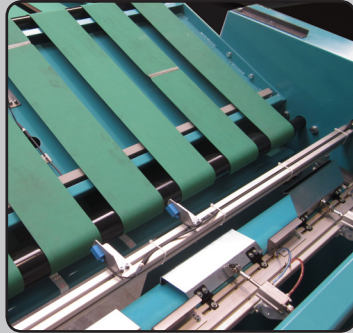# TECHNIC ONE
ENGINEERING
T1

■ ■ □ Technique and common sense to the expertise

For more than 30 years, TECHNIC ONE is specialized in the realization of turn-key projects.

Our philosophy is to support you throughout your project, from the preliminary feasibility study to the production on site. The presence of a SINGLE contact guarantees you the perfect match to your requirements.

To provide this service, TECHNIC ONE brings together under one roof a design office including a dozen engineers, a workshop and an assembly plant spreading over 2200m².

Recognized partners in advanced areas :

- A.T.I (electricity & automation)
- DV Hydraulics (hydraulic)
- Paul Wurth (mining industry)
- Munters - Denis - Dryer One

■ ■ □ Your partner

Designed from standard elements and based on simple and effective principles, textile handling and packaging machines TECHNIC ONE make possible to obtain a result that meets your expectations.

Our references allowed us to gain experience in various industries and to create synergies with our customers, in Belgium as well as around the world :

toward a maximum efficiency

The productivity of a textile line depends on the pace of work of each position. Out of their complexities or in order to achieve the desired result, some operations require more time than others, and then become a bottleneck.

Following this idea, a manual operation differs from a simple automated task. The sewing table is a perfect example: given the specificity of the product and to obtain a correct result, this operation can not be done without the intervention of an operator trained to that task.

Therefore we consider that a stacking station will be enough to supply three sewing tables. For the sake of productivity, it is obviously possible to increase the number of stacking stations, but a storage space must be reserved for dollies.

With his knowledge of the textile field, TECHNIC ONE will be your main contact to advise you and guide you to achieve the target objectives of productivity.

① Accumulator	④ Unstacking unit
② Stacking unit	⑤ Sewing table
③ Dolly	⑥ Folding and bagging unit
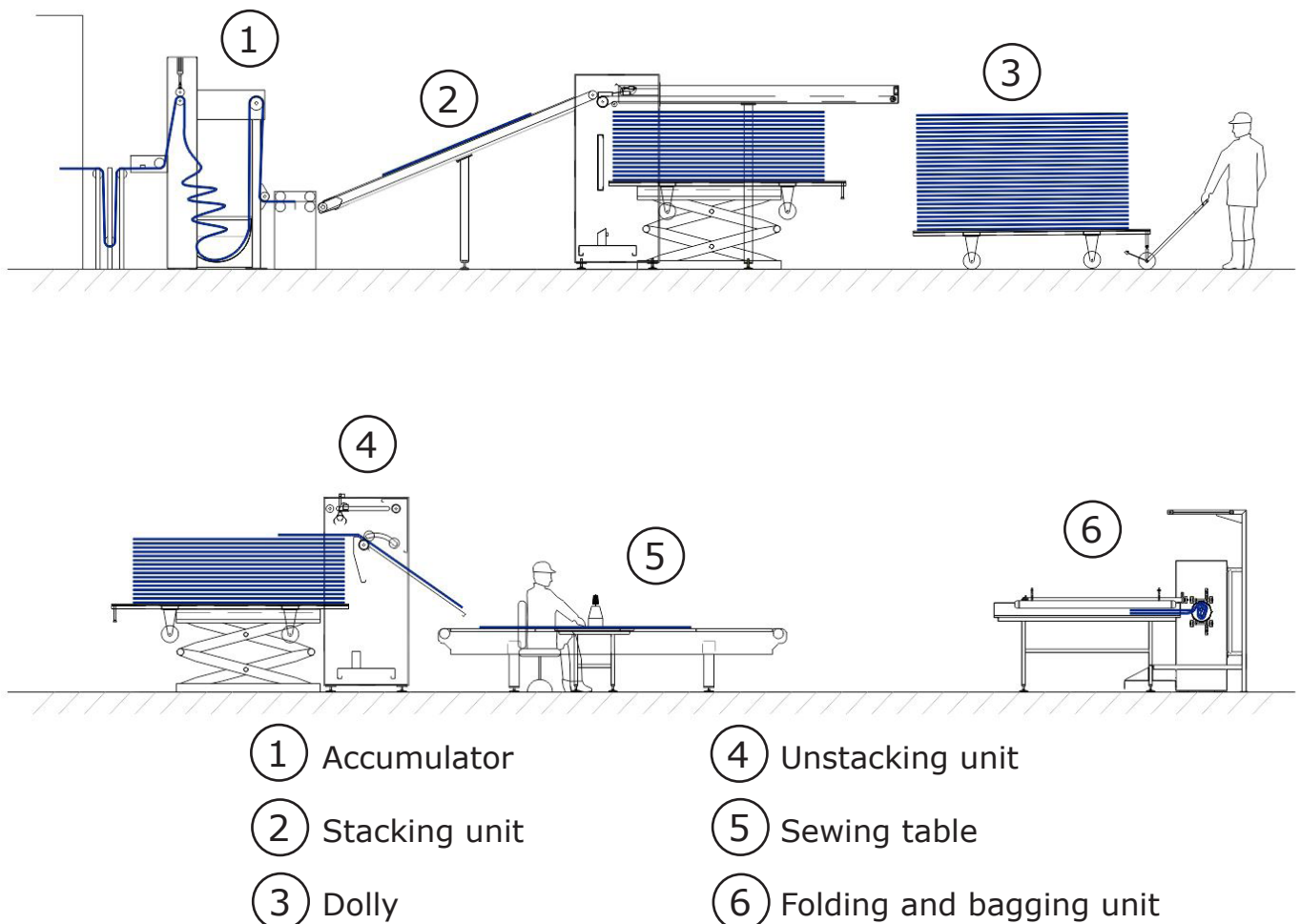
☐ ☐ ☐ Stacking unit

