

INSPECTION

FOR EXTENDED TOOL LIFE &
IMPROVED TABLET QUALITY



PROPER TOOL INSPECTION IS CRUCIAL

EXTEND TOOL LIFE

DECREASE PRESS DOWNTIME

REDUCE PRODUCTION-RELATED COSTS

IMPROVE TABLET QUALITY

Developing consistent tool inspection procedures is critical to all comprehensive tablet compression tooling maintenance programs. These procedures can help extend tool life, avoid tool damage, save operating costs, produce high-quality tablets, and maximize yields.

Tablet production is stressful on punches and dies. Eventually they will show signs of wear, which may include J-hook, abrasions, and head damage. These imperfections can result in sticking, excessive flashing, and tablet thickness and weight issues.

Using the correct inspection equipment is an important step in restoring punches and dies to like-new condition.



INSPECTION TRAINING

To arrange a one-on-one inspection training session for your staff to learn both fundamental and advanced inspection techniques and procedures contact your Natoli representative today. Training classes are available on-site at your company or at one of our training facilities.

DIGITAL INDICATOR EASILY MEASURES PUNCH WORKING LENGTH AND CUP DEPTH

Punch working length, cup depth, and overall length are vital measurements to track for punches. The **Digital Indicator with the Absolute Encoder** feature checks these dimensions to ensure proper tablet hardness, thickness, and weight consistency. The indicator can also be used to check die table run-out for proper feeder installation.

Digital Indicator shown with optional accessories. Please see Natoli Tablet Compression Accessories Catalog or contact your Natoli sales representative for additional information.



IN 7508 Digital Indicator with Absolute Encoder

RELATED ACCESSORIES



IN 7575 or IN 7577 Punch Holder Stabilizes punch when taking measurements. May be used with keyed or non-keyed punches.



IN 7425 or IN 7426 Digital Micrometer with Absolute Encoder Easily measures punch diameters, tip dimensions and tablet thickness.



IN 7548 (English) or IN 7571 (Spanish) Tableting Specification Manual (TSM) Includes: Tooling terminology, specifications, and more.

