



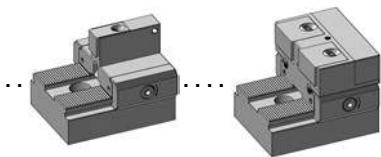
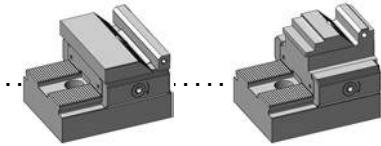
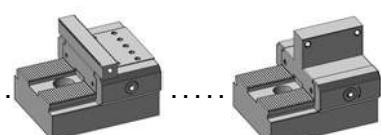
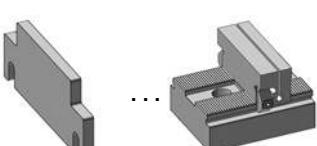
# powerCLAMP & 5axes



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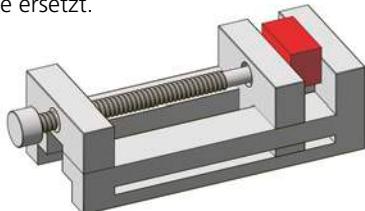
powerCLAMP

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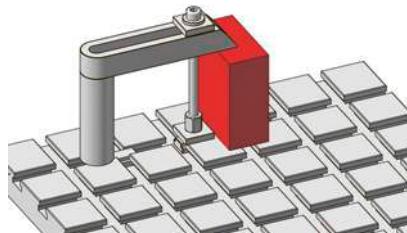
# Warum modular Spannen Why modular workholding

**powerCLAMP**

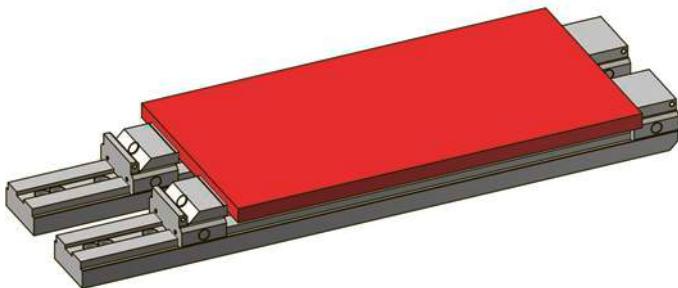
Der klassische Maschinenschraubstock ist für gewisse Zerspanungsarbeiten vielfach die richtige Wahl, obwohl man einen Spannstock ohne Mehrkosten auch mit einem Modularsystem aufbauen kann. Er wird durch die erhöhten Anforderungen an die Prozessoptimalisierung immer mehr durch modulare Spannsysteme ersetzt.



Spannen mit dem Spannstock  
Clamping with the machine vise

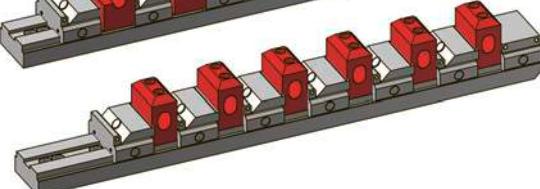
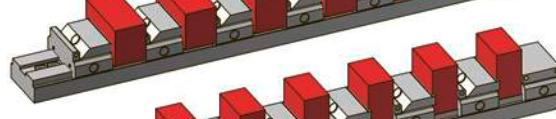


Spannen mit Spannpratzen  
Clamps in operation



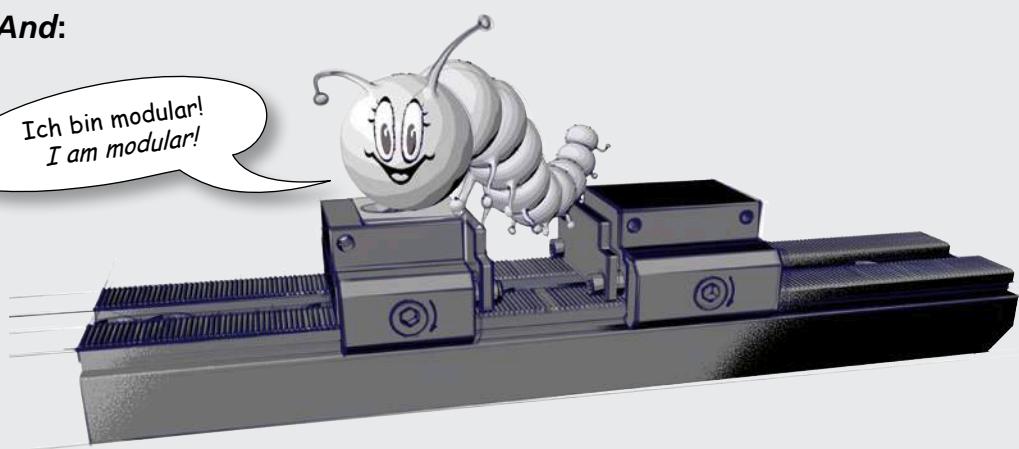
The classic machine vise is still a good option, on the other hand can you set up the same with a modular clamp system without higher costs! Because of always increasing demand and high competition you see more modular systems at endusers places, to keep up with productivity.

With modular clamp system you achieve a high flexibility and also grosser Spanndichte erreicht. Dies high density of holding workpieces. führt auch bei der Einzelteil- und Kleinserienfertigung zur Senkung der kostenintensiven Nebenzeiten, This brings you big advantages also by producing single parts or small quantities! Compared to dedicated fixtures you can use this vises for Wertschöpfungskette darstellen. Ge-



## Ausserdem / And:

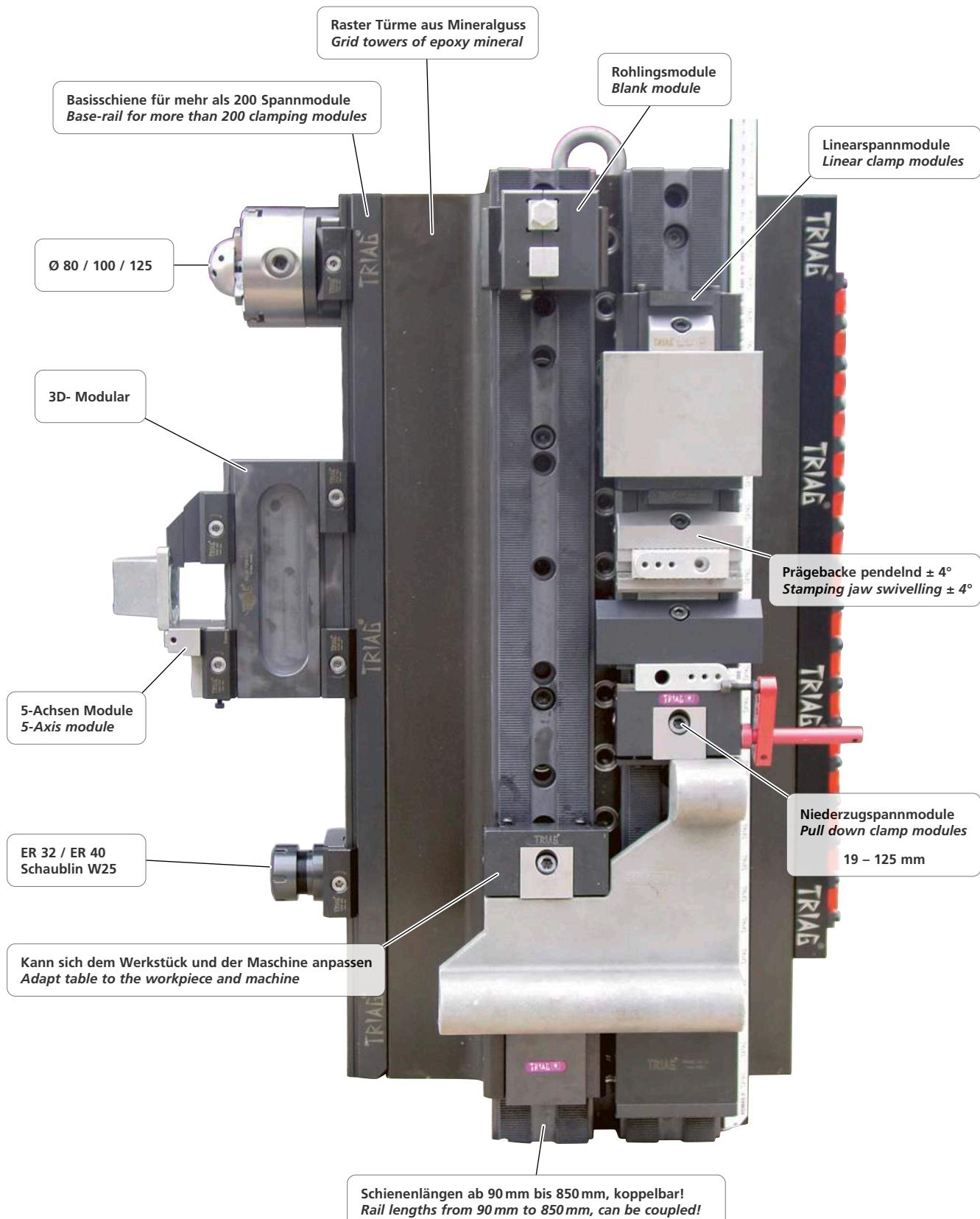
Ich bin modular!  
I am modular!



# Die Idee des modularen Spannens

## The idea of modular workholding

**powerCLAMP**



**Modulares Spannen =**

**Einzelspannung, Mehrfachspannung sowie auch das Spannen von kleinen, grossen oder unformigen Werkstücken.  
Chaotisches, gemischtes spannen!**

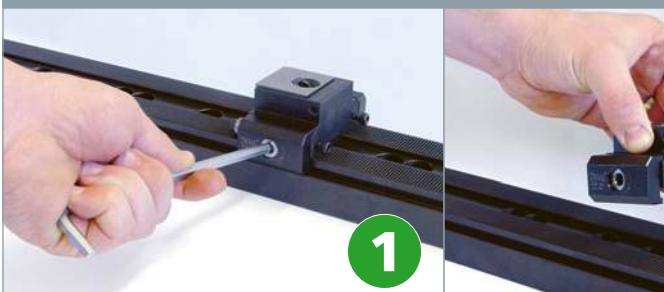
**Modular workholding =**

**Single clamping, multiple clamping small parts and large workpieces can be clamped, also shaped parts are possible to clamp.  
Mixed setups in chaotical clamp situation!**

Mit dem Spannsystem Power Clamp hat die Triag International ein Produkt entwickelt, welches die Vorteile des klassischen Maschinenschraubstocks mit der Modularität eines innovativen Spannsystems in einer optimalen Art und Weise kombiniert und eine enorme Vielseitigkeit bietet. Einfache Spannungen sind genauso möglich wie Mehrfachspannungen und Spannungen von schwierigen Werkstücken.

With Power Clamp Triag has developed a produkt which includes the advantages of a classical vise and has the features of an advanced modular system. It can be used to clamp single parts (small and big) or multiple workholding as well as difficult to clamp parts.

## Schnelligkeit / Quickness



**Eine Schraube lösen**  
*Loosen a screw*



**Abheben und neu platzieren**  
*lift and change position*



**Eine Schraube anziehen**  
*fasten one screw*



Mit nur einer Schraubspindel, welche von beiden Seiten her zugänglich ist, werden die positionierten Module in einem patentierten Pratzensystem zuverlässig geklemmt.

Die Module können an jeder Stelle der Trägerschienen aufgesetzt werden. Verglichen mit dem üblichen axialen Aufschieben beschleunigt das den Aufbau von Mehrfachspannern und ermöglicht, diese Spannsysteme auch bei begengten Platzverhältnissen komfortabel zu rüsten.

With only one bolt screw (left and right hand thread) the clamp modules can be lifted and change position in 2mm steps.

This patented system is unique and fast, as well as accurate.



**Drehmoment beachten**  
*Observe the torque*



## Geringes Gewicht Low weight



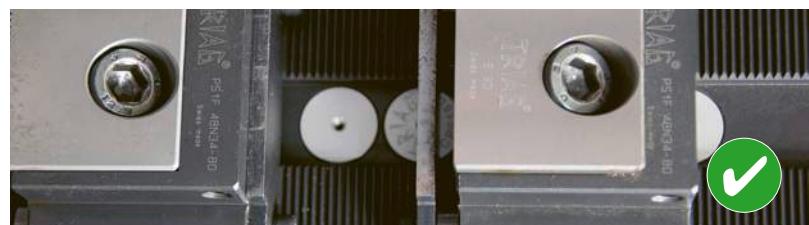
= Einfaches Handling  
= Easy handling

Das Modul kann mit zwei Fingern abgehoben werden.

The clamp module can be moved by two fingers.



## Einfache Reinigung Easy cleaning



Keine spänefüllenden T-Nuten (im Gegensatz zu vielen Wettbewerbsprodukten) - Basis bilden stabile, mit Teilstücken verlängerbare Trägerschienen. Sie verfügen über eine hochgenau gefräste Verzahnung.

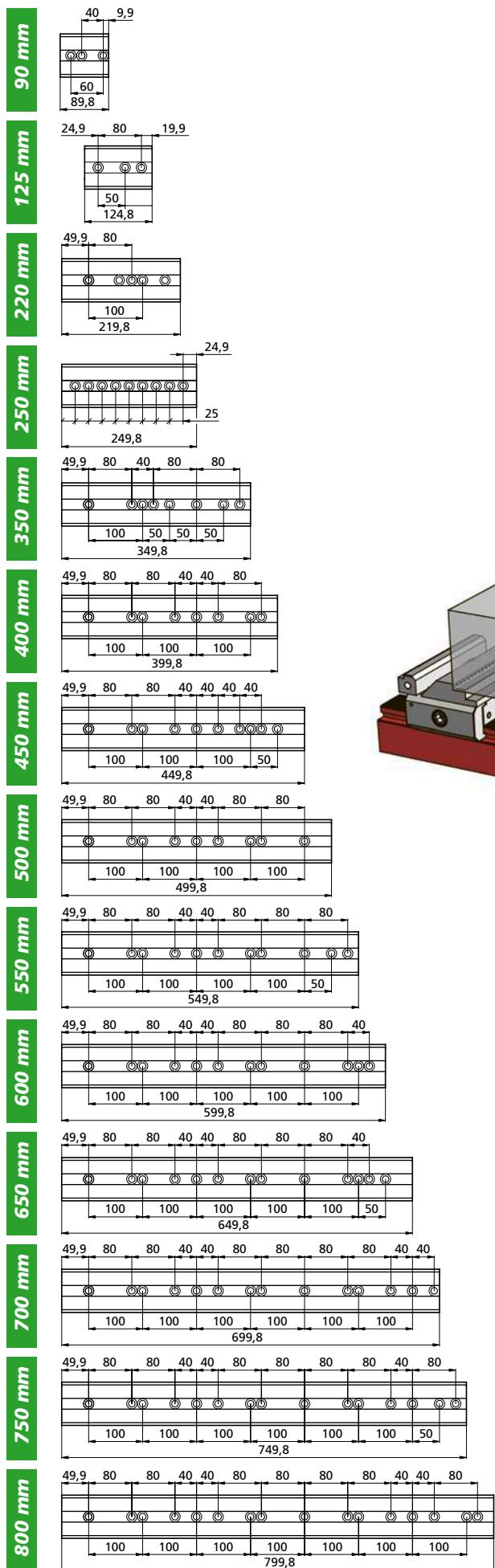
Eine Vielzahl an Spannmodulen mit unterschiedlichen Spannelementen lassen sich auf den Trägerschienen in einem Raster von 2 mm positionieren.

No chip catching T-slots (opposite of many competitors). The base rails are rigid and can be used modular in length width and hight. The serration is accurate and checked for each base rail.

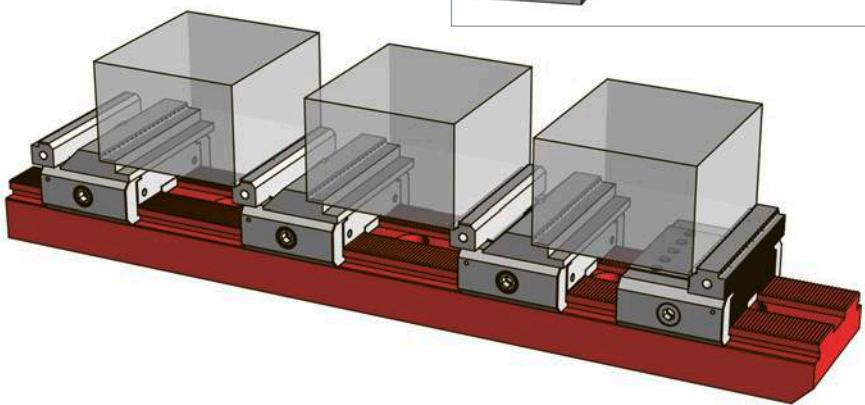
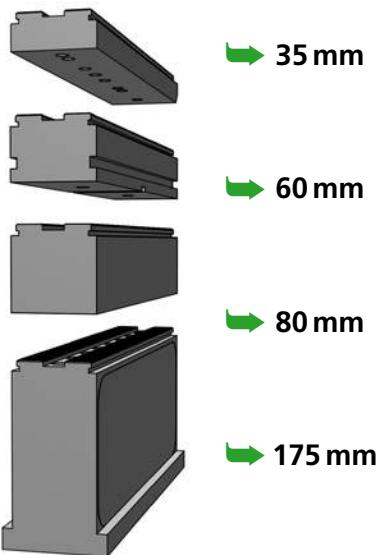
Many different clamp modules can be used on only one type base rail (step 2 mm)

# Basisschienen / Base rails

Masssystem / Measurement system = metric & inch powerCLAMP



Schienen sind in den folgenden Höhen lieferbar:  
Rails are in following ups available:



## Basisschiene

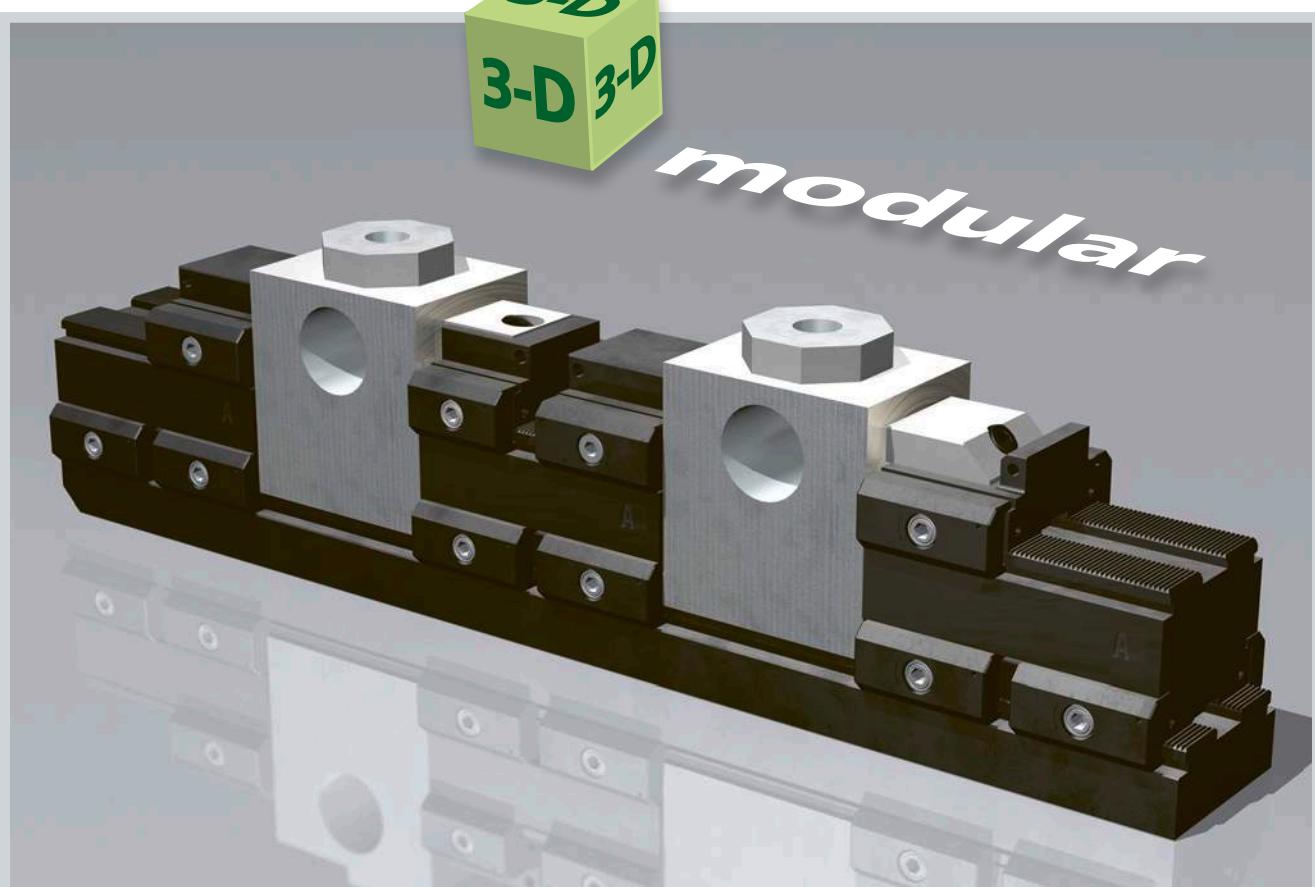
Die Basisschiene ist das Grundelement des modularen Spannsystems von Triag International und ist in den Höhen 35 mm, 60 mm, 80 mm und 175 mm verfügbar. Auf der Basisschiene werden alle Spann- und Anschlagmodule über eine Schraubspindel mit einer Haltekraft von 15.000 daN (= 15 t) befestigt. Eine schnelle und genaue Positionierung ist durch die Verzahnung (2 mm Teilung) auf der Basisschiene gewährleistet und sorgt somit für kurze Rüstzeiten.

Durch den Einsatz von Erhöhungsmodulen wird die Werkstück-Zugänglichkeit speziell bei 5-Achsenmaschinen auch mit kurzen Werkzeugaufnahmen ermöglicht. Somit ist die Maximalgrösse der Werkstücke nur noch durch die Maschinengrösse eingeschränkt. Die Basisschiene dient in diesem Zusammenhang als mechanisches Nullpunktssystem.

Die Basisschienen sind für eine schnelle Aufspannung auf den gängigsten Palettenystemen konzipiert. Aus Gewichtsgründen können auch die eigens entwickelten Spanntürme aus Mineralguss eingesetzt werden. Diese verfügen über eine so hohe Vibrationsdämpfung, dass dadurch im oberen Bereich der Türme sehr präzise gearbeitet und dabei eine exzellente Oberflächengüte erreicht werden kann.

# Basisschienen / Base rails

Masssystem / Measurement system = metric & inch powerCLAMP



Mit verschiedenen Basismodulen kann man auch die 3. Dimension Modular gestalten! Mit der Höhe von 60 mm kann die Modulhöhe auf 94 respektive auf 109 mm erhöht werden (34/49 Modulhöhe). Die Länge von 130 mm erlaubt es jeweils ein Spannmodul und ein Anschlagmodul zu platzieren.

There are different sizes of riser blocks to increase the height of the clamp modules. This way you can get from 34 to a clamp height of 94 or 109 mm depending on the clamp module you choose. This riser blocks makes the power clamp system 3D-modular!

**Mehr auf Seite | More on Page 48**

## Base rail

The base rail is the basic element of the Triag modular clamp system. We offer them in different lengths and heights and more than a hundred different standard clamp modules will fit onto the base rails.

Holding force which the clamp modules are clamped to the base rail is 15'000 daN (15 t). The precision serration in 2 mm pitch allows to fit the clamps fast and accurate.

All three dimension are modular! You can double or triple the length with coupling the rails or you can use them side words in a row. Also the height is modular (please see next page)



Basischienen in Zoll  
Base rails in inch



# Die Module Modules

über 200 Standard Module  
over 200 standard modules

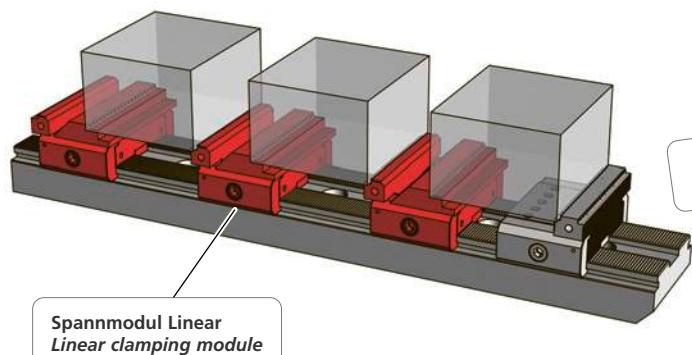
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## Das Anschlagmodul / End modules

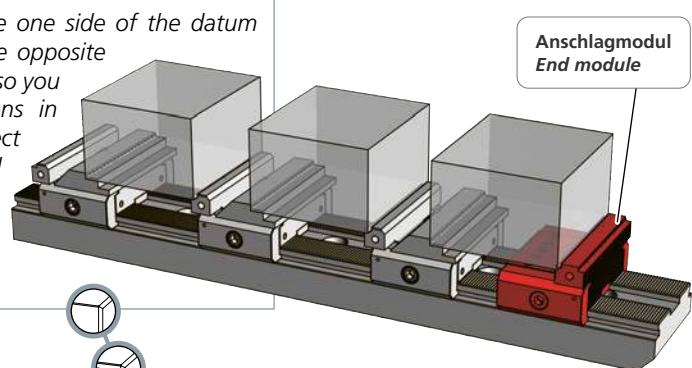
Für das Spannsystem «Power Clamp» ist in der Regel nur ein Anschlagmodul als «feste Backe» notwendig. Mittels der 2 mm Verzahnung lässt sich das Modul sehr genau auf der Basisschiene positionieren und ist mit der Schraubspindel schnell befestigt.

Für die unterschiedlichen Bearbeitungssituationen steht eine Vielzahl von Ausführungen zur Verfügung. Diese unterscheiden sich in der Breite der Backen (ab 19 mm bis max. 150 mm) als auch in der Beschaffenheit der Spannflächen (glatt, geriffelt, gerillt, hartmetallbeschichtet oder mit Prägeverzahnung, mit der direkt geprägt werden kann).

In a row of parts there is usually one end module followed by the clamp modules.  
For all the different clamp situation we offer a wide range of different end modules from 19 mm to 150 mm.  
Usually you have one side of the datum face flat and the opposite double serrated so you have two options in one. Also direct stamping end modules with a workholding step of 3 mm are available.



Spannmodul Linear  
Linear clamping module



Anschlagmodul  
End module



Verschiedene Ausführungen der Anschlagflächen!  
Different styles at grip surfaces!



Lineare Direktprägespannung  
Linear direct stamping module

## Das Spannmodul / Clamp modules

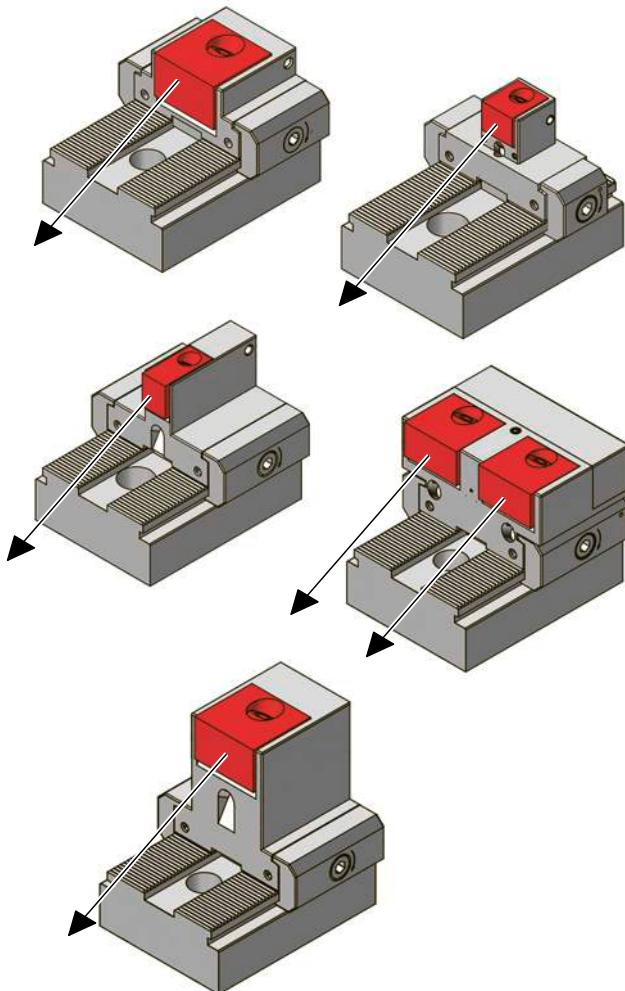
Die «beweglichen Backen» gibt es in zwei Ausführungen. Zum einen für das Niedergangspannungsysteem und zum anderen für das Linearspannungsysteem. Dabei dient das Spannmodul bei beiden Systemen wiederum als Anschlagmodul für die nächste Aufspannung.

There are mainly two different types of clamp modules. Linear and pull down jaws both with integrated datum face for the next workpiece. Datum face can normally be double serrated or flat.  
The movable jaws you can get in various versions such as hardened flat, carbide coated soft jaws double serrated, linear pull down, direct stamping dovating and more. The width of the clamps modules starts from 19 mm up to 125 mm.  
Clamping force goes to a maximum of 2800 daN (2,8t).

Bei umfangreichen Testreihen zu der Werkstückverschiebung bei einer Spannkraft von 2000 daN und einer Zerspankraft von bis zu 600 daN wurden bei der Verwendung von Prägebäckchen nur minimale Abweichungen vom Nullpunkt festgestellt. Leichte Abweichungen von der Parallelität der Werkstücke werden mit der Pendelfunktion ( $\pm 4^\circ$ ) ausgeglichen.

Innovative Lösungen gibt es auch für spezielle Spannaufgaben, wie z.B. Formbacken, Dreibacken- und Spannzangenfutter, Vakuumplatten oder Magnetspannplatten.

**Niederzugspannmodule  
Pull down clamp modules**



**Die Fakten beim Niederzugspannsystem**

Verstellbereich: 0- 4,1 mm  
Spannkraft: Bis 2'800 daN

**Vorteile beim Niederzugspannsystem:**

- Höhere Haltekräfte
- Hohe Wiederholgenauigkeit
- Optimale Spannmethode für Kleinteile
- Mit Schnellwechselbacken
- Doppelspannsystem in einer Backe zum Spannen und Bearbeiten von zwei Kleinteilen
- Mit Vorsatz als Linearspannsystem einsetzbar
- Auch Anschläge mit Niederzugeffekt erhältlich

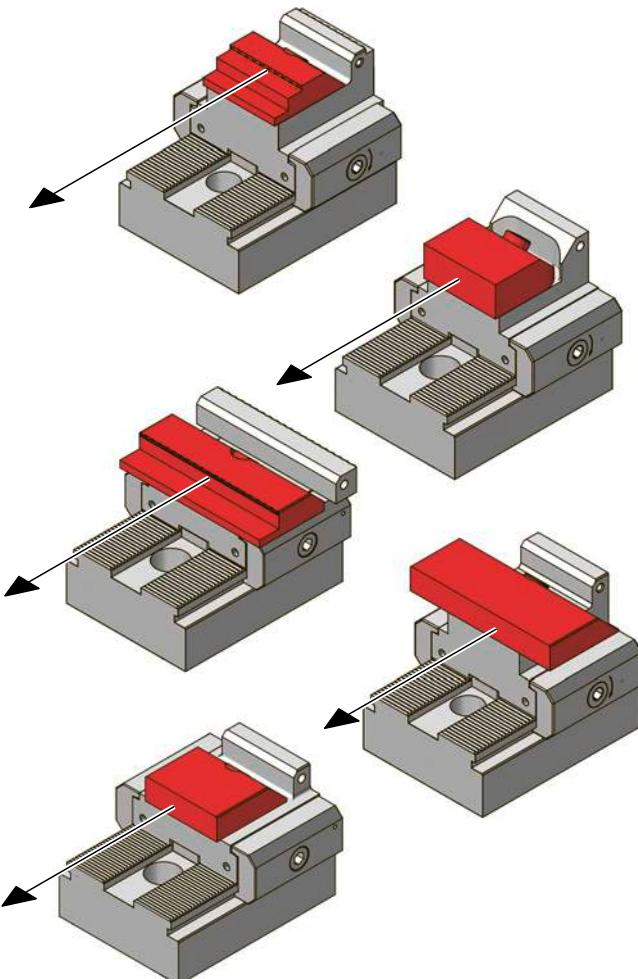
**Facts for pull down clamp modules**

Jaw range: 0- 4,1 mm  
Clamping force: up to 2'800 daN

**Advantages pull down jaws:**

- Higher holding force
- With linear adaptable jaws
- Also with pull down jaws for the stop side available
- With adapter set can be changed to linear
- Also pull down jaws for datum face

**Linearspannmodule  
Linear clamp modules**



**Die Fakten beim Linearspannsystem**

Verstellbereich: 0- 5,0 mm  
Spannkraft: Bis 1'600 daN

**Vorteile beim Linearspannsystem:**

- Spannstockähnliches Spannen
- Prozesssichere Positionierung der zweiten Aufspannung
- Gut geeignet für die Erstellung von individuellen Formbacken
- Sicherer Halt mit Prägetechnik

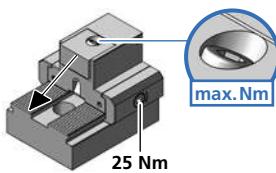
**Facts for linear clamp modules**

Jaw range: 0- 5,0 mm  
Clamping force: up to 1'600 daN

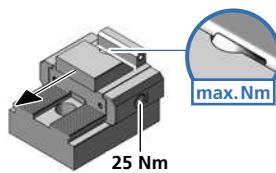
**Advantages linear jaws:**

- Similar clamp as conventional vise
- Good for shaped jaws
- Secure clamped with direct stamping jaws
- Higher accuracy

## ACHTUNG / CAUTION



Niederzug Spannmodule  
Pull adown module



Linear Spannmodule  
Linear module

| Schraube / Screw | Drehmoment / Torque |         | Spannkraft / Workholding force |       |      |
|------------------|---------------------|---------|--------------------------------|-------|------|
|                  | Nm                  | (lb-ft) | ~daN                           | ~(lb) | ~t   |
| <b>M5 + M6</b>   | 4                   | 3       | = 500                          | 1100  | 0,50 |
|                  | 5                   | 3,7     | = 580                          | 1280  | 0,58 |
|                  | 6                   | 4,4     | = 690                          | 1520  | 0,69 |
|                  | 7                   | 5,2     | = 780                          | 1720  | 0,78 |
|                  | 8                   | 5,9     | = 880                          | 1940  | 0,88 |
|                  | 9                   | 6,6     | = 980                          | 2160  | 0,98 |
| <b>M6</b>        | 10                  | 7,4     | = 1020                         | 2250  | 1,02 |
|                  | 12                  | 8,9     | = 1220                         | 2690  | 1,22 |
|                  | 14                  | 10,4    | = 1450                         | 3200  | 1,45 |
| <b>M8</b>        | 15                  | 11      | = 1520                         | 3350  | 1,52 |
|                  | 4                   | 3       | = 410                          | 900   | 0,41 |
|                  | 5                   | 3,7     | = 490                          | 1080  | 0,49 |
|                  | 6                   | 4,4     | = 560                          | 1230  | 0,56 |
|                  | 7                   | 5,2     | = 660                          | 1450  | 0,66 |
|                  | 8                   | 5,9     | = 730                          | 1600  | 0,73 |
|                  | 9                   | 6,6     | = 810                          | 1790  | 0,81 |
|                  | 10                  | 7,4     | = 900                          | 1980  | 0,90 |
|                  | 15                  | 11      | = 1520                         | 3350  | 1,52 |
|                  | 20                  | 14,8    | = 1810                         | 3990  | 1,81 |
| <b>M10</b>       | 25                  | 18,4    | = 2100                         | 4630  | 2,10 |
|                  | 10                  | 7,4     | = 400                          | 880   | 0,40 |
|                  | 20                  | 14,8    | = 1400                         | 3090  | 1,40 |
|                  | 30                  | 22,1    | = 2000                         | 4410  | 2,00 |
|                  | 40                  | 29,5    | = 2800                         | 6170  | 2,80 |

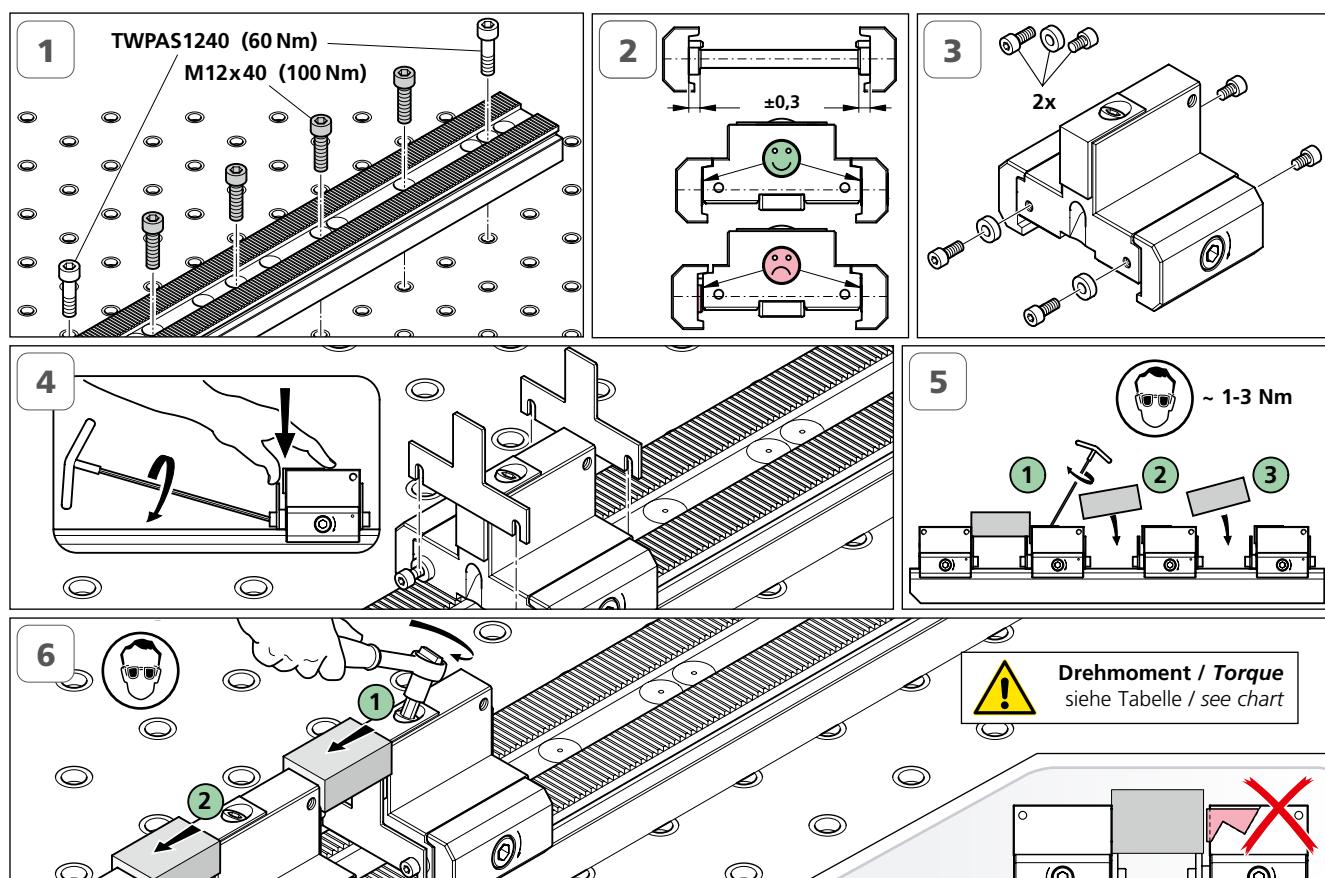
| Schraube / Screw | Drehmoment / Torque |         | Spannkraft / Workholding force |       |     |
|------------------|---------------------|---------|--------------------------------|-------|-----|
|                  | Nm                  | (lb-ft) | ~daN                           | ~(lb) | ~t  |
| <b>M8</b>        | 10                  | 7,4     | = 400                          | 880   | 0,4 |
|                  | 20                  | 14,8    | = 800                          | 1760  | 0,8 |
|                  | 30                  | 22,2    | = 1200                         | 2650  | 1,2 |
|                  | 40                  | 29,6    | = 1600                         | 3530  | 1,6 |

**WICHTIG:** Die angegebenen Drehmomente sind die absoluten Maximalwerte. Über die Spannkräfte geben die Tabellen Auskunft.

