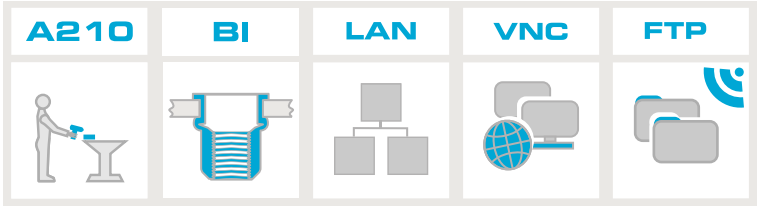
MDS | AUTORIV®
Fasteners + Assembly Systems

AUTORIV A210

Flexible assembly with manual setting tools

Systems for the free processing of fasteners with hand-held insertion units

- High flexibility – for components that are difficult to handle and difficult to access
- Monitoring of the integrity of set fasteners
- Independent force-displacement process monitoring of all connected manual setting tools via controller
- Processing of fasteners from all manufacturers
- Ergonomic, compact design
- Power station and control as a compact, easy-to-carry system with force-displacement monitoring
- Quick-change nose kits



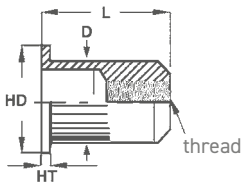
AUTORIV A210: Different manual setting tools and applications – function

- The separate booster of the AUTORIV A210 system generates the needed amount of force to set the fasteners.
- Spinning is done by applying slight axial pressure from the fastener onto the spindle or by manually spinning.
- The setting process starts via the single-stage trigger and is controlled via the integrated process monitoring.
- Blind rivet nuts and studs are removed automatically after the setting process.
- Quick-change nose kits allow a fast working pace for different applications.

Processable fasteners – different types / sizes depending on the type of the manual setting tool

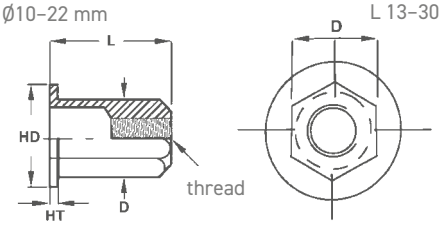
Blind rivet nut with round shank

HD Ø10–22 mm L 13–30 mm



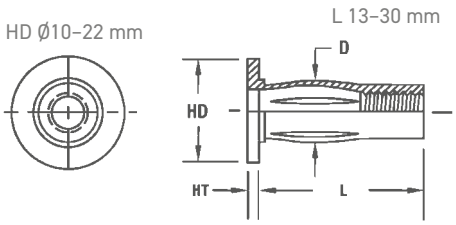
Blind rivet nut with hexagonal shank

HD Ø10–22 mm L 13–30 mm



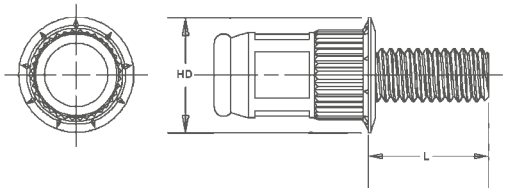
Blind rivet nut with slotted shank

HD Ø10–22 mm L 13–30 mm



Blind rivet studs

HD Ø10–22 mm L max 30 mm



Special adaptations of AUTORIV 210 manual setting tools, as well as other sizes and shapes of fasteners, are available upon request.

AUTORIV A210 Manual setting tools: Technical data

AUTORIV A210-BI-N-Flex8-PG


Controller


Manual setting tool (pistol grip)


Pressure booster unit

A210-BI-N-Flex8-PG-Flex 8 / N-PG-Flex 8-25	
for blind rivet nuts from M5 to M6	
Pneumatic supply	5 to 7 bar
Air consumption per cycle	6 liters at 5 bar
Insertion stroke / setting force	max. 15 mm / max. 35,6 kN
Cycle time	3 to 3,5 s
Projecting edge / comp. depth	acc. to customer request
Working direction	freely selectable

AUTORIV A210-BI-N-PG-Flex 18


Controller


Manual setting tool (pistol grip)


Pressure booster unit

A210-BI-N-PG-Flex 18 / N-PG-Flex 18-25	
for blind rivet nuts from M8 to M16	
Pneumatic supply	5 to 7 bar
Air consumption per cycle	9 liters at 5 bar
Insertion stroke / setting force	max. 15 mm / max. 80 kN
Cycle time	3 to 3,5 s
Projecting edge / comp. depth	acc. to customer request
Working direction	freely selectable

Special adaptations of AUTORIV 210 manual setting tools are possible upon request at any time. “N“ stands for the AUTORIV system solution nuts. “S“ stands for the AUTORIV system solution bolts.
All data based on a standard fastener under ideal conditions – depending on the manual setting tool.