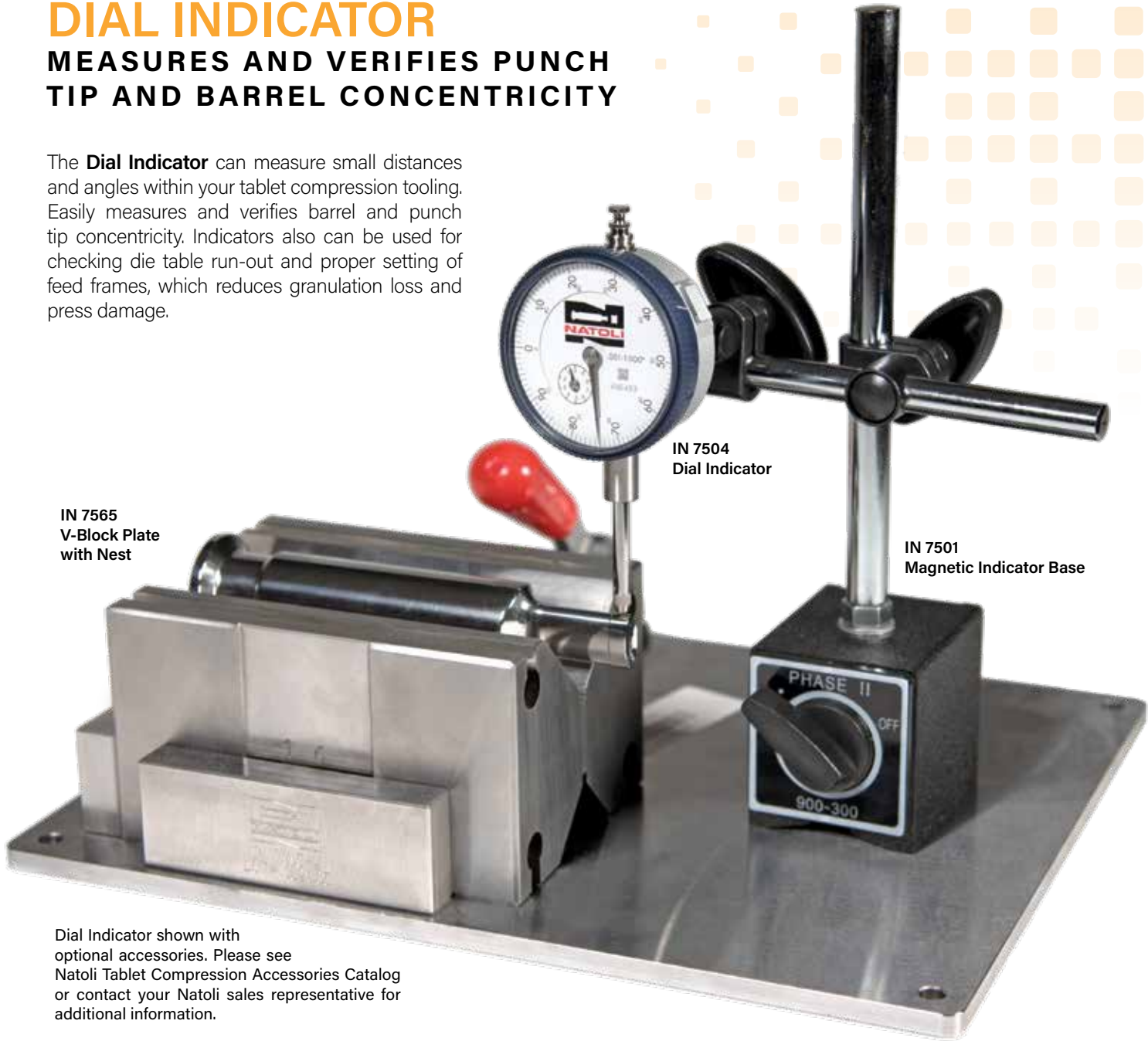


IN 7578 TM-II Tool Management Software Comprehensive tool management and inspection information at your fingertips, resulting in better tablet quality and reduced press downtime. (Monitor not included.)

DIAL INDICATOR

MEASURES AND VERIFIES PUNCH TIP AND BARREL CONCENTRICITY

The **Dial Indicator** can measure small distances and angles within your tablet compression tooling. Easily measures and verifies barrel and punch tip concentricity. Indicators also can be used for checking die table run-out and proper setting of feed frames, which reduces granulation loss and press damage.



IN 7565
V-Block Plate
with Nest

IN 7504
Dial Indicator

IN 7501
Magnetic Indicator Base

Dial Indicator shown with optional accessories. Please see Natoli Tablet Compression Accessories Catalog or contact your Natoli sales representative for additional information.

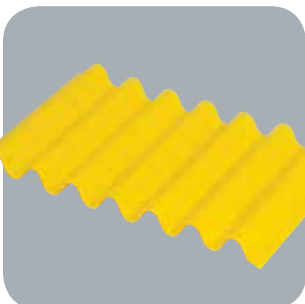
RELATED ACCESSORIES



IN 7565 V-Block with Head Cut-Out Holds punch when verifying tip and punch barrel concentricity.



IN 7975 Digital Handheld Microscope View small defects in tablets, punches and dies at up to 500X magnification.



MA 6025 Interlocking Punch Holding Strip Prevents punches from rolling off work area. Interlocking ends for expandable capacity.

DIE BORE GAUGE & WIGAUGE

QUICKLY MEASURES WEAR RING INSIDE DIE TO DETECT DAMAGE



IN 7721
Die Bore
Gauge



Regular tooling inspections detect early signs of tool failure, guard against tablet defects, and help avoid costly press downtime and lost production.

Die Bore Gauge shown with optional accessories. Please see Natoli Tablet Compression Accessories Catalog or contact your Natoli sales representative for additional information.

RELATED ACCESSORIES



IN 7728 or IN 7729 WiGauge Probe Set For inspection of a range of die bore diameters.



IN 7519 or IN 7520 Digital Caliper with Absolute Encoder Easily measures die inside and outside diameters. Measures in inches and millimeters.



IN 7578 TM-II Tool Management Software Comprehensive tool management and inspection information at your fingertips, resulting in better tablet quality and reduced press downtime. (Monitor not included.)

Damage to a tablet press die can cause premature tool wear, punch binding, and tablet capping and lamination. In fact, worn dies may reduce punch life by 80%. To inspect and determine if dies are in good condition, the **Die Bore Gauge** measures the wear ring inside a die.

The **WiGauge Digital Tester** is a digital die bore test gauge that collects measurements and wirelessly transmits them into a spreadsheet using Bluetooth technology. The WiGauge increases efficiency and tests dies and die table segments in any environment.