**IMPORTANT:** The torque numbers specified represent the absolute maximum. The table at the bottom of this page provides further information on the workholding forces.



Lubricate clamping jaw and screw regularly with grease!



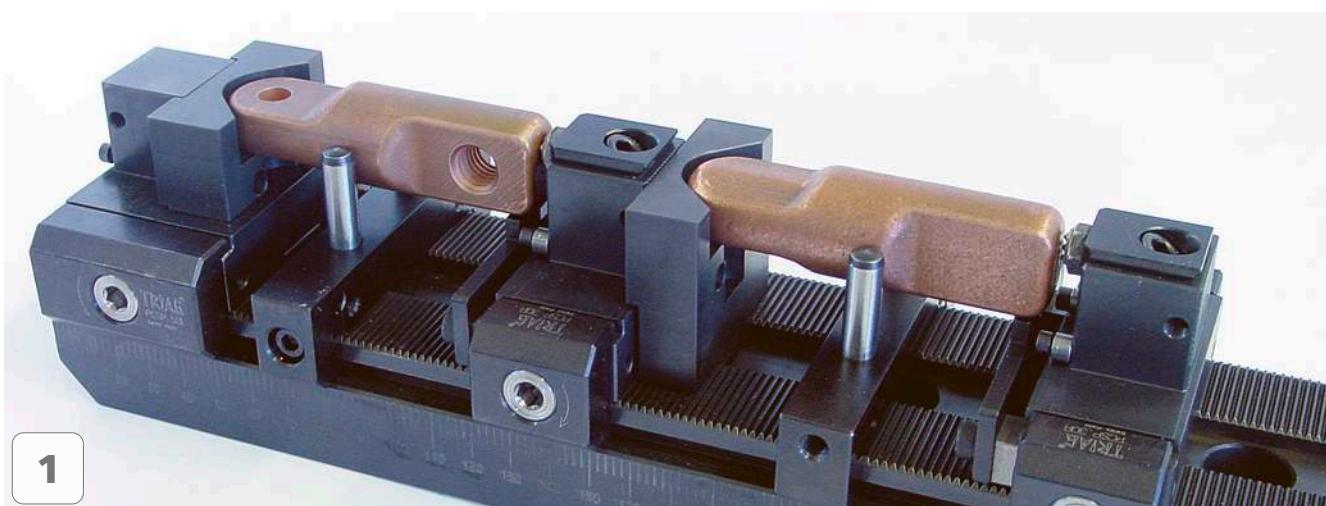
**7**

### WICHTIG:

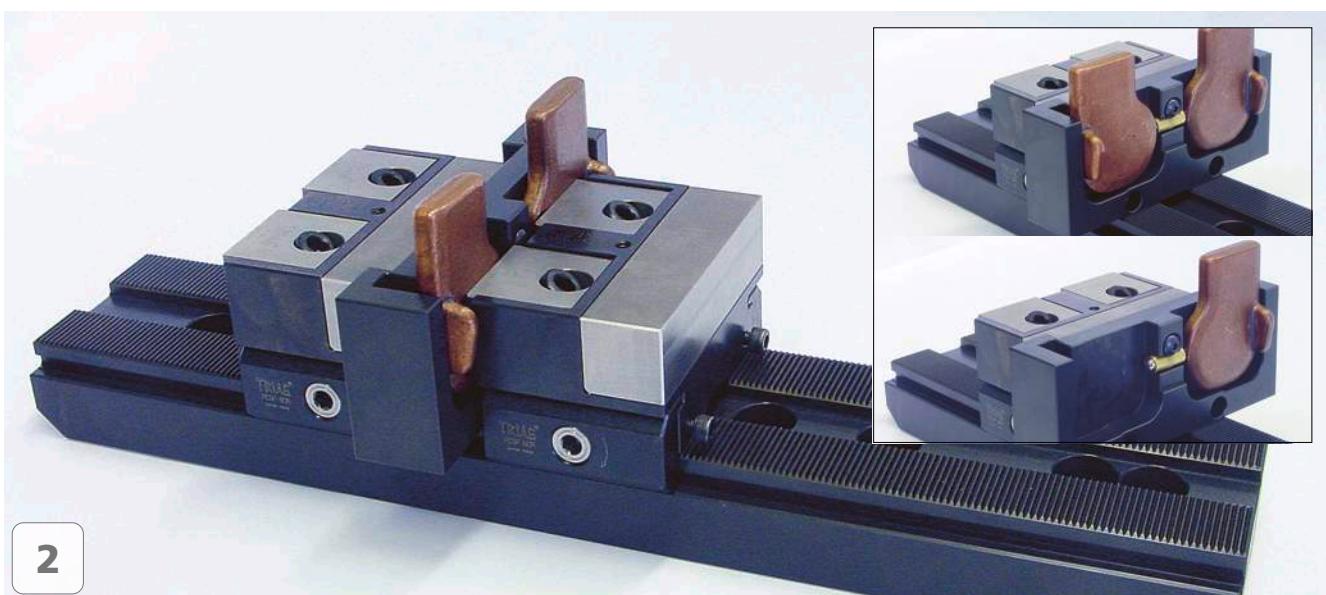
Vor dem Positionieren der Spannmodule für ein neues Werkstück, ist die **Spannbacke ganz zurück zu stellen**, dies gewährleistet eine sichere Spannung!

### IMPORTANT:

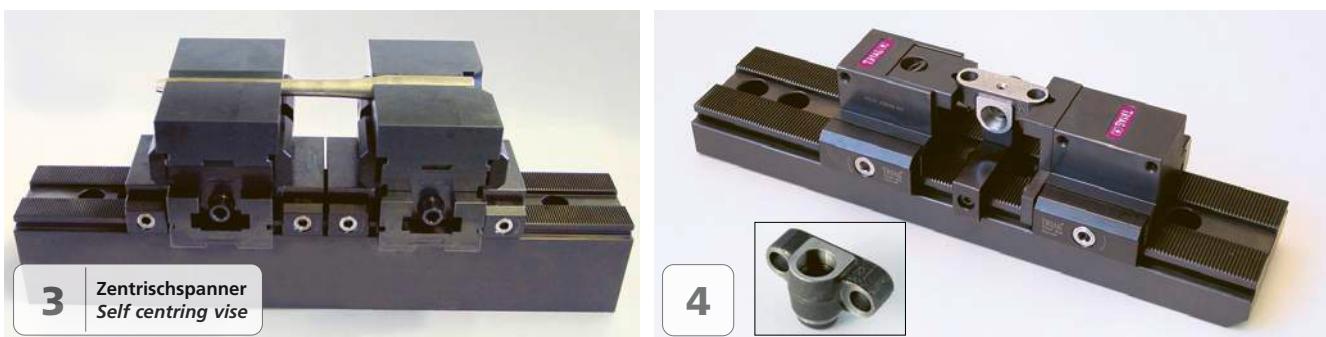
Prior to setting up a new clamping module the **clamping jaw of the vice module must be retracted all the way!** This guarantees proper clamping of the new workpiece.



1



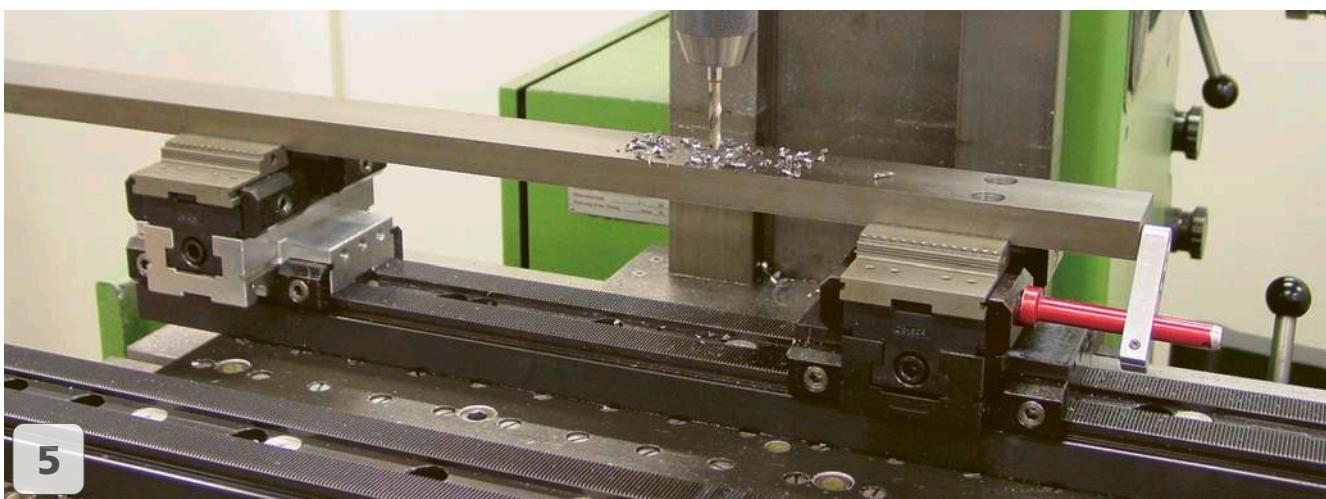
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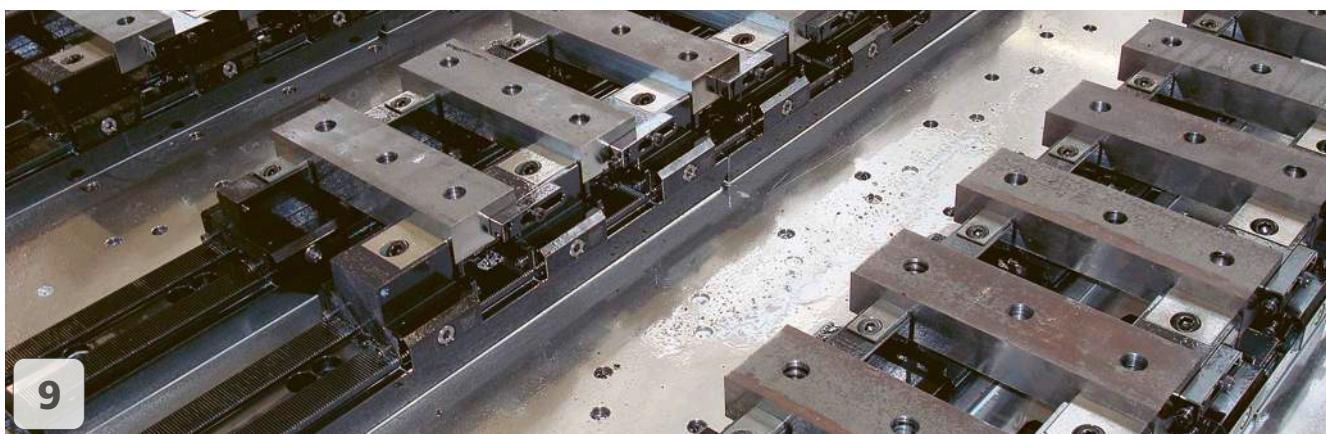
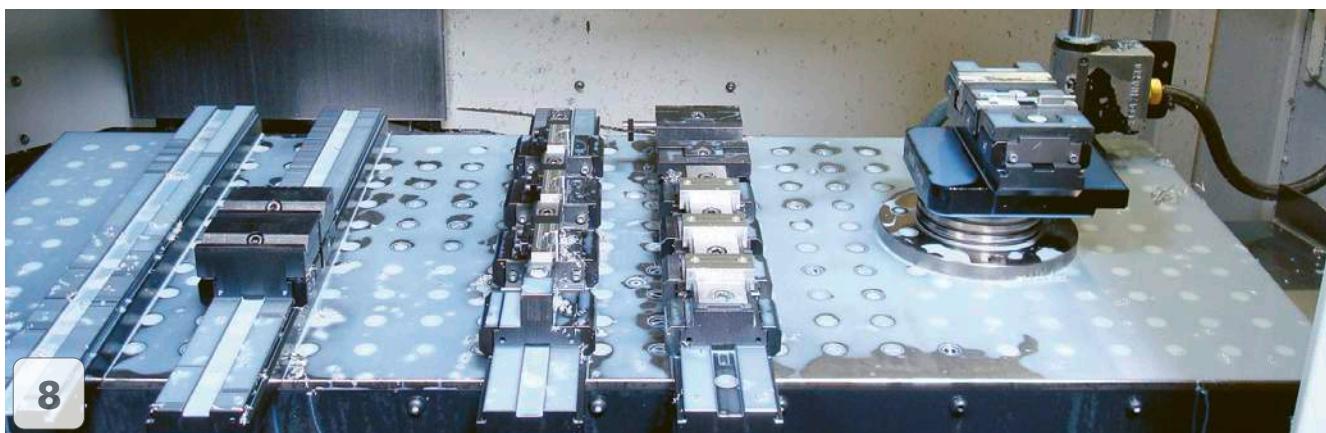
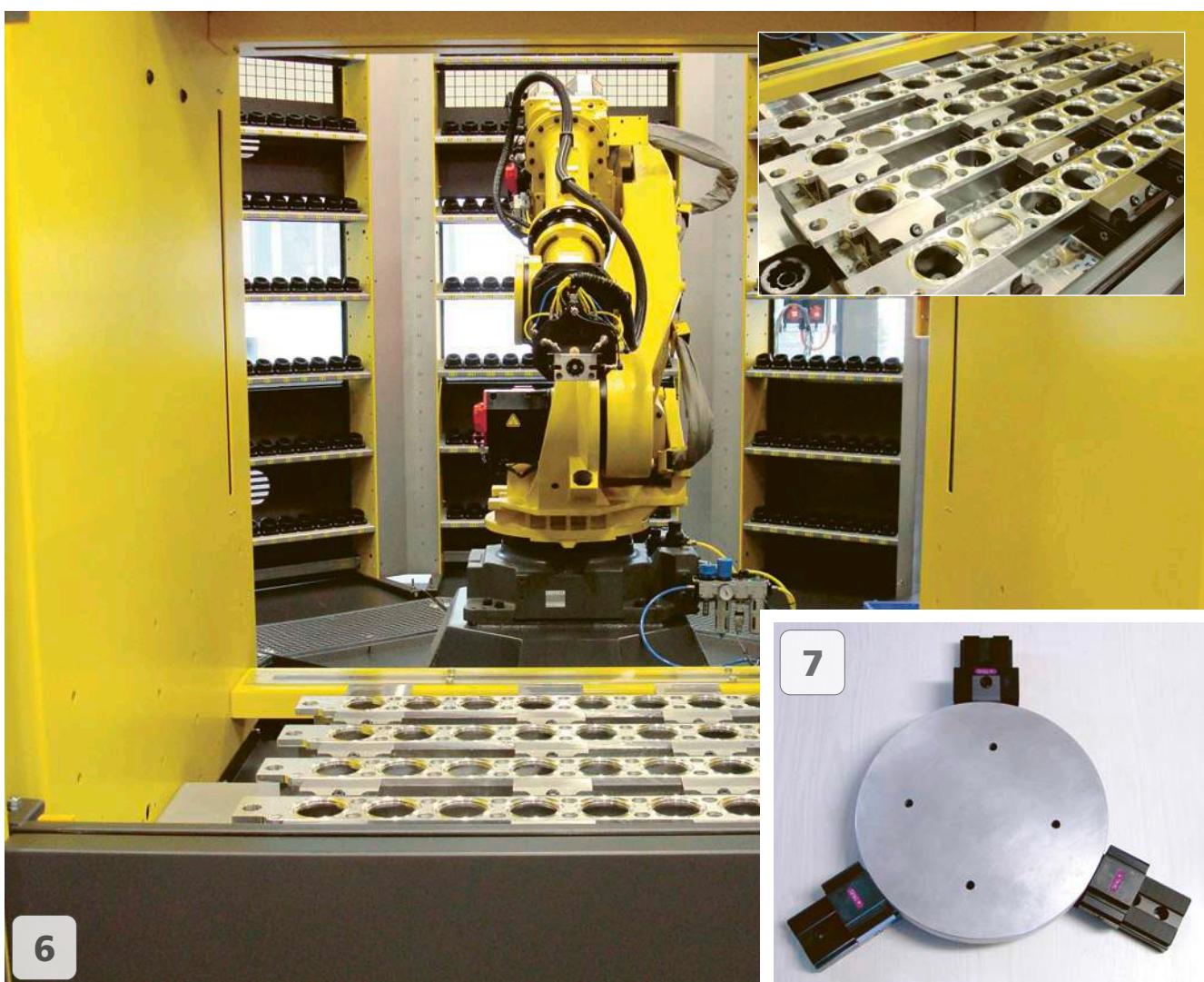
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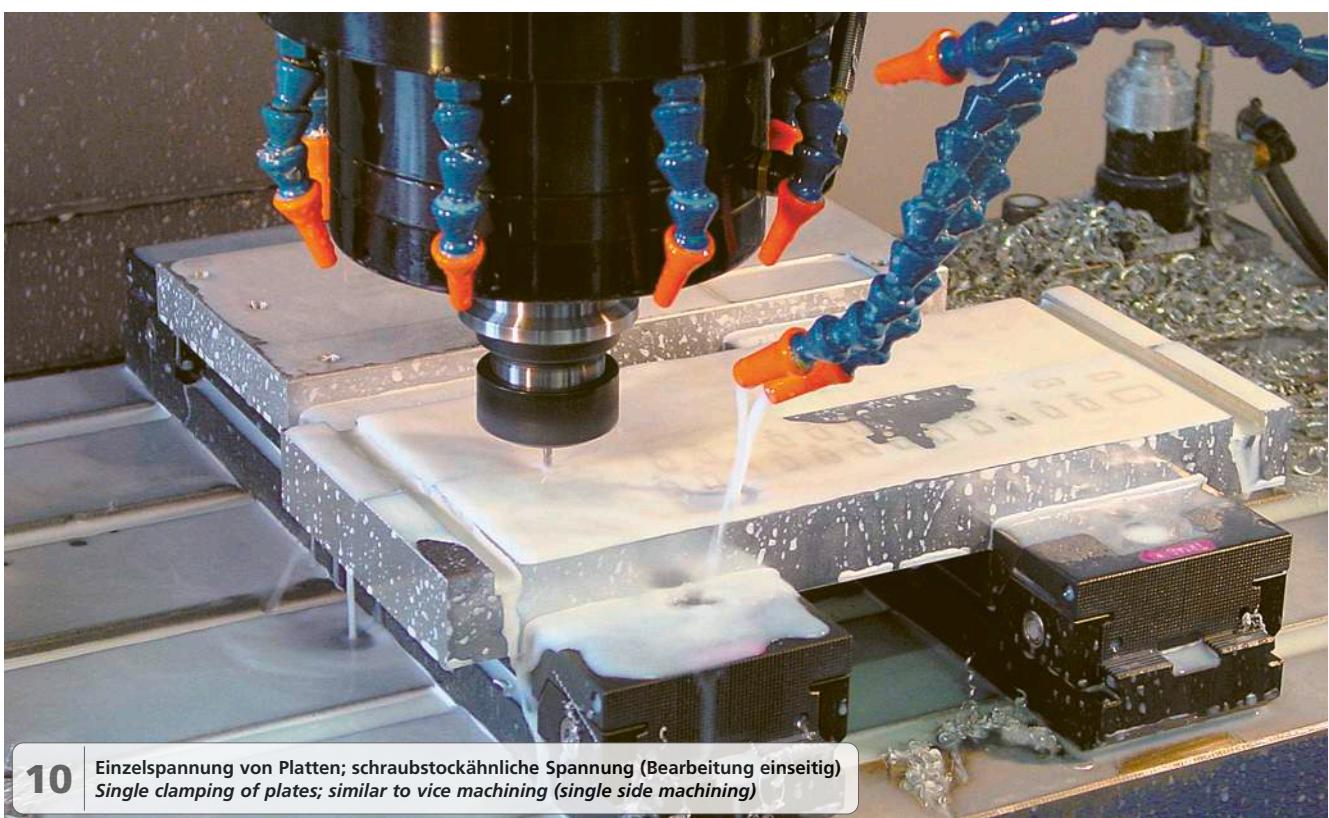
Zentrischspanner  
Self centring vise

4



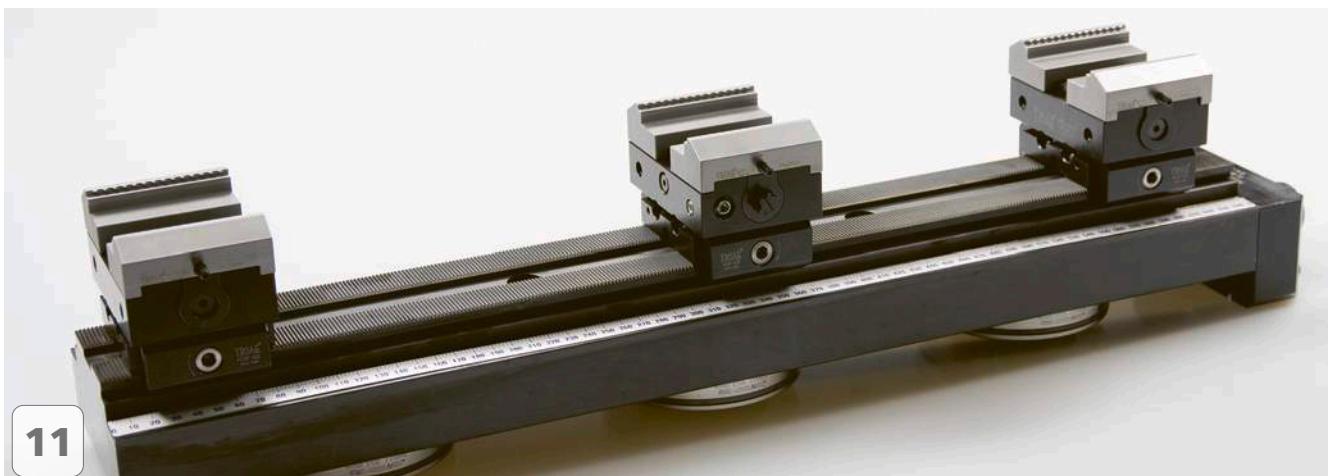
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10

**Einzelspannung von Platten; schraubstockähnliche Spannung (Bearbeitung einseitig)**  
***Single clamping of plates; similar to vice machining (single side machining)***

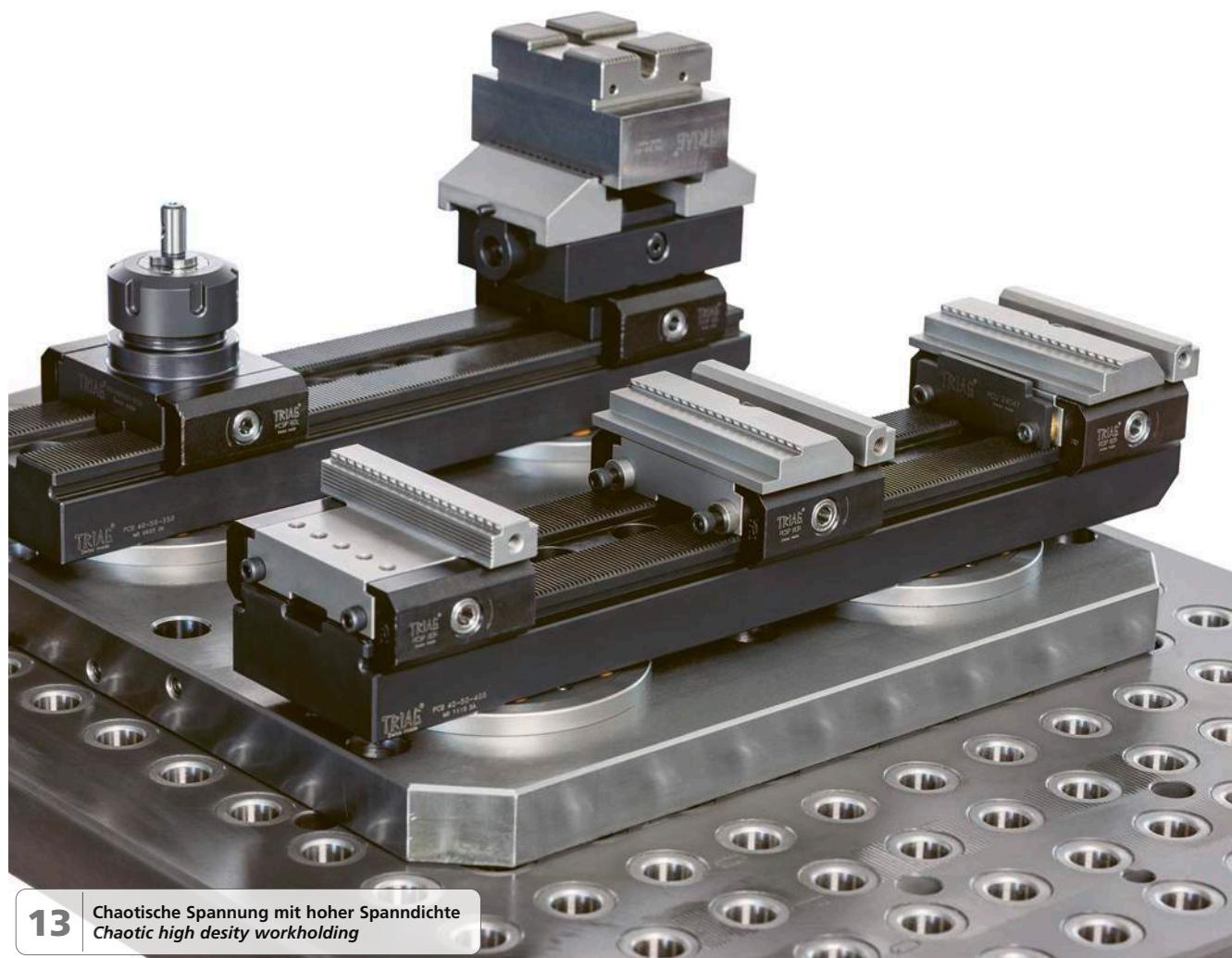


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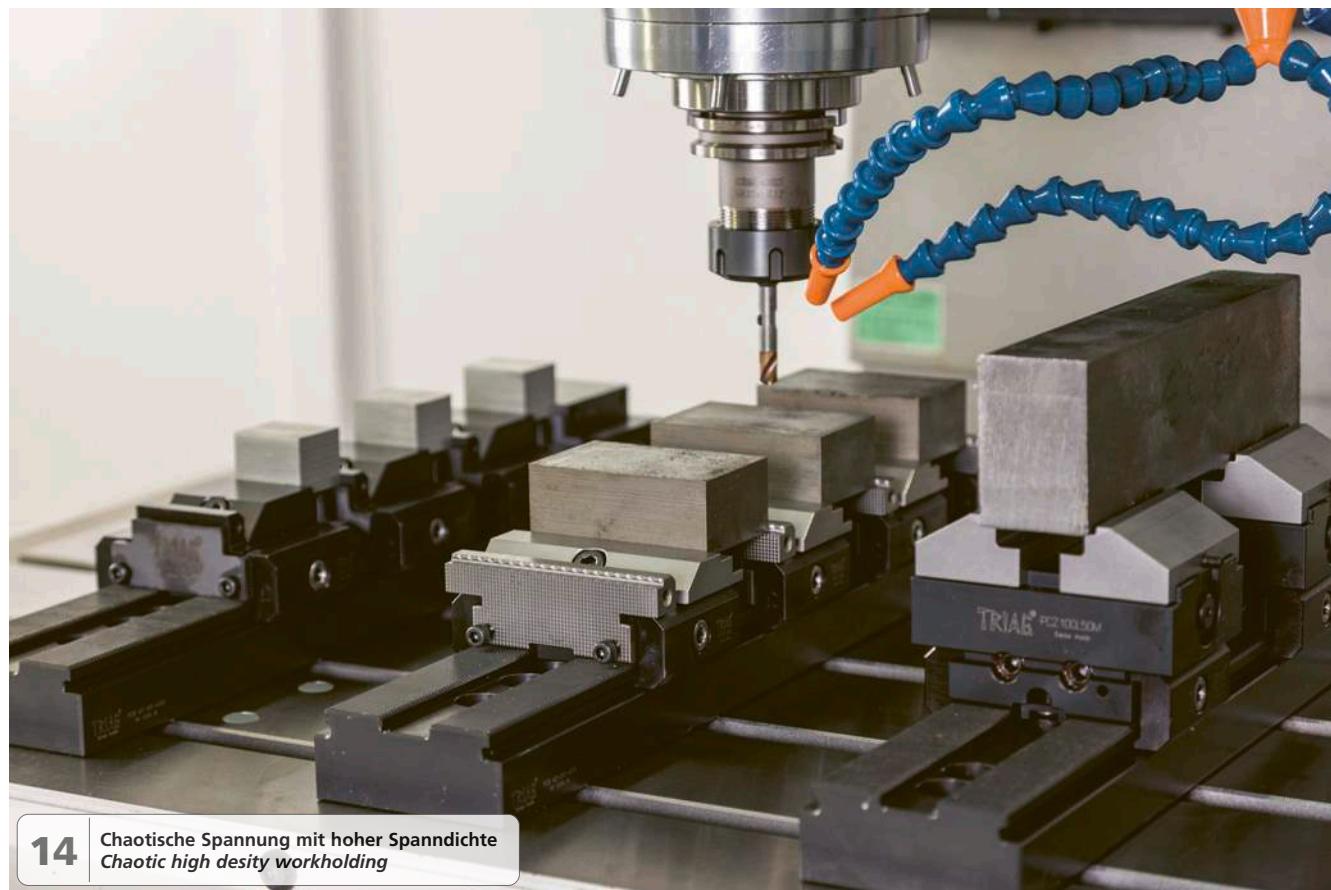
12

**Verschiedene dringende Werkstücke in Bearbeitung, Grundplatte, Nutensteine und Keile (Total 9 Werkstücke)**  
**Various urgent work pieces in progress, base plate, nuts and wedges (totally 9 pieces)**



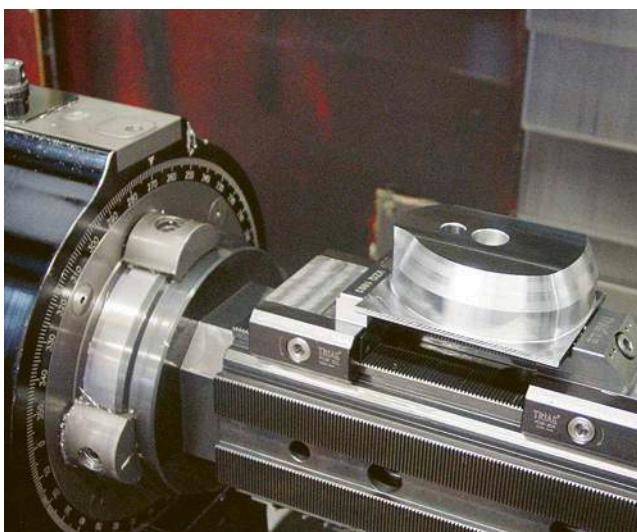
13

Chaotische Spannung mit hoher Spanndichte  
Chaotic high desity workholding

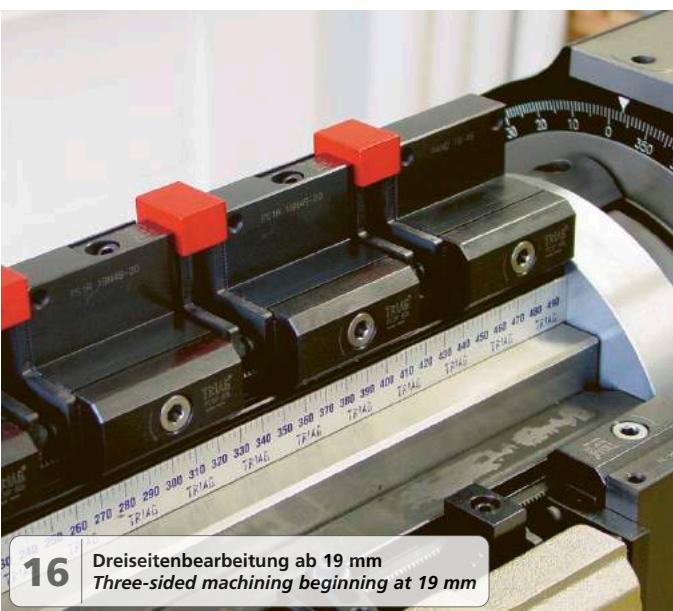


14

Chaotische Spannung mit hoher Spanndichte  
Chaotic high desity workholding



15 Prägespannung auf sehr kleiner Einspannhöhe von 3 mm  
Clamped 3 mm depth with direct stamping jaws



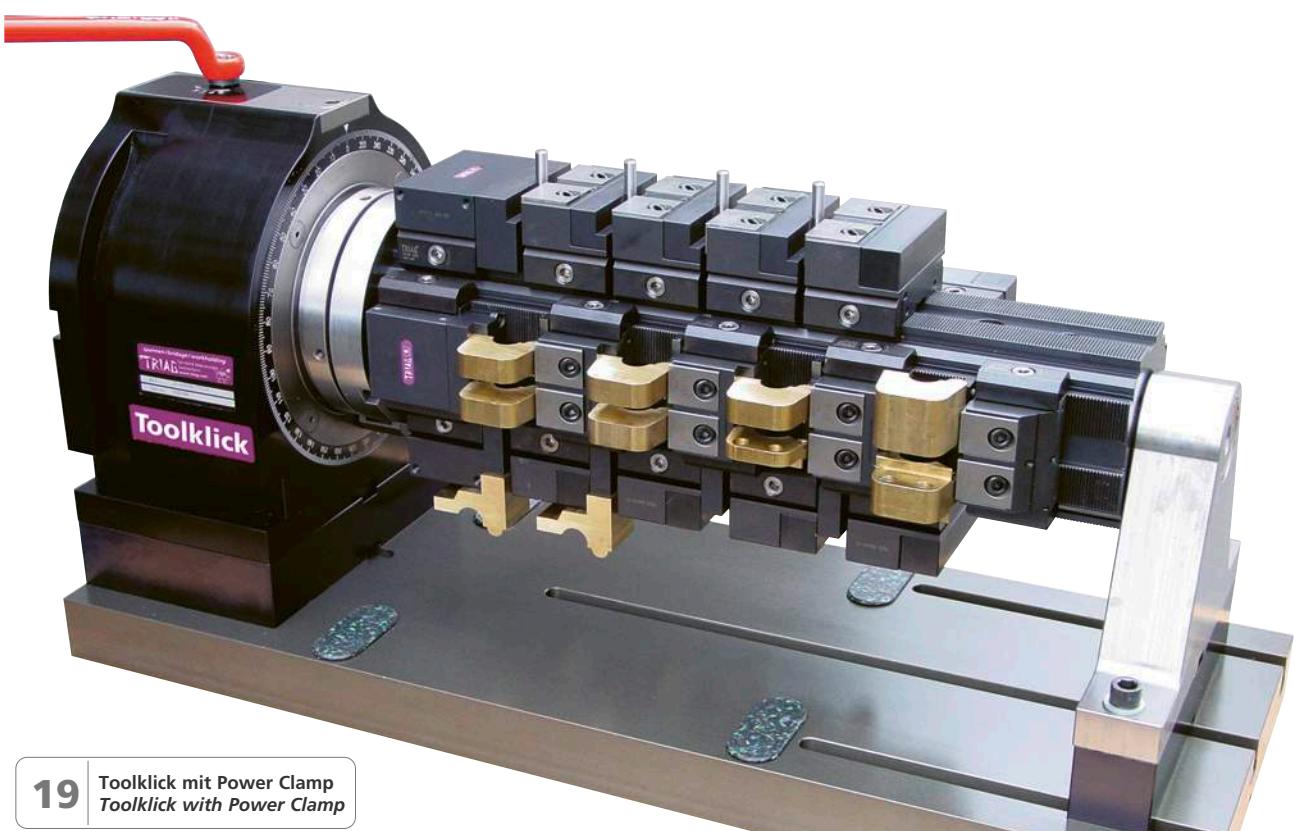
16 Dreiseitenbearbeitung ab 19 mm  
Three-sided machining beginning at 19 mm



