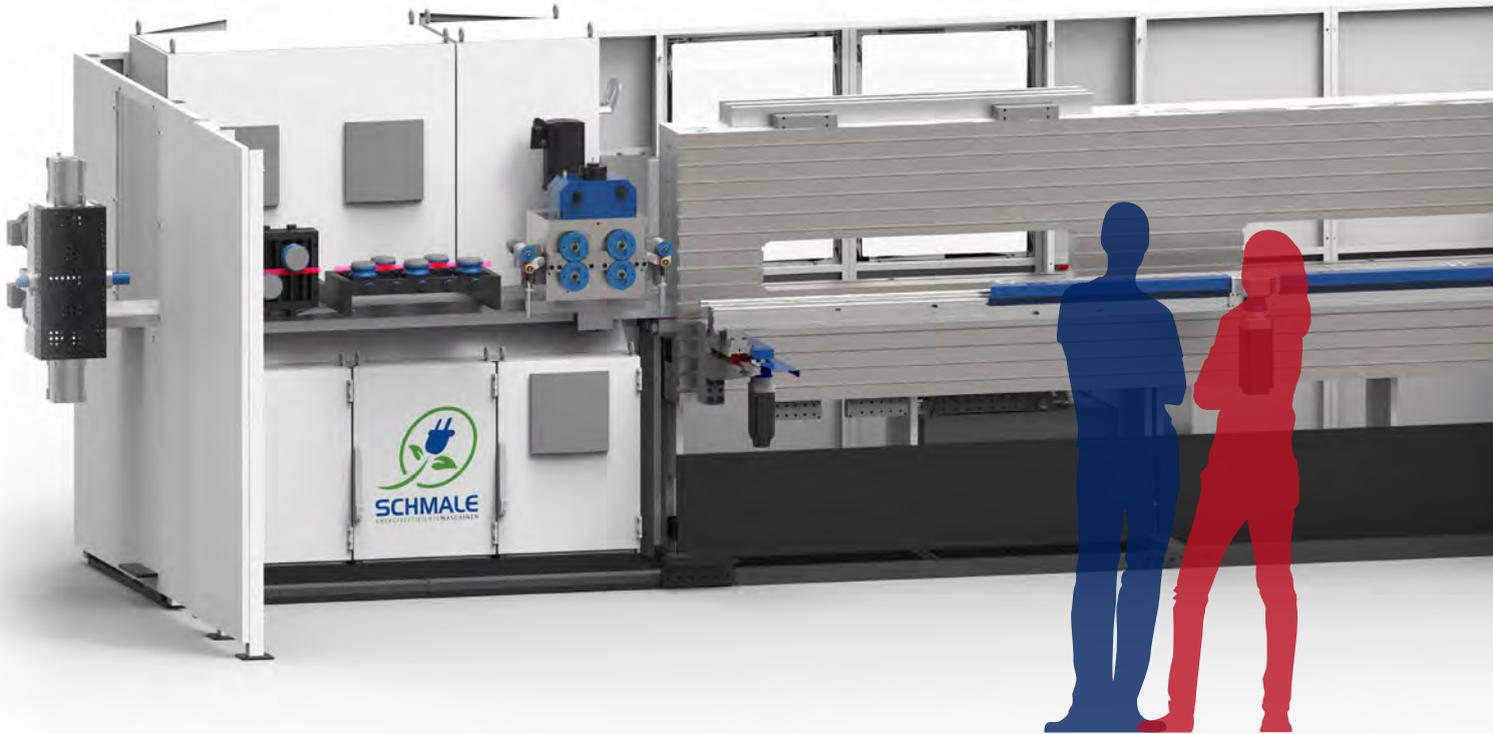


SCHMALE

partner in engineering



2018

WELCOME

„Pushing the boundaries depends on where they are set.“

This catalogue represents the results of us constantly pushing the boundaries in many areas: Cycle performance, dynamics, a wide variety of technologies, services, project size, and sharp-wittedness in daily business. Doing this we can provide highly sophisticated wire processing machines for you. In this catalogue, we'll give you an overview about what we can do for you on the

basis of technologies we have developed over the past 40 years. "What **SCHMALE** does makes a lot of sense" this are the words of a Managing Directors who has purchased a number of machines from us.

All of these technology solutions can be implemented in YOUR own production facilities.

„I received the help I needed and this is the feeling I always get from **SCHMALE!**“

Let us guide you through the catalogue:

- We start with an overview of sample parts that we have reliably mastered. All these technologies can be modularly combined with others and is not limited to a specific machine concept. Please regard the technologies as a unit assembly system from which you can choose the elements you require.
- The next chapter is attended to our machine concepts. If you don't find a machine that fits for your production - let us know: we'll build one especially for you.

- In the third chapter you can look behind the curtain of our control systems and our ability for excellent service. Please put us to the test.

The three areas of sample parts, machines and service are being constantly expanded. We would be delighted to keep you up-to-date with the latest information.

Please send us a short email or give us a call.

SCHMALE
partner in engineering



SAMPLE PARTS



MACHINES



GOOD TO KNOW



Wire or tube diameter



Cycle time



This part is made as left and right version



1/2"



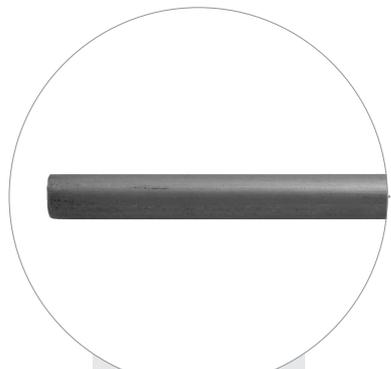
2 sec.



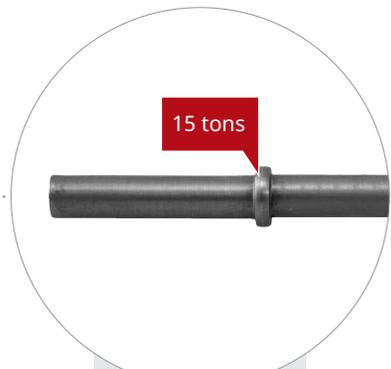
1/2"



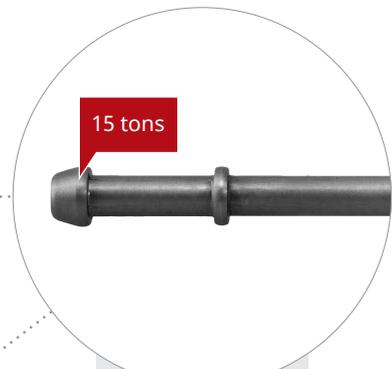
2.4 sec.



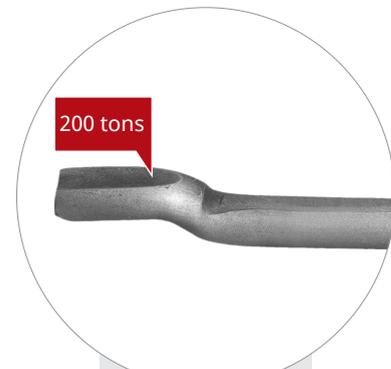
Stage I



Stage II



Stage III



Stage I



Stage II



Stage III



Stage IV



End Stage



End Stage



3/8"



2 sec.



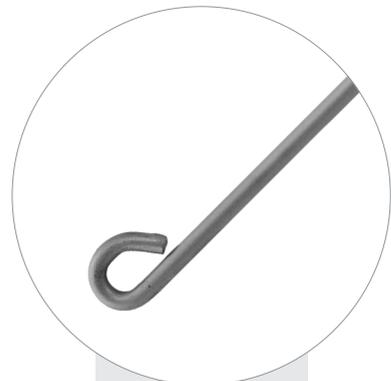
left & right



1/2"



2.4 sec.