IN 7727
WiGauge
Digital
Tester

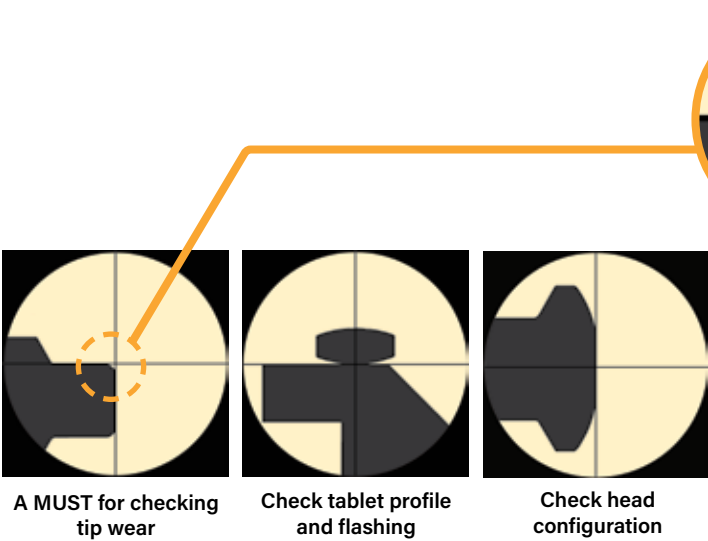
HORIZONTAL OPTICAL COMPARATOR

VIEW TIP RELIEF, PUNCH HEADS, AND PUNCH CUP EMBOSSING

The **Horizontal Optical Comparator** is the most versatile piece of inspection equipment for checking punch tip wear and inspecting surface details of embossed logos, bisects, punch head profiles and engravings. It provides a bright, crisp image for error-free inspection of tooling AND tablets.

THE HORIZONTAL OPTICAL COMPARATOR:

1. Measures punch tip wear
2. Uses overlays to compare tablet embossing with original tablet drawing to ensure accuracy
3. Checks tablet contour, i.e. cup radius (with overlays)
4. Checks head configuration



Horizontal Optical Comparator shown with optional accessories. Please see Natoli Tablet Compression Accessories Catalog or contact your Natoli sales representative for additional information.

RELATED ACCESSORIES



IN 7565 V-Block with Head Cut-Out Holds punch when verifying tip and punch barrel concentricity.



Customized Overlay Used to check wear of embossed cups. Provides better security against counterfeit tablets.



MA 6235 B-Type & MA 6236 D-Type Punch Holding Strip Quickly and easily transport punches from one location to another.



The ONLY WAY to verify:

- Embossing dimensions
- Punch head configuration
- Tip wear
- Sharpness and depth of tip relief

IN 7800 Horizontal Optical Comparator



LASER VISION INSPECTION SYSTEM (LVS)