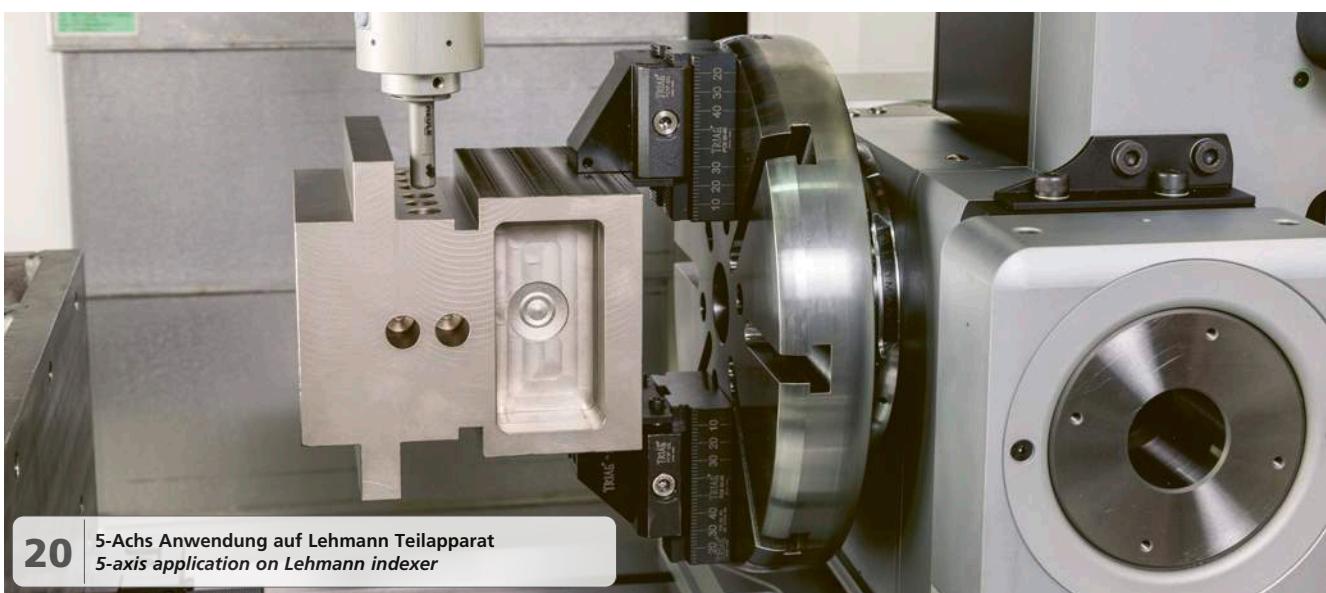
17 ... im Einsatz auf der 4. Achse  
... in action on the 4th axis



18 Das Triag Power Clamp im Einsatz als Spannstock (Starterset)  
Triag Power Clamp in action as machine vise (starter set)



19 Toolclick mit Power Clamp  
Toolclick with Power Clamp

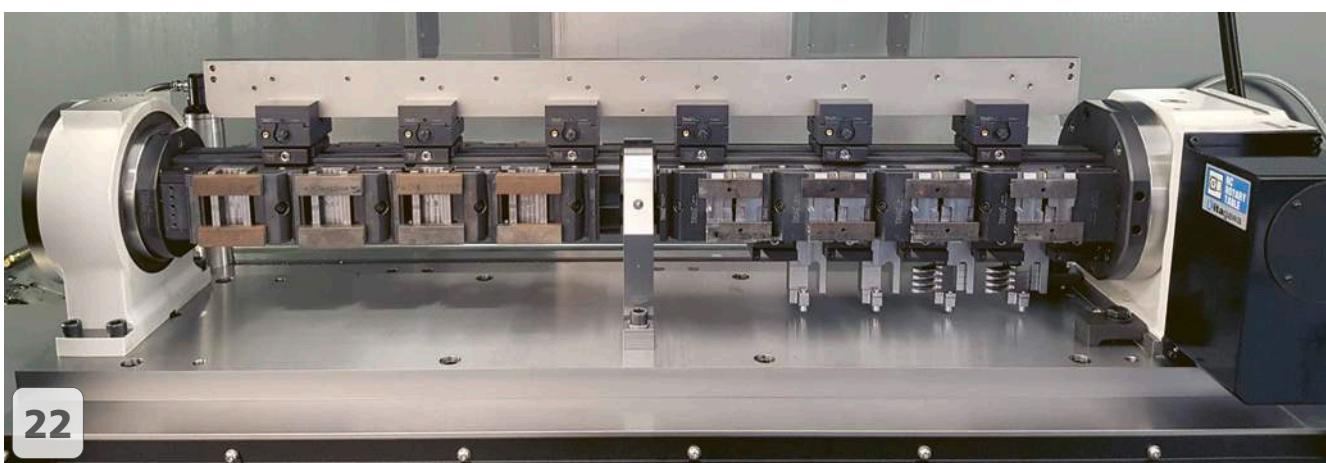


20

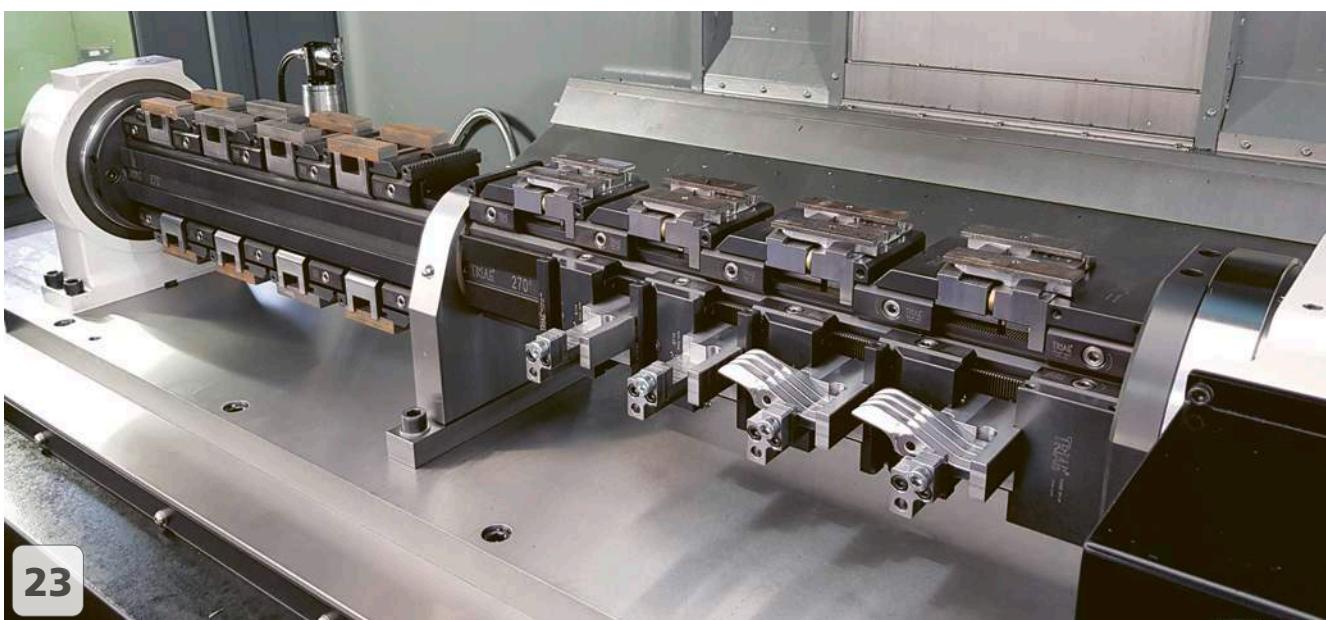
5-Achs Anwendung auf Lehmann Teilapparat  
5-axis application on Lehmann indexer



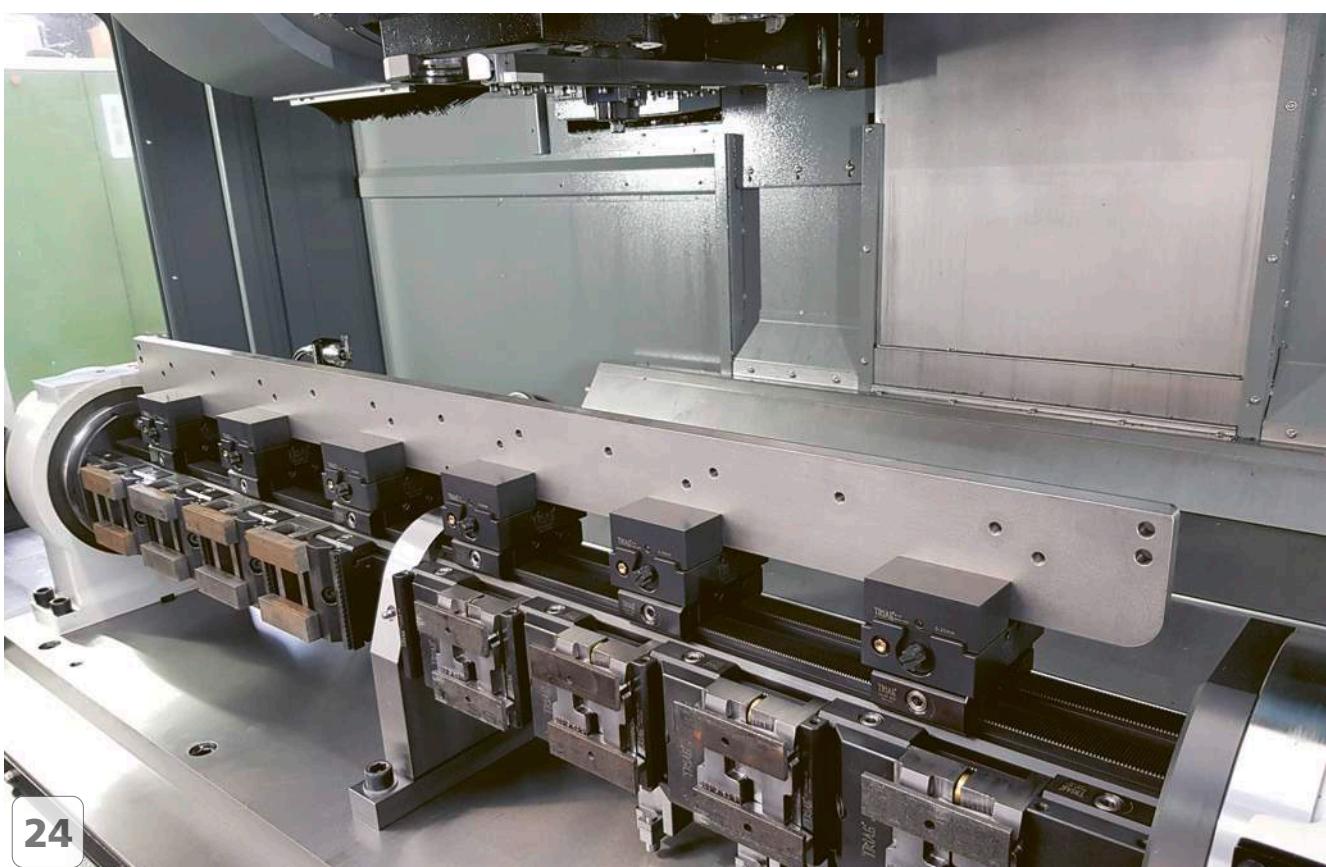
21



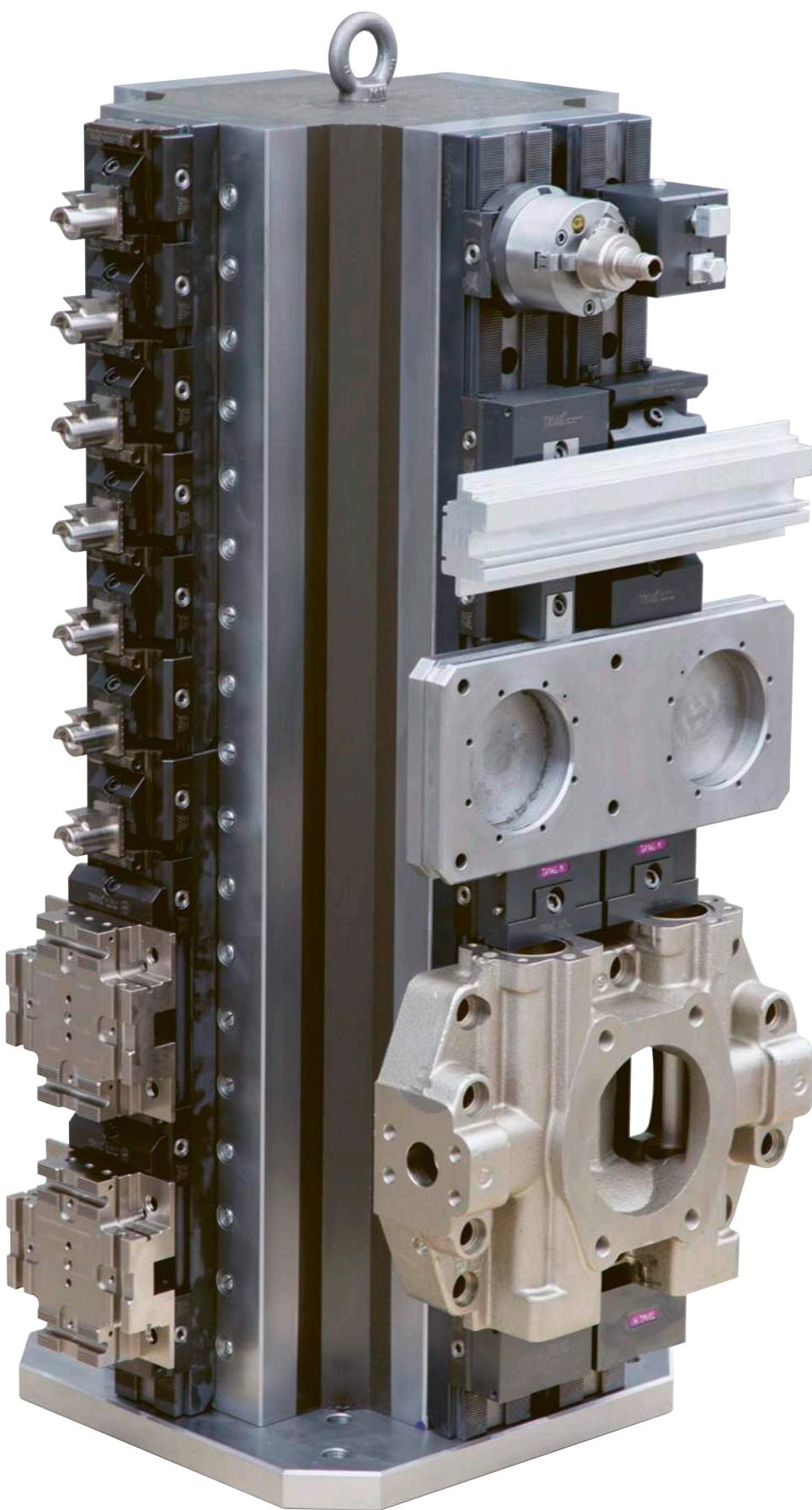
22



23



24



25

tripoxyMINERAL Kreuzturm mit PowerCLAMP Schienen für chaotische Spannung  
tripoxyMINERAL Cross version with PowerCLAMP baserails for chaotic workholding

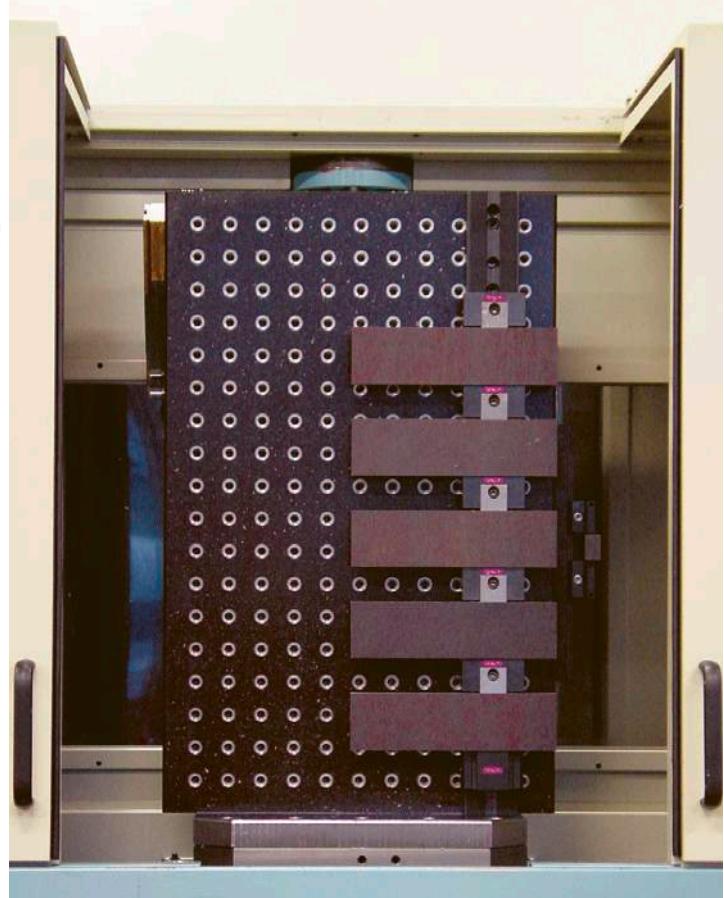
31

tripoxyMINERAL mit unterschiedlichen Werkstücken bestückt  
*tripoxyMINERAL tombstones holding a variety of workpieces*



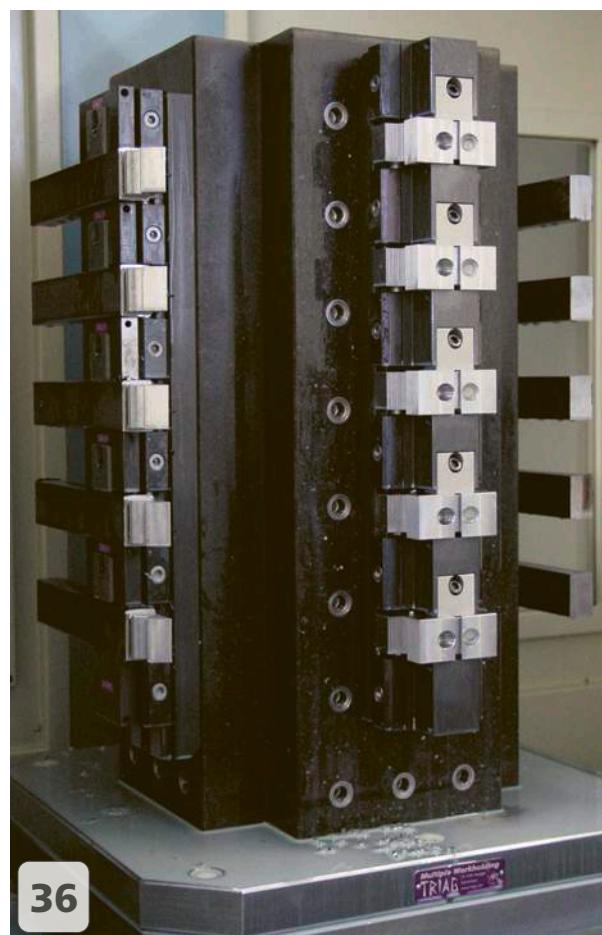
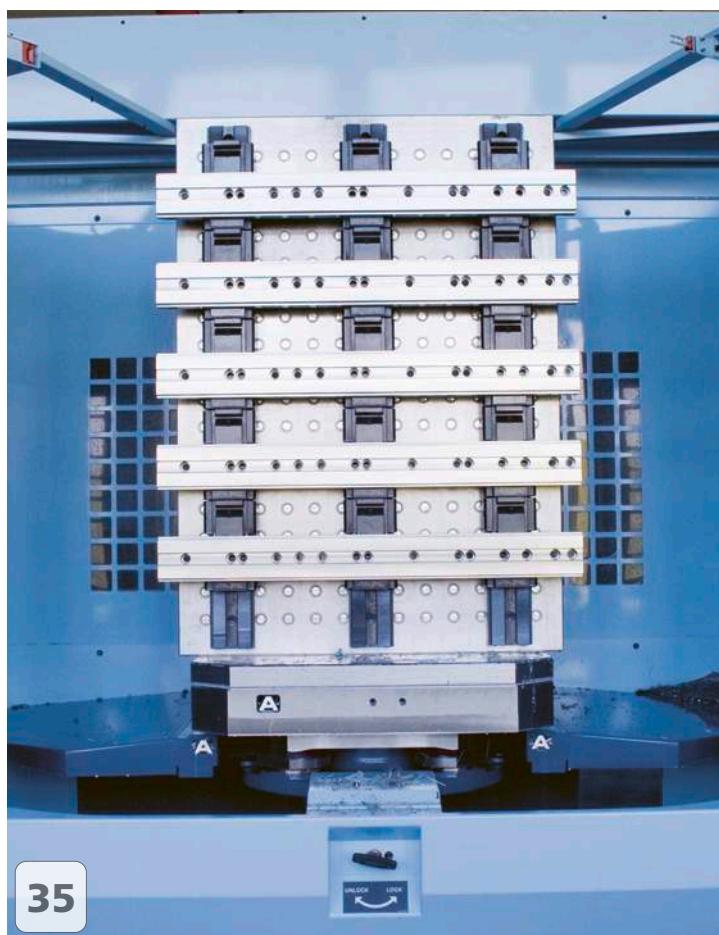
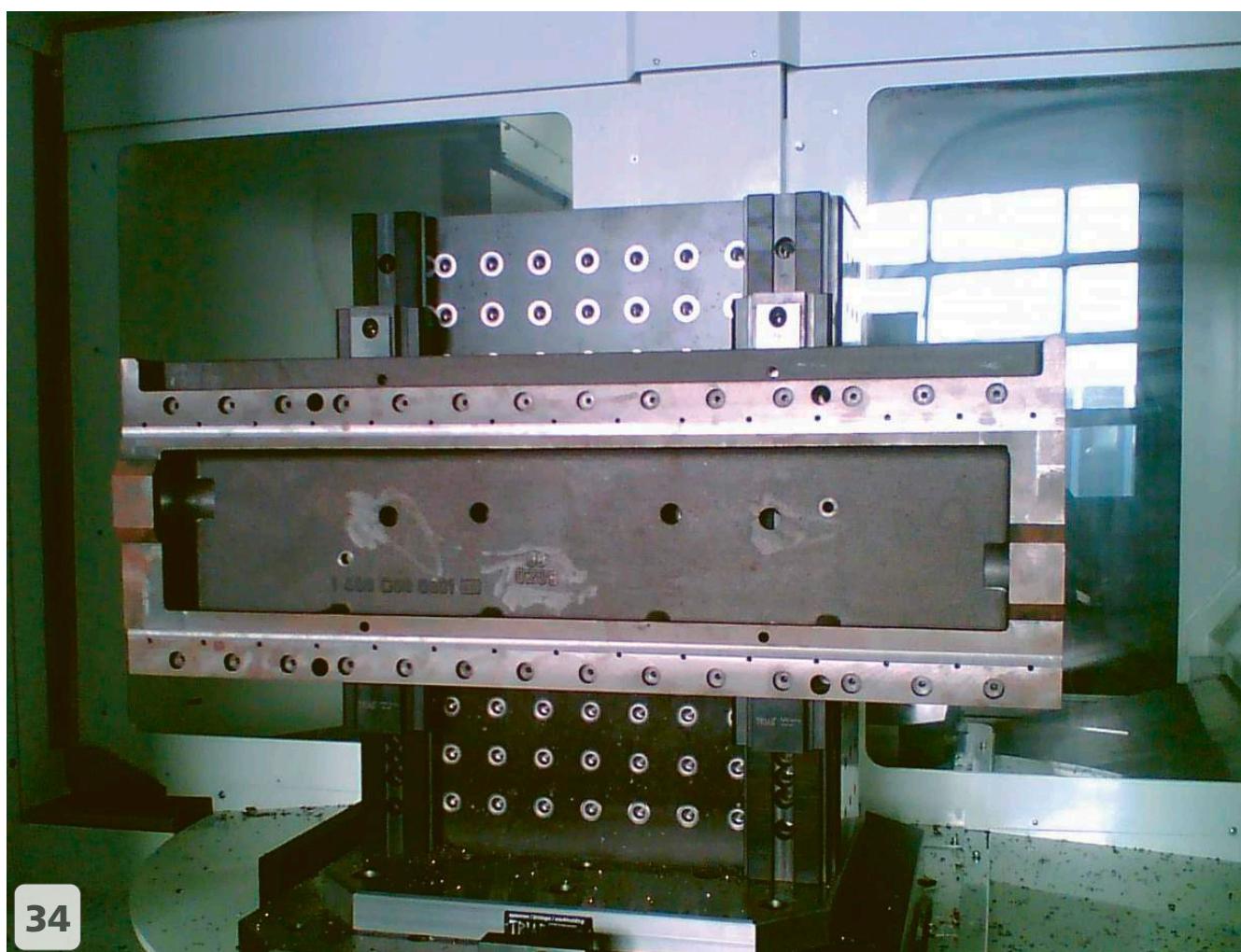
32

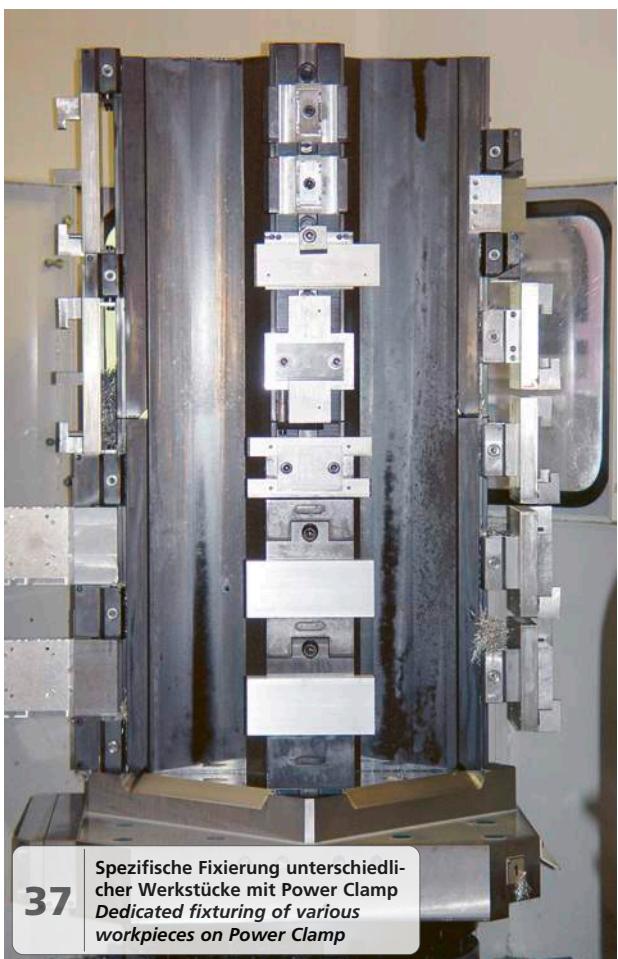
Zentrischspanner auf einem Spezialturm  
*Centric vices installed on a special tombstone*



33

Aufspannung mit Power Clamp auf einem Mineralgussturm  
*Set up with Power Clamp on a tombstone made of composite concrete*





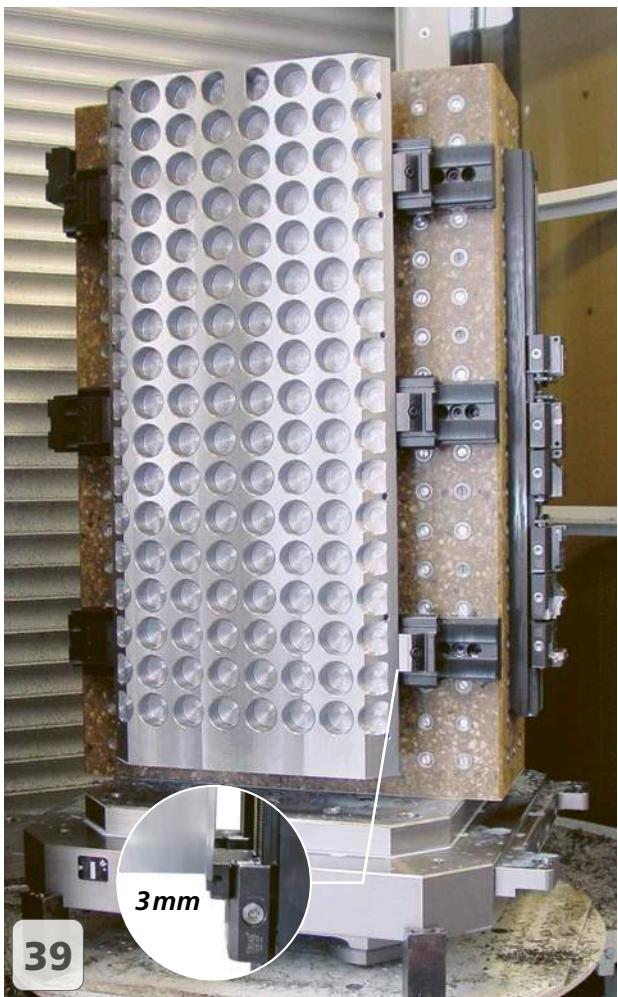
37

Spezifische Fixierung unterschiedlicher Werkstücke mit Power Clamp  
Dedicated fixturing of various workpieces on Power Clamp



38

Prägespannung auf sehr kleiner Einspannhöhe von 3 mm  
Clamped 3 mm depth with direct stamping jaws



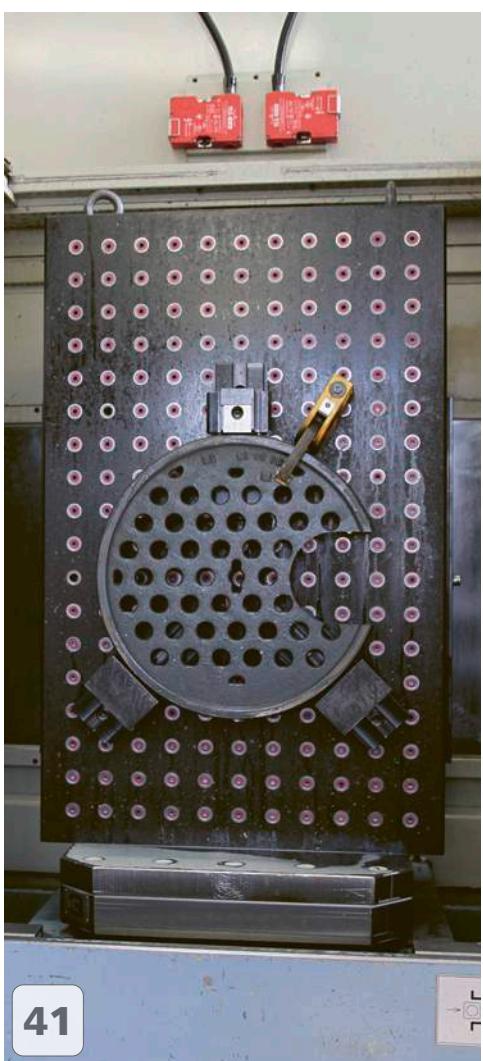
39

3mm



40

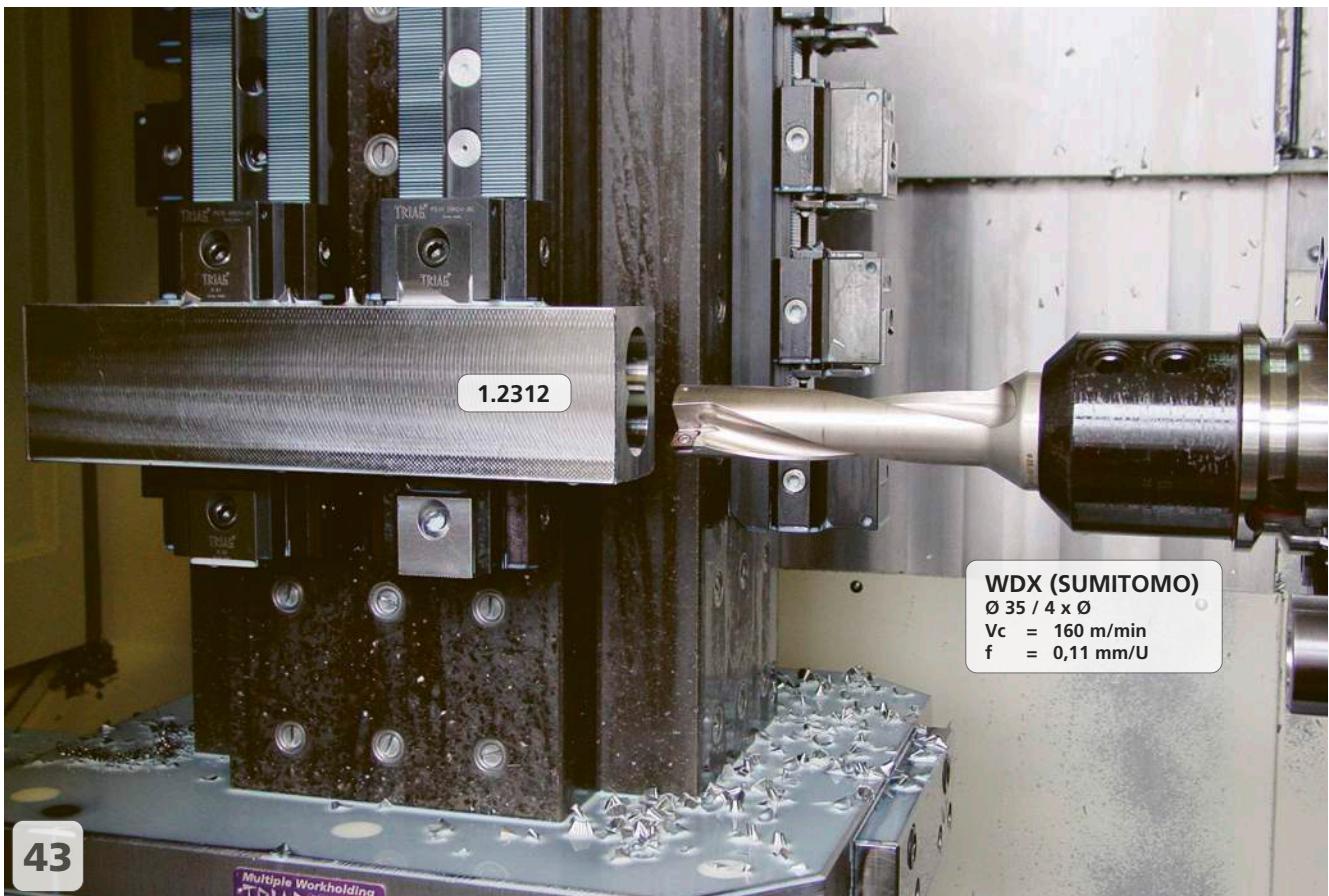
Aufspannung mit Power Clamp auf einem „Triopoly“ Mineralgussturm  
Set up with Power Clamp on a tombstone made of composite concrete



41



42

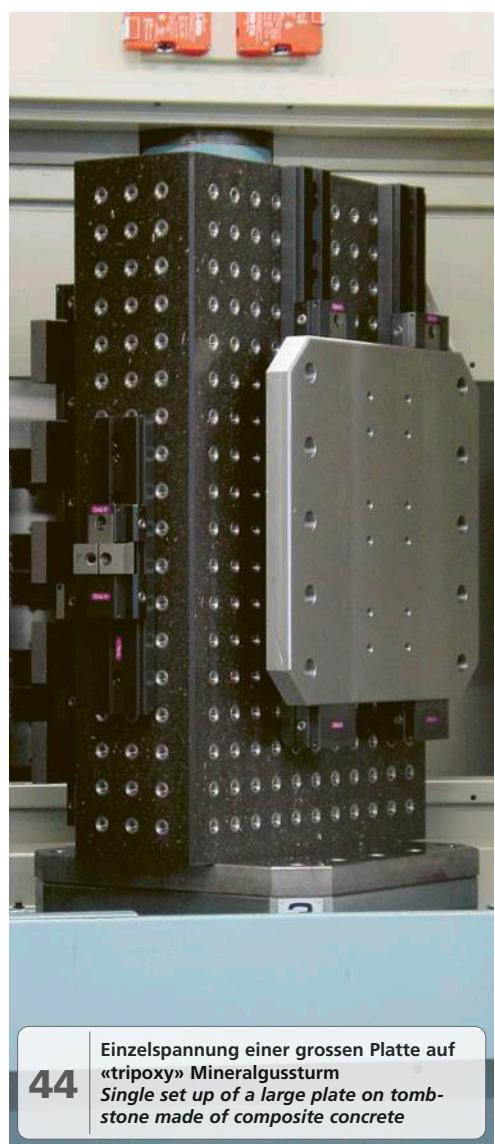


43



45

Stahlmineralguss-Säulen mit Power Clamp für die Fertigung von Flügelteilen.  
Steel epoxy frames machining wing parts on a Makino machine

