN INTERNATIONAL 	MFN INTERNATIONAL (Metal Finishing News) is a magazine specialized in peening, blasting, mass finishing and cleaning. Circulation: around 6400 issues Distribution: to 78 countries Frequency: 6 times/year 80 pages	760 820
Magazine: MFN CHINA 	MFN CHINA is a magazine specialized in peening, blasting, mass finishing and cleaning. Circulation: 2600 issues Distribution: China and Chinese speaking regions Frequency: 4 times/year 40 pages	760 830

Recalibration and Spare Parts for Almen Gages

Miscellaneous Products and Services for the HP Almen Gage	Ref. No.:
Recalibration for all type of gages (shipment of gage to original supplier required) Inclusive international certificate indicating that all measurements are done according DIN EN ISO / IEC 17025, which includes requirements of ISO 9001	700 101-1
Digital Indicator (same for all type of gages) S_Dial MINI Basic	700 303
Curved Zero Block (same for all type of gages), 88 - 90 g per pc	700 111
Individual Curved Zero Block Calibration Inclusive international certificate indicating that all measurements are done according DIN EN ISO / IEC 17025, which includes requirements of ISO 9001	700 111-1
Battery Replacement for Indicator, Type 3V-CR 2032	700 404
Battery drawer for the Almen gage (without battery)	700 304