The stacking unit TECHNIC ONE is used for stacking products cut to length on a dolly.

Thanks to the input conveyor with adjustable height, it is possible to stack on this installation: as diverse products as quilts, mattress covers, sleeping bags, blankets, quilted pieces and others...

Working description

1. The input conveyor, placed directly behind a transverse cutting device, receives and conveys the cut pieces to the gripping position. The clamps are closing in contact with the product to then lift and carry it at high speed.

2. The clamps opening and the downward movement of the lifting platform are synchronized in such a way that the product is deposited ideally on the stack.

3. The lift table returns in removal position by pressing the end of the product against the maintenance hatch. On this time, the clamps are being repositioned in receiving position.

4. An acoustic signal indicates to the operator that the lifting table is at its lowest point (the dolly is full) and that it must be evacuated and replaced by an empty dolly.
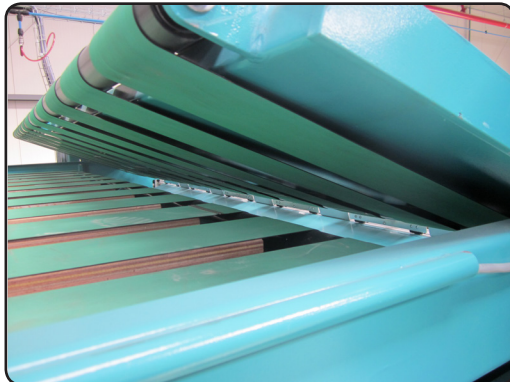
☐ ☐ ☐ Stacking unit

Specific configurations

dual input conveyor

To accelerate the stacking rate, the input conveyor can be doubled in order to be able to enjoy the time of clamps movements to prepare two products taking, or have a buffer zone to be able to prepare in hidden time the next product to be stacked.

Upper conveyor

For the stack of products which the end tends to fall back, an upper conveyor can be installed on top of the input conveyor to guide the product under the clamps.

Technical data of the stacking unit

Product dimension :

MODEL	CLAMPS NBR	PRODUCT LENGHT	PRODUCT WIDTH
Technic-One E-2200	3	60 to 220cm	60 to 220cm
Technic-One E-2500	4	100 to 250cm	100 to 250cm
Technic-One E-2800	5	100 to 280cm	100 to 280cm

Production capacity :   Around 300 cycles/h (100% theorical production)

Stack height :   Around 170cm

Unstacking unit / sewing table

The unstacking unit TECHNIC ONE is used for unstacking and sending to the sewing table as diverse products as quilts, mattress covers, sleeping bags, blankets, quilted pieces and others...