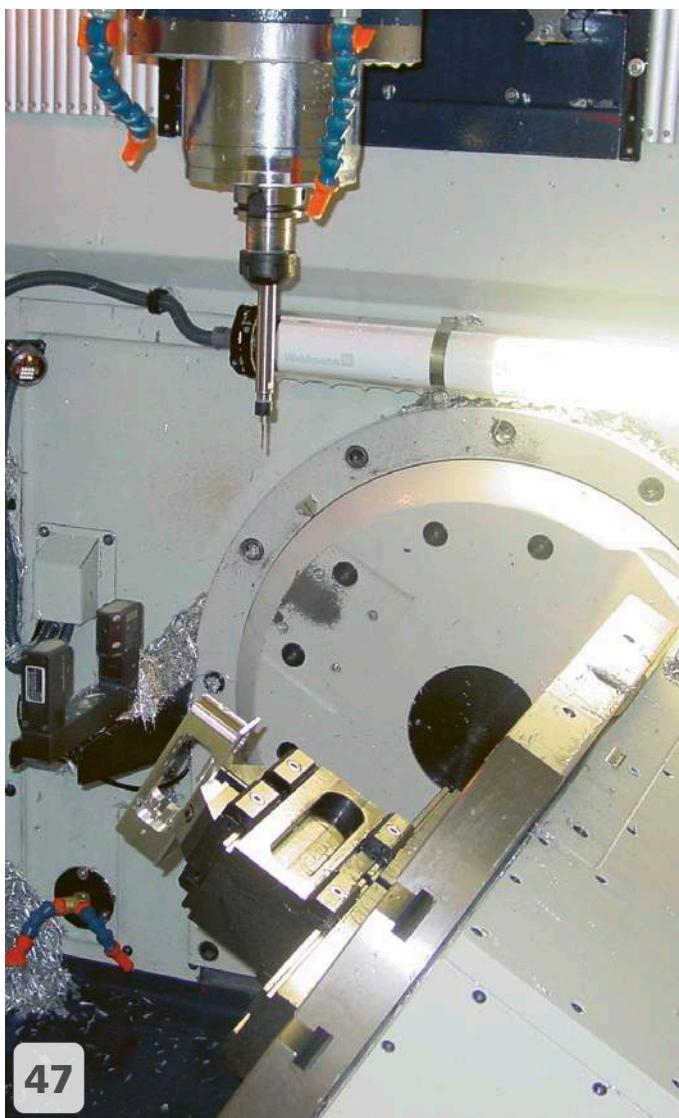


44

Einzelspannung einer grossen Platte auf «tripoxy» Mineralgussturm  
Single set up of a large plate on tombstone made of composite concrete



46

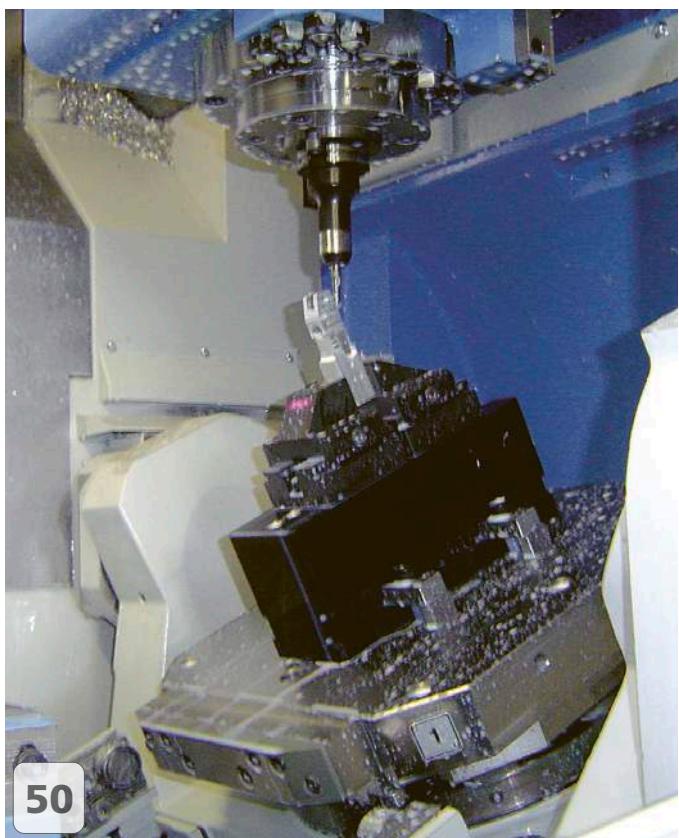


47



48

Im Einsatz auf der 5 Achsenmaschine  
In action on a 5 axis machine



50



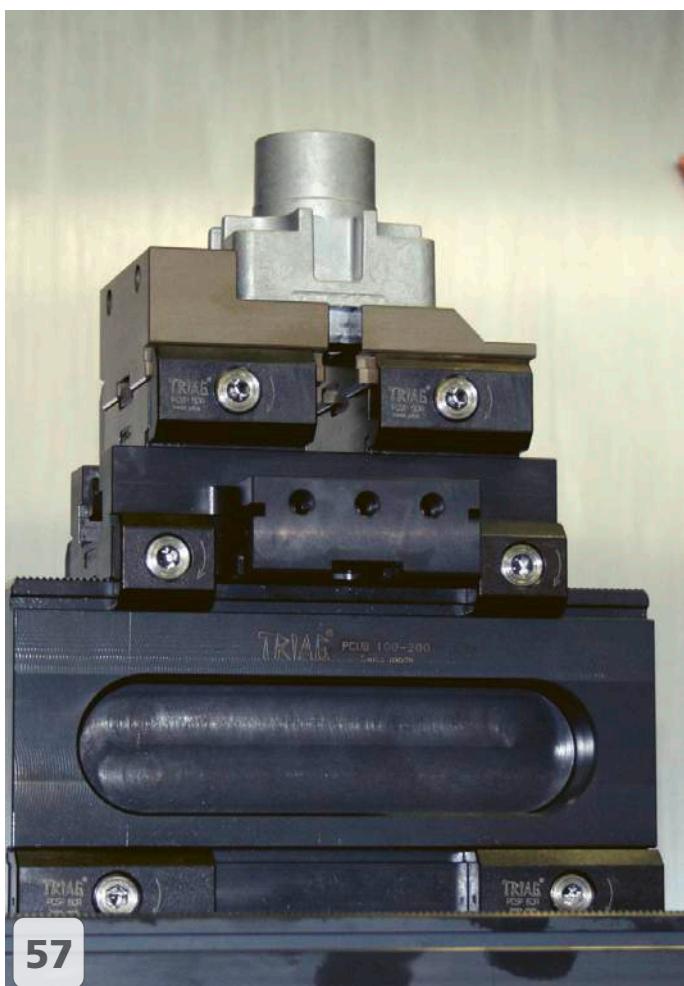
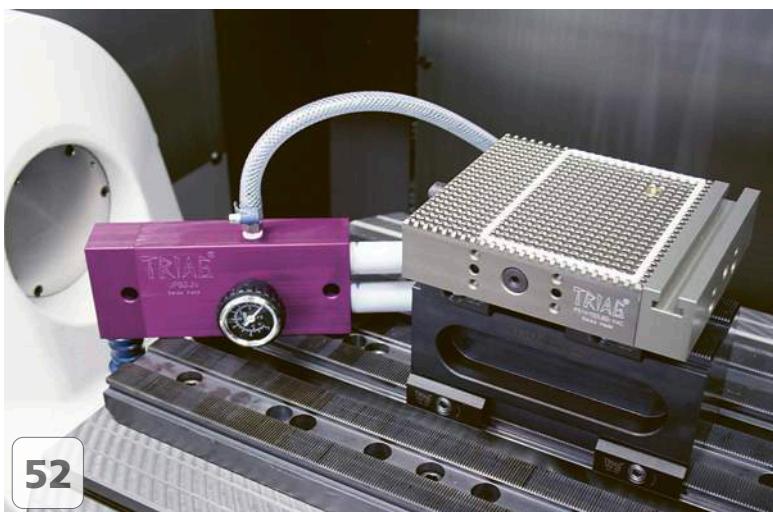
49

... im Einsatz auf der 5 Achsenmaschine  
... in action on a 5 axis machine



51

oppSystem in Anwendung mit Werkstückwechsler  
oppSystem in application with workpiece changer

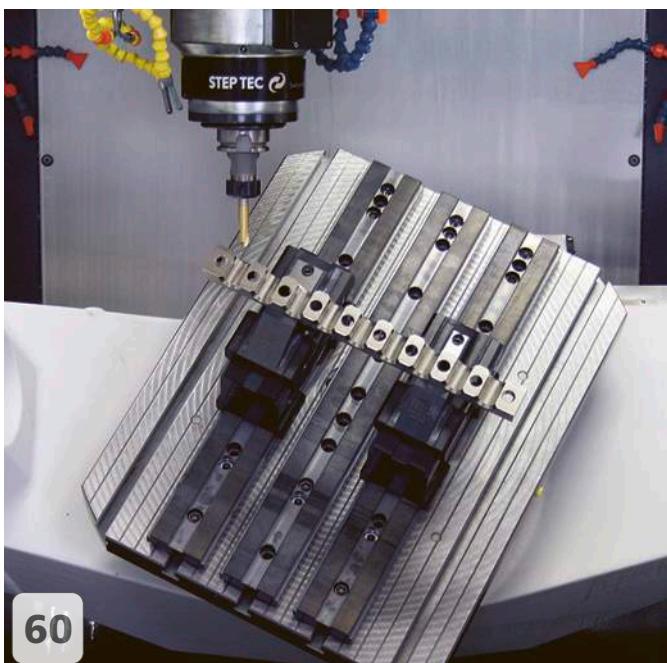




58



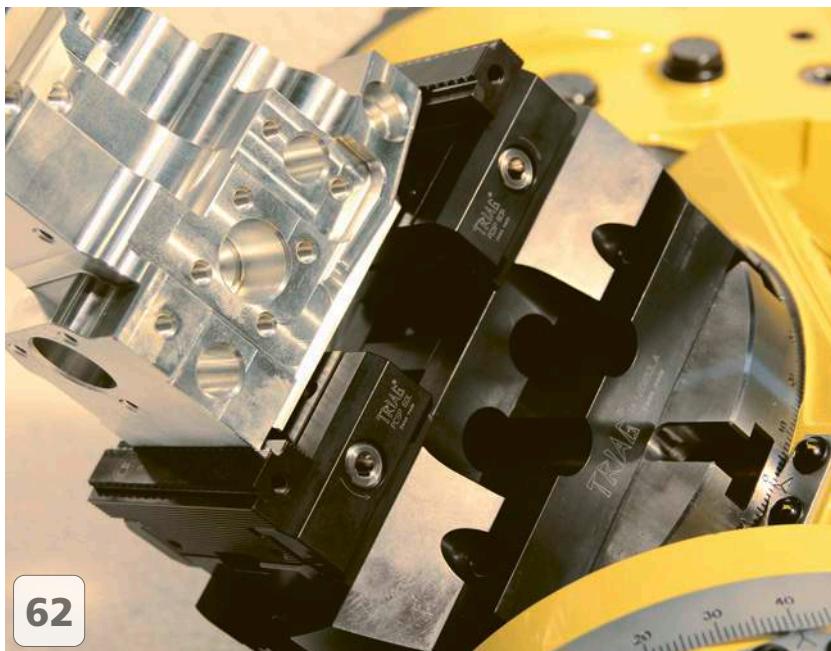
59



60



61



62

### Modulares Mehrfachspannen auf 5-Achsen- Maschinen

Immer öfter werden die 5-Achsen-Maschinen in den Produktionsabläufen eingesetzt, um den Ansprüchen der heutigen effizienten Herstellung gerecht zu werden und weltweit wettbewerbsfähig zu bleiben. Die Werkstückspannung ist sehr anspruchsvoll und fordert die technischen Mitarbeiter ausserordentlich, wie auf den nachfolgenden Bildern dargestellt.

*Increasingly, the 5-axis machines are used in the production processes to be in accordance with the demands of today's efficient manufacturing and remain globally competitive. The workpiece clamping is very demanding and calls for extremely technical staff, as shown on the following pictures.*

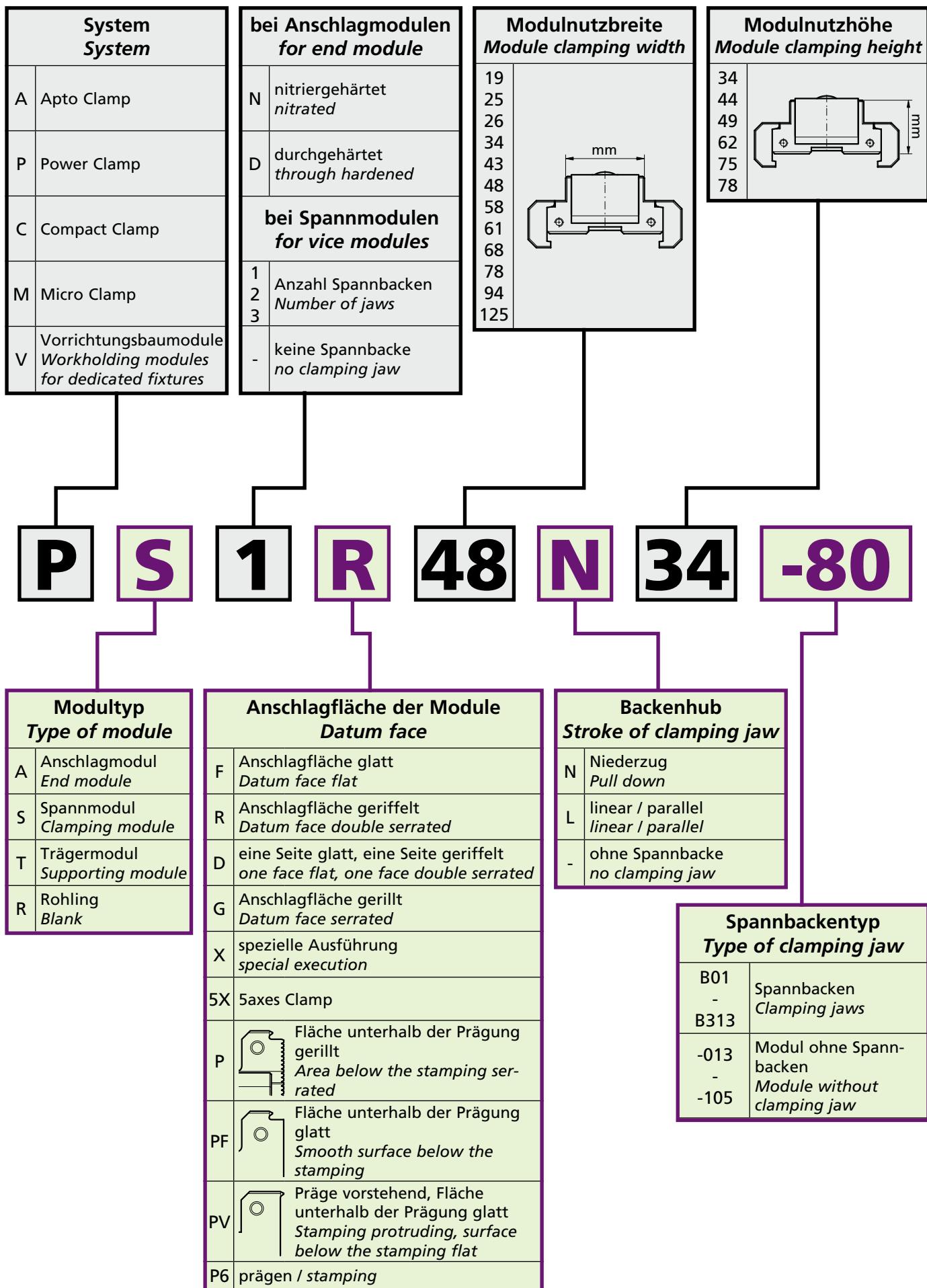
### Vorteile der Triag 5-Achsen Spannsysteme:

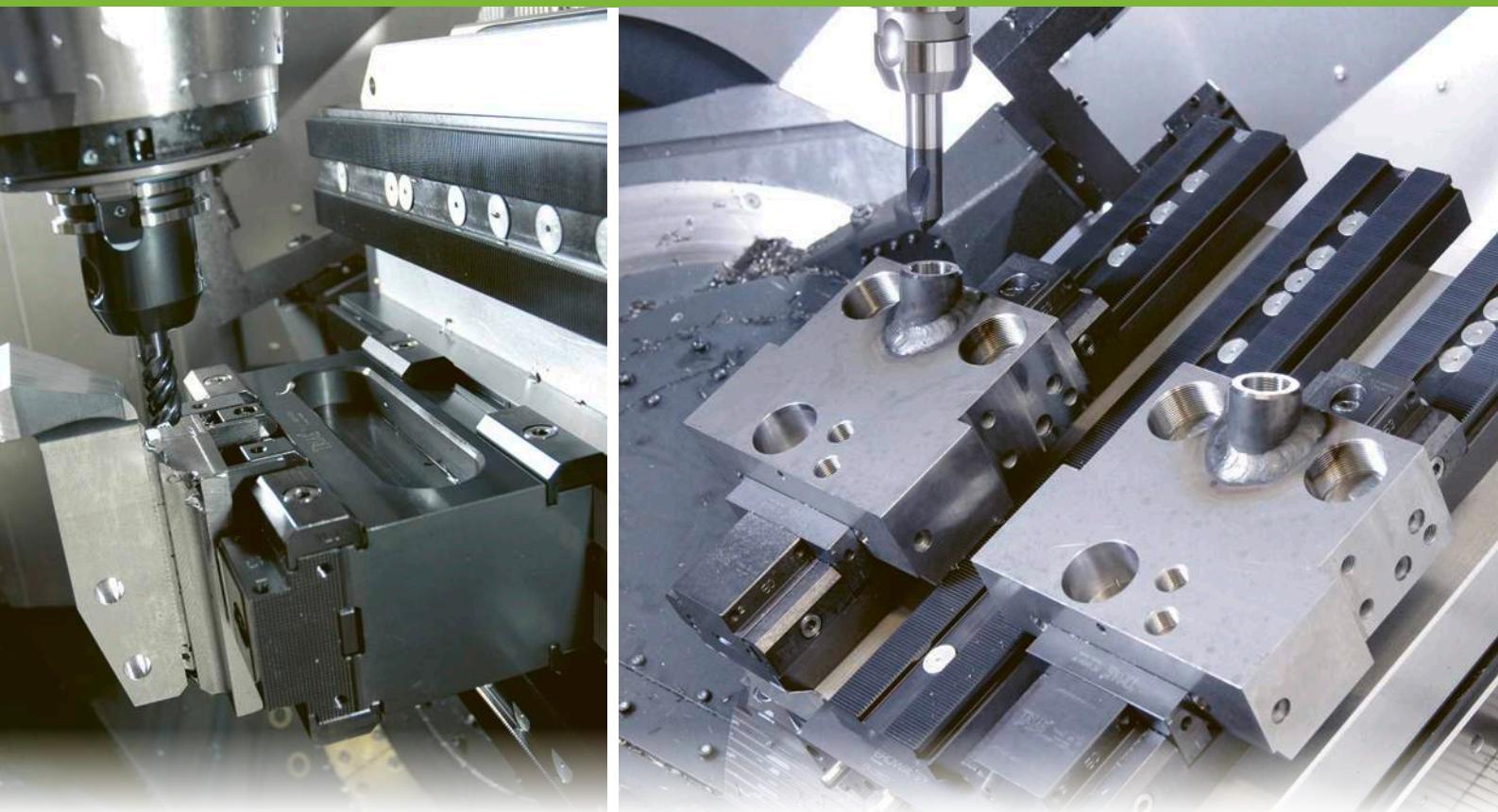
- Die unteren Basisschienen dienen sowohl als mechanisches Nullpunktspannungsysteem, aber auch als Spannstock.
- Die Spannkraft wirkt direkt beim Werkstück, trotzdem ist das Werkstück ob klein, lang oder gross mit kurzen Werkzeugen sehr gut zugänglich. (Die Einschränkung ist der Maschinentisch)!
- Bei der Dreiseitenbearbeitung ist auch Mehrfachspannung möglich.
- Es können über 200 verschiedene Spannmodule, sowie Rohrmodule, Zentrischspanner, Dreibackenfutter, Spannzangenfutter, Vakuumspannmodule usw. aufgesetzt werden. Die Schnittstelle ist immer dieselbe.
- Sehr schnelles Umrüsten!
- Wenig Reinigungsaufwand, da keine T-Nuten vorhanden sind.
- Besonders gut geeignet für 5-Achsen-Maschinen. Alle Spannvorrichtungen können auch auf Horizontal- und Vertikalmaschinen universell eingesetzt werden.

### Benefits of Triag 5-axis workholding systems:

- The lower base rails serve both as a mechanical zero-point clamping system, but also as a vice.
- The tension acts directly at the workpiece, the workpiece is still, whether small, long or large, very accessible with short tools. The constraint is the machine table!
- 3-side machining is possible as well.
- There may be placed over 200 different clamping modules, as well as raw modules, self-centring modules, three jaw chuck, collet chuck, vacuum clamping modules and so on. The interface is always the same.
- Very fast setup!
- Reduced cleaning required, since no T-slots available.
- Especially suitable for 5-axis machines. All clamping devices can also be used universally on horizontal and vertical machines.







**Die Basisschiene ist die Grundlage des Power Clamp Spannsystems**

Der Einsatz der Basisschiene als Modularspannstock ist jedem Mechaniker ein Begriff. Die Vorteile ihres Einsatzes als mechanisches Nullpunktssystem sind in der Zwischenzeit ebenfalls ins Planungsdenken der mechanischen Fertigung eingeflossen.

Die Power Clamp-Schiene dient als Basis für über 200 verschiedene Spannmodule, Zentrischspanner, Rohlingsmodule und Vakuumplatten.

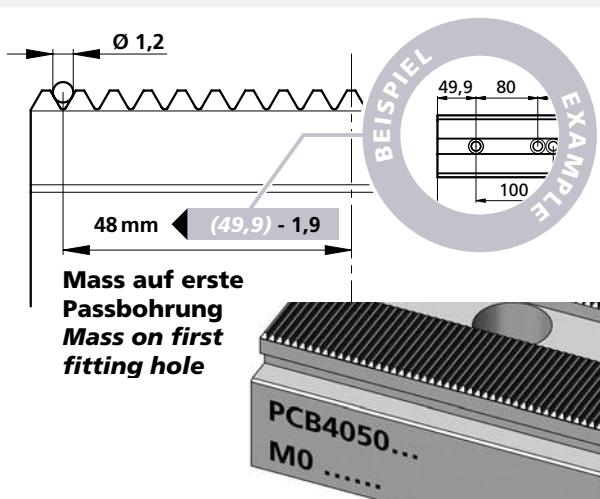
**The serrated base rail is the basic structure of the Power Clamp workholding system**

Using the base rail as a modular workholding vise is standard practice to any mechanic. The advantages of using it as a zero point system have also widely influenced the planning stages of mechanical production.

The Power Clamp base rail serves as a supporting plate for more than 200 different clamping modules, self centring vises, blank modules and vacuum clamping plates.

**Toleranz gilt für alle PCB-Basischienen / Tolerance applies to all PCB base rails**

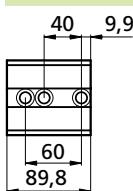
| Toleranzenklassen<br>Tolerance classes |        |
|--|--------|
| P6                                     | +0.06  |
| P5                                     | +0.05  |
| P4                                     | +0.04  |
| P3                                     | +0.03  |
| P2                                     | +0.02  |
| P1                                     | +0.01  |
| P0                                     | +0.005 |
| M0                                     | -0.005 |
| M1                                     | -0.01  |
| M2                                     | -0.02  |
| M3                                     | -0.03  |
| M4                                     | -0.04  |
| M5                                     | -0.05  |
| M6                                     | -0.06  |



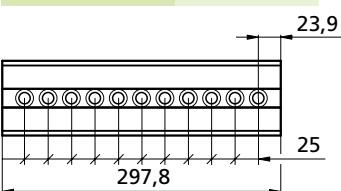
## Basisschienen

## Base rails

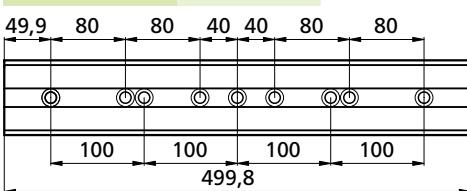
PCB6090 kg ~1,7



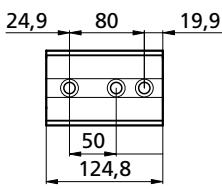
PCB25300 kg ~5,4



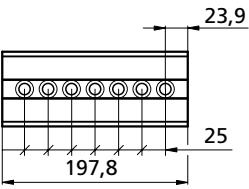
PCB4050500 kg ~9,5



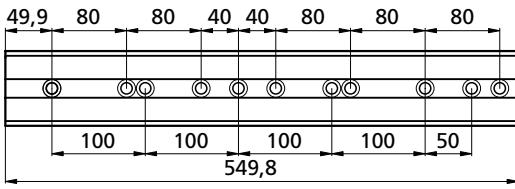
PCB4050125 kg ~2,3



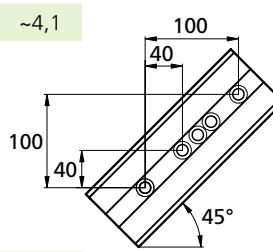
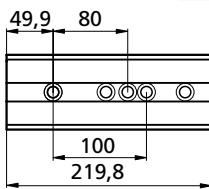
PCB25200 kg ~3,6



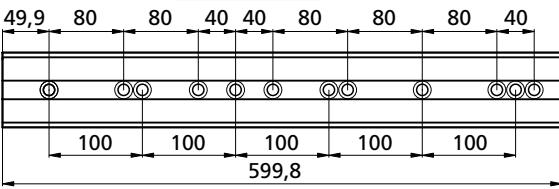
PCB4050550 kg ~10,3



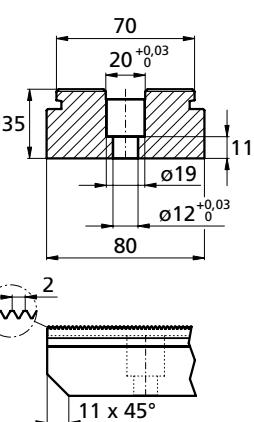
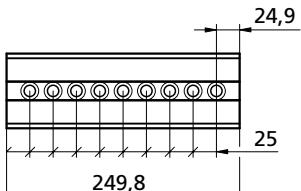
PCB4050220W2 kg ~4,1



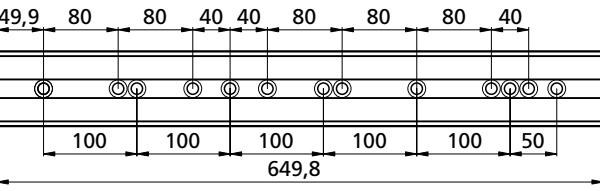
PCB4050600 kg ~11,3



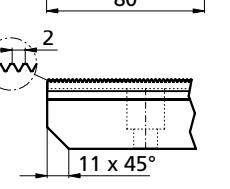
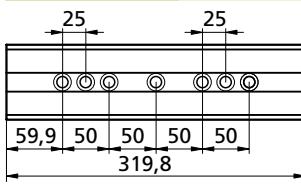
PCB2550250 kg ~4,5



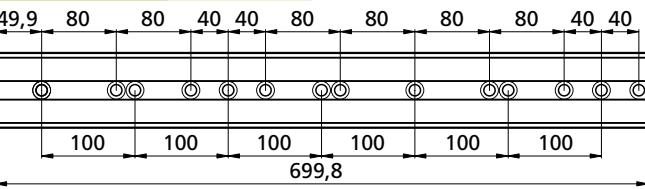
PCB4050650 kg ~12,2



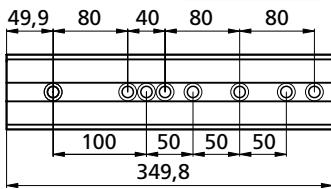
PCB50320 kg ~6,0



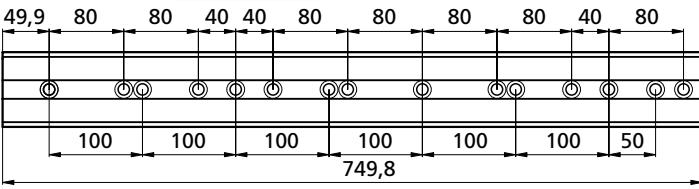
PCB4050700 kg ~13,2



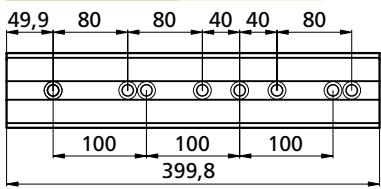
PCB4050350 kg ~6,5



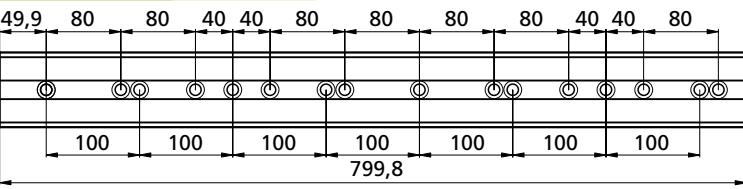
PCB4050750 kg ~14,1



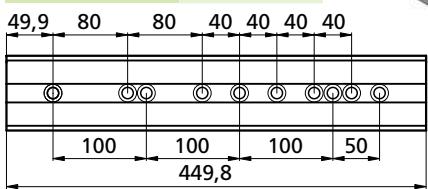
PCB4050400 kg ~7,5



PCB4050800 kg ~15,0

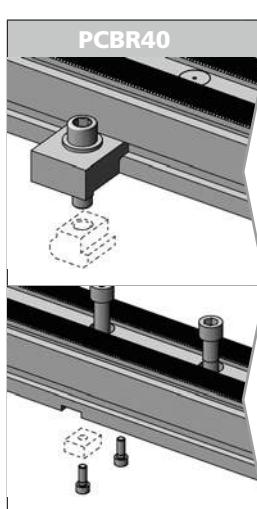
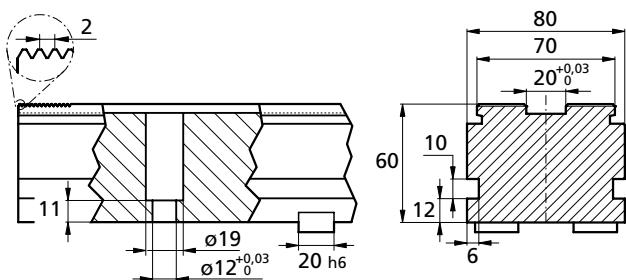


PCB4050450 kg ~8,4



Bestellbeispiel / Ordering example: PCB4050125

Basisschienen in Zoll  
Base rails in inch



### 1. Befestigung 1. Fastening

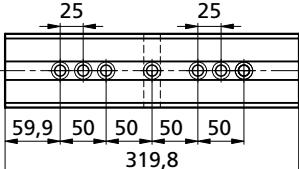
Mit den seitlichen Pratzen, kann die Basischiene frei auf Ihrem Maschinentisch montiert werden.  
With the lateral clamps, the base-rail can be mounted freely on your machine table.

### 2. Befestigung 2. Fastening

Diese Nutenstein sind zum Ausrichten der Basischiene auf Ihrem Maschinentisch.  
These t-slot nuts are for aligning the base-rail on your machine table.

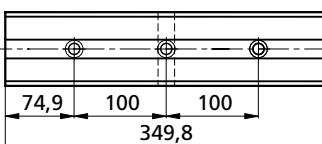
**PCB50320H60**

- ① 1x TF190449
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~10,3



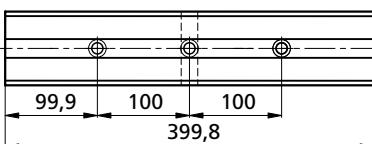
**PCB100350H60**

- ① 1x TH170888
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~11,7



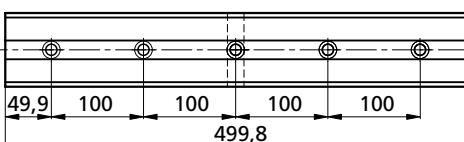
**PCB100400H60**

- ① 1x TB140546
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~13,4



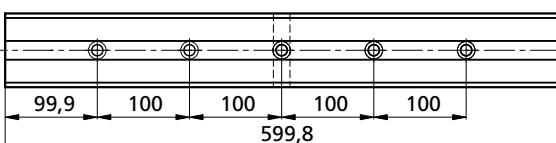
**PCB100500H60**

- ① 1x TB140553
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~16,7



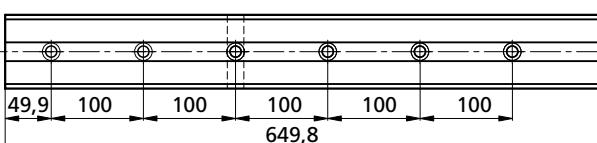
**PCB100600H60**

- ① 1x TB140556
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~20,1



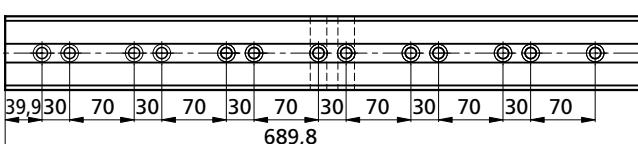
**PCB100650H60**

- ① 1x TB140559
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~21,8



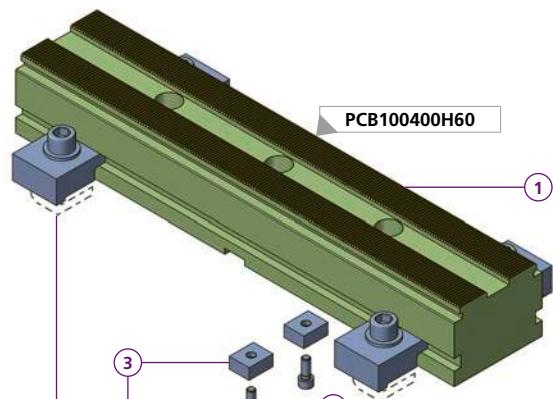
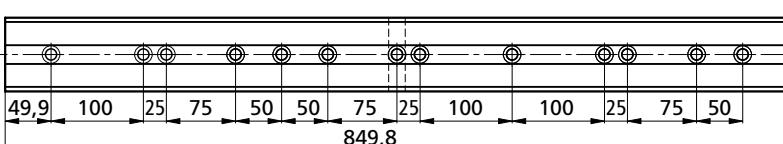
**PCB100690H60**

- ① 1x ZL100122
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~22,6



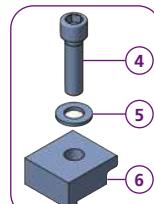
**PCB100850H60**

- ① 1x TB140562
  - ② 2x M6X12ISO4762
  - ③ 2x SM1136-20
- kg** ~27,9



**PCBR40**

- ④ 1x M12X45ISO4762
  - ⑤ 1x TN100251
  - ⑥ 1x TK200035
- kg** ~0,25



### T-Nutensteine T-slot nuts

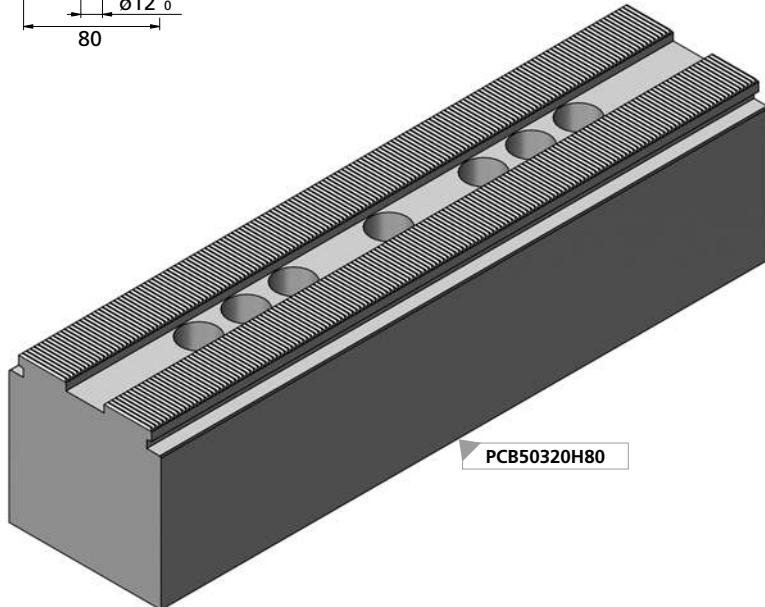
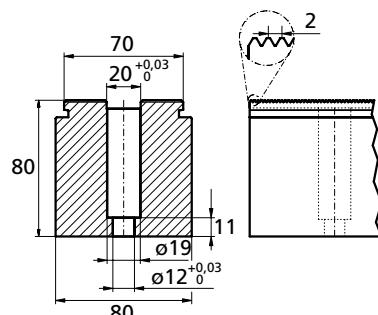
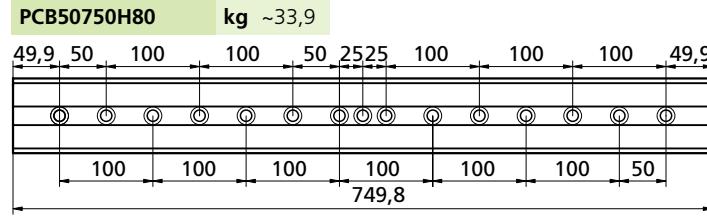
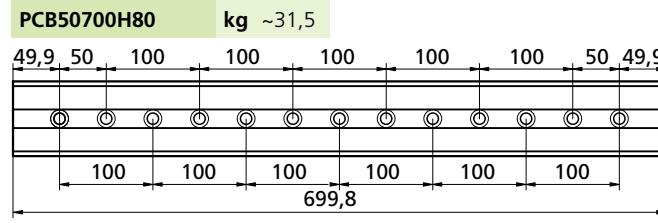
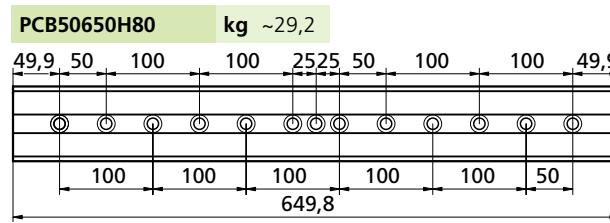
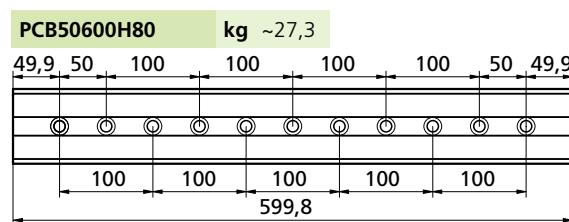
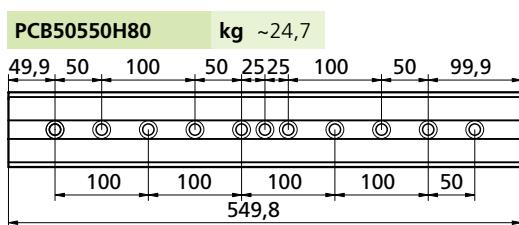
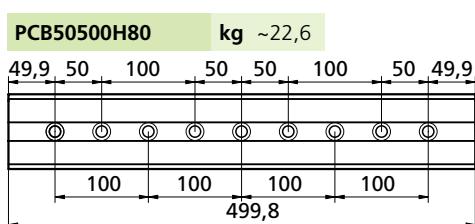
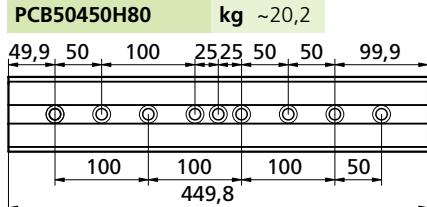
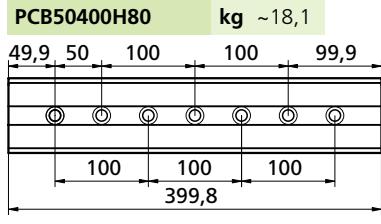
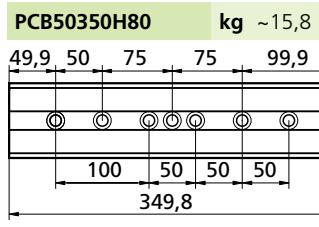
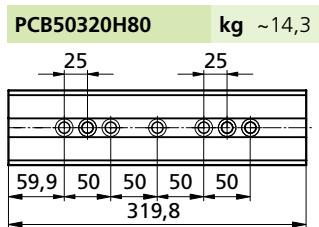
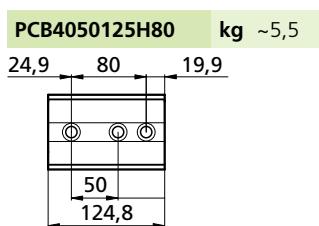
T-Nutensteine je nach Maschinentisch, muss separat bestellt werden.  
T-slot nuts depending on the machine table, must be ordered separately.