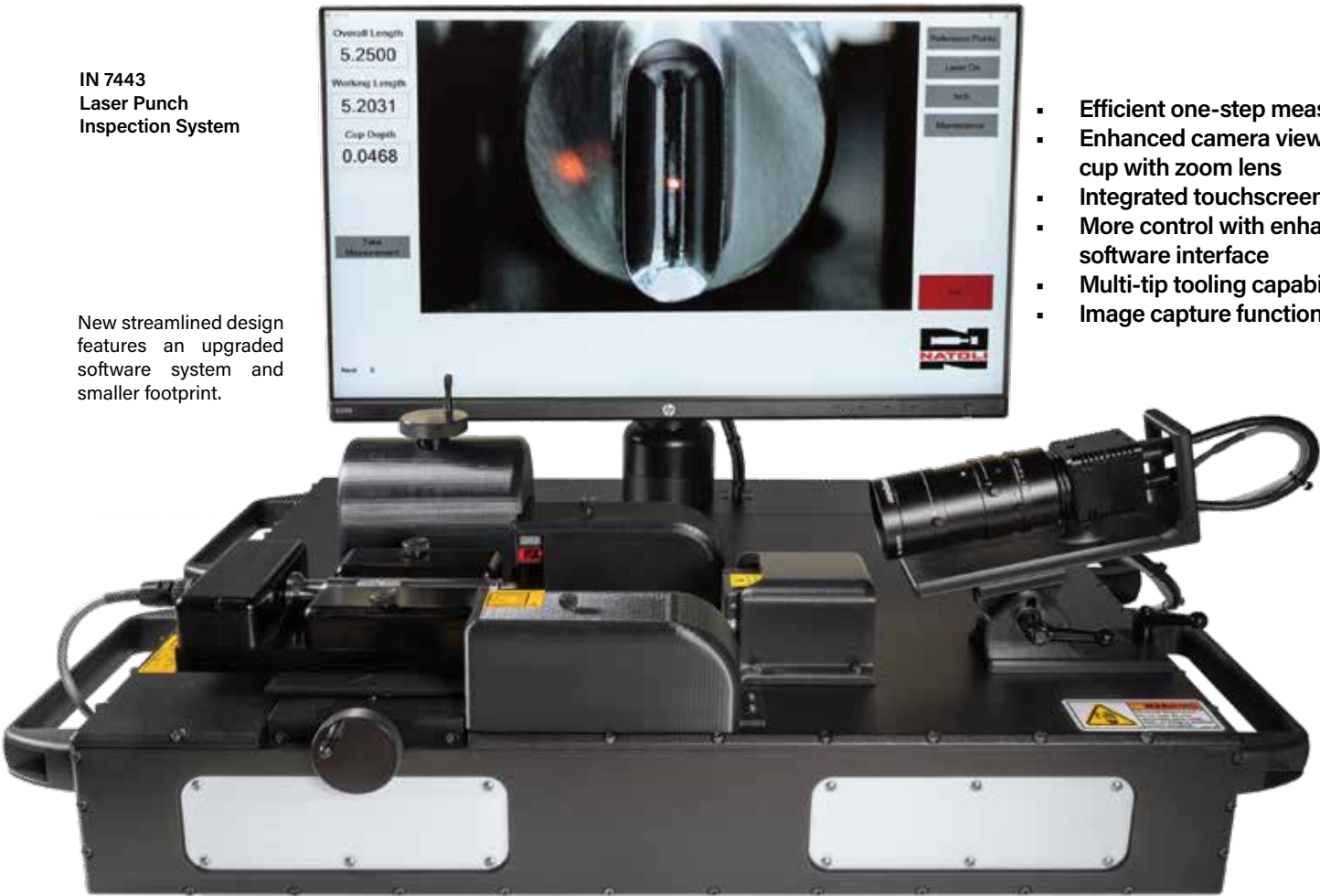
EASILY MEASURES CRITICAL PUNCH DIMENSIONS INCLUDING WORKING LENGTH, CUP DEPTH, AND OVERALL LENGTH

The pinnacle of tooling inspection the **Natoli Laser Vision System (LVS)**, is an automatic, non-contact inspection system for use in conjunction with **Natoli Tool Management (TM-II) Software**. The LVS simultaneously measures critical dimensions of a punch: working length, cup depth, and overall length.

Non-contact lasers eliminate the risk of punch-tip damage from handling and accelerate the inspection process by recording real-time measurements instantly into the TM-II database.

IN 7443 Laser Punch Inspection System

New streamlined design features an upgraded software system and smaller footprint.



- Efficient one-step measurements
- Enhanced camera view of punch cup with zoom lens
- Integrated touchscreen controls
- More control with enhanced software interface
- Multi-tip tooling capability
- Image capture function

RELATED ACCESSORIES



IN 7578 TM-II Tool Management Software Comprehensive tool management and inspection information at your fingertips, resulting in better tablet quality and reduced press downtime. (Monitor not included.)



IN 7448 D-Type or IN 7449 B-Type LVS Tool Nest Securely cradles punch during LVS inspection.

CLEANING



POLISHING



Ask a
Natoli Sales
Representative
about Our Other
**Tooling
Maintenance
Brochures**



TABLETING SPECIFICATION MANUAL

The **Tableting Specification Manual (TSM)** is the most valuable source of tooling information available. English and Spanish versions available. Spanish language version **EXCLUSIVE** to Natoli Engineering.

Summary of Topics and Guidelines:

- Tooling terminology and specifications
- Tablet design
- Tool steel, compression forces
- Procurement, inspection, and maintenance
- Troubleshooting tablet production



TABLET COMPRESSION ACCESSORIES CATALOG

Prolong tool life, maintain tablet quality, and increase productivity with the **industry's most comprehensive accessories catalog**. Natoli's newest edition of the Tablet Compression Accessories Catalog includes all the tablet manufacturing accessories needed to help keep your operation running efficiently and profitably.

The **FREE** catalog is available in printed and digital versions at **natoli.com**.



YOU DEMAND. WE DELIVER.

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