Combined with the unstacking unit, the sewing table achieves optimum performance, maximum security and a guaranteed user comfort.

At the request of the operator, the product is removed from the stack by the unstacker and sent to the sewing table. Thanks to the two conveyor belts, it provides easy handling.

Unstacking unit / sewing table
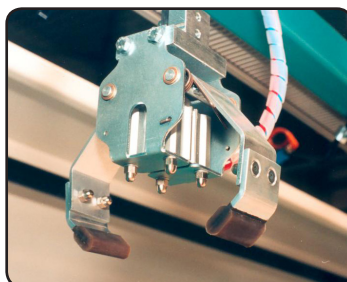
Working description of the unstacker

1. Positioning of the dolly on the lifting unit (in low position), localization thereon

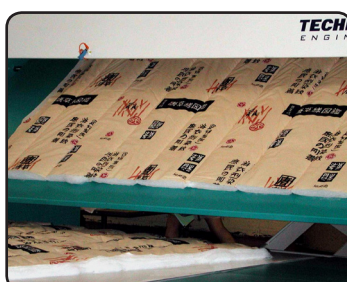2. Selection of the format to unstack on the display

3. Call from the operator by pulsing on a pedal under the sewing machine

4. Rise of the lift table with open clamps and waiting

5. Clamps closing and side clearance of the product. It is deposited between the drive rollers to be positioned in waiting on the inclined conveyor
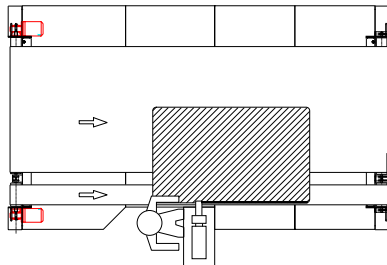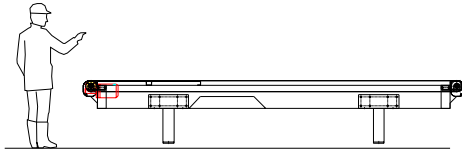

6. After a second call by the operator (via pedal), the product shift to the sewing table. The product is driven by the two conveyor belts, the sewing cycle can begin
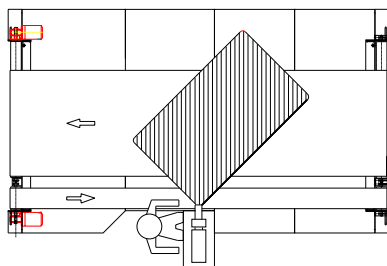
Unstacking unit / sewing table

Working description of the sewing table

1. The product, brought by the two conveyor belts, is sewed from one end. Both belts work in the same direction, synchronizing the product with the sewing advance