# Basisschienen

## Base rails

**H80**

**powerCLAMP**



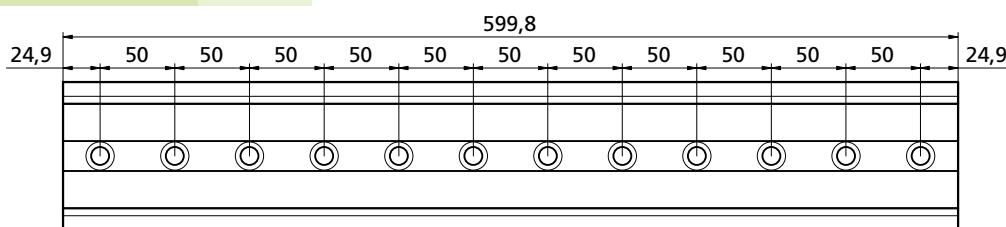
Bestellbeispiel / Ordering example: **PCB4050125H80**

**Basisschiene Stahl-Mineralguss**  
**Base-rail steel-epoxy mineral tombstones**

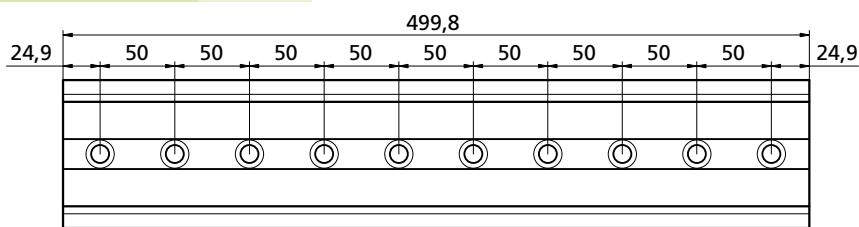
**H175**

**powerCLAMP**

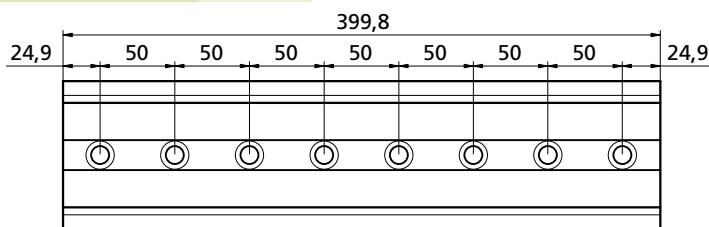
**PCMB50600H175 kg ~39**



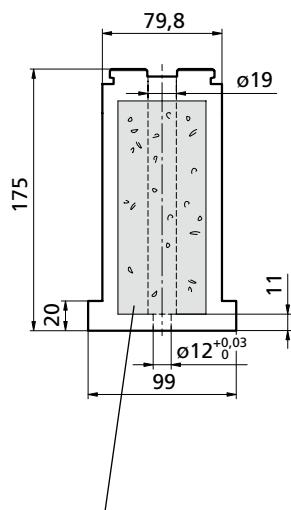
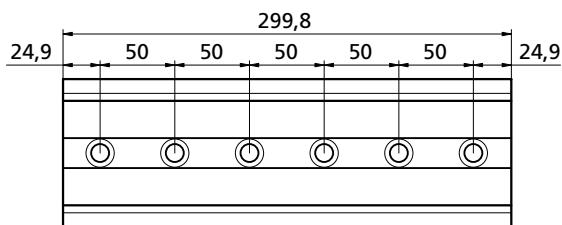
**PCMB50500H175 kg ~34**



**PCMB50400H175 kg ~27**



**PCMB50300H175 kg ~22**



**Epoxy Mineral**

Für gute Vibrationsdämpfung  
 For brilliant dampening effect

Bestellbeispiel / Ordering example: **PCMB50600H175**

# Kupplungsstück (Basisschienen zum koppeln)

## Coupling element (Base rails for coupling)

**powerCLAMP**

### Kupplungsstücke für PCB Basisschiene auf Mineralguss-Türmen

Mit diesen Kupplungsstücken ist es möglich, die PCB Basisschienen zu verlängern. Aufgrund des durchgängigen Kraftschlusses wird eine übermässige Belastung des Mineralgussturmes vermieden. Erforderlich ist eine Modifikation der Enden der Basisschienen gemäss der untenstehenden Zeichnung durch den Anwender. Selbstverständlich können neue Schienen bereits mit dieser Modifikation ausgeliefert werden.

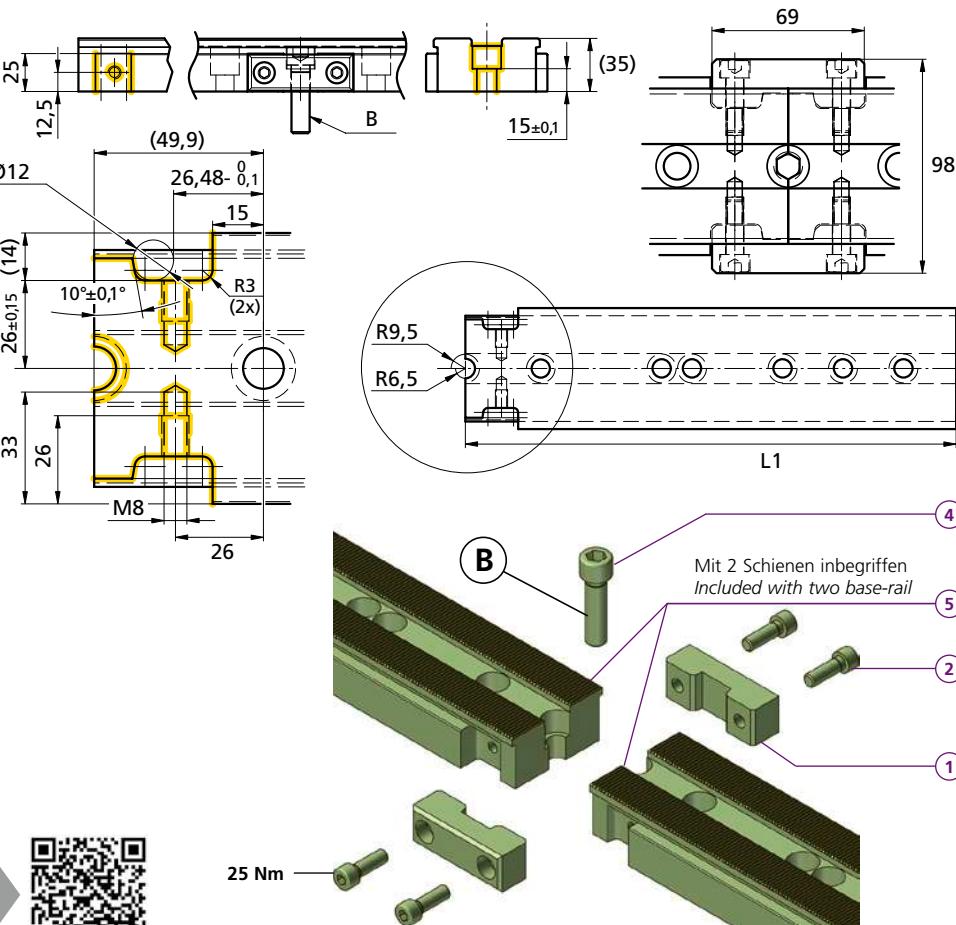
So können die zwei Kupplungsstücke montiert werden, die nach dem Platzieren der Schienen eingesetzt und festgezogen werden. Eine zusätzliche Schraube (**B**) nimmt allfällige, senkrecht zur Befestigungsfläche auftretende Kräfte auf.

Detailzeichnung zum Bearbeiten aller Basisschienen H35, um die Aussparung für das Kupplungstück bei vorhandenen Schienen nachträglich herzustellen.

*Detail drawing for machining all base rails H35 to retrofit the recess for the coupling piece on existing rails.*



Montageanleitung siehe Video  
Assembly instructions see video



| PCBP69SET          |              |
|--------------------|--------------|
| ① 2x TW900078      | PCB4050250KP |
| ② 4x M8X25ISO4762  | ⑤ L1 = 250   |
| ④ 1x M12X45ISO4762 | kg ~5,1      |

| PCB4050400KP |
|--------------|
| ⑤ L1 = 400   |

| PCB4050450KP |
|--------------|
| ⑤ L1 = 450   |

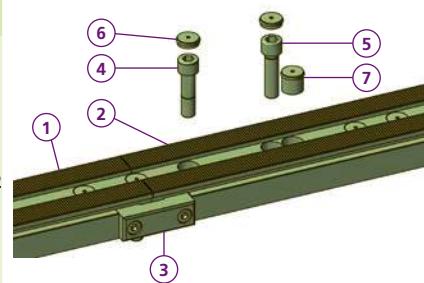
| PCB4050500KP |
|--------------|
| ⑤ L1 = 500   |

| PCB4050650KP |
|--------------|
| ⑤ L1 = 650   |

| PCB4050700KP |
|--------------|
| ⑤ L1 = 700   |

Bestellbeispiel / Ordering example: PCB4050250KP

| PCB850SET          | PCB900SET          | PCB950SET          | PCB1000SET          |
|--------------------|--------------------|--------------------|---------------------|
| ① 1x PCB4050400KP  | ① 1x PCB4050650KP  | ① 1x PCB4050700KP  | ① 2x PCB4050500KP   |
| ② 1x PCB4050450KP  | ② 1x PCB4050250KP  | ② 1x PCB4050250KP  | ③ 1x PCBP69SET      |
| ③ 1x PCBP69SET     | ③ 1x PCBP69SET     | ③ 1x PCBP69SET     | ④ 4x TWPAS1240      |
| ④ 4x TWPAS1240     | ④ 4x TWPAS1240     | ④ 4x TWPAS1240     | ⑤ 6x M12X40ISO4762  |
| ⑤ 5x M12X40ISO4762 | ⑤ 6x M12X40ISO4762 | ⑤ 6x M12X40ISO4762 | ⑥ 10x M12X40ISO4762 |
| ⑥ 9x PCPF16L6      | ⑥ 10x PCPF16L6     | ⑥ 10x PCPF16L6     | ⑦ 10x PCPF16L6      |
| ⑦ 9x PCPF16L18     | ⑦ 8x PCPF16L18     | ⑦ 9x PCPF16L18     | ⑧ 8x PCPF16L18      |
| kg ~17,1           | kg ~18,2           | kg ~19,1           | kg ~20,2            |

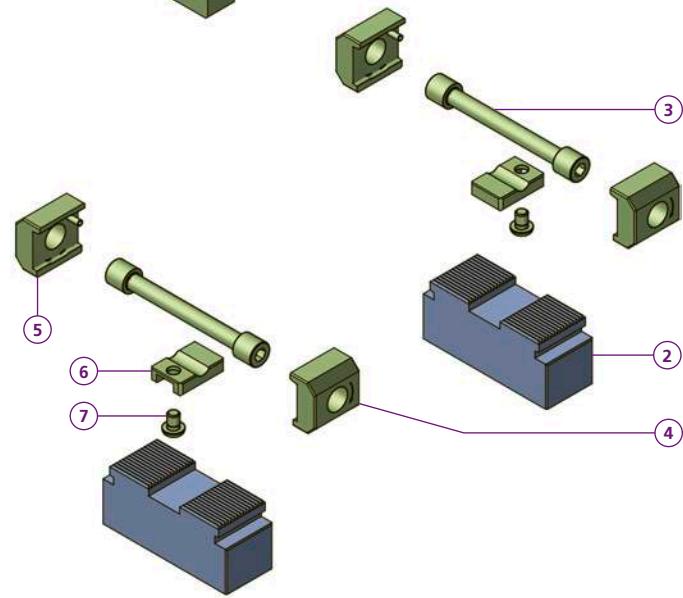
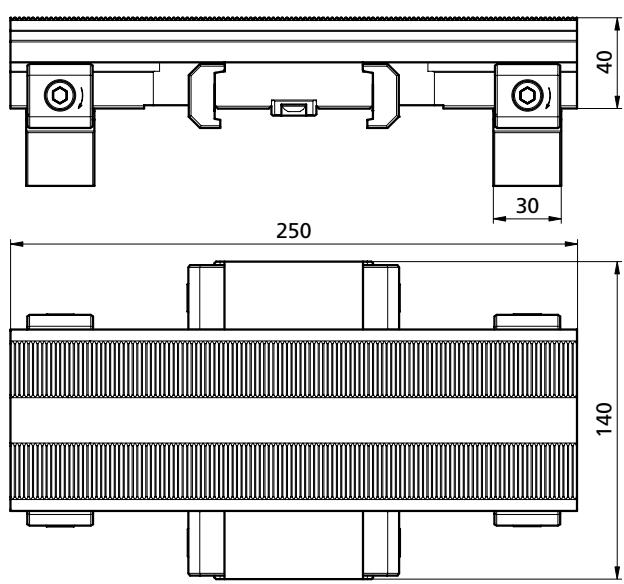
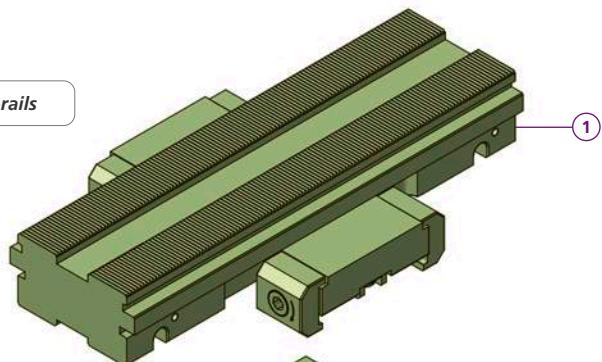
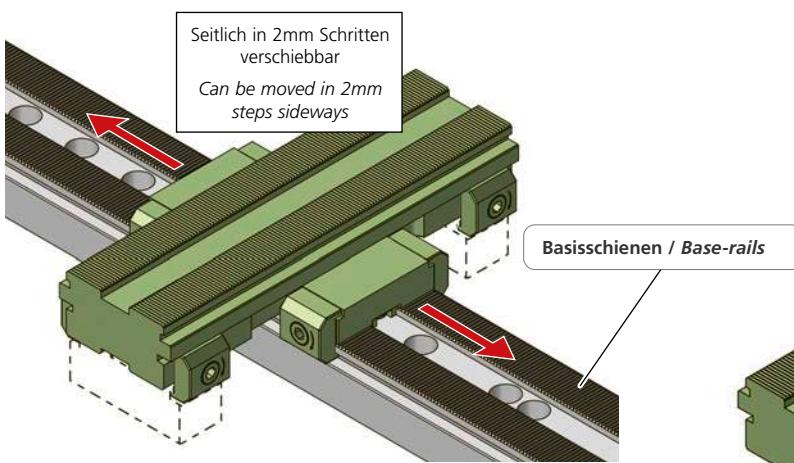


Bestellbeispiel / Ordering example: PCB850SET

# Querschiene 90° Crossbar 90°

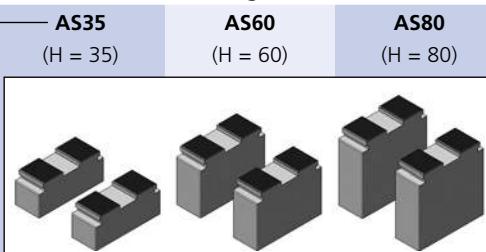
PCB250Q90-H35

powerCLAMP



| PCB250Q90H35 |                |
|--------------|----------------|
| ①            | 1x TH151032    |
| ②            | 2x             |
| ③            | 4x PCS14       |
| ④            | 4x PCSP30L     |
| ⑤            | 4x PCSP30R     |
| ⑥            | 4x PCGU2030    |
| ⑦            | 1x M6X8ISO7380 |
| kg           | ~8,18          |

## Schienenhöhe / Rail height



## Seitliche Stützen

Bei Gebrauch der Querschiene 90°, werden je nach Höhe der Basisschiene auf dessen sie aufgesetzt sind, zwei seitliche Stützen AS35 / AS60 / AS80 unterlegt.

## Side support

When using the cross rail 90°, a side support AS35 / AS60 / AS80 is underlaid, depending on the height of the base rail on which it is placed.

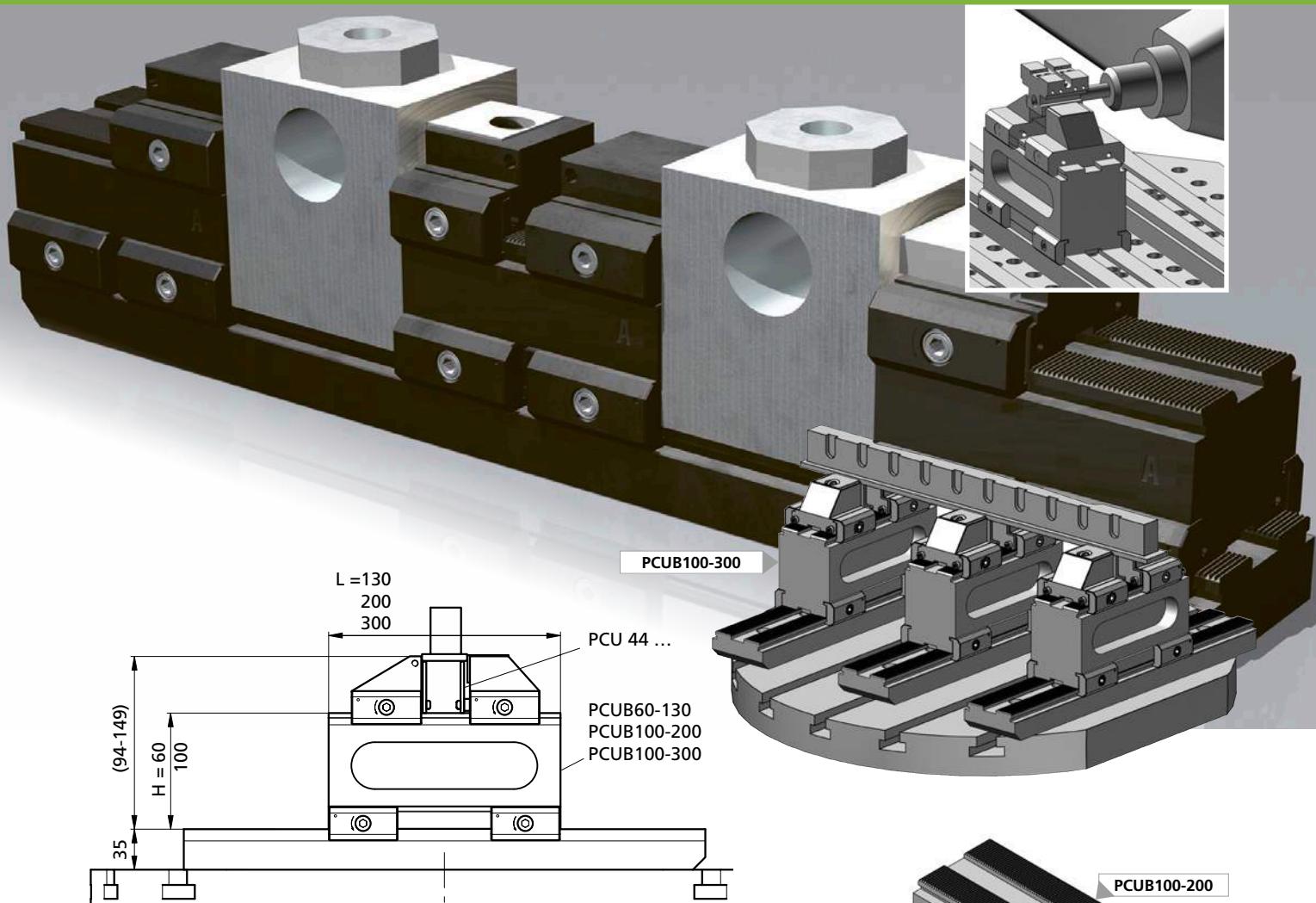
Bestellbeispiel / Ordering example: PCB250Q90H35

# Erhöhung für 5-Achsenmaschinen

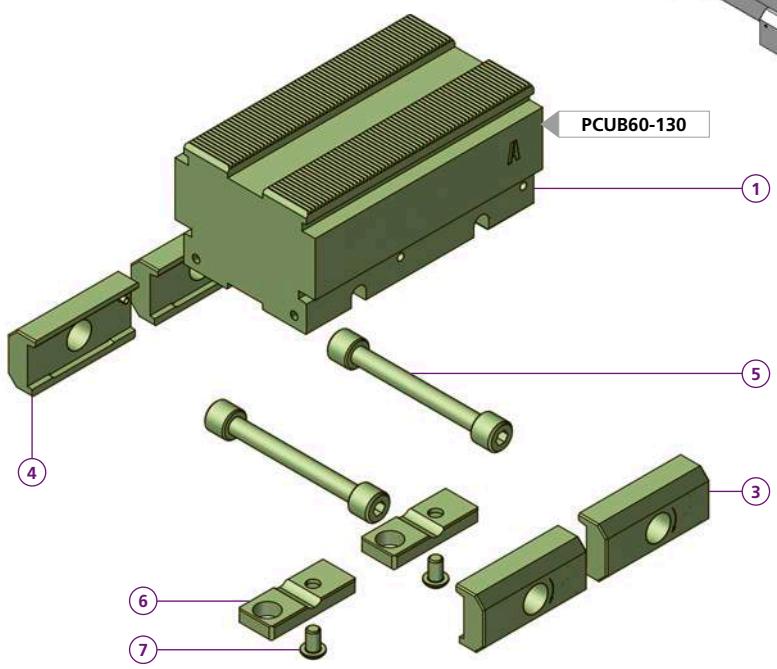
## Riser for 5-axis machines

**PCUB60-130**  
**PCUB100-200**  
**PCUB100-300**

**powerCLAMP**



| PCUB60-130  |                |
|-------------|----------------|
| ①           | 1x TK120596    |
| ③           | 2x PCSP60R     |
| ④           | 2x PCSP60L     |
| ⑤           | 2x PCS14       |
| ⑥           | 2x PCGU2049    |
| ⑦           | 2x M6X8ISO7380 |
| L           | = 130          |
| H           | = 60           |
| kg          | ~5,8           |
| PCUB100-200 |                |
| ①           | 1x TK130108    |
| L           | = 200          |
| H           | = 100          |
| kg          | ~10,5          |
| PCUB100-300 |                |
| ①           | 1x TK130109    |
| ③           | 3x PCSP60R     |
| ④           | 3x PCSP60L     |
| ⑤           | 3x PCS14       |
| ⑥           | 3x PCGU2049    |
| ⑦           | 3x M6X8ISO7380 |
| L           | = 300          |
| H           | = 100          |
| kg          | ~16            |



Bestellbeispiel / Ordering example: **PCUB100-200**

Anwendungsbeispiele  
*Examples of application*

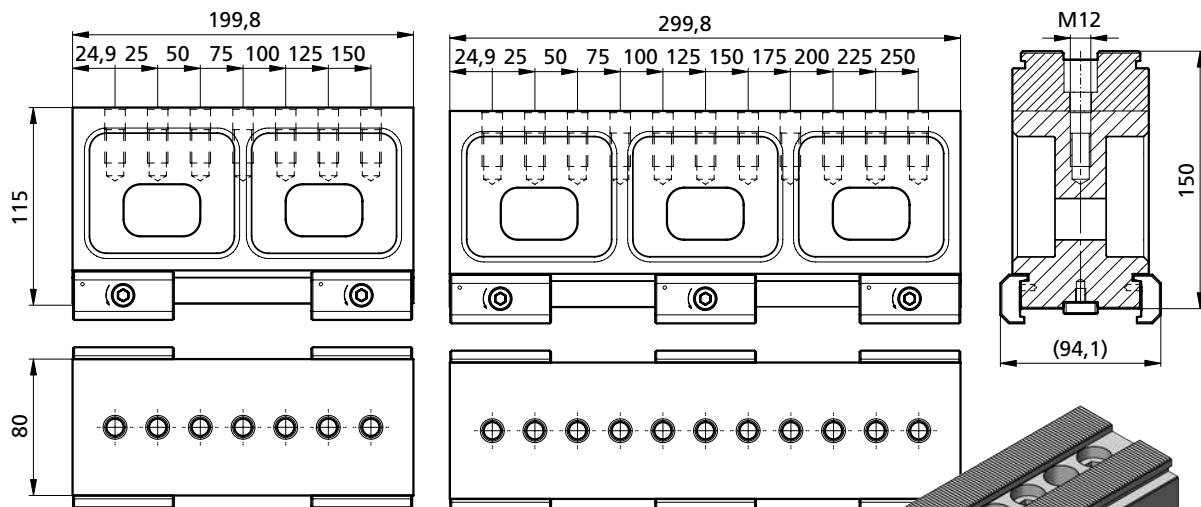
**powerCLAMP**



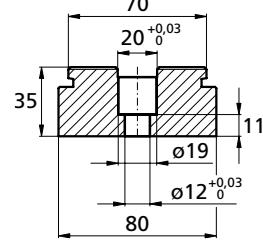
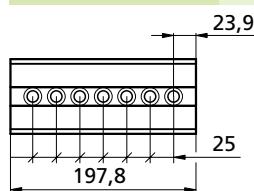
## PCUB115-200-R25

## PCUB115-300-R25

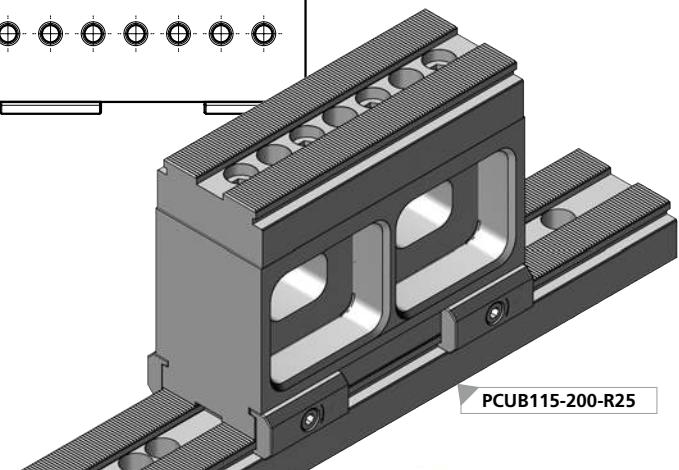
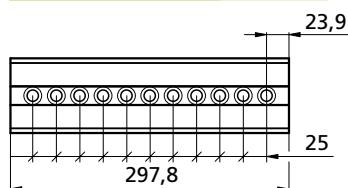
**powerCLAMP**



**PCB25200** kg ~3,6

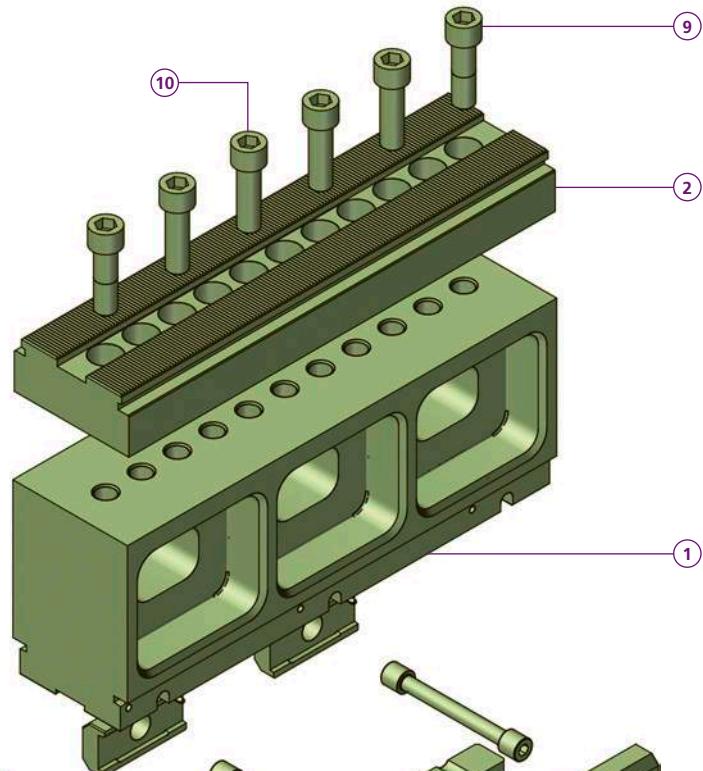


**PCB25300** kg ~5,4



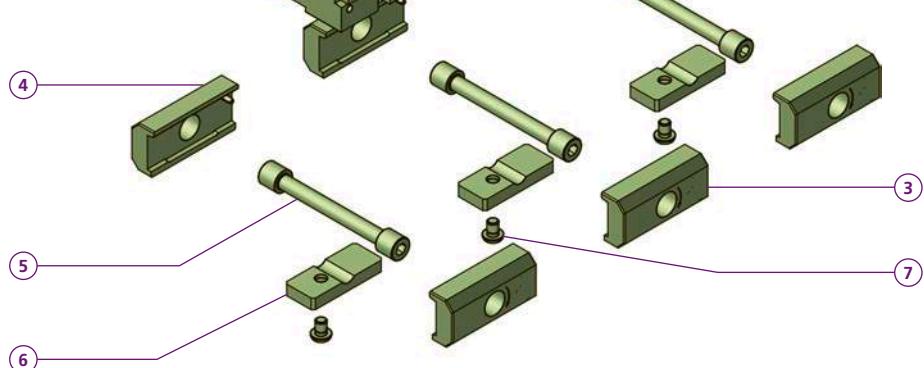
**PCUB115-200-R25**

- ① 1x TK130323
  - ② 1x PCB25200
  - ③ 2x PCSP60R
  - ④ 2x PCSP60L
  - ⑤ 2x PCS14
  - ⑥ 2x PCGU2049
  - ⑦ 2x M6X8ISO7380
  - ⑨ 2x TWPAS1240
  - ⑩ 2x M12X40ISO4762
- kg** ~13

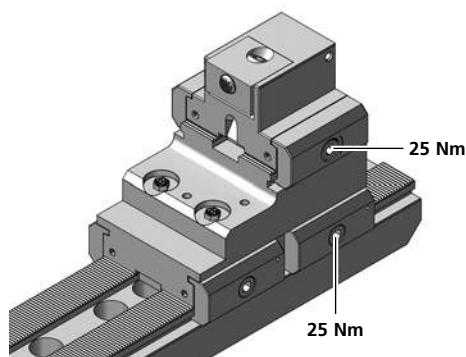
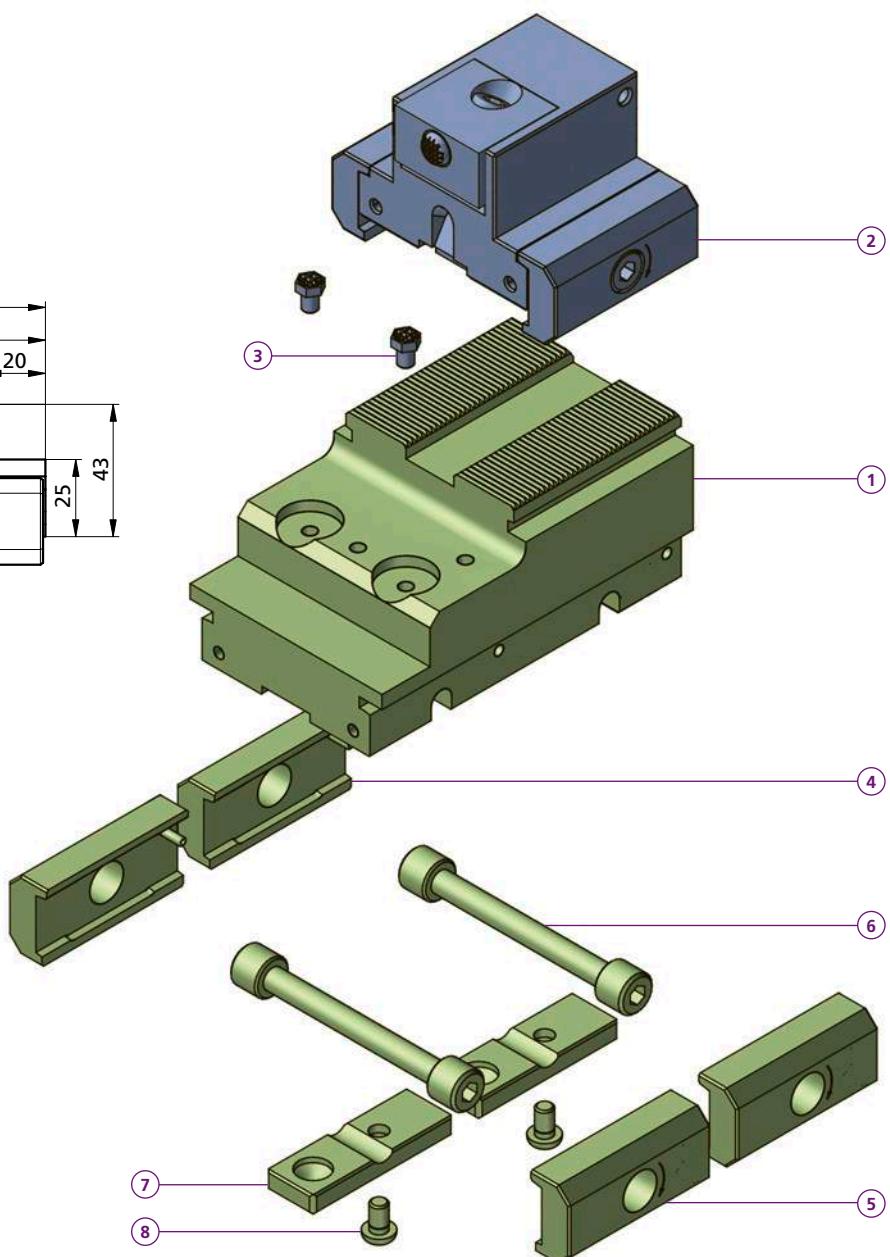
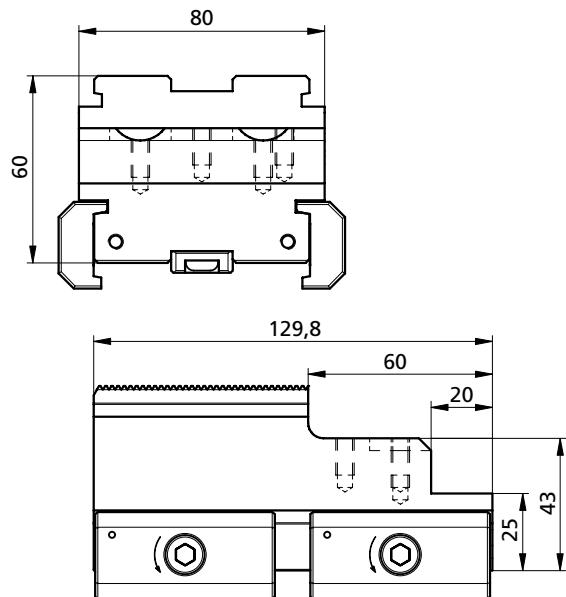


