



## **RIVSET® Gen<sup>2</sup>**

Self-pierce riveting in its new generation

# **BOLLHOFF**

## RIVSET® Gen<sup>2</sup> – Self-pierce riveting in its new generation



### Modular, flexible, efficient!

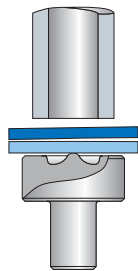
The next generation of semi-tubular self-pierce riveting technology RIVSET® Gen<sup>2</sup> enables the process time to be halved during the joining of mixed materials and high-strength steels. It is targeted towards applications in large-volume productions with a maximum flexibility in production planning.

#### Advantages

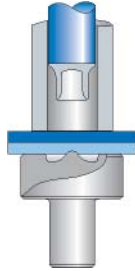
- Modular construction of the components
- Local control architecture for maximum configurations
- Speed: Optimised process cycle of  $\leq 1,5$  seconds/rivet (depending on the setting tool)
- Stable machine availability: Rivet length control with a precision of  $\pm 0,25$  mm
- Weight-optimised setting tools with max. 78 kN setting force at a robot load capacity of 80 kg
- Multi visualisation of 1 – 5 system(s) with only one control panel
- Optimised footprint
- Adaptability to customised configurations
- Low investment costs due to configuration management

### Technology

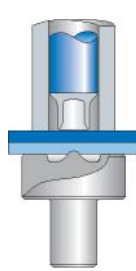
#### Positioning



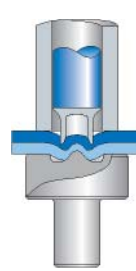
#### Holding



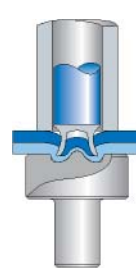
#### Piercing



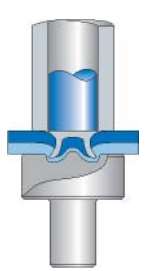
#### Stamping



#### Forming

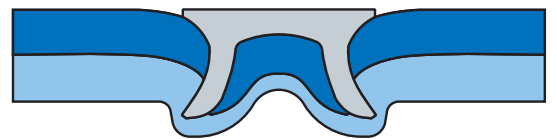


#### Setting



#### A simple and fast process:

In one step the semi-tubular rivet pierces through the upper layer/s of the workpiece and forms the locking head in the lower layer.



### Materials

Joining materials and material combinations for your high-strength joints:

- Aluminium (pressure cast, extruded, sheet)
- Deep drawing steels with Rm up to 500 N/mm<sup>2</sup>
- High-strength steels with Rm up to 1600 N/mm<sup>2</sup>
- Also material combinations with magnesium, copper, films, metal mesh, wood, plastic (with fibre glass if applicable), sandwich materials
- Adhesive as a middle layer

## RIVSET® Gen<sup>2</sup> – Module Configuration

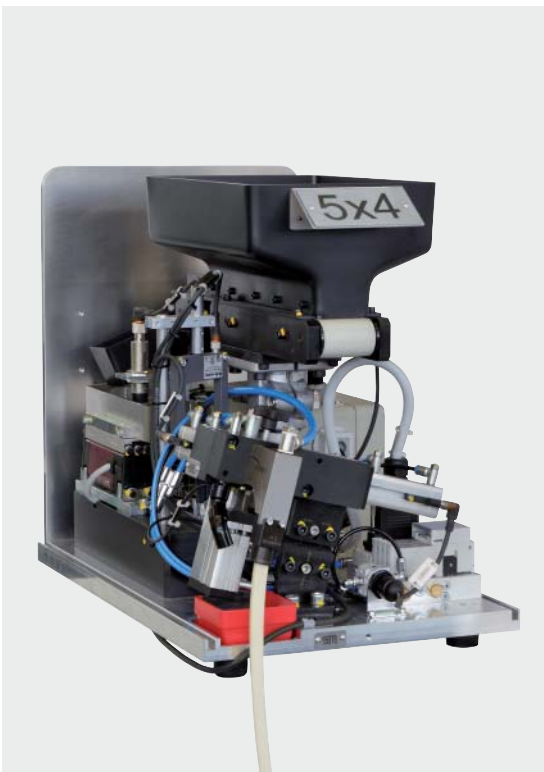


### Setting tool

#### Product features

- Setting tool size optimised by reduction of the setting tool weight
- Throat depth of C-frame up to 500 mm conventional and 750 with light frame design
- Removable die dome
- Media docking possible
- Optimal centre of gravity
- Better lifetime of hydraulic cylinder results in lower maintenance cost