2. When the stitching reaches a corner of the product, the operator activate a reversal of the big belt, causing a rotation of the product. The sewing of the corner is facilitated by this rotation
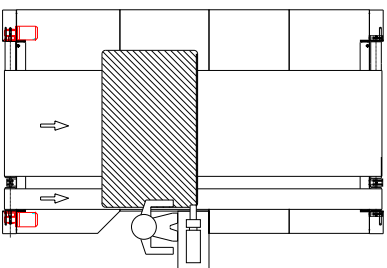
3. Once the corner is sewed, the operator activate the inversion of the upper belt and begins sewing the short length. The rotation operation relieves the operator and accelerates the production rate
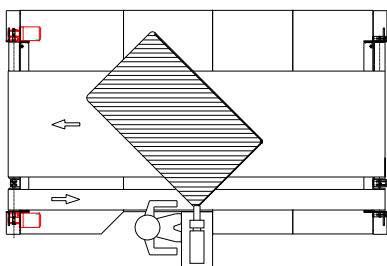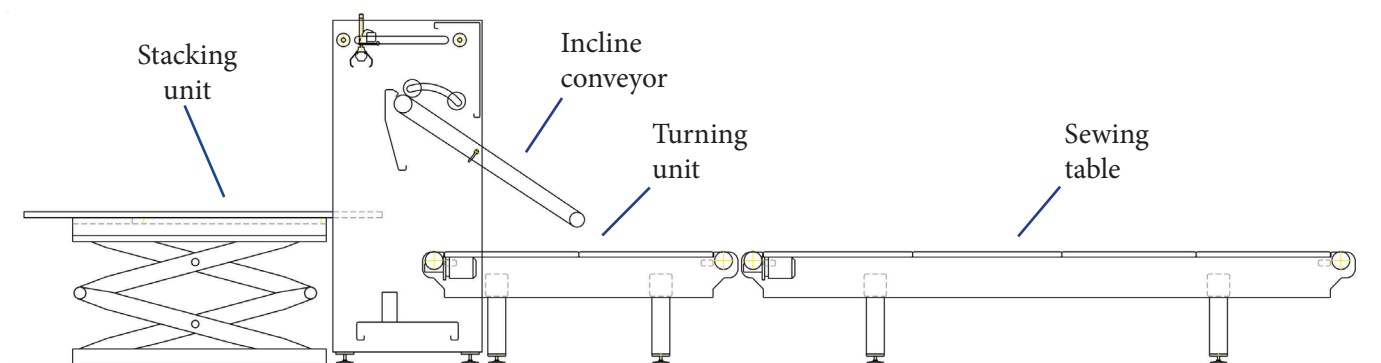
4. Steps 2 and 3 are set again to complete the execution of the planking

▪ ▪ □ Unstacking unit / sewing table

Specific configuration

The unstacking unit D/TC DUO has an additional module called turning unit and is installed between the incline conveyor of the unstacking unit and the sewing table. This model is used in the case of double padded.

The operating principle is identical to the standard unit, except that after the first call from the operator, the product is dropped on the turning table that turns into reverse way. The first layer is thus turned on the table. The product is brought returned to the standby position under the incline conveyor.

Thus, during the second call from the operator, the two products are brought simultaneously, the speeds of the three conveyors (inclined conveyor, and reversal of the sewing table) are adapted to perform an optimum stacking of two layers.

The operator may, without further intervention, perform taping the two layers.

Technical data of the unstacking unit / sewing table

Product dimension :

MODEL	CLAMPS NBR	PRODUCT LENGTH	PRODUCT WIDTH
Technic-One D/TC-2200	4	60 to 220cm	60 to 220cm
Technic-One D/TC-2500	5	100 to 250cm	100 to 250cm
Technic-One D/TC-2800	6	100 to 280cm	100 to 280cm

Production capacity :   Around 60 cycles/h (100% theorical production) with a dimension of 220x200 cm

Stack height :   Around 170cm

Vacuum cleaner

The vacuum cleaner TECHNIC ONE A1200 is used to collect the waste created during cutting or sewing operation.

Yarn-cutter

The yarn-cutter unit TECHNIC ONE is used to eliminate the sewing yarn exceeding duvets, blankets, mattress topper ...

Accumulators

Depending on productivity requirements in your line, the cutting station is often a bottleneck that forces slow the upstream rate.
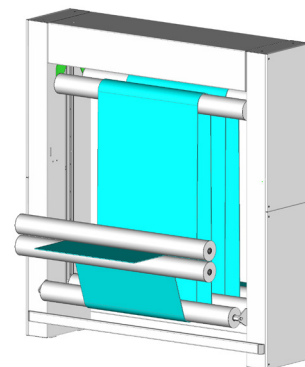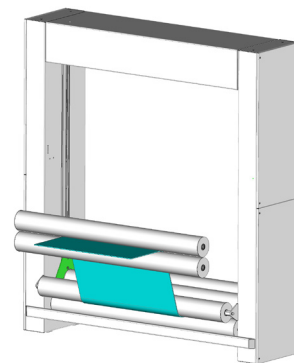The accumulator overcomes the problem by creating a buffer zone to then feed the cutting machine according to its rate of production.

The roller accumulator

This accumulator creates a buffer zone by successive winds of the product.
It is distinguished by ease of product insertion in the machine. Indeed, when the dolly is at the lowest point, just move the product through the accumulator, no winding is to achieve.
Once in operation, the product is taken in «fork» between the three fixed and two movable rollers. Thus, the product is kept under tension.