Other variants, e.g. for breakaway rivets are possible upon request at any time.

AUTORIV A210: Force-displacement process monitoring and evaluation

- The process monitoring of AUTORIV A210 manual setting tools is carried out by querying the sensors in the manual setting tool.
- In addition to that, a process evaluation is possible via the control software of the operating panel. Here, a successful insertion process is set as a reference via the special monitoring-window function.
- As soon as another setting process matches the specified reference values, it is evaluated as successful.

Process monitoring

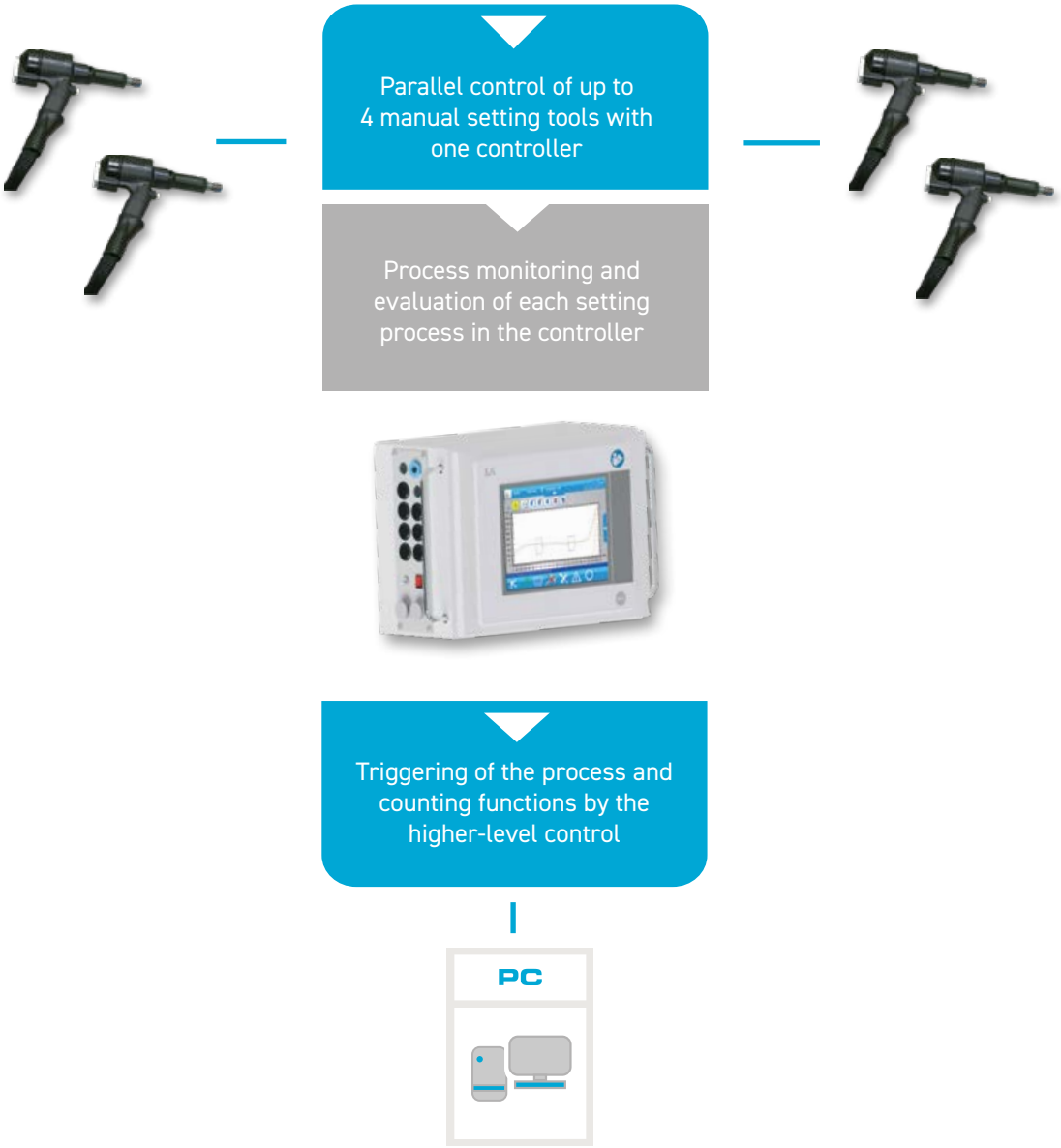
querying
the force-displacement sensors
in the manual setting tool

parallel process evaluation of
up to 4 manual setting tools

Process evaluation and
display of setting-process
results as OK / NOK

AUTORIV A210 Manual setting tools: Integration into external control system

- AUTORIV A210 manual setting tools, which are connected by a controller, can optionally be integrated into a higher-level system with external control.
- The data transfer between controller and external control is optionally performed via a ProfiNet interface or Ethernet/IP.
- When AUTORIV A210 manual setting tools are integrated into a higher-level system, the "counting intelligence" is transferred from the controller to the higher-level system control, which then assumes all tasks.
- The evaluation of the setting processes remains with the controller even when integrated into / controlled by a higher-level system and can be evaluated from there.