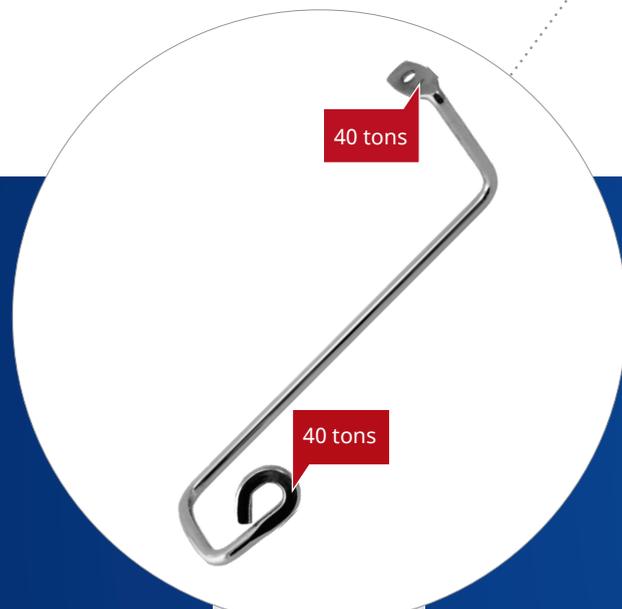
Stage I



Stage II



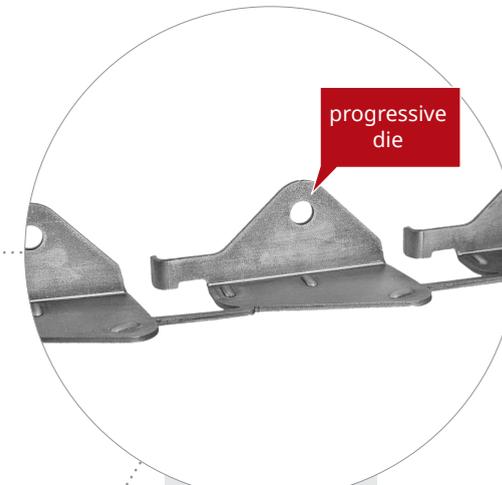
Stage III



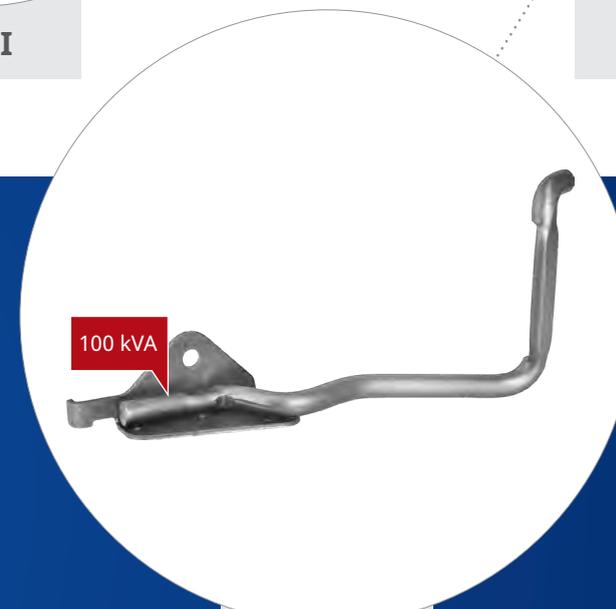
End Stage



Stage I



Stage II



End Stage



1/4"



2.4 sec.



1/4" x 1"



2 sec.



Stage I



Stage II



Stage III



Stage I



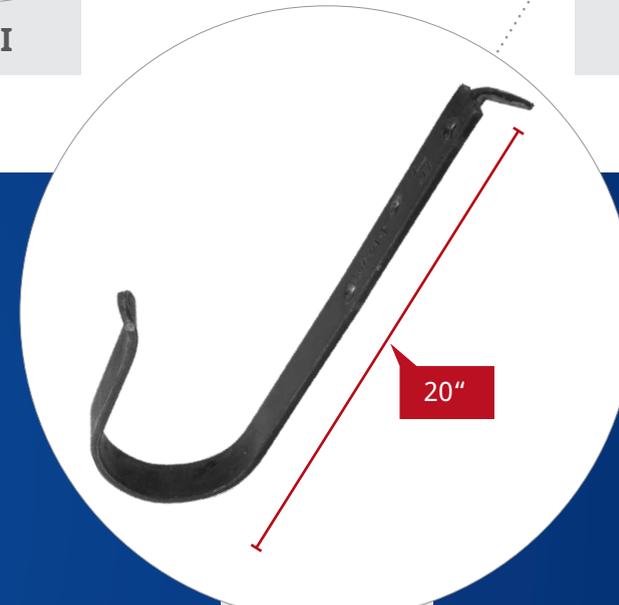
Stage II



Stage IV



End Stage



End Stage



1/2"



5 sec.



1/4"



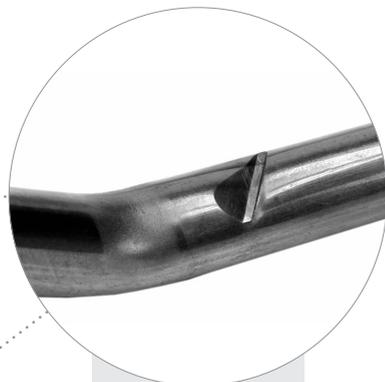
0.75 sec.



Stage I



Stage II



Stage III



Stage I



Stage II

with or without mandrel



Stage IV



Stage V



Stage VI





3/16"



2.4 sec.



1/2"



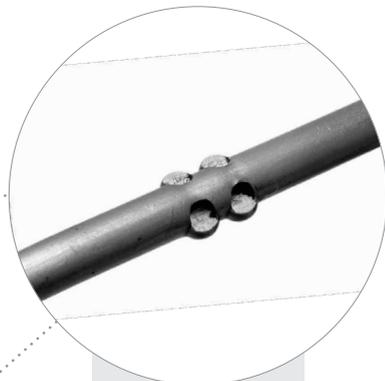
3 sec.