**PCUB115-300-R25**

- ① 1x TK130324
  - ② 1x PCB25300
  - ③ 3x PCSP60R
  - ④ 3x PCSP60L
  - ⑤ 3x PCS14
  - ⑥ 3x PCGU2049
  - ⑦ 3x M6X8ISO7380
  - ⑨ 2x TWPAS1240
  - ⑩ 4x M12X40ISO4762
- kg** ~19,6



Bestellbeispiel / Ordering example: **PCUB115-300-R25**



| PCUB60-70-130 |                 |
|---------------|-----------------|
| ①             | 1x TK130707     |
| ②             | 1x PS1F43N49-60 |
| ③             | 2x CCHMR        |
| ④             | 2x PCSP60L      |
| ⑤             | 2x PCSP60R      |
| ⑥             | 2x PCS14        |
| ⑦             | 2x PCGU2049     |
| ⑧             | 2x M6X8ISO7380  |
| kg            | ~4,3            |

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Zubehör / Accessories p. 337

Separat bestellen / Order separately

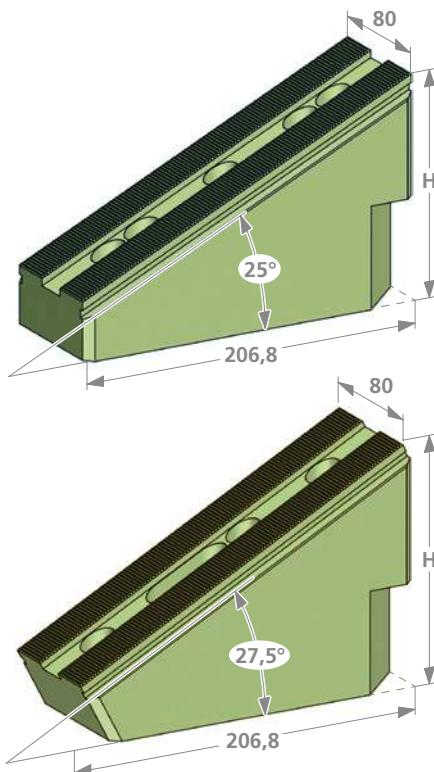
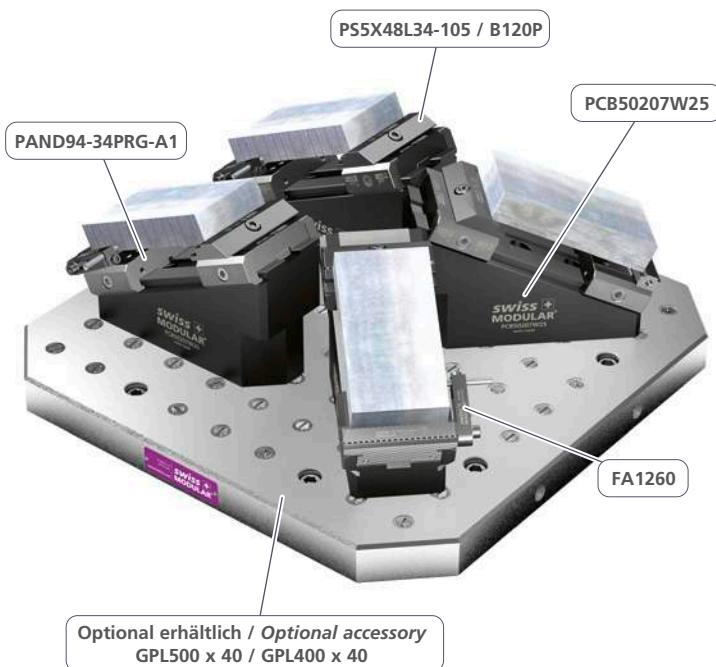
Bestellbeispiel / Ordering example: PCUB60-70-130

# Schräge Basisschiene für 5-Achsenmaschinen

## Slanted base rail for 5-axis machines

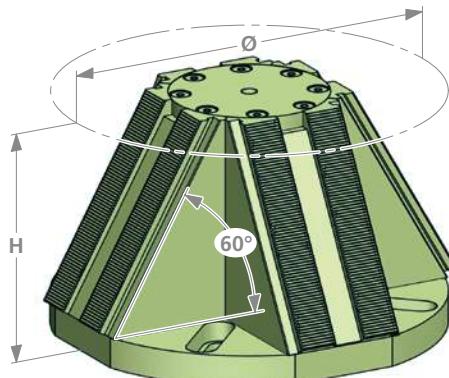
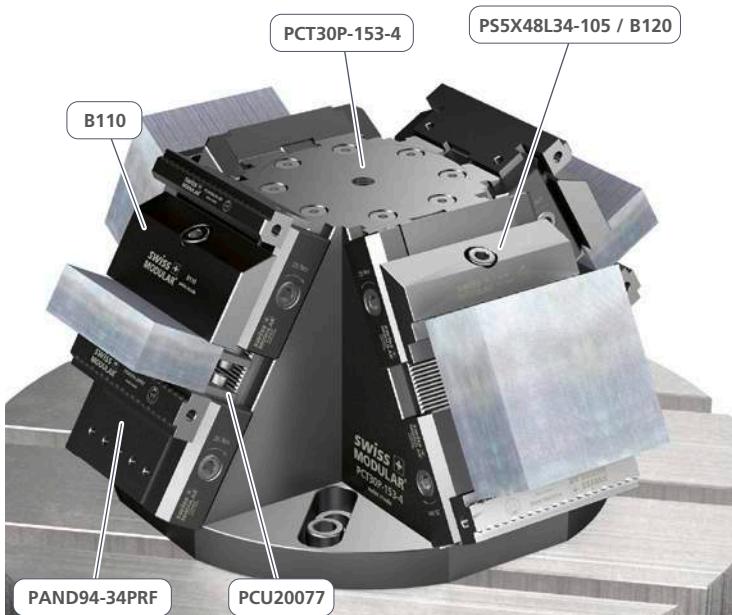
**5axes  
powerCLAMP**

| Art. Nr.           | kg   | $\Delta$ | H     |
|--------------------|------|----------|-------|
| <b>PCB50207W25</b> | ~9,2 | 25°      | 131,5 |
| <b>PCB50207W27</b> | ~9,5 | 27,5°    | 139,7 |



Die Basisschienen können auf einem 50 mm Raster je nach Bedarf parallel oder diagonal platziert werden.  
The base rails can be placed on a 50 mm grid either parallel or diagonal as required.

| Art. Nr.            | kg  | $\Delta$ | $\emptyset$ | H     |
|---------------------|-----|----------|-------------|-------|
| <b>PCT30P-153-4</b> | ~24 | 60°      | 266         | 152,4 |



Die Stahl-Mineralgusspyramide verfügt über eine powerCLAMP Schnittstelle und ermöglicht eine kompakte und zugleich flexible 5-Achs-Bearbeitung. Die Module werden in einem Winkel von 60° montiert. Dank dem eingesetzten Mineralguss, hat die Konstruktion ein relativ tiefes Gewicht bei einer hohen Festigkeit.

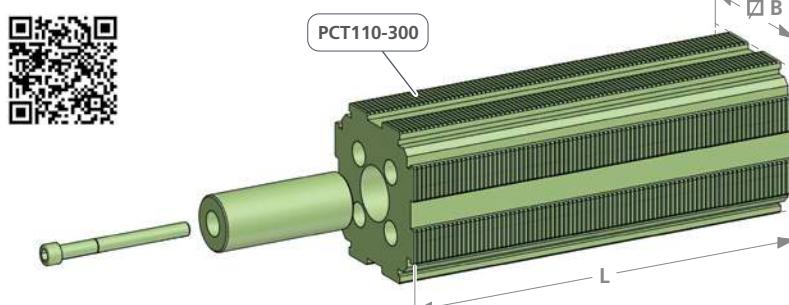
The steel mineral casting pyramid has a powerCLAMP interface and enables compact and, at the same time, flexible 5-axis machining. The modules are mounted at an angle of 60°. Due to the mineral cast used, the construction has a relatively low weight with a high rigidity.

# Monobloc Balken & Gegenlager zu Teilapparat

## Monobloc & Counterbearing for 4th-axis

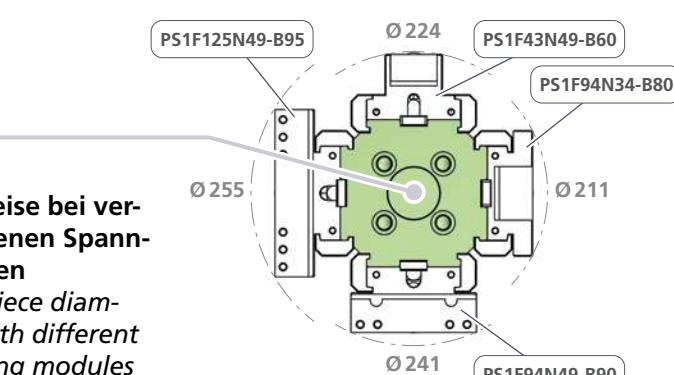
**powerCLAMP**

| Art. Nr.   | kg    | L   | B       |
|------------|-------|-----|---------|
| PCT110-300 | ~24,5 | 300 | 110x110 |
| PCT110-350 | ~27,5 | 350 | 110x110 |
| PCT110-400 | ~31,5 | 400 | 110x110 |
| PCT110-450 | ~35,5 | 450 | 110x110 |
| PCT110-500 | ~39,5 | 500 | 110x110 |
| PCT110-550 | ~43,0 | 550 | 110x110 |
| PCT110-600 | ~47,0 | 600 | 110x110 |
| PCT110-650 | ~51,0 | 650 | 110x110 |
| PCT110-700 | ~55,2 | 700 | 110x110 |



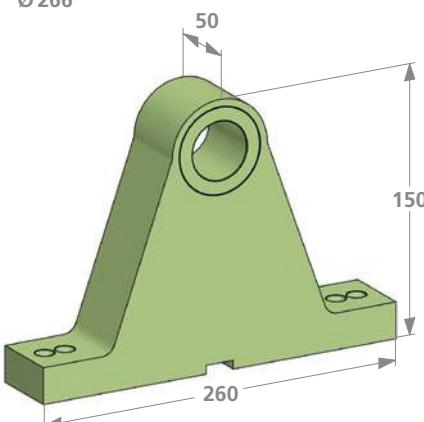
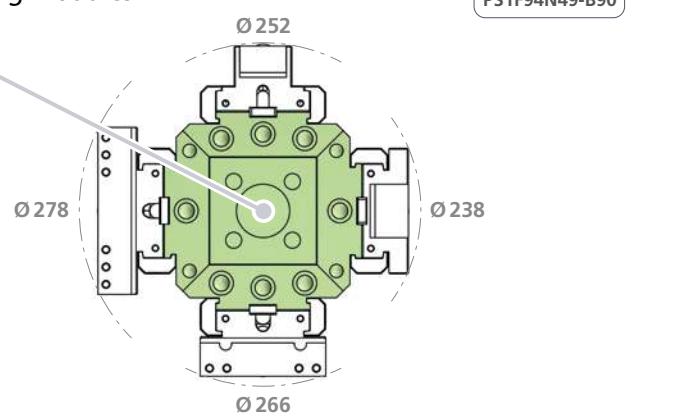
**Störkreise bei ver-  
schiedenen Spann-  
modulen**  
*Workpiece diam-  
eter with different  
clamping modules*

| Art. Nr.    | kg     | L   | B       |
|-------------|--------|-----|---------|
| PCMT150-700 | ~83,0  | 700 | 150x150 |
| PCMT150-750 | ~89,0  | 750 | 150x150 |
| PCMT150-800 | ~95,0  | 800 | 150x150 |
| PCMT150-850 | ~101,0 | 850 | 150x150 |



Gegenlager  
Counterbearing

| Art. Nr.  | kg   |
|-----------|------|
| PCGL15050 | ~8,0 |



**Reduziert Vibrationen und ist leicht**  
*Reduces vibrations and is light*



# Spanntürme zu 5-Achs Bearbeitungszentren

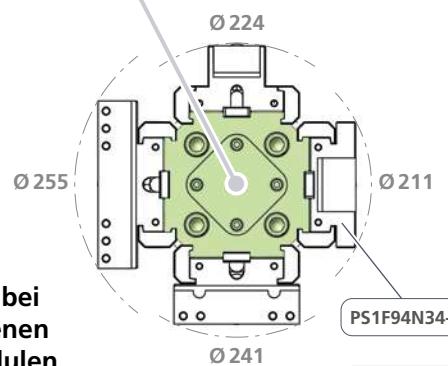
## Clamping fixtures for 5 axis machines

**5 axes**  
**powerCLAMP**

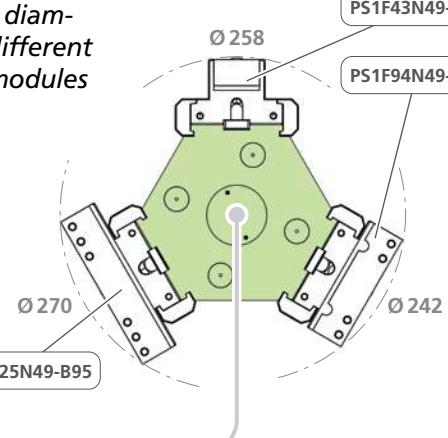
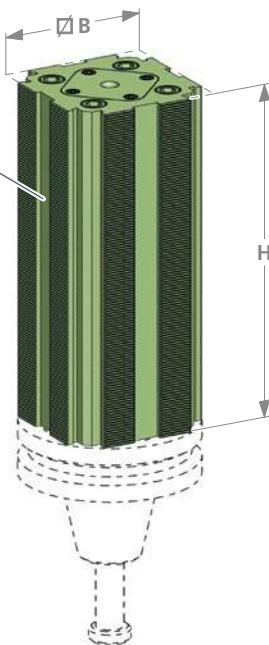
| Art. Nr.              | kg  | H   | B       |
|-----------------------|-----|-----|---------|
| <b>PCT110-250MATS</b> | ~17 | 250 | 110x110 |
| <b>PCT110-300MATS</b> | ~21 | 300 | 110x110 |



**Störkreise bei verschiedenen Spannmodulen**  
**Workpiece diameter with different clamping modules**



PCT110-250MATS



PS1F94N34-B80

PS1F43N49-B60

PS1F94N49-B90

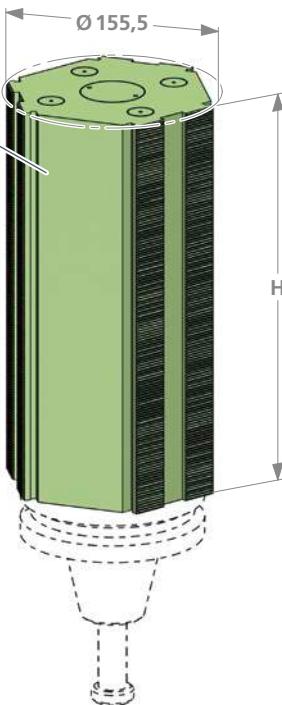
PS1F125N49-B95



| Art. Nr.                | kg  | H   |
|-------------------------|-----|-----|
| <b>PCT155-290-3MATS</b> | ~30 | 290 |



PCT155-290-3MATS



# Spanntürme zu 5-Achs Bearbeitungszentren

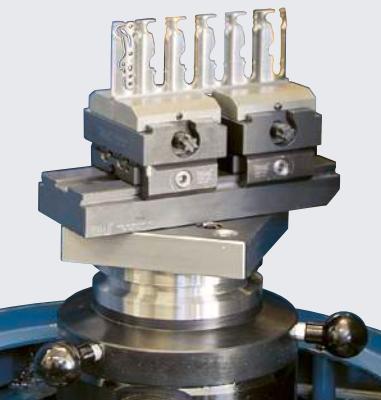
## Clamping fixtures for 5 axis machines

powerCLAMP



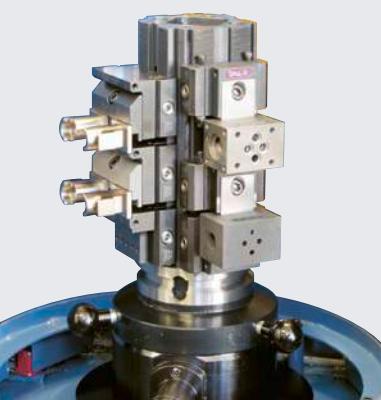
microCLAMP

p. 178



triCENTRO

p. 126



powerCLAMP

p. 74, 64



microCLAMP

p. 202

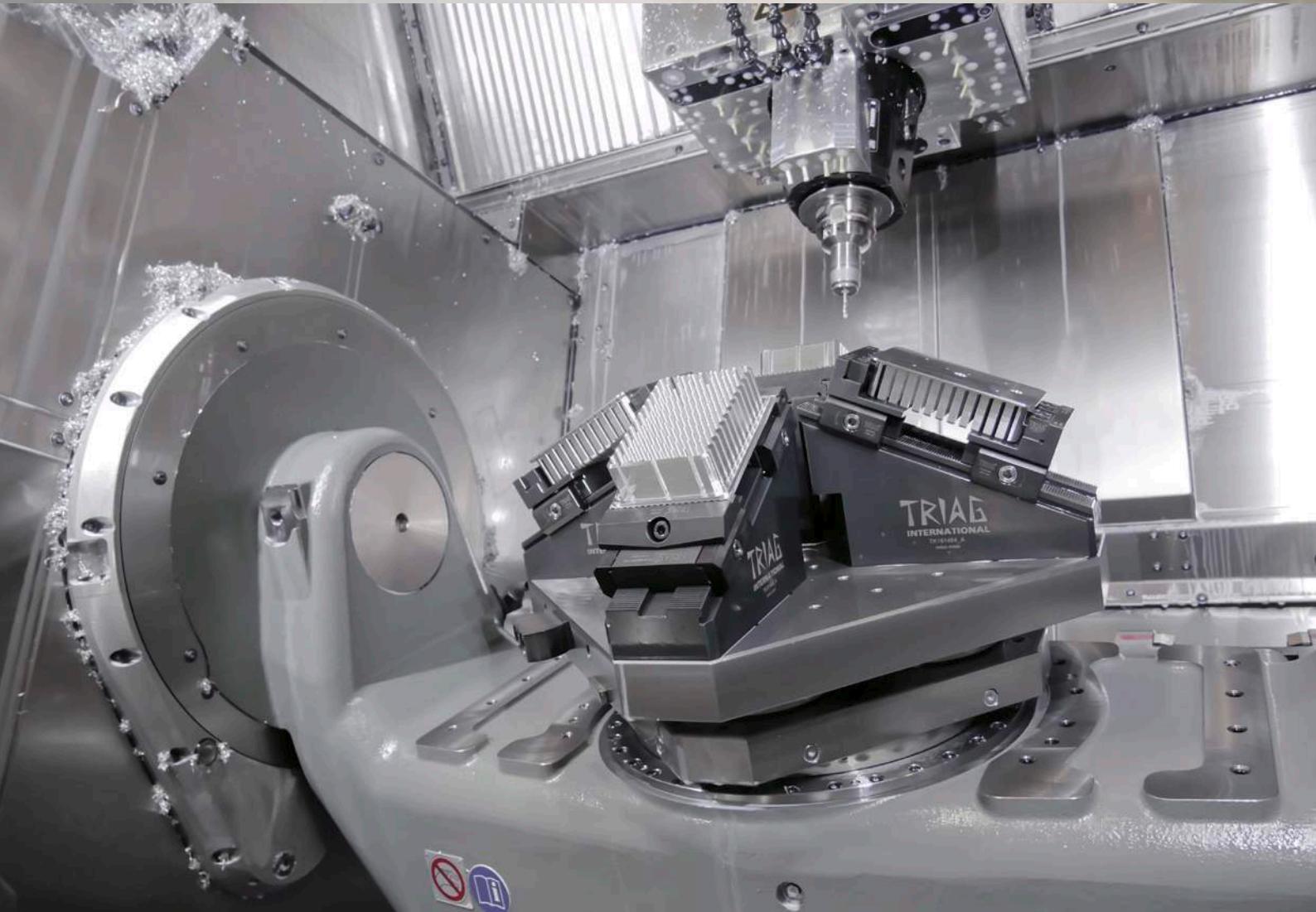
# Anwendungsbeispiele *Examples of application*

**powerCLAMP**



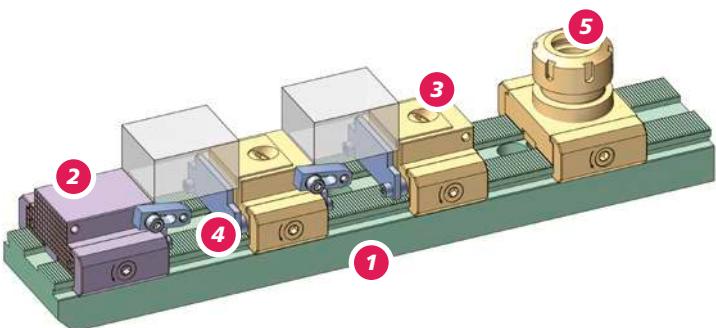
# Anwendungsbeispiele *Examples of application*

**powerCLAMP**



**BESTELLBEISPIEL / ORDERING EXAMPLE**

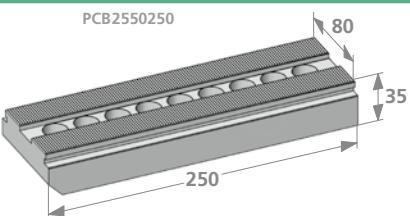
1x PCSET18-450A 2x PCSET18-N3 1x PS1X50N62-ER32



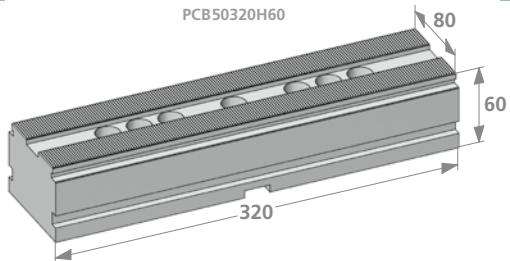
Zu jeder Basisschiene gehört 1 Anschlagmodul «Tabelle 2» nach Ihrer Wahl!  
 Each base rail comes with 1 end module "table 2" of your choice!

**1 Basisschienen / Base-rails**

|              |            |              |            |
|--------------|------------|--------------|------------|
| PCSET18-250A | PCB2550250 | PCSET18-600A | PCB4050600 |
| PCSET18-350A | PCB4050350 | PCSET18-650A | PCB4050650 |
| PCSET18-400A | PCB4050400 | PCSET18-700A | PCB4050700 |
| PCSET18-450A | PCB4050450 | PCSET18-750A | PCB4050750 |
| PCSET18-500A | PCB4050500 | PCSET18-800A | PCB4050800 |
| PCSET18-550A | PCB4050550 |              |            |



|              |               |
|--------------|---------------|
| PCSET18-320B | PCB50-320H60  |
| PCSET18-400B | PCB100-400H60 |
| PCSET18-500B | PCB100-500H60 |
| PCSET18-600B | PCB100-600H60 |
| PCSET18-650B | PCB100-650H60 |
| PCSET18-690B | PCB100-690H60 |
| PCSET18-850B | PCB100-850H60 |



**2 Anschlagmodule / End modules**

| 48                |    | 78                              |    | 94                                    |    |
|-------------------|----|---------------------------------|----|---------------------------------------|----|
| PAND 48-34        | 01 | PAND 48-49                      | 02 | PAND 78-34                            | 05 |
|                   |    |                                 |    |                                       |    |
| 48                | 34 | 48                              | 49 | 78                                    | 49 |
| PAND 48-34 PRF-A1 | 03 | PAND 48-49 PRF-A1               | 04 | PAND 94-34 PRF-A1                     | 09 |
|                   |    |                                 |    |                                       |    |
| 48                | 34 | 48                              | 49 | 94                                    | 49 |
| F = glatt / flat  |    | R = geriffelt / double serrated |    | = Direktprägebacken / Direct stamping |    |
|                   |    |                                 |    |                                       |    |
| 01                | 02 | 05                              | 06 | 07                                    | 08 |
| 03                | 04 |                                 |    | 09                                    | 10 |

**5**

**Dreibackenfutter | Spannzangenmodul | Mini-Zentrischspanner**  
**Three-jaw chuck | Collet module | Mini-self centering vise**

|                |                |               |                |                     |                        |
|----------------|----------------|---------------|----------------|---------------------|------------------------|
|                |                |               |                |                     |                        |
| Ø125<br>87     | Ø100<br>82     | Ø80<br>75     | Ø50<br>62      | 60<br>80<br>3<br>48 | 70<br>(99)<br>20<br>50 |
| PS3X125L87BSET | PS3X100L82BSET | PS3X80L75BSET | PS1X50N62-ER32 | PCZ80L40PRG62       | PC100L50               |

**3**

**Niederzugspannmodule / Pull down clamp modules**

| 48  |                    | 78  |                   | 94                 |                    |
|---|--------------------|---|-------------------|--------------------|--------------------|
| PS1R48N34 B80N                                  | PS1R48N49 B80N     | PS1R78N49 B90R78  | PS1F48N49 B90F78  | PS1R94N49 B90      | PS1F94N49 B90      |
|   |                    |   |                   |                    |                    |
| <b>PCSET18-N1</b>                               | <b>PCSET18-N2</b>  | <b>PCSET18-N5</b>   | <b>PCSET18-N6</b> | <b>PCSET18-N7</b>  | <b>PCSET18-N8</b>  |
| PS1F48N34 B80N                                  | PS1F48N49 B80N     | <br><br>  |                   | PS1R94N49 B93      |                    |
|   |                    | <br><br>  |                   |                    |                    |
| <b>PCSET18-N3</b>                               | <b>PCSET18-N4</b>  |   |                   | <b>PCSET18-N9</b>  |                    |
| <b>Linearspannmodule / Linear clamp modules</b> |                    |   |                   |                    |                    |
| PS1PF48L34 B115P                                | PS1PF48L49 B115P   | PS1R78L34 B141  | PS1F78L34 B140    | PS1PF94L34 B120P   | PS1PF94L49 B120P   |
|   |                    |   |                   |                    |                    |
| <b>PCSET18-L1</b>                               | <b>PCSET18-L2</b>  | <b>PCSET18-L5</b>   | <b>PCSET18-L6</b> | <b>PCSET18-L9</b>  | <b>PCSET18-L11</b> |
| PS1R48L49 B106                                  | PS1F48L49 B105     | PS1R78L49 B141  | PS1F78L49 B140    | PS1R94L34 B111     | PS1F94L34 B110     |
|   |                    |   |                   |                    |                    |
| <b>PCSET18-L3</b>                               | <b>PCSET18-L4</b>  | <b>PCSET18-L7</b>   | <b>PCSET18-L8</b> | <b>PCSET18-L12</b> | <b>PCSET18-L13</b> |
| PS1R48L34 B106                                  | PS1F48L34 B105     | <br><br><br>  |                   | PS1R94L49 B111     | PS1F94L49 B110     |
|   |                    | <br><br><br>  |                   |                    |                    |
| <b>PCSET18-L16</b>                              | <b>PCSET18-L17</b> | <p>Bei jedem Niederzug und Linear Spannmodul sind 2 Parallelunterlagen nach Ihrer Wahl und 1 Fräsanschlag enthalten.</p> <p>Each pull-down and linear clamping module includes 2 parallels of your choice and 1 milling buffer.</p> |                   | <b>PCSET18-L14</b> | <b>PCSET18-L15</b> |

**4**

**Parallelunterlagen / Steel parallels**

| 48                                   |   | 78              |   | 94                       |   |
|--------------------------------------|---|-----------------|---|--------------------------|---|
| PCU29047                             | <b>H</b><br>PCU 20 047<br>PCU 24 047<br><b>PCU 29 047</b><br>PCU 31 047<br>PCU 34 047<br>PCU 39 047<br>PCU 44 047<br>PCU 46 047 | PCU39077        | <b>H</b><br>PCU 20 077<br>PCU 24 077<br>PCU 29 077<br>PCU 31 077<br>PCU 34 077<br><b>PCU 39 077</b><br>PCU 44 077<br>PCU 46 077 | PCU29093                 | <b>H</b><br>PCU 14 093<br>PCU 20 093<br>PCU 24 093<br><b>PCU 29 093</b><br>PCU 31 093<br>PCU 34 093<br>PCU 39 093<br>PCU 44 093<br>PCU 46 093<br>PCU 47 093 |
| <b>B48- ...</b>                      |   | <b>B78- ...</b> |   | <b>B94- ...</b>          |   |
| <b>Fräsanschlag / Milling buffer</b> |   |                 | FA1240  | 1 x Inklusive / Included |   |



Für mehr Informationen (Genaue Bemessung, Material, Spannkraft, Drehmoment)  
For further informations (exact dimensions, material, clamping forces, torque)

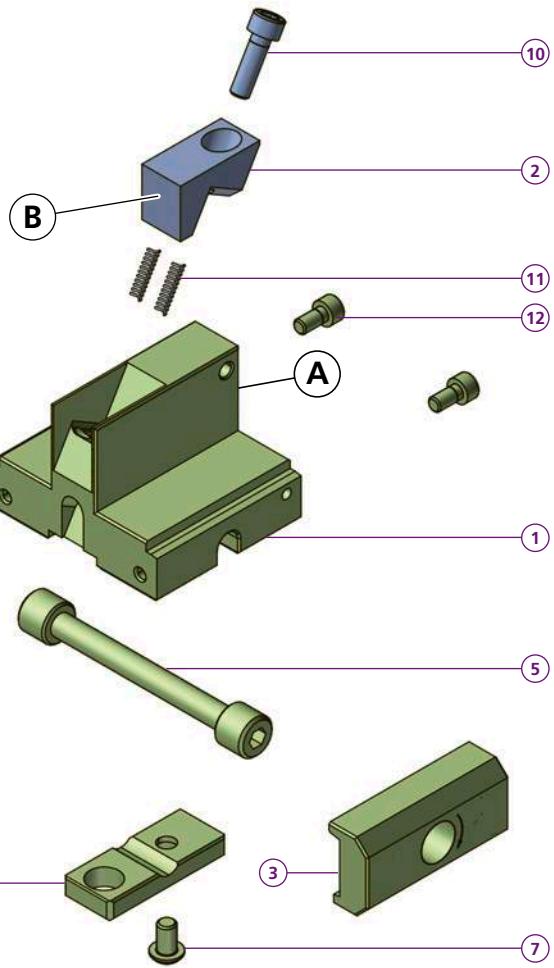
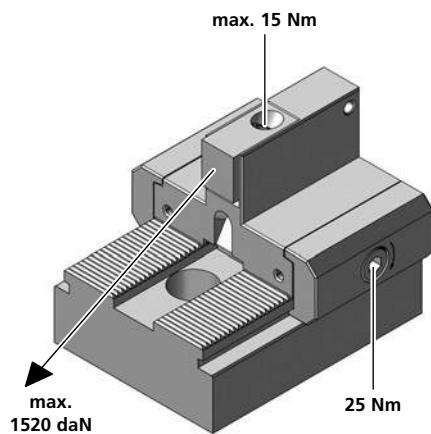
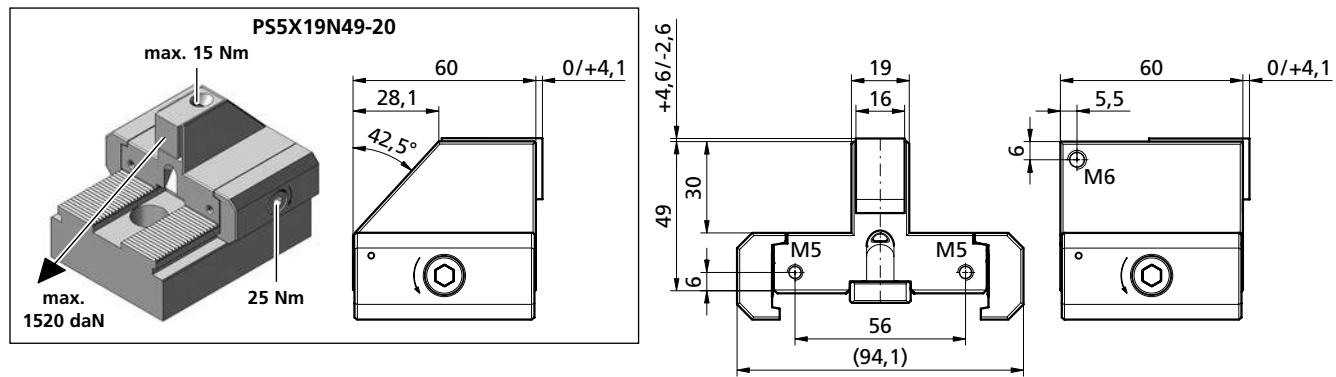
p. 60 - 112



**Spannmodule**  
**Clamping module**

**PS1R/F19N49-20**  
**PS5X19N49-20**

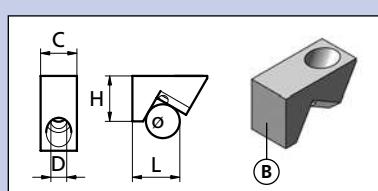
**5axes**  
**powerCLAMP**



|                     |                     |
|---------------------|---------------------|
|                     | <b>PS5X19N49-20</b> |
| (1)                 | 1x TF140449         |
| (9)                 | 2x PCD005           |
| (8)                 | 2x M5X14ISO4762     |
| kg                  | ~1,1                |
| <b>PS1F19N49-20</b> |                     |
| (1)                 | 1x TF150961         |
| <b>PS1R19N49-20</b> |                     |
| (1)                 | 1x TF140448         |
| (2)                 | 1x _____            |
| (3)                 | 1x PCSP60R          |
| (4)                 | 1x PCSP60L          |
| (5)                 | 1x PCS14            |
| (6)                 | 1x PCGU2049         |
| (7)                 | 1x M6X8ISO7380      |
| (8)                 | 2x M5X14ISO4762     |
| (9)                 | 2x PCD005           |
| (10)                | 1x M6X20ISO4762     |
| (11)                | 2x FED0418          |
| (12)                | 2x M5X10ISO4762     |
| kg                  | ~1,2                |

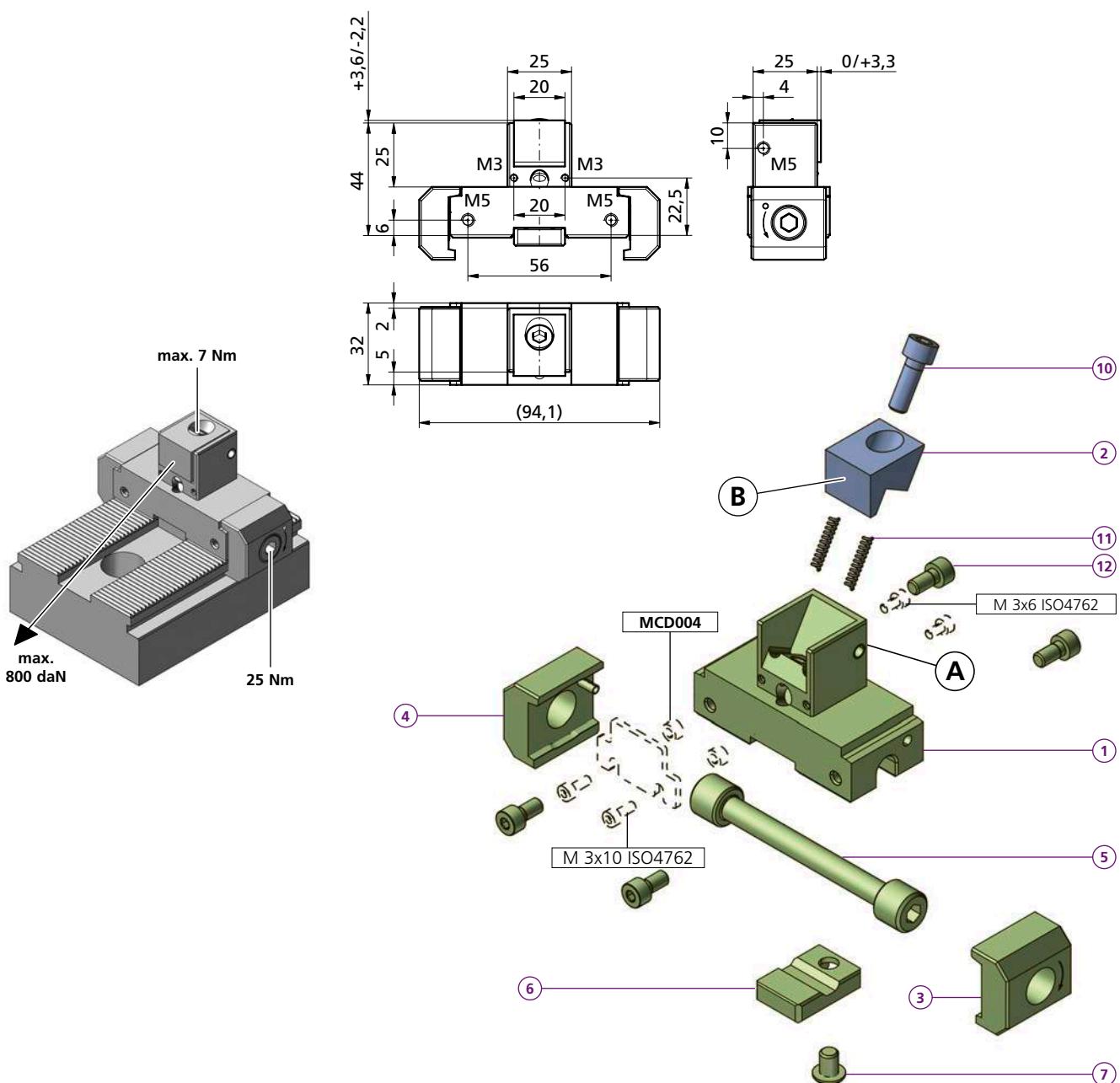
Bestellbeispiel / Ordering example: 1x **PS1R19N49-20** & 1x **B21**

| B  |        |        |       |
|----|--------|--------|-------|
|    | B20    | B21    | B22   |
| C  | 16     | 16     | 16    |
| H  | 20     | 20     | 20    |
| L  | 19     | 19     | 19    |
| D  | 6,5    | 6,5    | 6,5   |
| ø  | 12     | 12     | 12    |
| i  | HV700  | HV700  | *     |
|    | x0,2mm | x0,2mm |       |
| kg | ~0,06  | ~0,06  | ~0,06 |