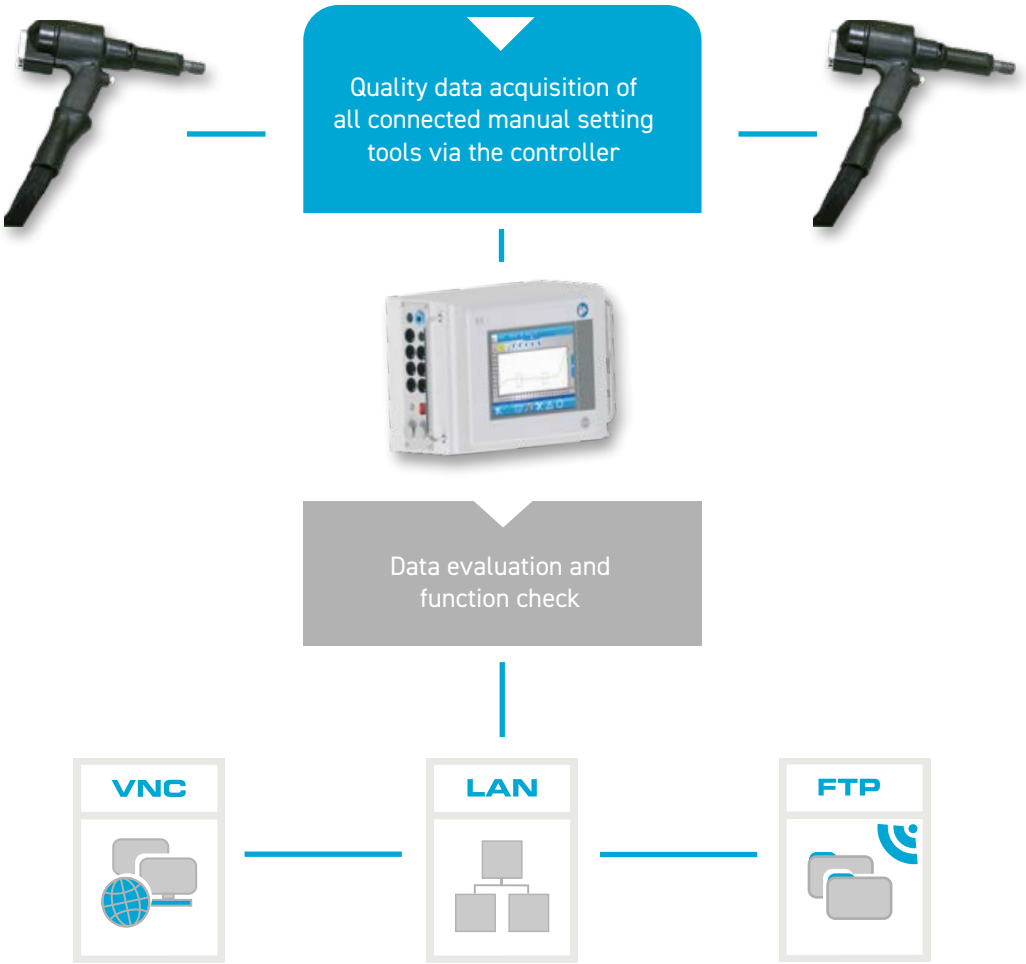
AUTORIV A210 Manual setting tools: Quality data storage and remote service

Quality data storage

- The quality data of AUTORIV A210 manual setting tools connected via the controller can optionally be stored and called up.
- A 500 GB hard disk compliant with MDS standards provides permanently traceable quality data of completed projects and setting processes.
- The quality data can optionally be diverted (connection via LAN, FTP, according to MDS standards).

Remote service

- All functions of AUTORIV A210 manual setting tools, which are connected via the controller, can optionally be called up via a remote-service module and can be checked for correct function.
- Prerequisite: Internet access via the operator network, minimum DSL 1000.
  Practicability must be checked on an individual basis.