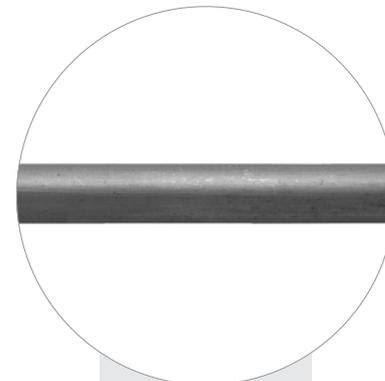
Stage I



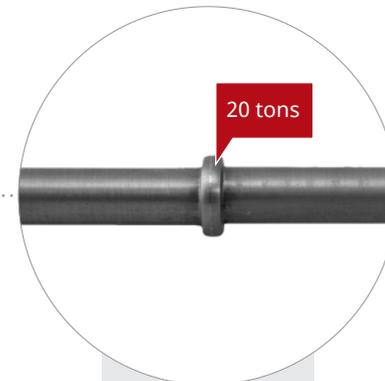
Stage II



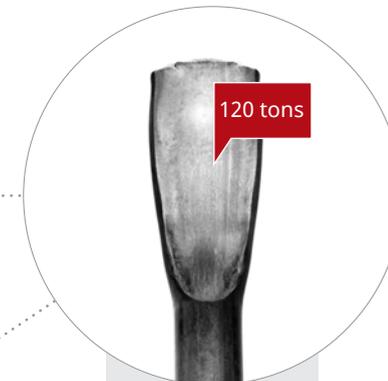
Stage III



Stage I



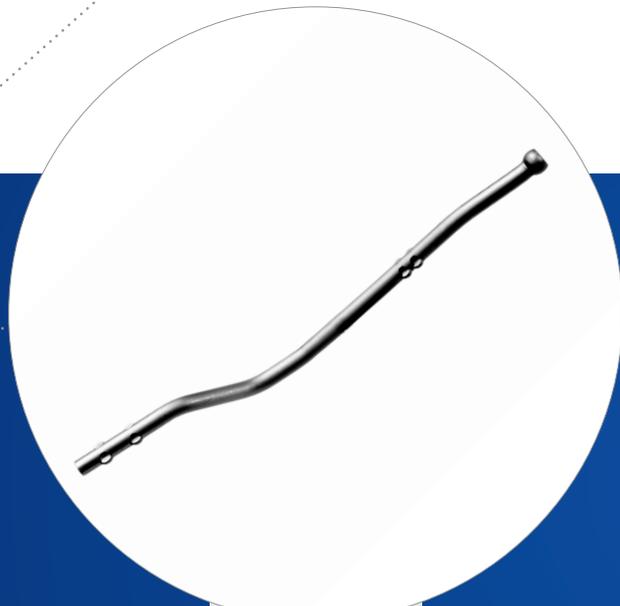
Stage II A



Stage II B



Stage IV



Stage V



Stage IV



Stage V



Stage VI

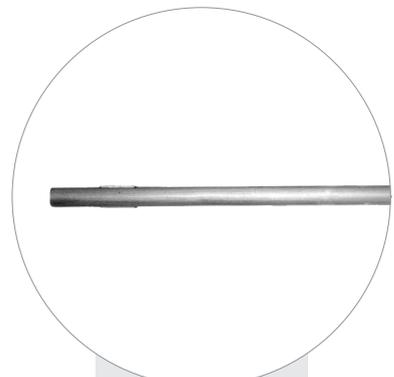




1/4"



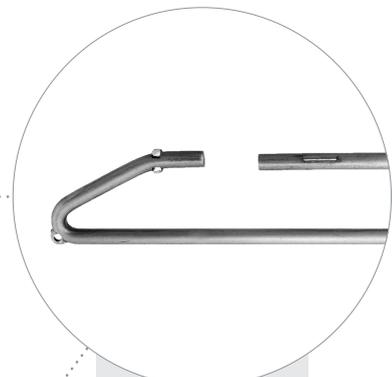
2 sec.



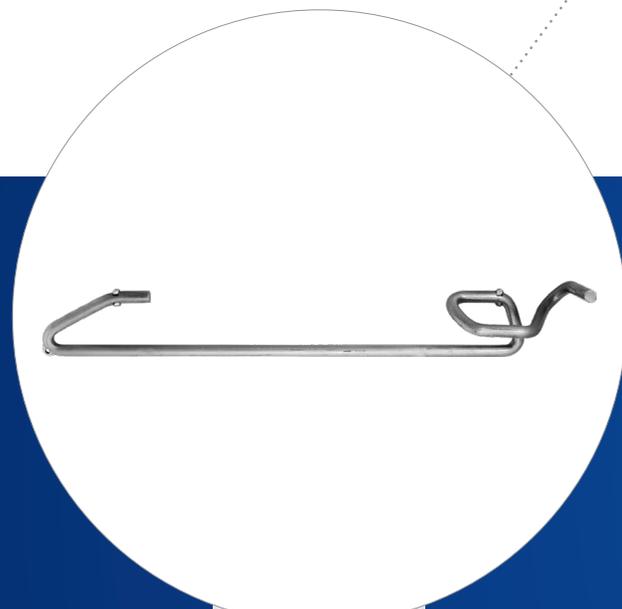
Stage I



Stage II



Stage III



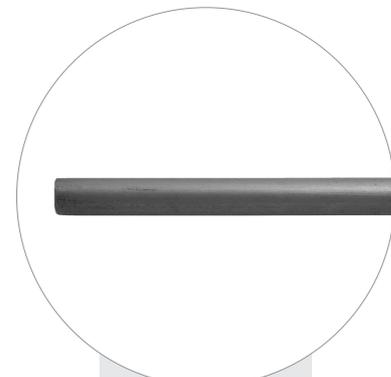
End Stage



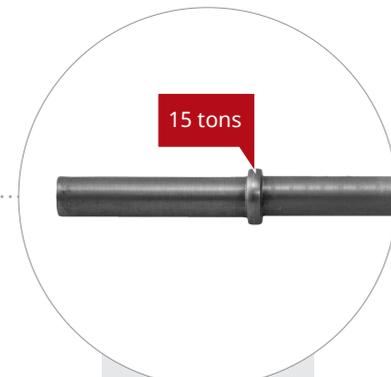
1/2"



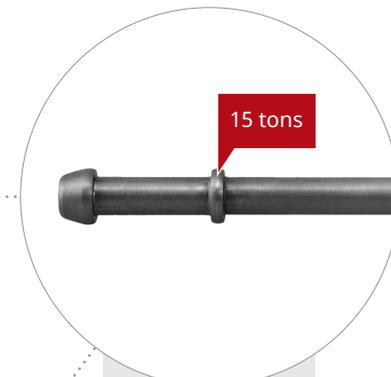
2.4 sec.



Stage I



Stage II



Stage III



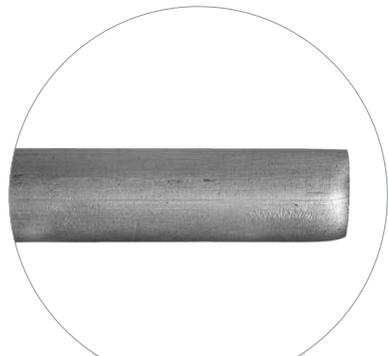
Stage IV



3/8"



2 sec.