Separat bestellen / Order separately

\* = weicher Stahl / soft steel



|                     |          |
|---------------------|----------|
| <b>PS1F25N44-13</b> | <b>A</b> |
| ① 1x TF150960       |          |
| <b>PS1R25N44-13</b> |          |
| ① 1x TF140450       |          |
| ② 1x —              |          |
| ③ 1x PCSP30R        |          |
| ④ 1x PCSP30L        |          |
| ⑤ 1x PCS14          |          |
| ⑥ 1x PCGU2030       |          |
| ⑦ 1x M6X8ISO7380    |          |
| ⑩ 1x M6X16ISO4762   |          |
| ⑪ 2x FED03018       |          |
| ⑫ 4x M5X10ISO4762   |          |
| <b>kg</b>           | ~0,6     |

**B**

|           | <b>B13</b>    | <b>B14</b> | <b>B15</b> | <b>B16</b> |
|-----------|---------------|------------|------------|------------|
| <b>C</b>  | 20            | 20         | 20         | 20         |
| <b>H</b>  | 16            | 16         | 16         | 16         |
| <b>L</b>  | 13,8          | 13,8       | 13,8       | 19         |
| <b>D</b>  | 6,5           | 6,5        | 6,5        | 6,5        |
| <b>ø</b>  | 10            | 10         | 10         | 10         |
| <b>i</b>  | HV700         | HV700      | *          | *          |
|           | x0,2mm x0,2mm |            |            |            |
| <b>kg</b> | ~0,05         | ~0,05      | ~0,05      | ~0,06      |

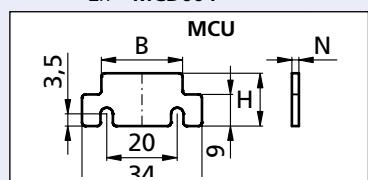
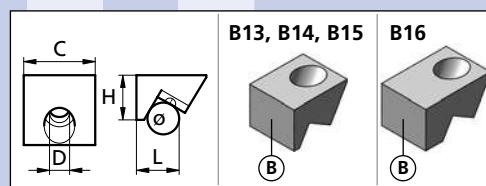
**Bestellbeispiel / Ordering example:** 1x **PS1R25N44-13** & 1x **B14**

|                 | <b>H</b> | <b>B</b> | <b>N</b> | <b>kg</b> |
|-----------------|----------|----------|----------|-----------|
| <b>MCU11037</b> | 11       | 23       | 2        | ~0,004    |
| <b>MCU15037</b> | 15       | 23       | 2        | ~0,006    |
| <b>MCU18037</b> | 18       | 23       | 2        | ~0,008    |
| <b>MCU20037</b> | 20       | 23       | 2        | ~0,008    |
| <b>MCU22537</b> | 22,5     | 23       | 2        | ~0,008    |

2x **M3X10ISO4762**

2x **M3X6ISO4762**

2x **MCD004**

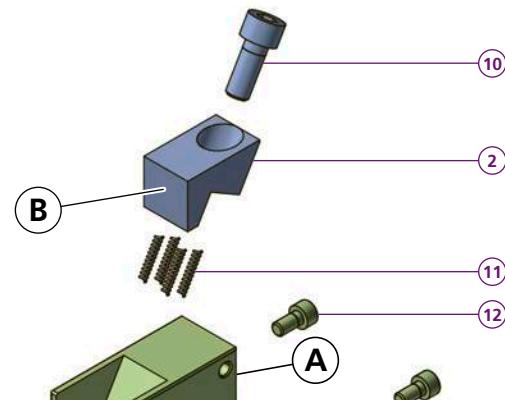
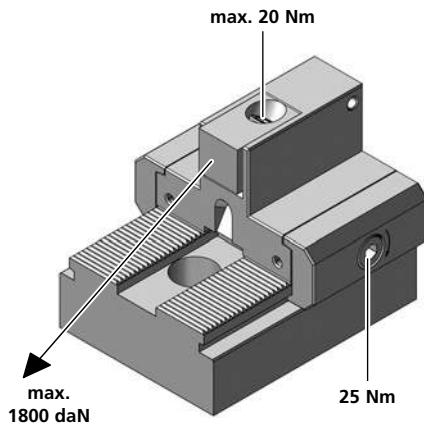
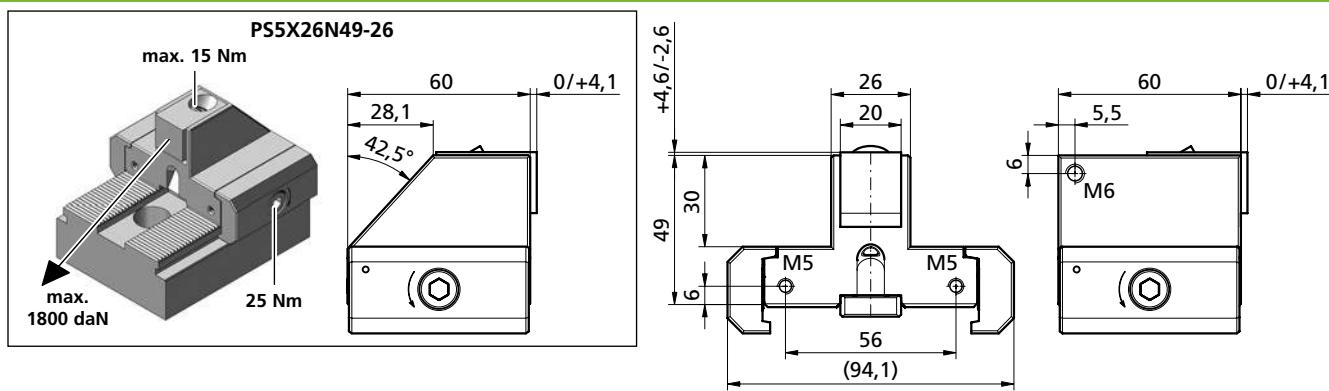


\* = weicher Stahl / soft steel

Separat bestellen / Order separately

PS1R/F26N49-26

PS5X26N49-26



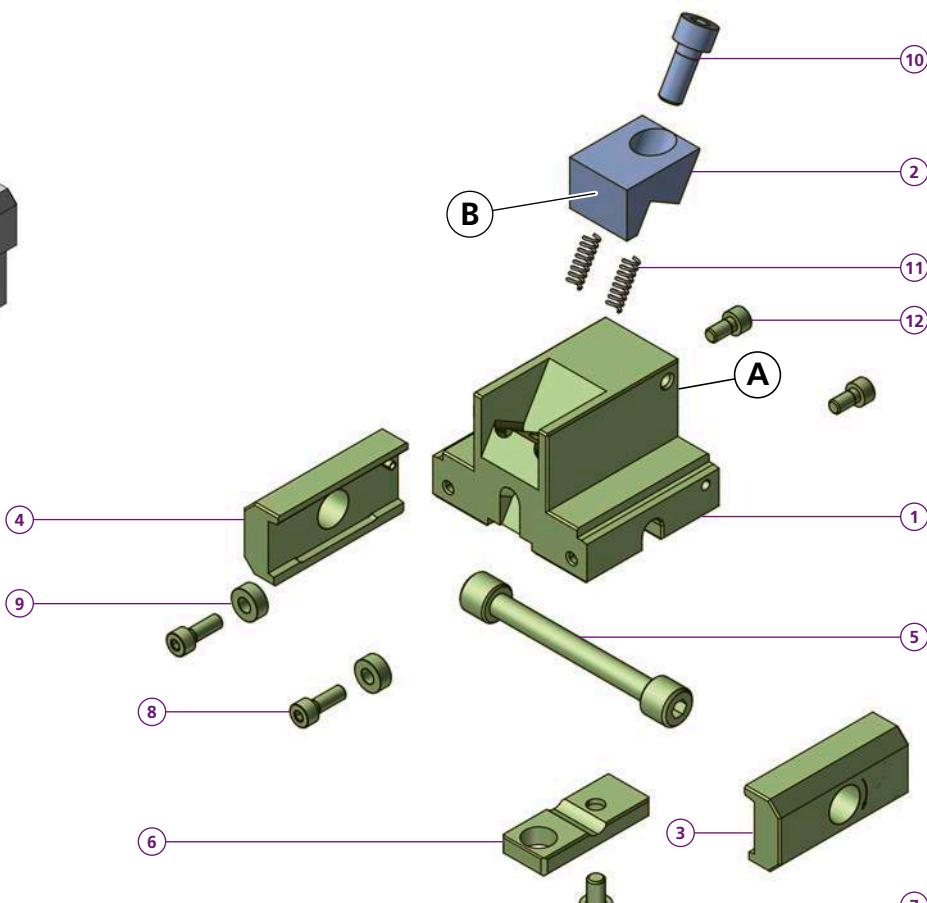
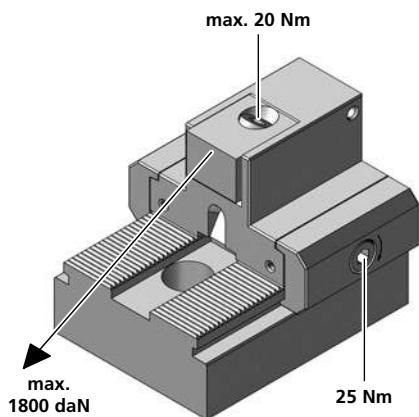
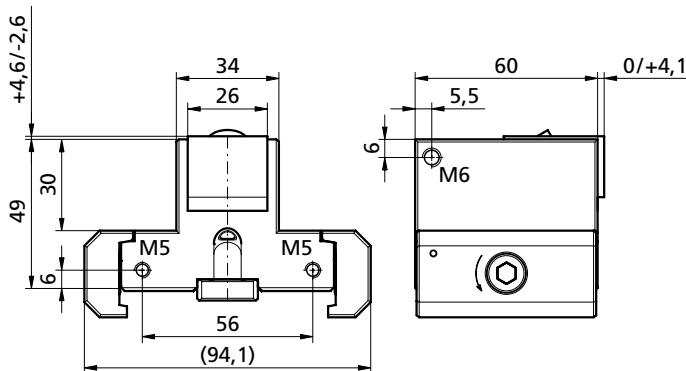
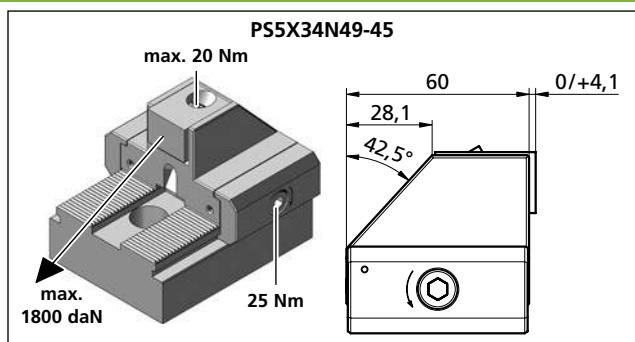
|                     |                     |
|---------------------|---------------------|
|                     | <b>PS5X26N49-26</b> |
| (1)                 | 1x TF140453         |
| (9)                 | 2x PCD005           |
| (8)                 | 2x M5X14ISO4762     |
| kg                  | ~1,1                |
| <b>PS1F26N49-26</b> |                     |
| (1)                 | 1x TF140451         |
| <b>PS1R26N49-26</b> |                     |
| (1)                 | 1x TF140452         |
| (2)                 | 1x _____            |
| (3)                 | 1x PCSP60R          |
| (4)                 | 1x PCSP60L          |
| (5)                 | 1x PCS14            |
| (6)                 | 1x PCGU2049         |
| (7)                 | 1x M6X8ISO7380      |
| (8)                 | 2x M5X14ISO4762     |
| (9)                 | 2x PCD005           |
| (10)                | 1x M8X20ISO4762     |
| (11)                | 4x FED0418          |
| (12)                | 2x M5X10ISO4762     |
| kg                  | ~1,2                |

**Bestellbeispiel / Ordering example:** 1x **PS1R26N49-26** & 1x **B26**

|           | <b>B26</b>      | <b>B27</b>      | <b>B28</b> |
|-----------|-----------------|-----------------|------------|
| <b>C</b>  | 20              | 20              | 20         |
| <b>H</b>  | 20              | 20              | 20         |
| <b>L</b>  | 19              | 19              | 19         |
| <b>D</b>  | 9               | 9               | 9          |
| <b>ø</b>  | 12              | 12              | 12         |
| <b>i</b>  | HV700<br>x0,2mm | HV700<br>x0,2mm | *          |
| <b>kg</b> | ~0,07           | ~0,07           | ~0,07      |

## PS1R/F34N49-45

## PS5X34N49-45



|                     |                     |
|---------------------|---------------------|
|                     | <b>PS5X34N49-45</b> |
| (1)                 | 1x TF140455         |
| (9)                 | 2x PCD005           |
| (8)                 | 2x M5X14ISO4762     |
| kg                  | ~1,2                |
| <b>PS1F34N49-45</b> |                     |
| (1)                 | 1x TF191071         |
| <b>PS1R34N49-45</b> |                     |
| (1)                 | 1x TF140454         |
| (2)                 | 1x _____            |
| (3)                 | 1x PCSP60R          |
| (4)                 | 1x PCSP60L          |
| (5)                 | 1x PCS14            |
| (6)                 | 1x PCGU2049         |
| (7)                 | 1x M6X8ISO7380      |
| (8)                 | 2x M5X14ISO4762     |
| (9)                 | 2x PCD005           |
| (10)                | 1x M8X20ISO4762     |
| (11)                | 2x FED0618          |
| (12)                | 2x M5X10ISO4762     |
| kg                  | ~1,3                |

|          |  |                 |            |              |
|----------|--|-----------------|------------|--------------|
| <b>B</b> | Bestellbeispiel / Ordering example: 1x <b>PS5X34N49-45</b> & 1x <b>B47HM</b> |                 |            |              |
|          | <b>B45</b>   | <b>B46</b>      | <b>B47</b> | <b>B47HM</b> |
| (C)      | 26   | 26              | 26         | 26           |
| (H)      | 20   | 20              | 20         | 20           |
| (L)      | 19   | 19              | 19,1       | 19,1         |
| (D)      | 9  | 9               | 9          | 9            |
| (o)      | 12   | 12              | 12         | 12           |
| (i)      | HV700<br>x0,2mm  | HV700<br>x0,2mm | *          | HM           |
| kg       | ~0,1   | ~0,1            | ~0,1       | ~0,1         |

**C** **H** **D** **L** **B**

Separat bestellen / Order separately

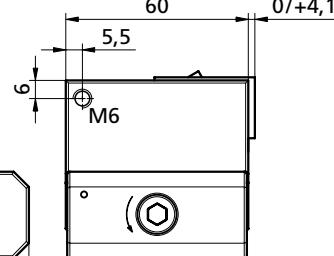
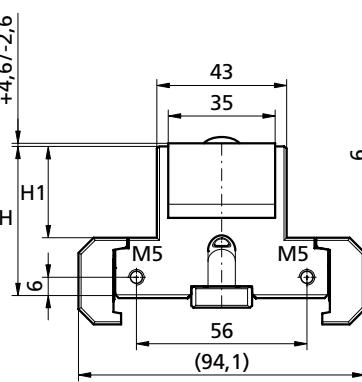
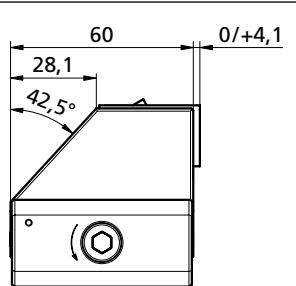
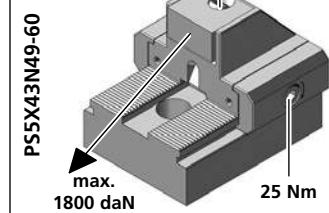
\* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

**PS1R/F43N49-60**

**PS1R/F43N62-60**

**PS5X43N49-60**



**A**

~~42,5°~~ PS5X43N49-60

- (1) 1x TF140458
- (9) 2x PCD005
- (8) 2x M5X14ISO4762
- kg ~1,3

PS1F43N49-60

- (1) 1x TF140456

PS1R43N49-60

- (1) 1x TF140457

(2) 1x

- (3) 1x PCSP60R
- (4) 1x PCSP60L
- (5) 1x PCS14
- (6) 1x PCGU2049
- (7) 1x M6X8ISO7380
- (8) 2x M5X14ISO4762
- (9) 2x PCD005

- (10) 1x M8X20ISO4762

- (11) 2x FED0618

- (12) 2x M5X10ISO4762

H = 49

H1 = 30

kg ~1,4

PS1F43N62-60

- (1) 1x TF140459

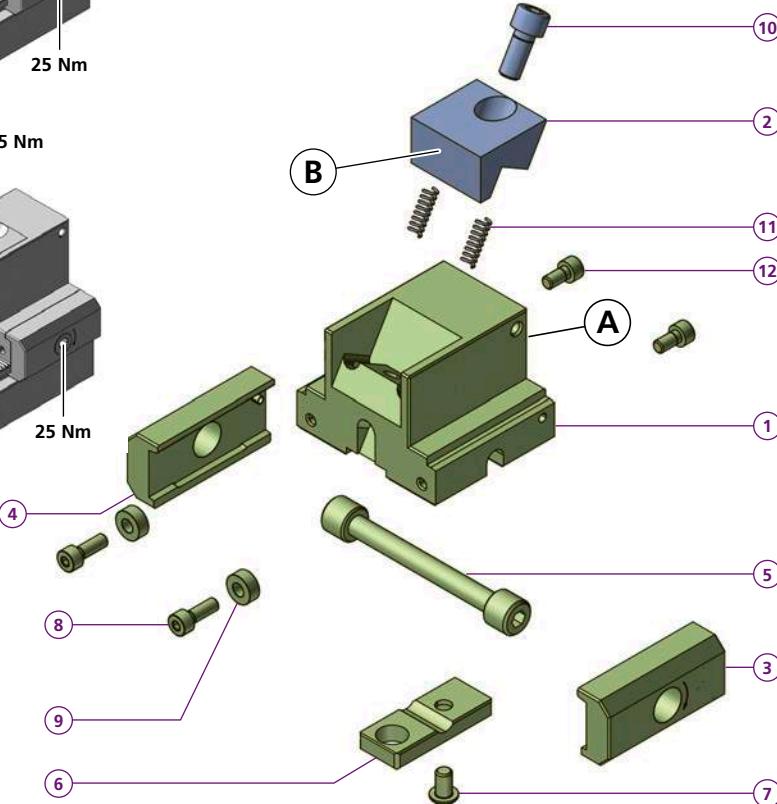
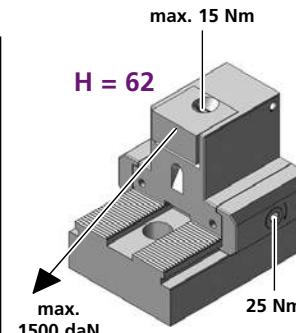
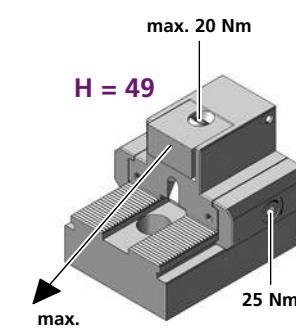
PS1R43N62-60

- (1) 1x TF140460

H = 62

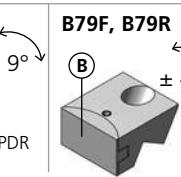
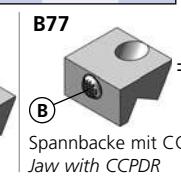
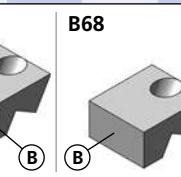
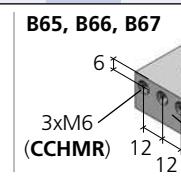
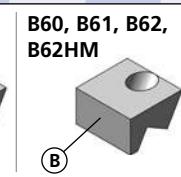
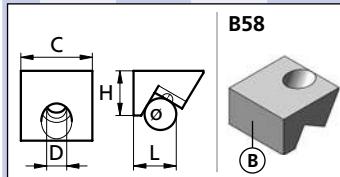
H1 = 43

kg ~1,7



Bestellbeispiel / Ordering example: 1x PS1R43N49-60 & 1x B61

| B  | B58   | B60   | B61   | B62   | B62HM | B65   | B66   | B67   | B68   | B69   | B77   | B79F  | B79R  | B69          |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|
| C  | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | 35    | M5X10ISO4762 |
| H  | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 25    | 20    | 20    | 20    | +11,5/-0,7   |
| L  | 26    | 19    | 19    | 19    | 19    | 19    | 19    | 19    | 24    | 26    | 22    | 25    | 25    | 0/+7         |
| D  | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     | 9     |              |
| E  | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    | 12    |              |
| i  | ALU   | 56HRC | 56HRC | *     | HM    | HV700 | HV700 | HV700 | *     | *     | 56HRC | HV700 | HV700 | FED 0628     |
| kg | ~0,07 | ~0,12 | ~0,12 | ~0,12 | ~0,12 | ~0,12 | ~0,12 | ~0,12 | ~0,14 | ~0,15 | ~0,12 | ~0,18 | ~0,18 |              |

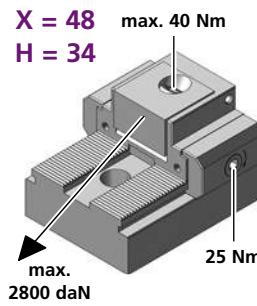


\* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

ALU = ENAW-7022

Separat bestellen / Order separately

**PS1R/F48N34-80****PS1R/F68N34-80****PS1R/F58N34-80****PS1R58N49-80****powerCLAMP****A**

**PS1F48N34-80**

(1) 1x TF140461

**PS1R48N34-80**

(1) 1x TF140462

(2) 1x

(3) 1x PCSP50R

(4) 1x PCSP50L

(5) 1x PCS14

(6) 1x PCGU2049

(7) 1x M6X8ISO7380

(8) 2x M5X14ISO4762

(9) 2x PCD005

(10) 1x M10X25ISO4762

(11) 2x FED0618

(12) 2x M5X10ISO4762

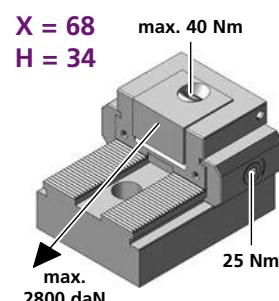
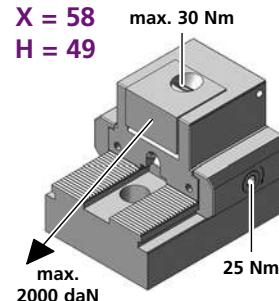
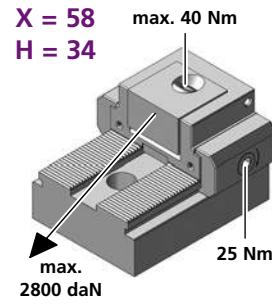
X = 48

H = 34

H1 = 15

Y = 50

kg ~0,9

**B**

**PS1R58N49-80**

(1) 1x TK120129

(3) 1x PCSP60R

(4) 1x PCSP60L

X = 58

H = 49

H1 = 30

Y = 60

kg ~1,6

**PS1F68N34-80**

(1) 1x TF140465

**PS1R68N34-80**

(1) 1x TF140466

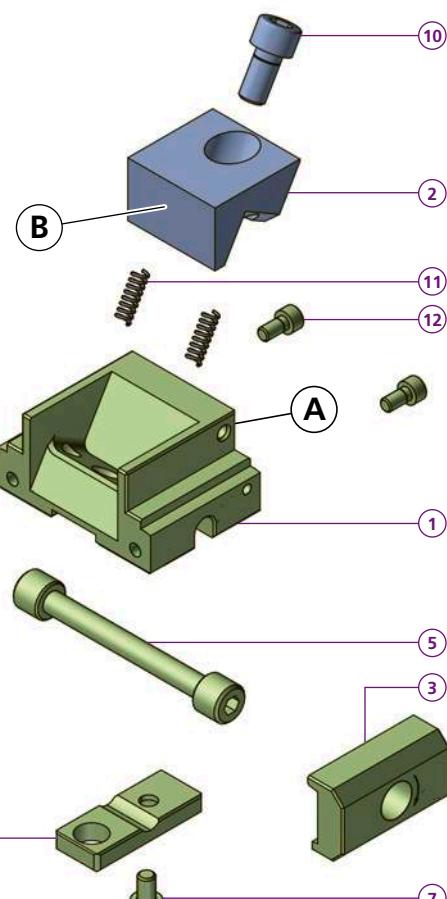
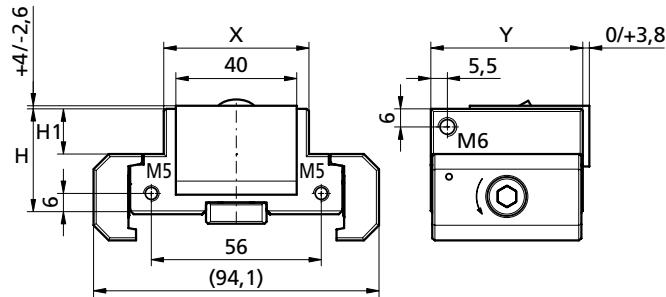
X = 68

H = 34

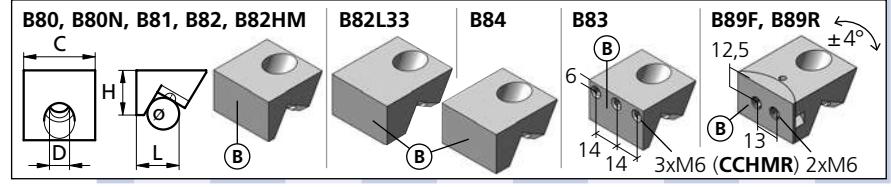
H1 = 15

Y = 50

kg ~1,0

Bestellbeispiel / Ordering example: 1x **PS1F68N34-80** & 1x **B82HM**

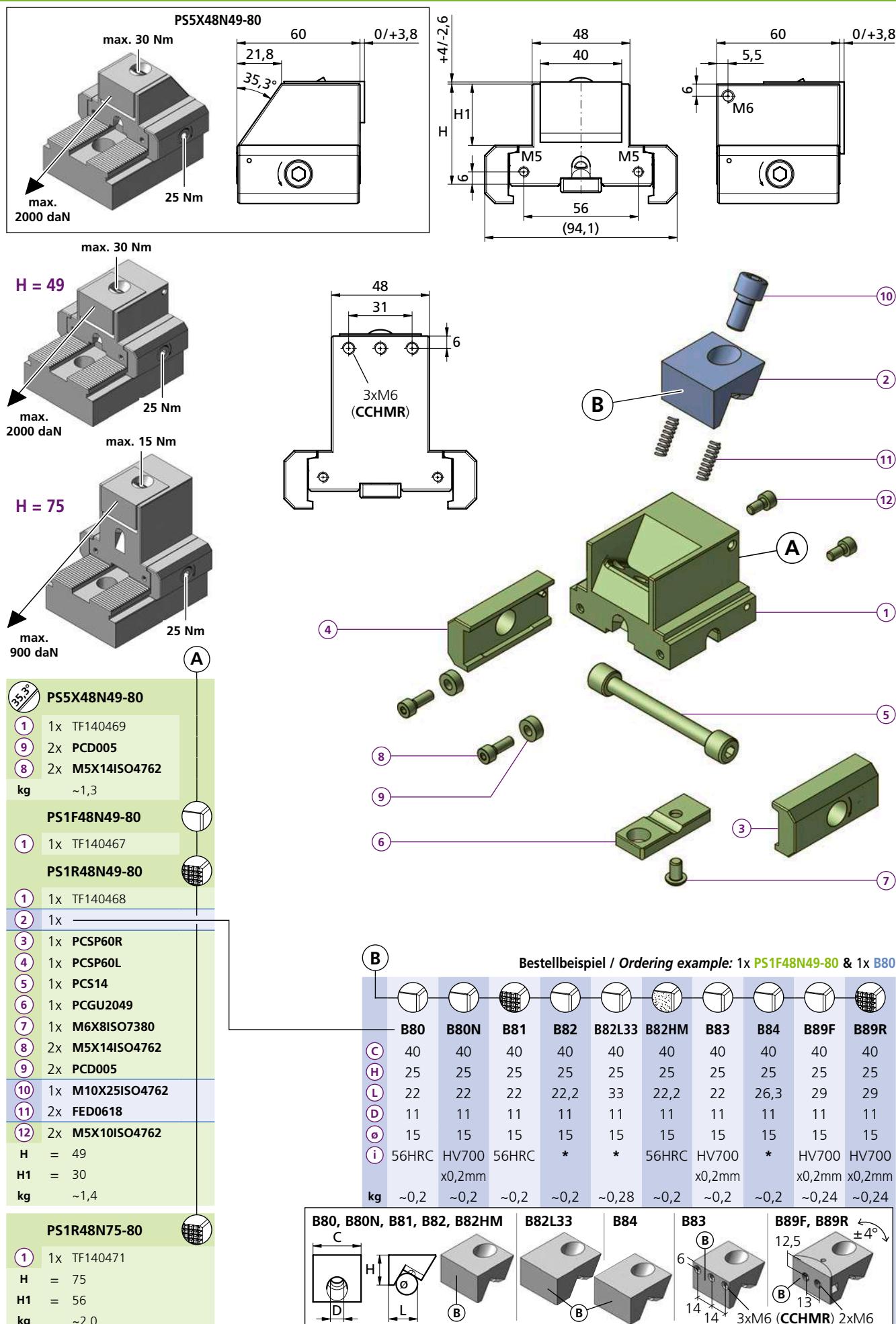
|    |       | B80    | B80N  | B81  | B82   | B82L33 | B82HM | B83  | B84    | B89F   | B89R |
|----|-------|--------|-------|------|-------|--------|-------|------|--------|--------|------|
| C  | 40    | 40     | 40    | 40   | 40    | 40     | 40    | 40   | 40     | 40     |      |
| H  | 25    | 25     | 25    | 25   | 25    | 25     | 25    | 25   | 25     | 25     |      |
| L  | 22    | 22     | 22    | 22,2 | 33    | 22,2   | 22    | 26,3 | 29     | 29     |      |
| D  | 11    | 11     | 11    | 11   | 11    | 11     | 11    | 11   | 11     | 11     |      |
| E  | 15    | 15     | 15    | 15   | 15    | 15     | 15    | 15   | 15     | 15     |      |
| I  | 56HRC | HV700  | 56HRC | *    | *     | 56HRC  | HV700 | *    | HV700  | HV700  |      |
| kg | ~0,2  | ~0,2   | ~0,2  | ~0,2 | ~0,28 | ~0,2   | ~0,2  | ~0,2 | ~0,24  | ~0,24  |      |
|    |       | x0,2mm |       |      |       | x0,2mm |       |      | x0,2mm | x0,2mm |      |



\* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

Separat bestellen / Order separately

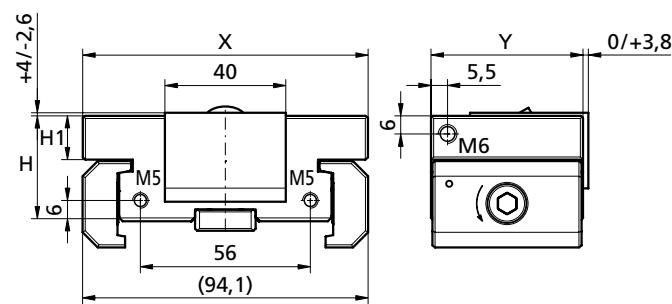
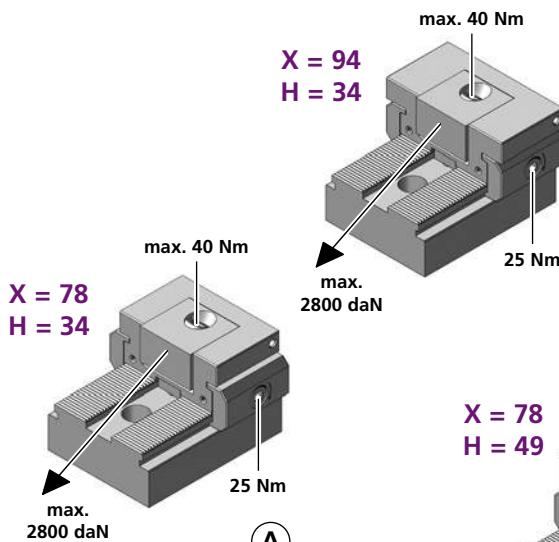


**PS1R/F78N34-80**

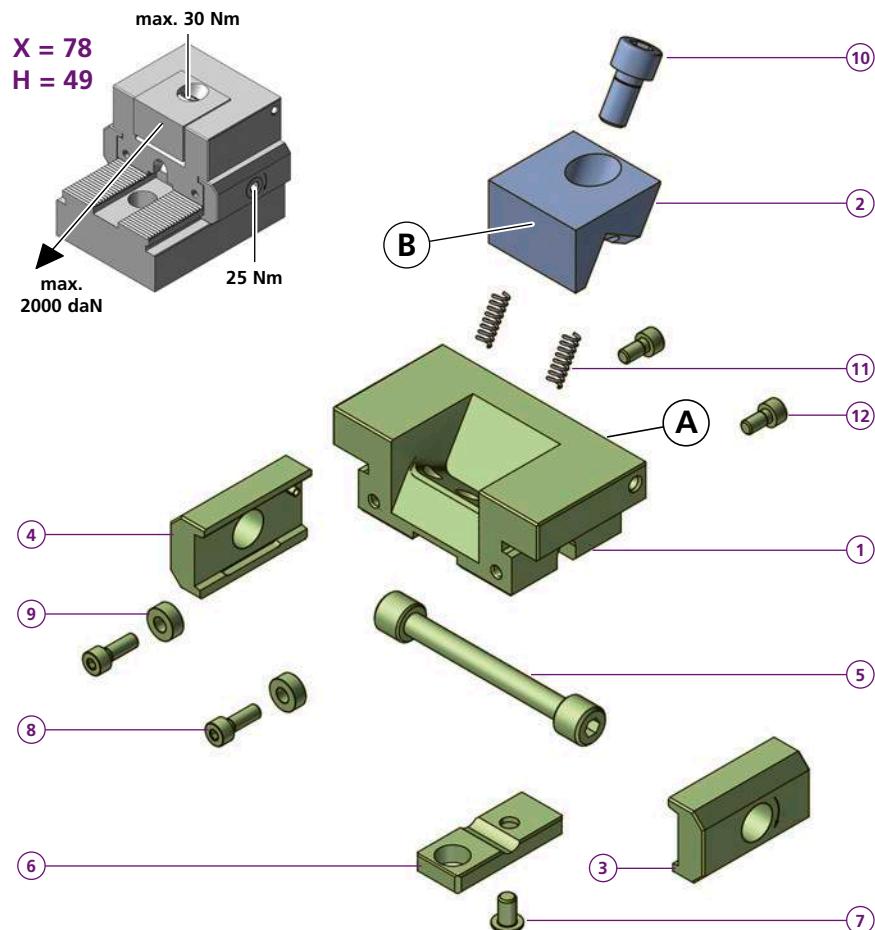
**PS1R/F78N49-80**

**PS1R/F94N34-80**

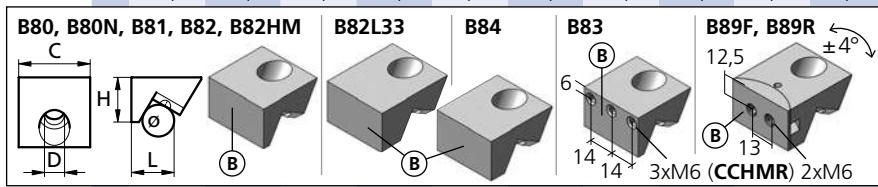
**powerCLAMP**



|                     |                  |
|---------------------|------------------|
| <b>PS1F78N34-80</b> |                  |
| ①                   | 1x TF140472      |
| <b>PS1R78N34-80</b> |                  |
| ①                   | 1x TF140473      |
| ②                   | 1x —             |
| ③                   | 1x PCSP50R       |
| ④                   | 1x PCSP50L       |
| ⑤                   | 1x PCS14         |
| ⑥                   | 1x PCGU2049      |
| ⑦                   | 1x M6X8ISO7380   |
| ⑧                   | 2x M5X14ISO4762  |
| ⑨                   | 2x PCD005        |
| ⑩                   | 1x M10X25ISO4762 |
| ⑪                   | 2x FED0618       |
| ⑫                   | 2x M5X10ISO4762  |
| X                   | = 48             |
| H                   | = 34             |
| H1                  | = 15             |
| Y                   | = 50             |
| kg                  | ~1,1             |
| <b>PS1F94N34-80</b> |                  |
| ①                   | 1x TF140476      |
| <b>PS1R94N34-80</b> |                  |
| ①                   | 1x TF140477      |
| X                   | = 94             |
| H                   | = 34             |
| H1                  | = 15             |
| Y                   | = 50             |
| kg                  | ~1,1             |
| <b>PS1F78N49-80</b> |                  |
| ①                   | 1x TF140474      |
| <b>PS1R78N49-80</b> |                  |
| ①                   | 1x TF140475      |
| ③                   | 1x PCSP60R       |
| ④                   | 1x PCSP60L       |
| X                   | = 78             |
| H                   | = 49             |
| H1                  | = 30             |
| Y                   | = 60             |
| kg                  | ~1,8             |