The J-Box accumulator

Counter to the previous one, this accumulator creates a buffer zone without tension of the product. This one is accumulated in a tank to then feed the cutting machine according to its rate of production.
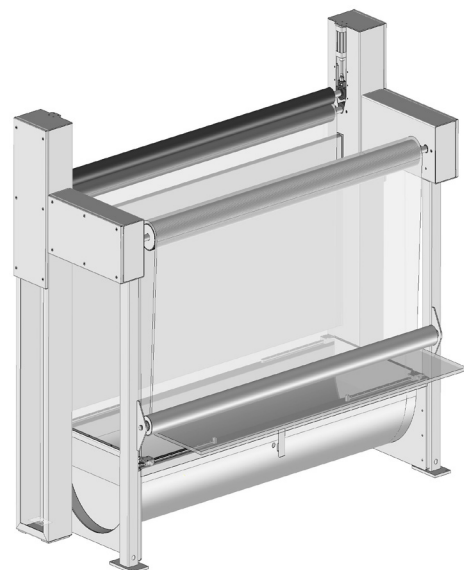
Technical data of the accumulators

Maximum width of product :   Under request

Maximum length of accumulation :   Under request

■ ■ □ Furling of quilts

The furling of quilts TECHNIC ONE is used for the conditioning of quilts, comforters, sleeping bags and other products by winding and bagging.

The unit will improve the quality and packaging rate by removing a significant number of steps performed manually (winding, positioning of the cover ...) and facilitating the manual operations still required (threading of the cover, evacuation the packaged product ...)

The furling also compact the product and reduce the packaging volume around 40%.

Technical data of the furling of quilts

Product dimension :

MODEL	PRODUCT LENGTH	PRODUCT WIDTH
Technic-One QR2600	100 to 280cm	100 to 280cm

Production capacity :	Around 80-100 cycles/h - 1 operator
Quilts size :	140x200cm, 200x200cm, 240x220cm, 260x240cm
Conformers :	Depending on product characteristic and the cover size

Furling of quilts

Working description

1. The products presented flat at the entrance of the unit are folded manually in the lengthwise

2. The operator slides the product between the fingers of the motorized clamp and start by button-pushed the winding cycle

3. The half-shells of conformer are closed on the winding zone. The rotation of clamp is activated and the guide tube goes down on the quilt which starts the winding cycle.
The guide tube also ensures a pressure and therefore a tension on the product during winding

4. Complete winding of the quilt in the conformer making easy the positionning of the cover

5. In hidden time, the operator positions the insert and grabs the cover.
At the end of the winding, he can therefore thread the cover to the stop of the conformer

6. The operator closes the cover and finishes the cycle

Post folder quilts

The Post folder quilts TECHNIC ONE is used for the conditioning of quilts, comforters, sleeping bags and other products by compressing and bagging.

Before placing the quilt in its bag, it is previously bent by an operator and arranged on two pivoting supports of the machine.

A unit, consisting of a rod and a push cylinder, goes down vertically in the middle of the quilt to bend it a last time in half.

Both pivoting supports are synchronized with the lowering of the rod so as to maintain the quilt and compressed it.

Once folded and compressed, the operator places a bag between the two pivoting supports. The quilt is then pushed by a cylinder in the bag.

Technical data of the Post folder quilts

Product dimension :

MODEL	PRODUCT LENGTH	PRODUCT WIDTH
Technic-One PF	100 to 280cm	100 to 280cm

Production capacity :   Around 80-100 cycles/h - 1 operator

Quilt size :   140x200cm, 200x200cm, 240x220cm, 260x240cm

■ ■ □ Pillow press unit

The pillow press TECHNIC ONE is used for pillow bagging, by reducing the volume thereon to the maximum.

Previously placed in the bag, with leading edge opened, the pillow is inserted into the machine.

Firstly, a press evacuates the air contained in the bag and reduced the volume of the pillow.

Once pressed, the main edge is welded through two heating elements, one fixed, the other movable.

The bag is then evacuated at the rear of the machine by a conveyor belt.