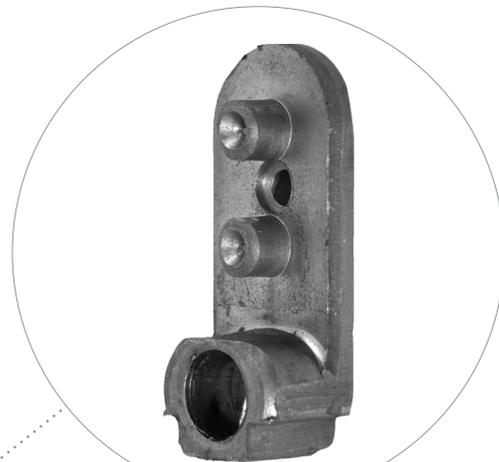
Stage I



Stage II



Stage III



Stage VII



End Stage



Stage IV



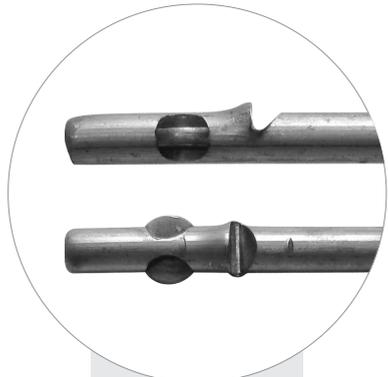
Stage V



Stage VI



Assembling



Notching



Thread Cutting



Swaging



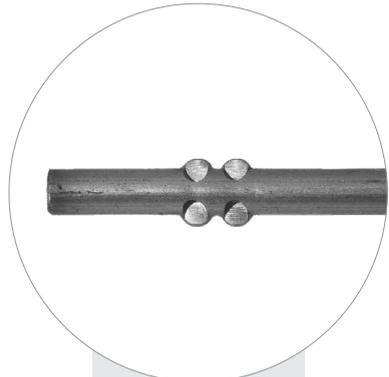
Milling



Cutting And Stamping



Marking



Lug Pressing



Broaching



Flattening



Cutting And Deburring



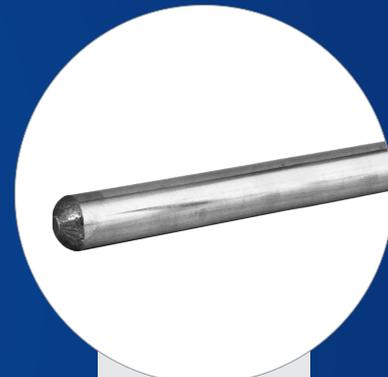
Punching



Flattening In Wire



Cutting



Rounding



Grooving In Wire



Flattening In Wire I



Flattening In Wire II



Cutting With Insert



Tapering I



Roll Grooving I



Roll Grooving II



Roll Milling



Tapering II



Notching



Flaring



Knurling



Swaging Of Collar And Head



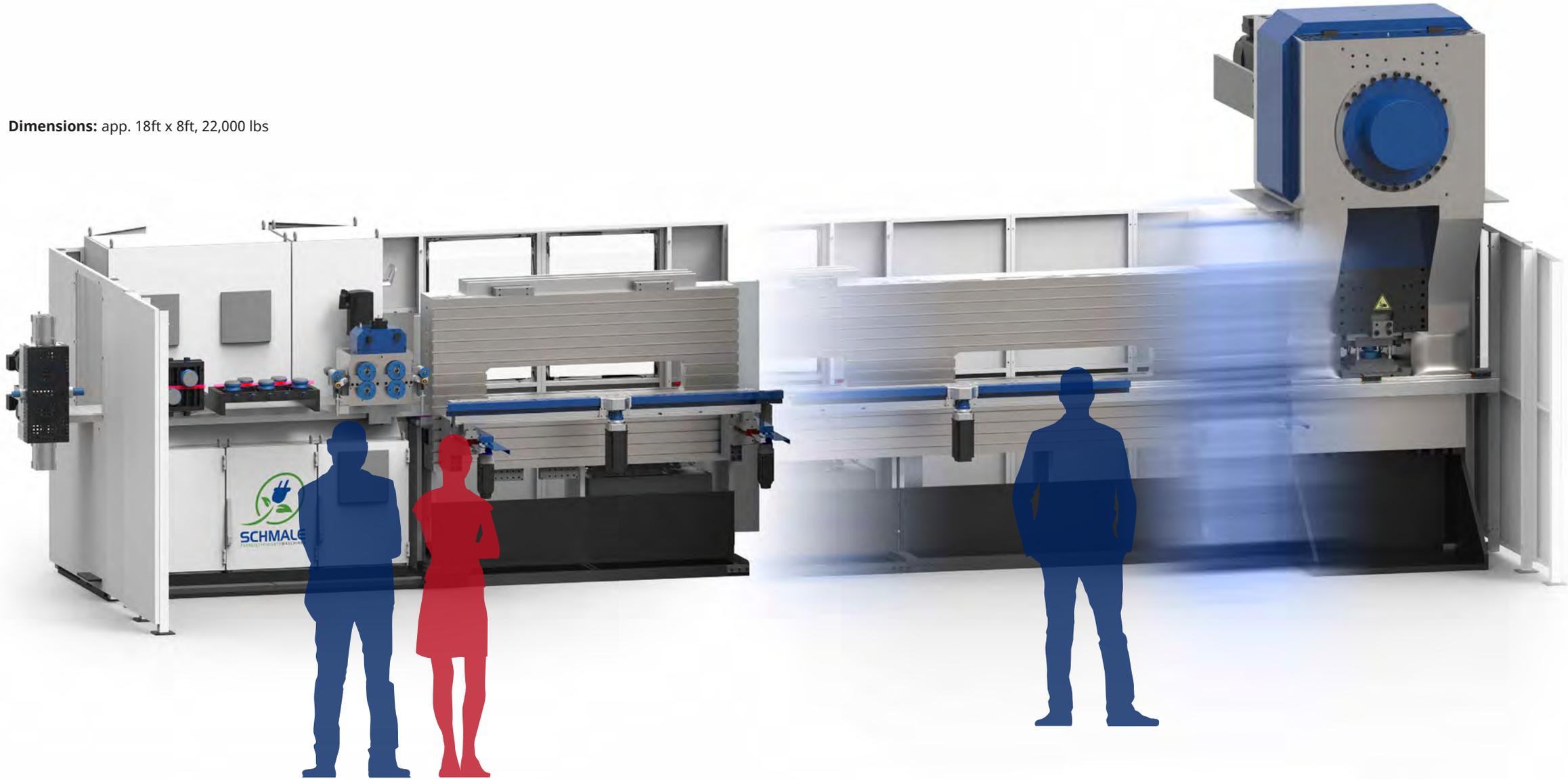
Bending With Die Insert



Bending With Fold

X2000NC

Dimensions: app. 18ft x 8ft, 22,000 lbs



X2000NC <i>The Innovative</i>	
Drives	Servo electric
...	
Wire	✓
Strip	✓
Tube	✓
...	
Feed roller	✓
Buffer magazine	✓
...	
Production speed	0-120 pcs./min.
Typ. wire diameter	1/16" to 1"
Typ. strip dimensions	1/4" x 2"
...	
Free work surface	up to 26ft
Transfer system	Servo electric
Stages	max 10
...	
Typical forces	up 700 tons
Servo drives	up to 80
...	
Remote PLC service	✓

TEST MACHINES

A test machine can be operated both as a standalone machine or in line with other machines.



The modular concept can be used for a wide range of tasks.



A pick&place system packs the tested and processed parts, e.g. in trays.



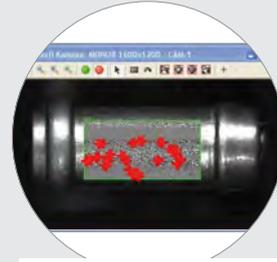
Brushing



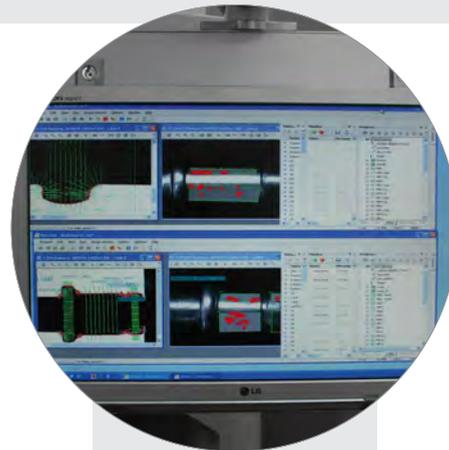
Rinsing



Dimensional Measuring



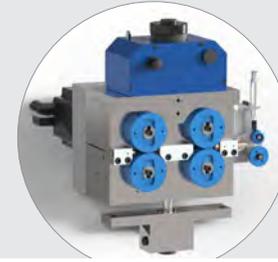
Finish Checking



Customer-Specific Test Programs

A test machine can be used to realize many work processes typically associated with production. These include cleaning, measuring, labelling, turbulent flow testing, visual processes, packaging, calibration, fitting and many more.