AUTORIV A210 Manual setting tools for hand-held assembly: Advantages

Very short cycle time

Depending on the design and the fastener to be processed, the cycle time is 1.5 to 4 s.

Compact design

Both the manual setting tool as well as the controller and the supply unit have compact dimensions and can therefore be conveyed to the processing location in a very flexible manner.

System technology from one source

Tried-and-true technology as well as experience from over 45 years of market presence ensure the high quality of the whole system. The robust implementation guarantees minimal susceptibility to failure.

High degree of process visualization and evaluation

All processes around the setting cycle are visible and usable via the controller as well as via remote evaluation.

Integration into automated processes

Integration into automated processes is simple and practical.

AUTORIV A210 – Fasteners – Standard

ALM
Large flange,
knurled body

AKM
Small flange,
knurled body

AFM
Large flange,
hexagonal body

AFSM
Small flange,
hexagonal body

AHM
Large flange,
half hex body

AHSM
Small flange,
half hex body

APN
Straight shank,
slotted body

APB
Prebulbed, slotted body

AFH
Large flange,
fully hexagonal body

AAL
Large flange,
knurled body

AAK
Middle-size flange,
knurled body

AAH
Large flange,
half hex body

AAO
Small flange,
smooth body

AFW
Diamond knurled 360°

AFT
Knurled 360°

AFK / AFL
Floating rivet nut
(cage nut)

AAS
Blind rivet studs,
round shaft, knurled

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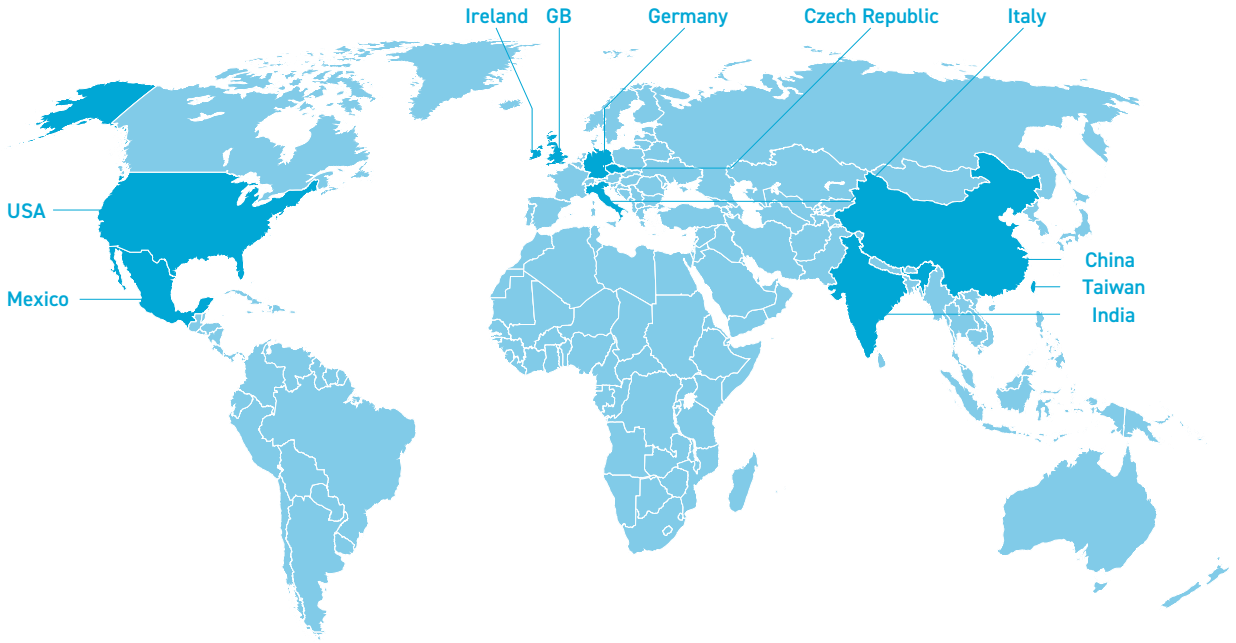
Automated Fastener and Assembly Systems (A-FAS Group)

MDS is a shareholder of the A-FAS Group, which includes a total of nine companies in Europe, Asia, and North America. Both legally and economically independent, each of these companies has a very specialized orientation. The combination of these synergetic specializations and a uniform strategy, which is determined by the Board of Directors of the A-FAS, results in a globally unique performance portfolio with major customer benefits. Complete systems, consisting of automation and automation-specific fastening elements or small parts are offered from one source: from development and production to the delivery, from hand tools to robotic systems, and all of this on a global scale.



AUTORIV: An MDS brand

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