The advantages of this machine are numerous:

- Quick and efficient operation

- Space-saving storage and transportation

- Single module, compact, easy to integrate and movable

Technical data of the pillow press unit

Maximum pillow dimension :   90x90cm

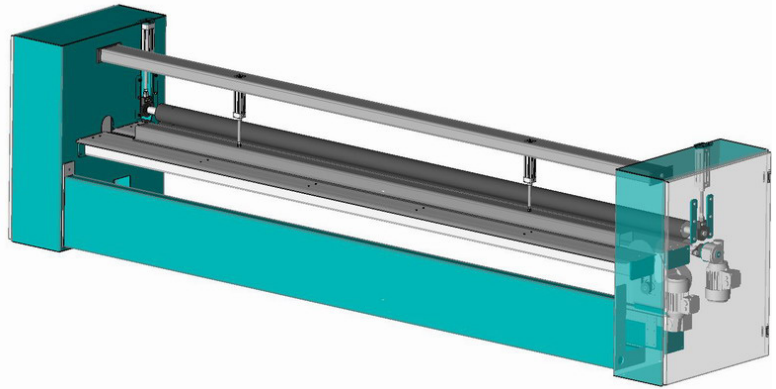Production capacity :   Around 600 cycles/h - 1 operator

Cutting unit

The cutting unit TECHNIC ONE is used for the transversal cutting of thin or thick products after a carding machine or a stitcher.

Can be cut on this installation: as diverse products as quilts, mattress covers, blankets...

The type and size of the blade can be adjusted depending on the product to be cut.

Technical data of the cutting unit

Product dimension :

MODEL	PRODUCT LENGTH	PRODUCT WIDTH
Technic-One CP-2200	60 to 220cm	60 to 220cm
Technic-One CP-2500	100 to 250cm	100 to 250cm
Technic-One CP-2800	100 to 280cm	100 to 280cm
Technic-One CP-3200	100 to 320cm	100 to 320cm

Production capacity :   Around 240 cycles/h (100% theorical production) with a length of 240cm

Laundry clothes folding line

The laundry folding line TECHNIC ONE permits bending continuously from all types of products previously dried and then placed on a hanger conveyor. The line detects the types of products (overalls, apron, jacket, pants ...) and automatically adjusts the operations to perform for a correct folding.

The advantage is to treat on the same line all products from a single client without any sorting.

A program can also be used to select a particular type of clothing to increase the rate or force a specific folding.
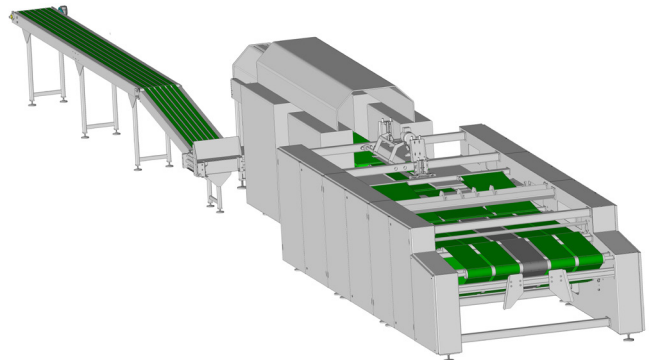
Working description

1. The operator drops the clothe on the introduction and a leg detection occurs. The folding cycle to the specific leg folding unit can start

2. the specific leg folding unit make a fold on the major products (overalls, apron) and automatically bypass small products

3. In the case where sleeves are detected, they are folded perpendicular to the clothe body and a width detection of the product is performed to validate the butterfly folding

4. According to the detected length, the product is once or twice more folded lengthwise

5. The products are then stacked and disposed to the lock according to the request (stack height)

6. A 90° return evacuates the stacks on juxtaposing conveyor.
Clothing stacks are ready to be packaged
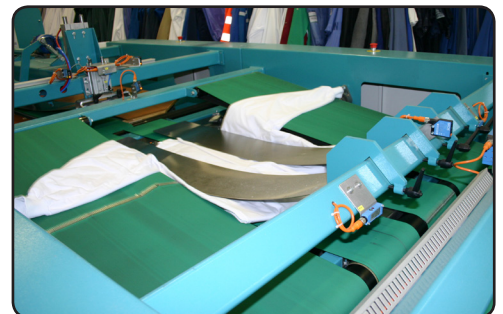
Sheets folder

Adaptable line from standard TECHNIC ONE modules

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