SERVOELECTRIC AGGREGATES



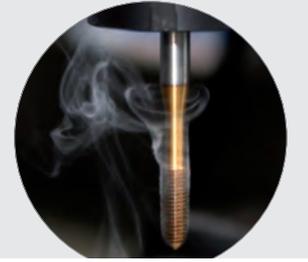
Servo electric feed-in roller

- easy setting
- adjustment while system is running
- no restriction of feed-in length
- profiling possible



Press with tool changer

- 40 to servo press with integrated 8-fold tool changer
- typical tool changing 0.6 seconds
- typical punching process 0.8 seconds



Thread former

- with automatic positioning
- automatic change between thread formers
- typical thread forming process including tool change 1 second



Finger bender

Servo electric finger benders in many variations for wire and strip.



Decoiler

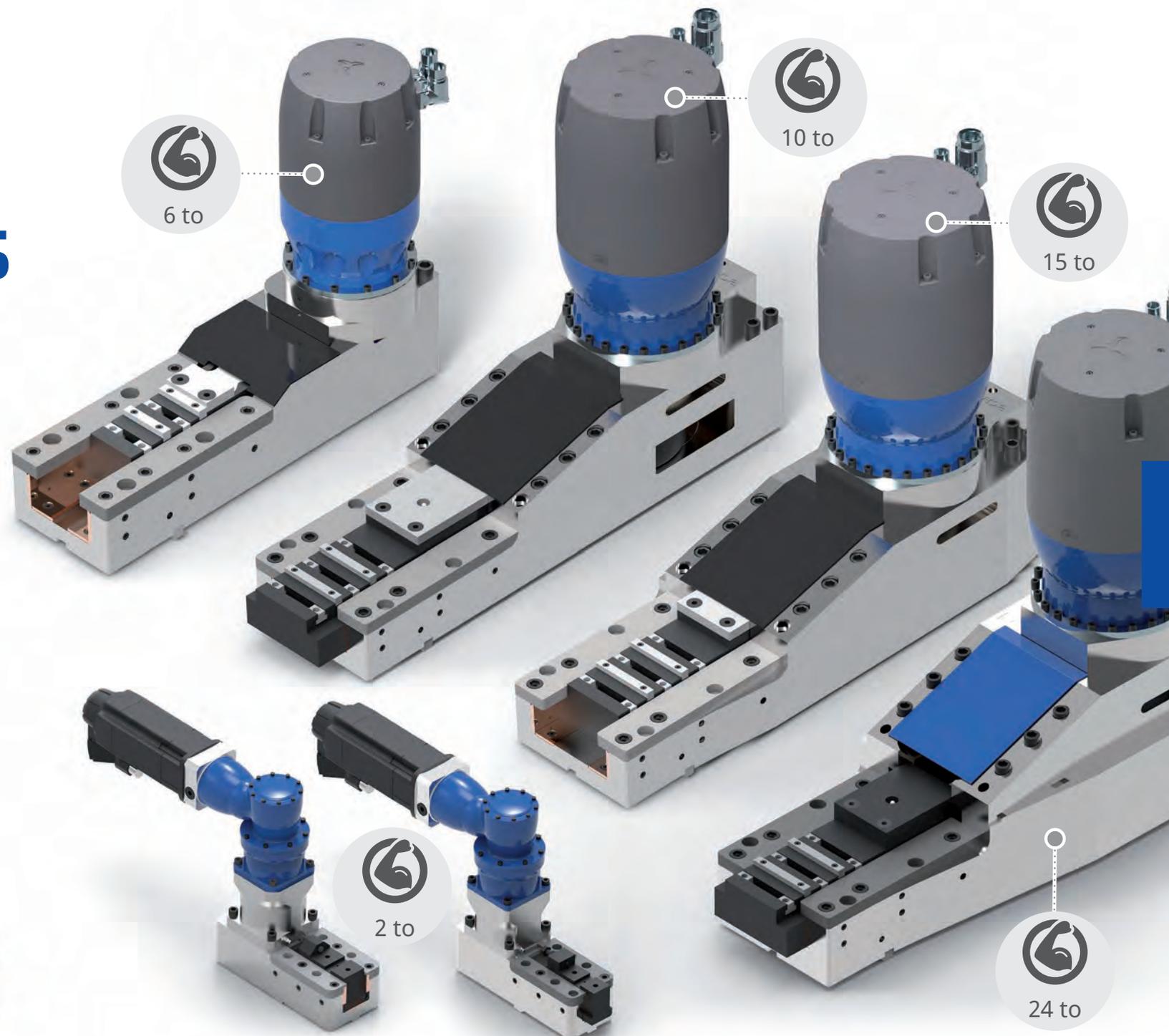
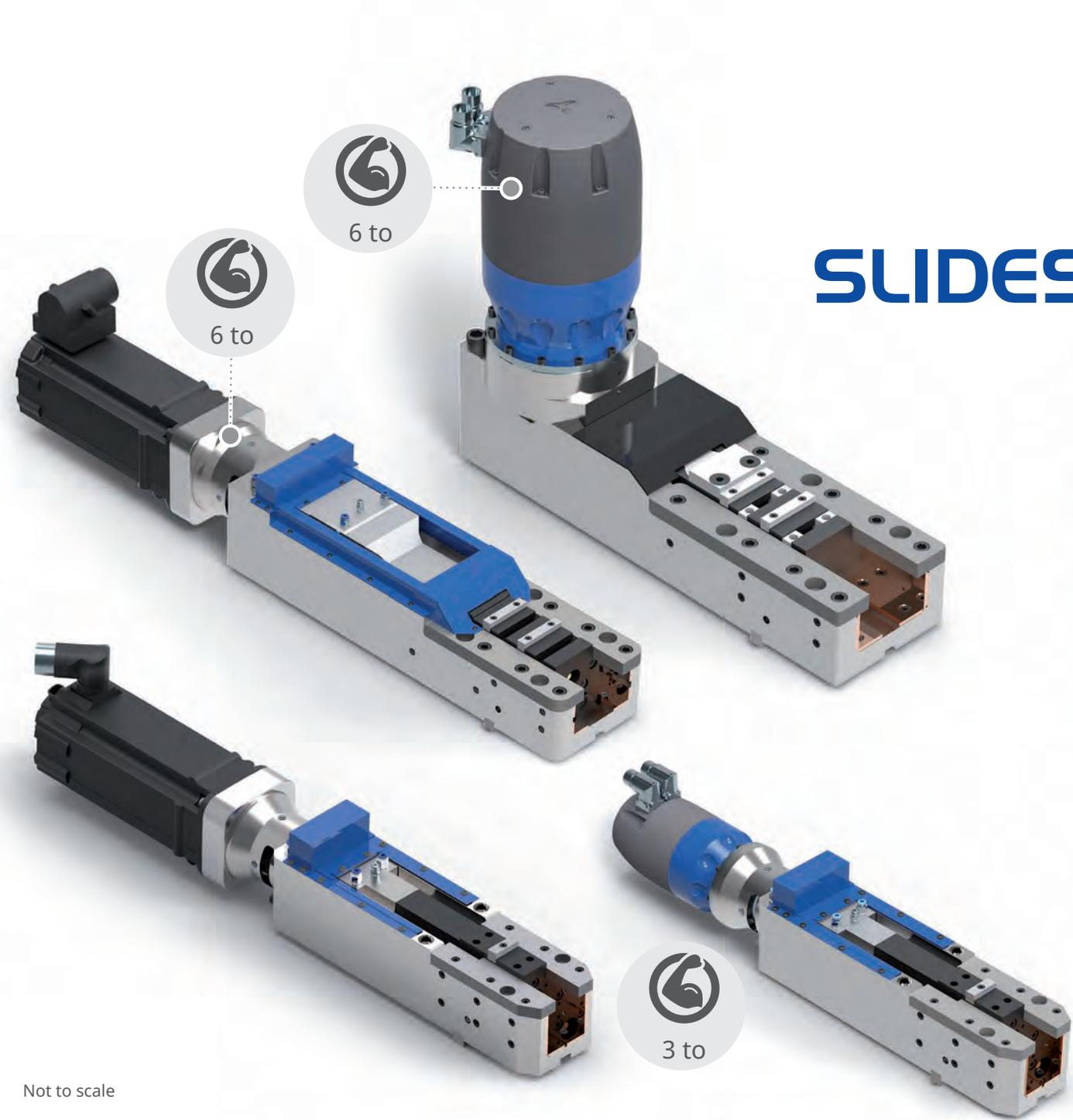
Coils to 3 to
Ø 3/8" - 1"