### Rivet feeding



#### Product features

- Delivery rate 60 rivets/minute
- Storage of approximately 15,000 rivets
- Minimal maintenance requirement
- Rivet pre-separation and length-measurement within a tolerance of  $\pm 0,25$  mm available as an option

## Böllhoff Control System (BCS)



### Product features

- Local hardware configuration with central controlling of machine components by bus-system
- „Embedded PC“ based control
- Drive up to 3 rivet feeders (standard)
- Open interface to diverse robot cutting sites (ProfiNet, Interbus etc.)
- Manual control unit with complete visualisation of the process (plug & play)
- Optional panel pc and operator instruction via touch screen
- Multi visualisation of 1 – 5 system(s) by one control panel (optional)

## Drive



### Product features

- Modular and compact hydraulic system
- Suitable for setting forces up to 78 kN
- Local valve block (on the setting tool)
- Optimised cycle time of  $\leq 1,25$  seconds/rivet (depending on the setting tool)
- Integrated measurement of oil temperature
- Energy efficient valve drive
- Switchable additional cooler
- Reduced hydraulic hose connection



## RIVSET® Gen<sup>2</sup> – Configurations of the system

### Standard configurations

#### RIVSET® Gen<sup>2</sup> Single, Twin und Triple

System consisting of setting tool, drive, switching cabinet, process control and one separating stop.

Feeding: Blow feed

During blow feeding, the rivets are fed loosely by compressed air.

#### All systems offer the following parameters:

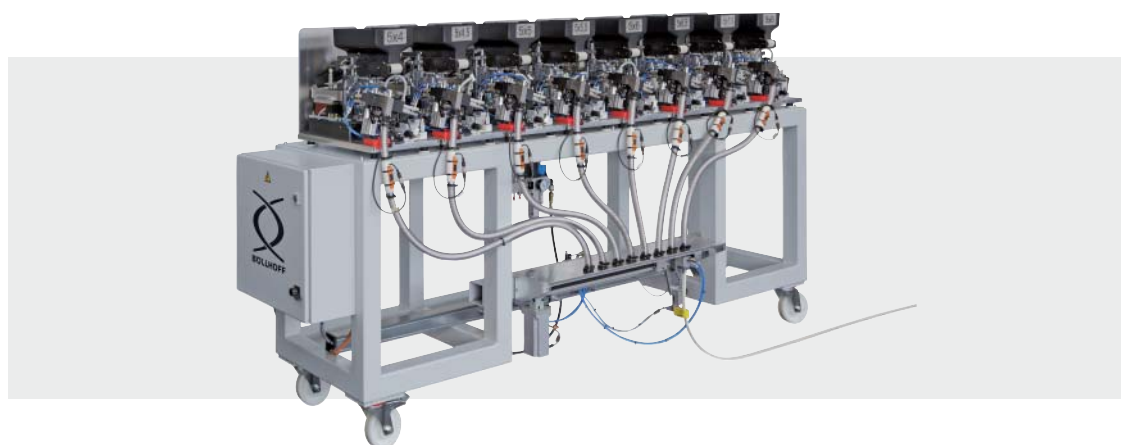
- Suited for small, medium, large and lightweight setting tools
- Designed for joints with a setting force of 50 kN and 75 kN
- Automatic or manual operation
- Attachment for setting tools available
- Process control included
- Docking, visualisation or control panel



### Special configurations

In addition to our standard variants, we offer special configurations, e.g. multi feeding.

Please contact us – we will be pleased to advise you!



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