Buffer magazine

- Cut length can be used
- low energy consumption

SLIDES



Not to scale

PRESSES




120 to




200 to




250 to




40 to



Not to scale

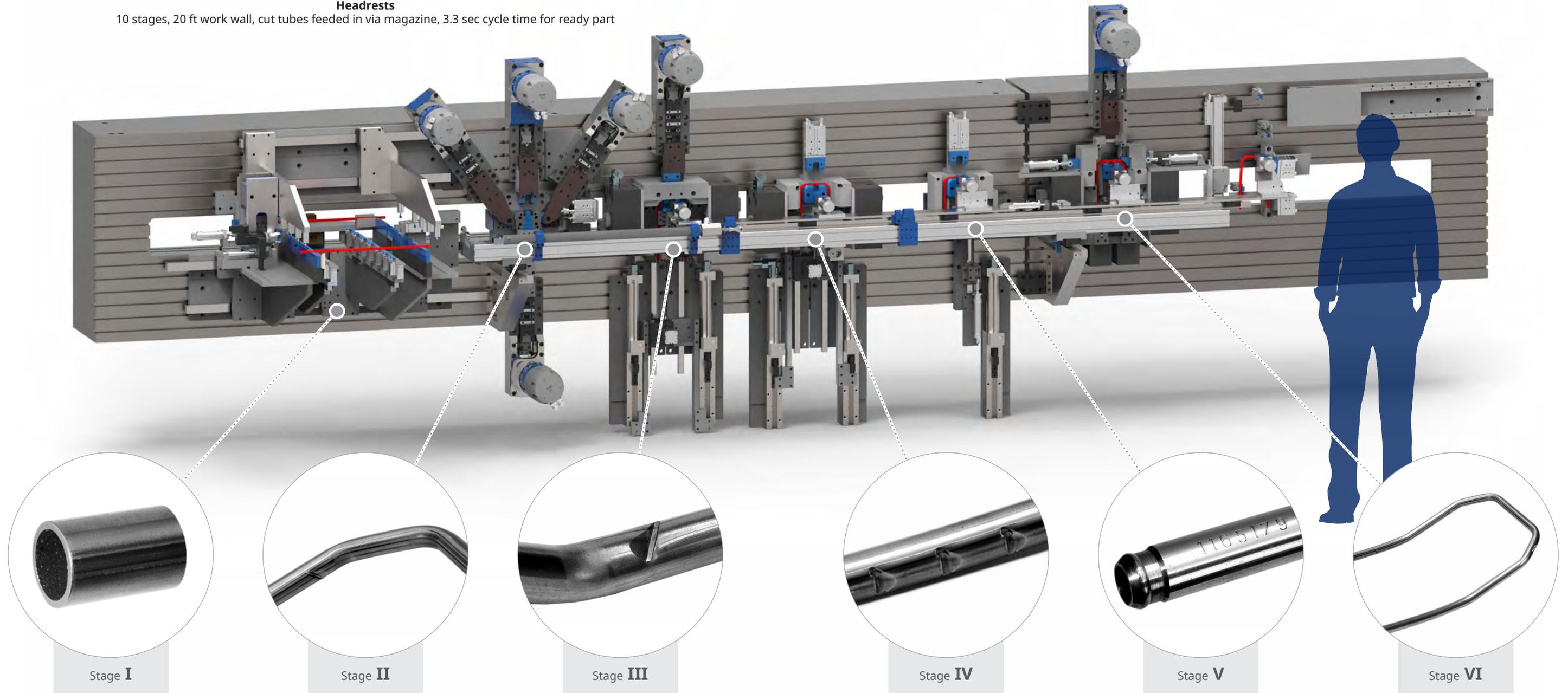



700 to

TOOL SETS

Headrests

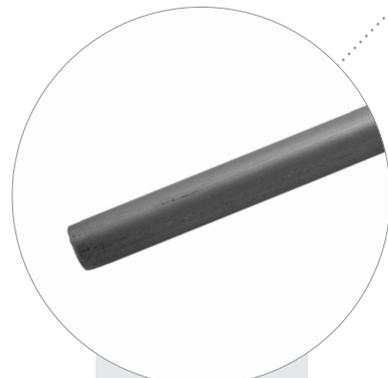
10 stages, 20 ft work wall, cut tubes feeded in via magazine, 3.3 sec cycle time for ready part



TOOL SETS

5 stages, 13 ft work wall, feeded with coil material via servo electric roll feeder, 3 sec cycle time for ready part

200 tons



Stage **I**



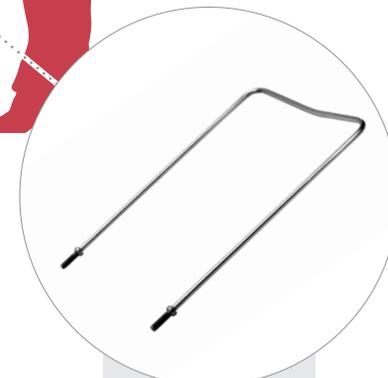
Stage **II + III**



Stage **IV**



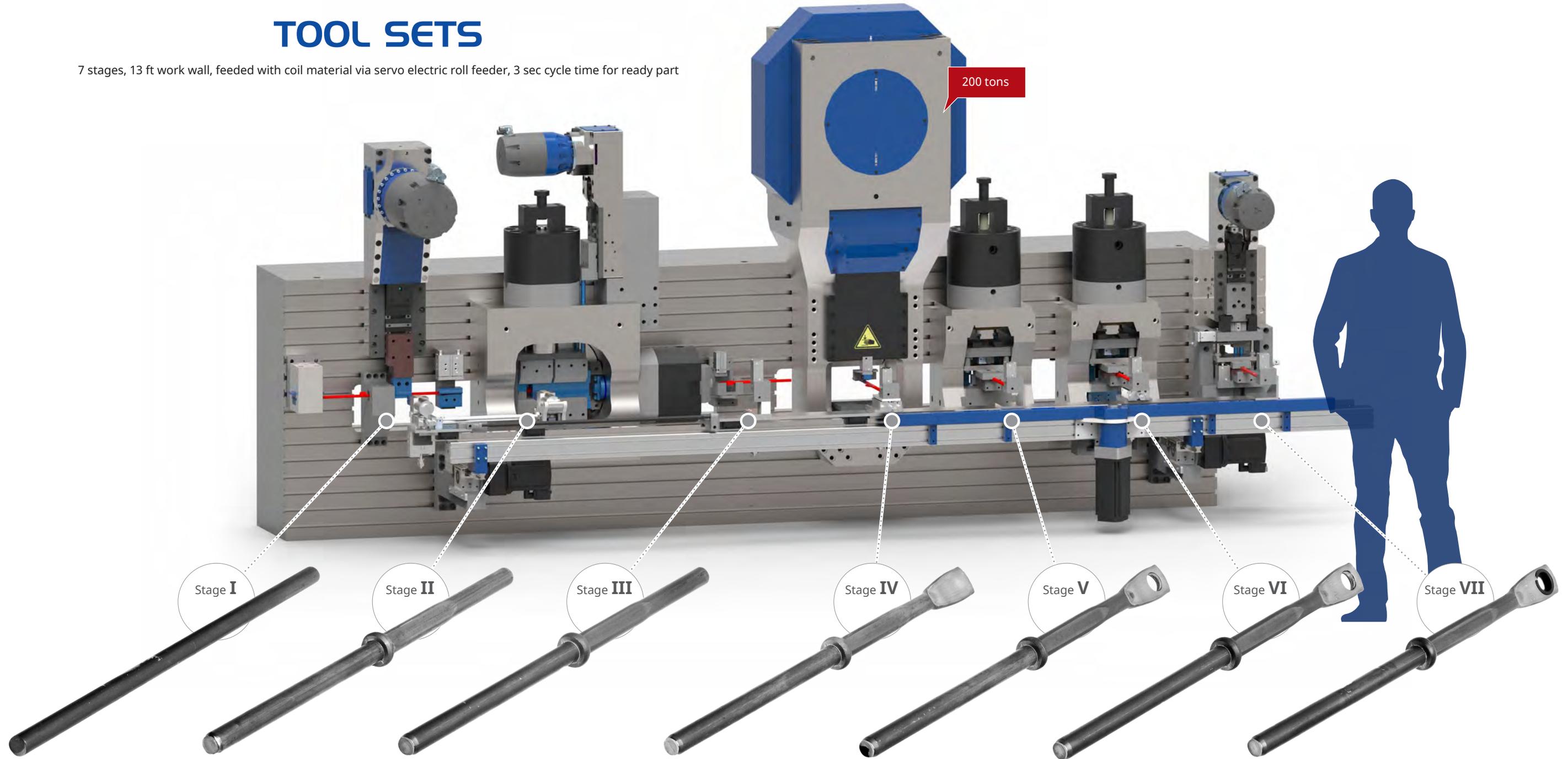
Stage **V**



Stage **VI**

TOOL SETS

7 stages, 13 ft work wall, feeded with coil material via servo electric roll feeder, 3 sec cycle time for ready part



200 tons

Stage I

Stage II

Stage III

Stage IV

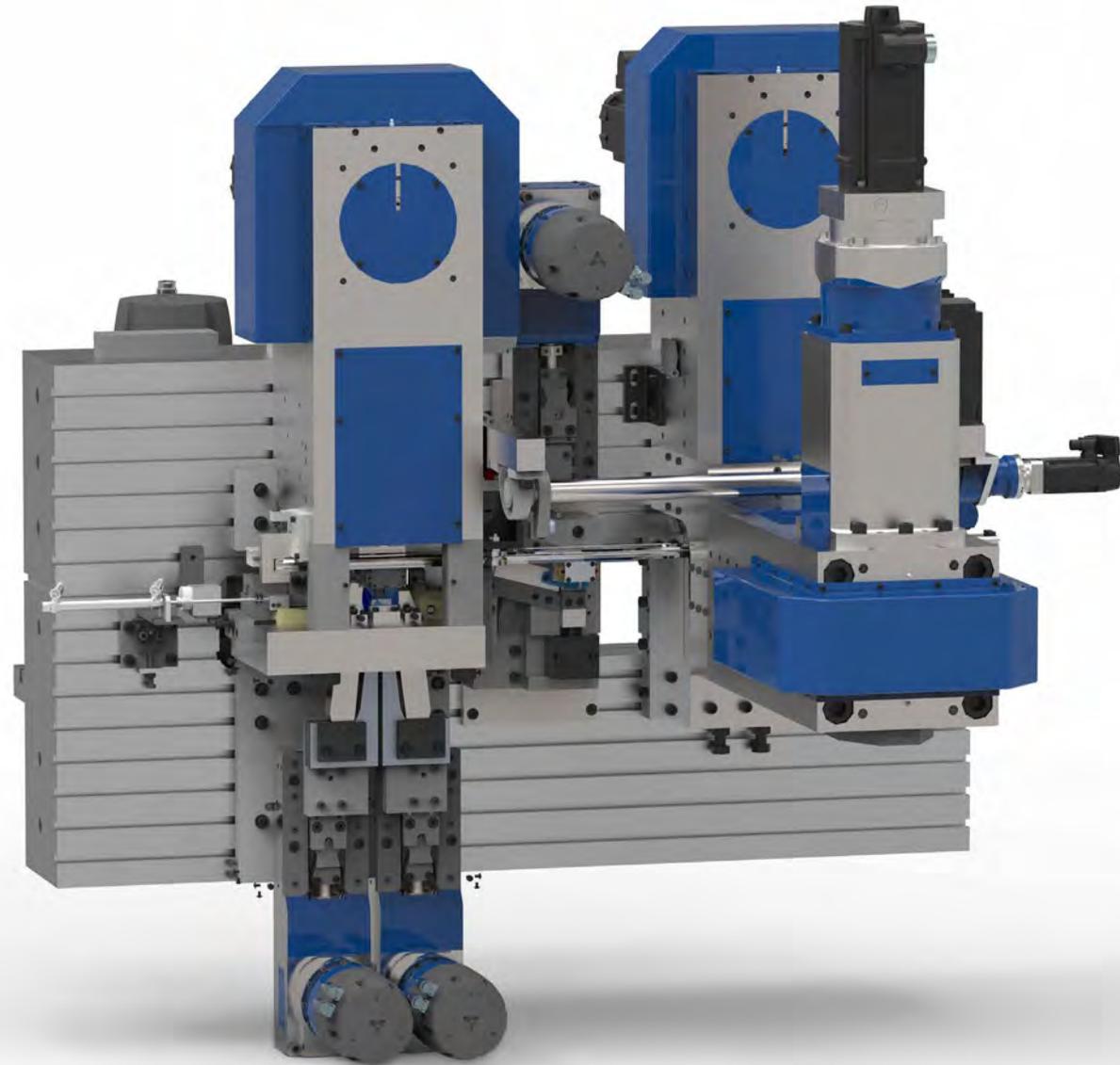
Stage V

Stage VI

Stage VII

TOOL SETS

3 stages, 6 ft work wall, feeded with coil material via servo electric roll feeder, 1.2 sec cycle time for ready part



1/4"



1.2 sec.



reduced



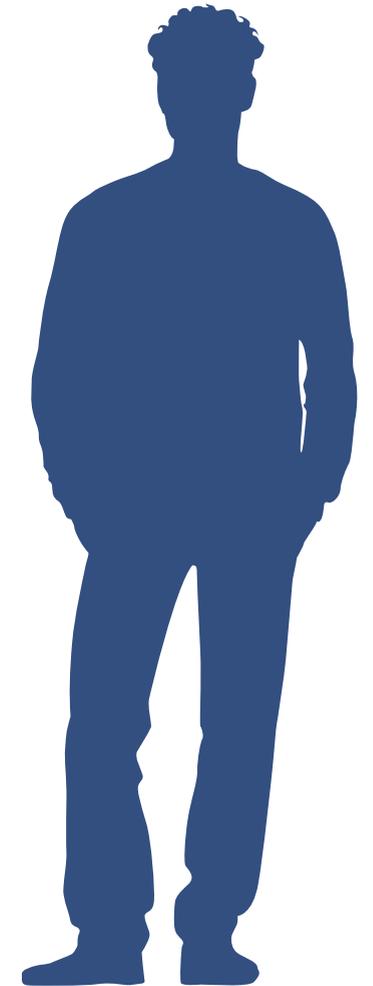
reduced



swaged



swaged



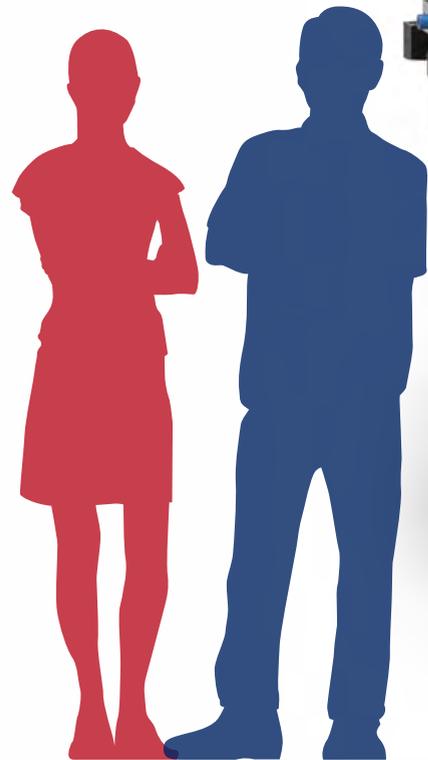
TOOL SETS



1/4"



0.75 sec.



OPERATION

Interfaces, controls and operating concepts are the same for all SCHMALE machines. This means less time is needed for familiarization. The seamless integration of additional functions is possible. Emphasis is placed on extendibility and simplicity.



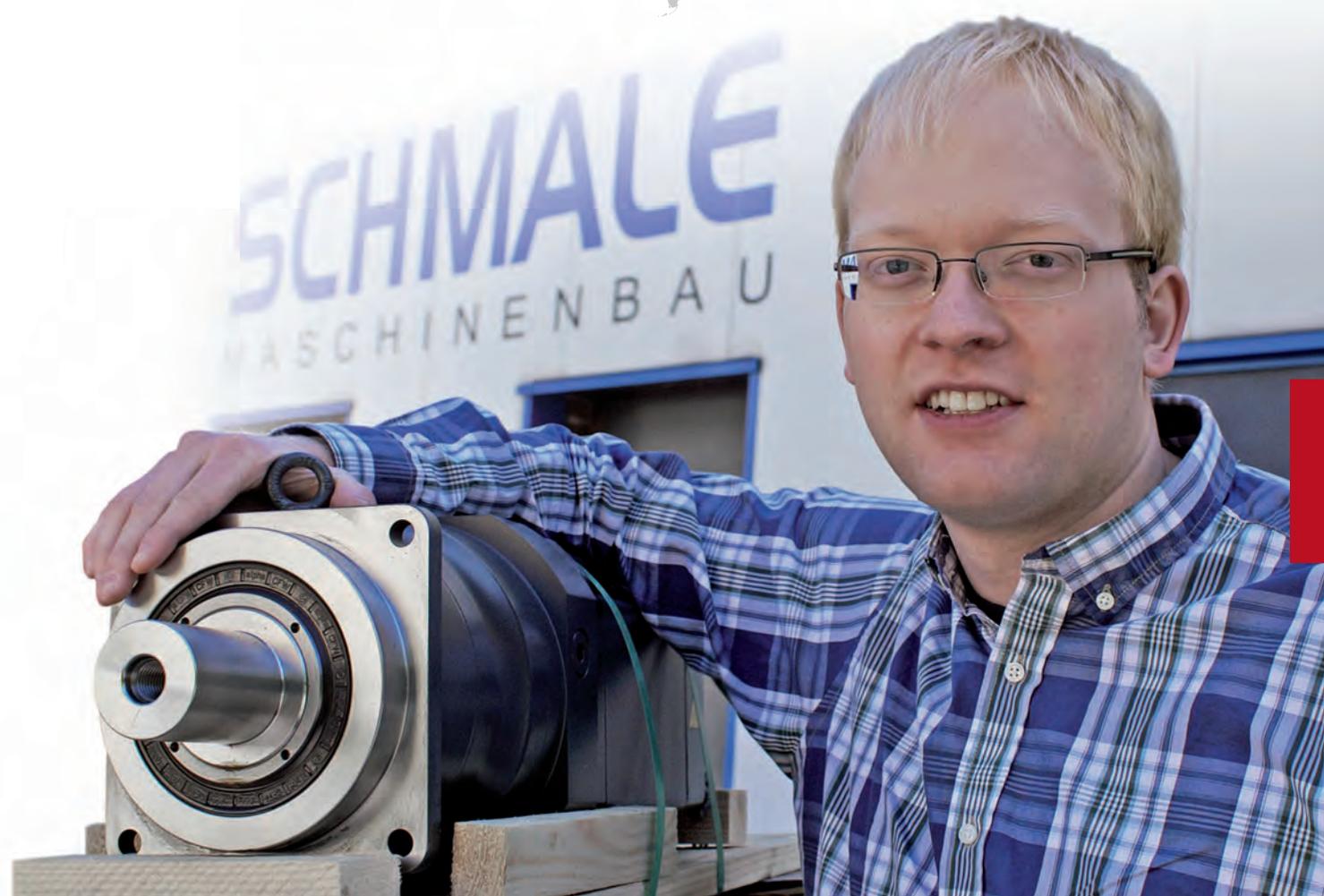
SAFETY

Safety technology is always based on the most current version of the European machine guidelines. The safety of operating personnel is a priority for us. We combine high safety standards with optimum usability.



SPARE PARTS

Original spare parts available at short notice.



TECHNICAL CUSTOMER SERVICE



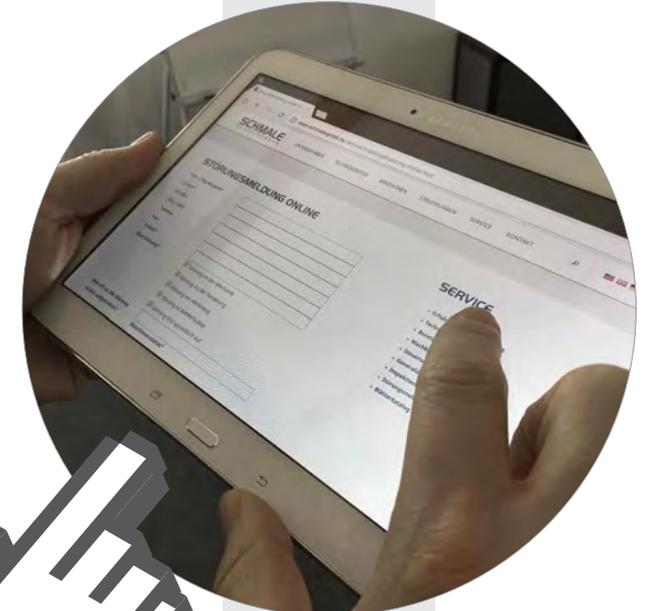
Competent service usually within 24h



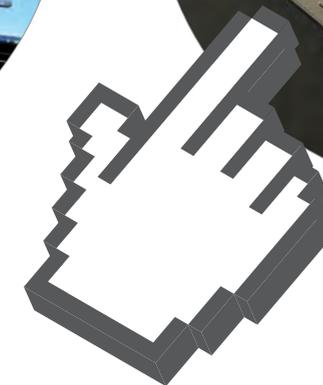
Original spare parts



Teleservice



Remote PLC Service



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SCHMALE
partner in engineering

SCHMALE

partner in engineering



SCHMALE machines allow our customers to achieve a high level of automation and added value.

Our customers rely on the expertise of **SCHMALE** Maschinenbau GmbH for a wide range of production technologies.

Every **SCHMALE** machine enables production technologies to be combined to achieve a high level of added value. This includes wire, strip and pipe machining, delivery and aggregation of parts and quality assurance.

SCHMALE is a company that brings people together to work and coexist happily and successfully together.