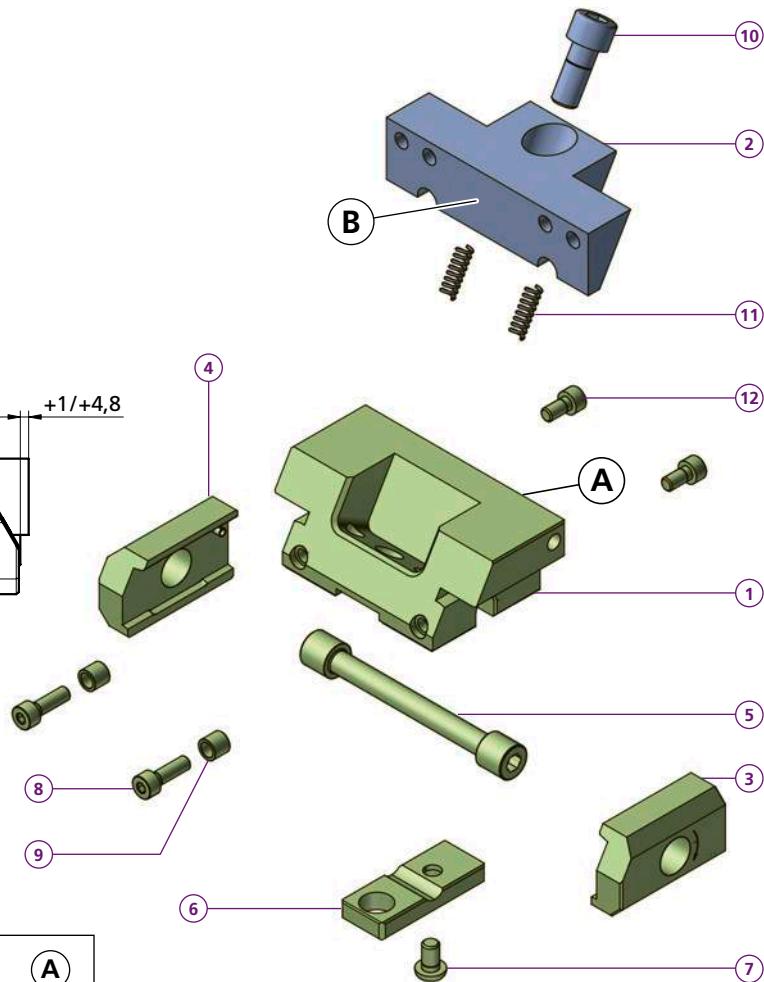
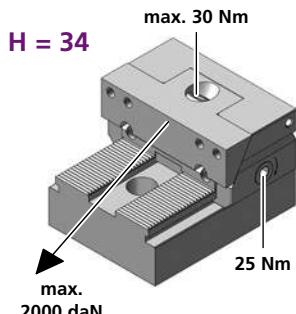
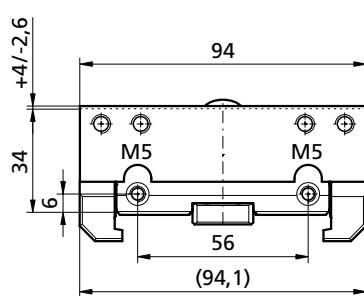
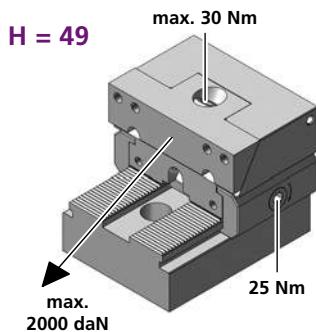
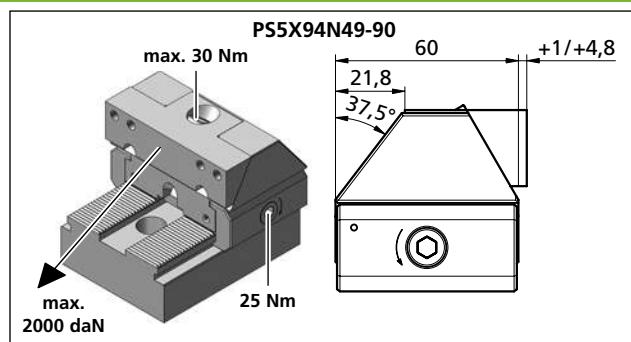
| Bestellbeispiel / Ordering example: 1x PS1R94N34-80 & 1x B80 |                 |                 |                 |      |        |                 |                 |      |                 |                 |
|--|-----------------|-----------------|-----------------|------|--------|-----------------|-----------------|------|-----------------|-----------------|
| B  | B80             | B80N            | B81             | B82  | B82L33 | B82HM           | B83             | B84  | B89F            | B89R            |
| C  | 40              | 40              | 40              | 40   | 40     | 40              | 40              | 40   | 40              | 40              |
| H  | 25              | 25              | 25              | 25   | 25     | 25              | 25              | 25   | 25              | 25              |
| L  | 22              | 22              | 22              | 22,2 | 33     | 22,2            | 22              | 26,3 | 29              | 29              |
| D  | 11              | 11              | 11              | 11   | 11     | 11              | 11              | 11   | 11              | 11              |
| E  | 15              | 15              | 15              | 15   | 15     | 15              | 15              | 15   | 15              | 15              |
| i  | 56HRC<br>x0,2mm | HV700<br>x0,2mm | 56HRC<br>x0,2mm | *    | *      | 56HRC<br>x0,2mm | HV700<br>x0,2mm | *    | HV700<br>x0,2mm | HV700<br>x0,2mm |
| kg   | ~0,2            | ~0,2            | ~0,2            | ~0,2 | ~0,28  | ~0,2            | ~0,2            | ~0,2 | ~0,24           | ~0,24           |



\* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

Separat bestellen / Order separately



|                     |          |
|---------------------|----------|
| <b>PS1F94N34-90</b> | <b>A</b> |
| ① 1x TF140478       |          |
| <b>PS1R94N34-90</b> |          |
| ① 1x TF140479       |          |
| ② 1x                |          |
| ③ 1x PCSP50RF       |          |
| ④ 1x PCSP50LF       |          |
| ⑤ 1x PCS14          |          |
| ⑥ 1x PCGU2049       |          |
| ⑦ 1x M6X8ISO7380    |          |
| ⑧ 2x M5X16ISO4762   |          |
| ⑨ 2x PCD008         |          |
| ⑩ 1x M10X25ISO4762  |          |
| ⑪ 2x FED0618        |          |
| ⑫ 2x M5X10ISO4762   |          |
| H = 34              |          |
| kg ~1,0             |          |

|                     |          |
|---------------------|----------|
| <b>PS1F94N49-90</b> | <b>B</b> |
| ① 1x TF140480       |          |
| <b>PS1R94N49-90</b> |          |
| ① 1x TF140481       |          |
| <b>PS1R94N49-90</b> |          |
| ③ 1x PCSP60R        |          |
| ④ 1x PCSP60L        |          |
| ⑧ 2x M5X14ISO4762   |          |
| ⑨ 2x PCD005         |          |
| H = 49              |          |
| kg ~2,0             |          |

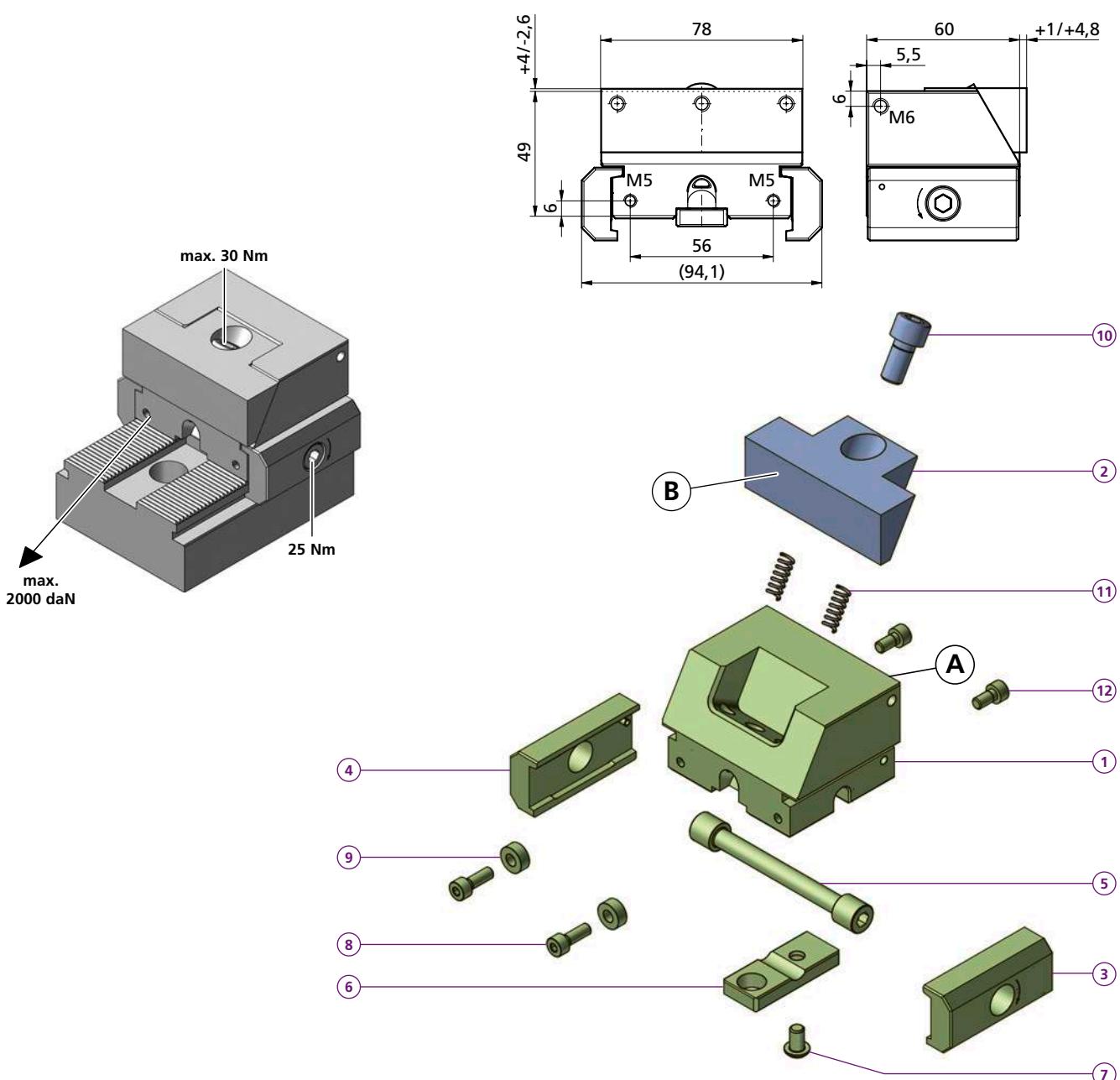
Bestellbeispiel / Ordering example:  
1x PS1F94N34-90 & 1x B91

|    | B90    | B91    | B92   | B93    | B94   |
|----|--------|--------|-------|--------|-------|
| C  | 94     | 94     | 94    | 94     | 94    |
| H  | 25     | 25     | 25    | 25     | 25    |
| L  | 23     | 23     | 23    | 23     | 40    |
| D  | 11     | 11     | 11    | 11     | 11    |
| Ø  | 15     | 15     | 15    | 15     | 15    |
| i  | HV700  | HV700  | *     | HV700  | *     |
|    | x0,2mm | x0,2mm |       | x0,2mm |       |
| kg | ~0,33  | ~0,33  | ~0,33 | ~0,33  | ~0,64 |

**B90, B91, B92, B93**

C H L D

80 54 6 4xM6 (CCHMR)



| PS1F78N49-90        |                  |
|---------------------|------------------|
| ①                   | 1x TH160490      |
| <b>PS1R78N49-90</b> |                  |
| ①                   | 1x TH160490      |
| ②                   | 1x —             |
| ③                   | 1x PCSP60R       |
| ④                   | 1x PCSP60L       |
| ⑤                   | 1x PCS14         |
| ⑥                   | 1x PCGU2049      |
| ⑦                   | 1x M6X8ISO7380   |
| ⑧                   | 2x M5X14ISO4762  |
| ⑨                   | 2x PCD005        |
| ⑩                   | 1x M10X25ISO4762 |
| ⑪                   | 2x FED0618       |
| ⑫                   | 2x M5X10ISO4762  |
| kg                  | ~1,8             |

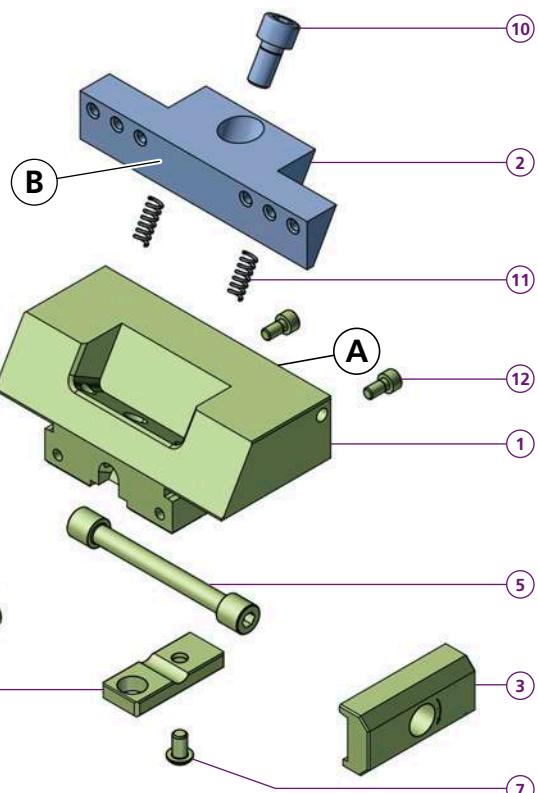
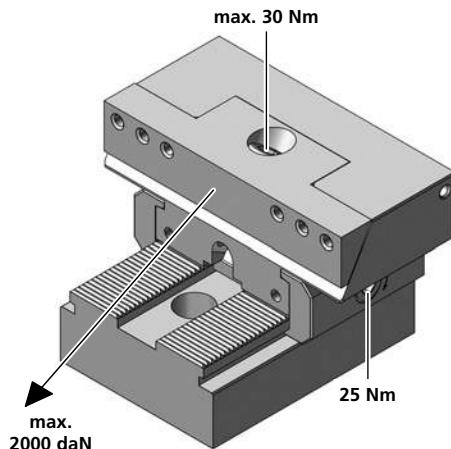
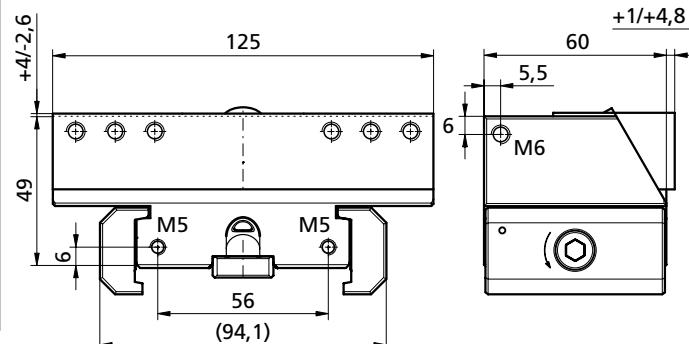
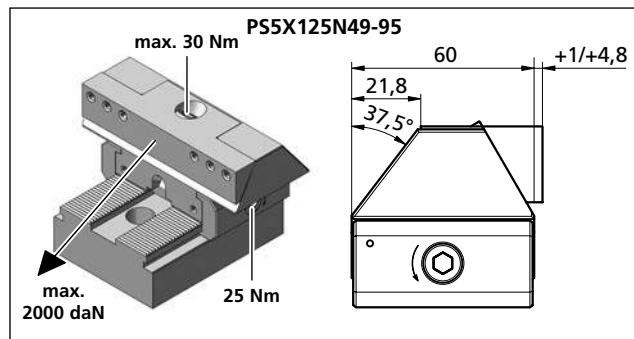
**Bestellbeispiel / Ordering example:**  
1x PS1F78N49-90 & 1x B90F78

|    | B90F78          | B90W78 | B90R78          |
|----|-----------------|--------|-----------------|
| C  | 78              | 78     | 78              |
| H  | 25              | 25     | 25              |
| L  | 23              | 28     | 23              |
| D  | 11              | 11     | 11              |
| ø  | 15              | 15     | 15              |
| i  | HV700<br>x0,2mm | *      | HV700<br>x0,2mm |
| kg | ~0,3            | ~0,37  | ~0,3            |

**B90F78, B90W78**

**B90R78**

\* = weicher Stahl / soft steel



|                      |                      |
|----------------------|----------------------|
|                      | <b>PS5X125N49-95</b> |
| (1)                  | 1x TF140485          |
| (9)                  | 2x PCD005            |
| (8)                  | 2x M5X14ISO4762      |
| kg                   | ~2,0                 |
| <b>PS1F125N49-95</b> |                      |
| (1)                  | 1x TF140483          |
| <b>PS1R125N49-95</b> |                      |
| (1)                  | 1x TF140484          |
| (2)                  | 1x _____             |
| (3)                  | 1x PCSP60R           |
| (4)                  | 1x PCSP60L           |
| (5)                  | 1x PCS14             |
| (6)                  | 1x PCGU2049          |
| (7)                  | 1x M6X8ISO7380       |
| (8)                  | 2x M5X14ISO4762      |
| (9)                  | 2x PCD005            |
| (10)                 | 1x M10X25ISO4762     |
| (11)                 | 2x FED0618           |
| (12)                 | 2x M5X10ISO4762      |
| kg                   | ~2,3                 |

| <b>Bestellbeispiel / Ordering example:</b> 1x PS5X125N49-95 & 1x B95 |                 |                 |            |            |                 |
|--|-----------------|-----------------|------------|------------|-----------------|
| <b>B</b>   | <b>B95</b>      | <b>B96</b>      | <b>B97</b> | <b>B98</b> | <b>B99</b>      |
| (C)  | 125             | 125             | 125        | 125        | 125             |
| (H)  | 25              | 25              | 25         | 25         | 25              |
| (L)  | 23              | 23              | 23         | 30         | 23              |
| (D)  | 11              | 11              | 11         | 11         | 11              |
| (ø)  | 15              | 15              | 15         | 15         | 15              |
| (i)  | HV700<br>x0,2mm | HV700<br>x0,2mm | *          | *          | HV700<br>x0,2mm |
| kg   | ~0,46           | ~0,45           | ~0,46      | ~0,63      | ~0,45           |

**B95, B96, B97, B99**

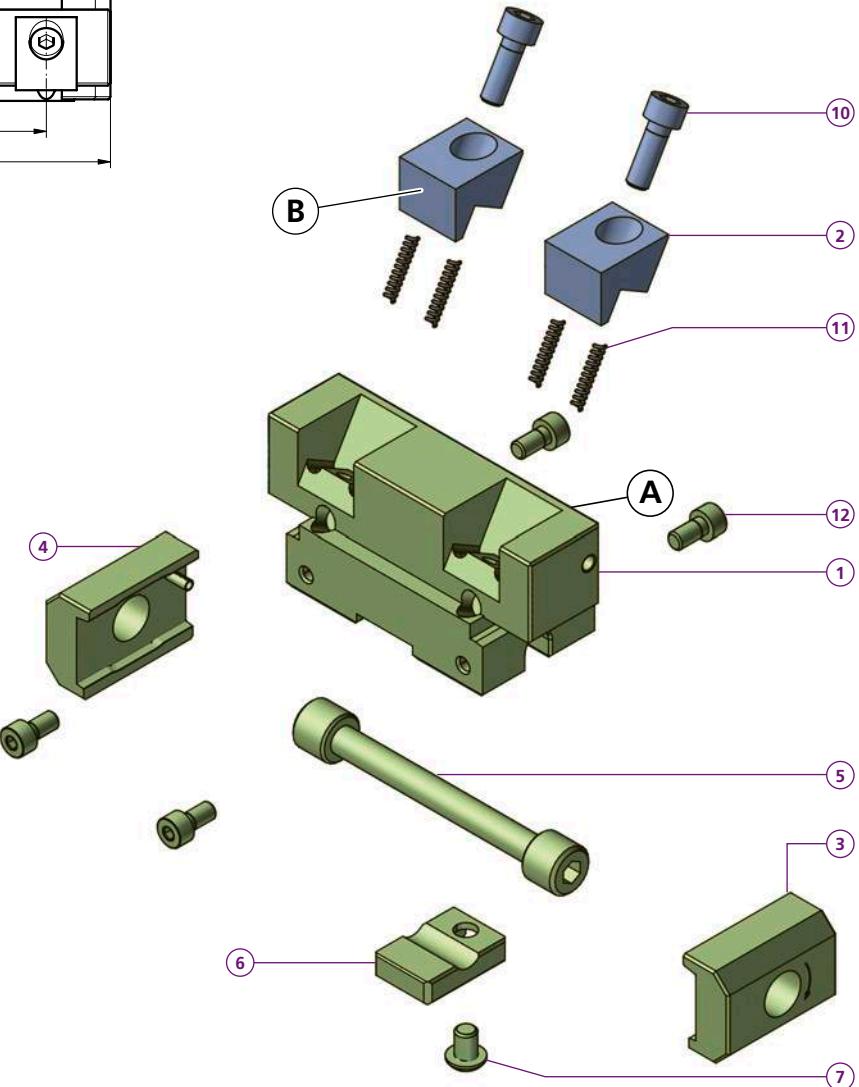
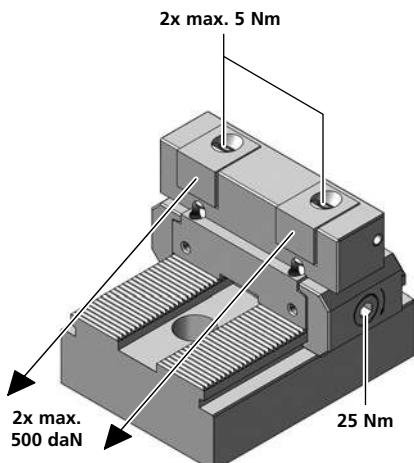
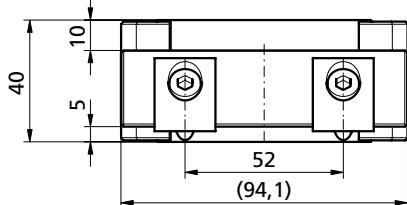
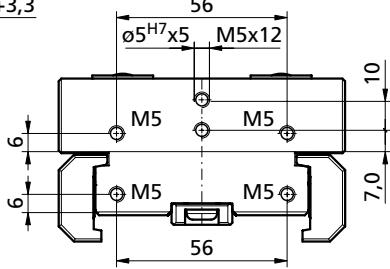
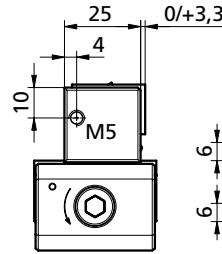
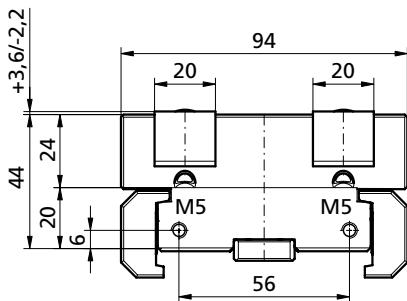
**B98**

**C**

6xM6 (CCHMR)

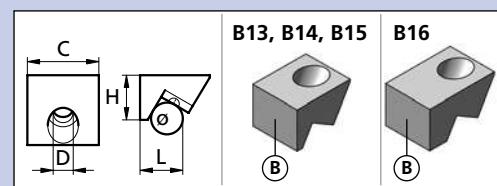
\* = weicher Stahl / soft steel

## PS2G94N44-13

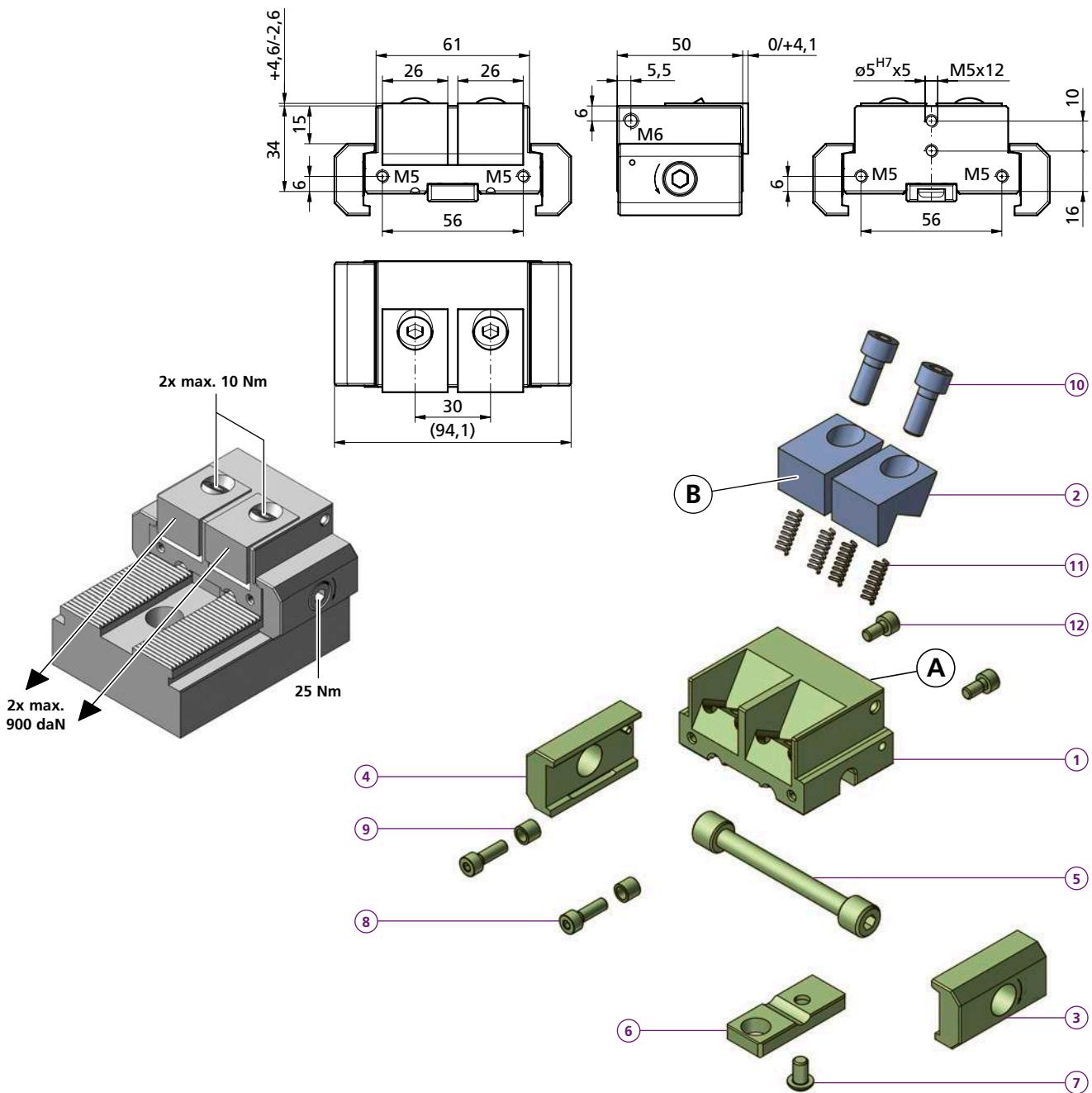


| PS2G94N44-13 |                 |
|--------------|-----------------|
| ①            | 1x TF140486     |
| ②            | 2x —            |
| ③            | 1x PCSP40R      |
| ④            | 1x PCSP40L      |
| ⑤            | 1x PCS14        |
| ⑥            | 1x PCGU2030     |
| ⑦            | 1x M6X8ISO7380  |
| ⑩            | 2x M6X16ISO4762 |
| ⑪            | 4x FED0318      |
| ⑫            | 4x M5X10ISO4762 |
| kg           | ~1,0            |

| B  | Bestellbeispiel / Ordering example: 1x PS2G94N44-13 & 2x B14 |        |       |       |
|----|--|--------|-------|-------|
|    | B13  | B14    | B15   | B16   |
| C  | 20   | 20     | 20    | 20    |
| H  | 16   | 16     | 16    | 16    |
| L  | 13,8   | 13,8   | 13,8  | 19    |
| D  | 6,5  | 6,5    | 6,5   | 6,5   |
| ø  | 10   | 10     | 10    | 10    |
| i  | HV700  | HV700  | *     | *     |
|    | x0,2mm   | x0,2mm |       |       |
| kg | ~0,05  | ~0,05  | ~0,05 | ~0,06 |



\* = weicher Stahl / soft steel



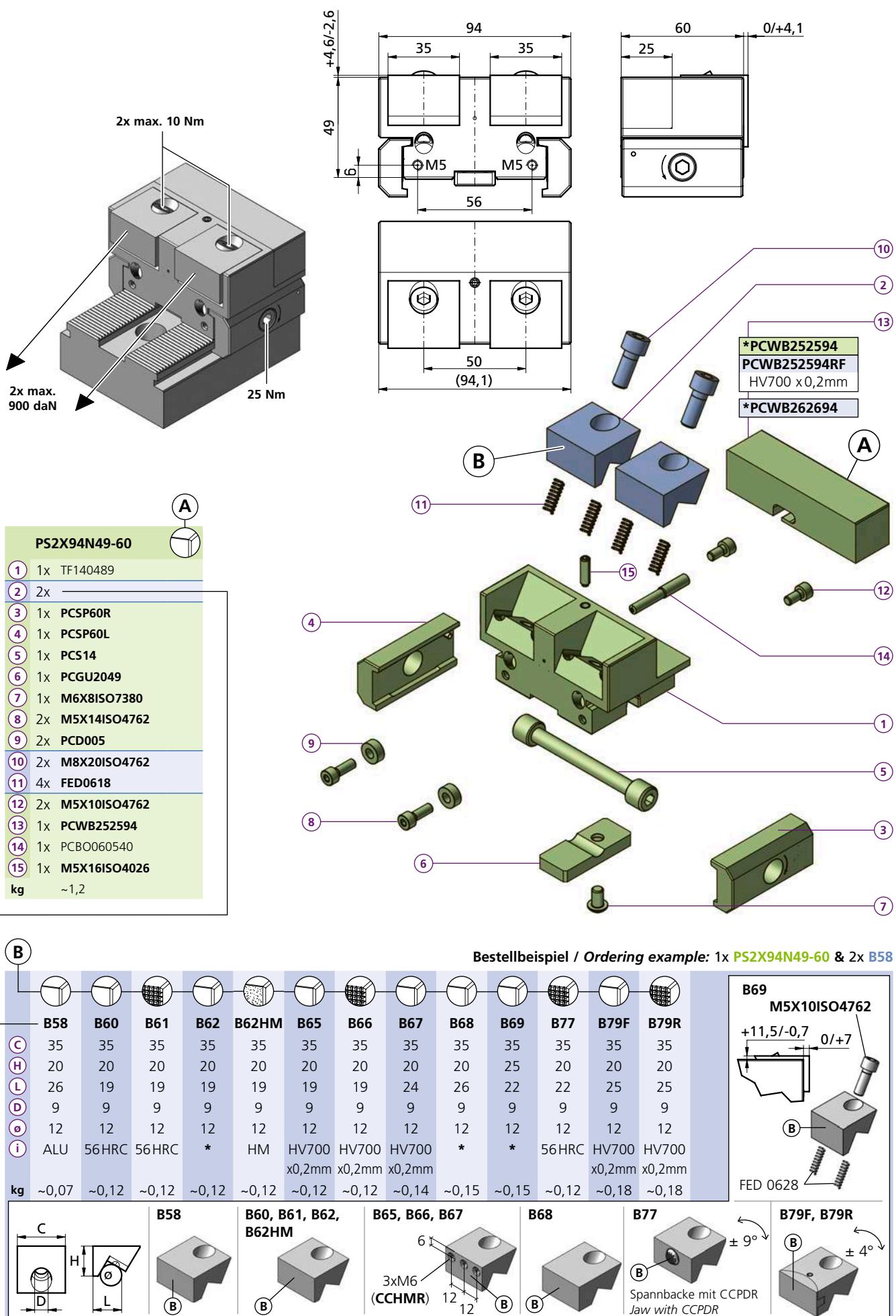
|                     |                     |
|---------------------|---------------------|
| <b>PS2F61N34-45</b> | (A)                 |
| ① 1x TF140487       |                     |
| <b>PS2R61N34-45</b> | (B)                 |
| ① 1x TF140488       |                     |
| ② 2x —              |                     |
| ③ 1x PCSP50R        | B45                 |
| ④ 1x PCSP50L        | B46                 |
| ⑤ 1x PCS14          | B47                 |
| ⑥ 1x PCGU2049       | B47HM               |
| ⑦ 1x M6X8ISO7380    | (C) 26              |
| ⑧ 2x M5X16ISO4762   | (H) 20              |
| ⑨ 2x PCD008         | (L) 19              |
| ⑩ 2x M8X20ISO4762   | (D) 9               |
| ⑪ 4x FED0618        | (o) 12              |
| ⑫ 2x M5X10ISO4762   | (i) HV700<br>x0,2mm |
| kg                  | ~0,1                |
| kg                  | ~1,0                |

| Bestellbeispiel / Ordering example: 1x PS2R61N34-45 & 2x B47HM |      |        |        |      |
|--|------|--------|--------|------|
| B  | C    | H      | L      | D    |
| B45  | 26   | 26     | 26     | 26   |
| B46  | 20   | 20     | 20     | 20   |
| B47  | 19   | 19     | 19,1   | 19,1 |
| B47HM  | *    | *      | *      | *    |
|  |      |        |        | HM   |
|  |      | x0,2mm | x0,2mm |      |
| kg   | ~0,1 | ~0,1   | ~0,1   | ~0,1 |

Dimensions for B47HM:

- C: 26
- H: 19
- L: 19,1
- D: 9
- i: HV700 x0,2mm

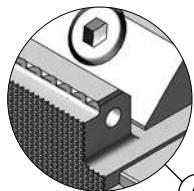
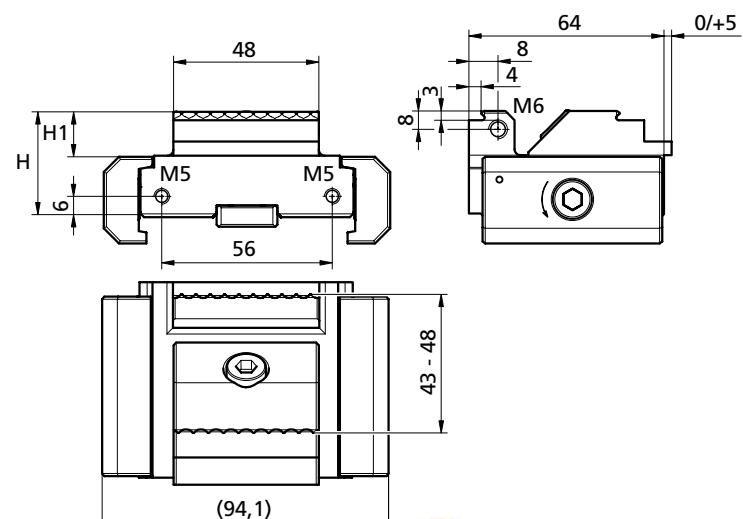
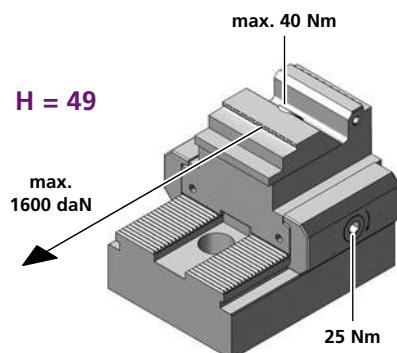
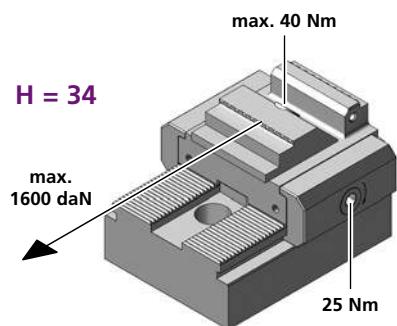
Technical drawing at the bottom right shows a side view of the clamp with dimensions C, H, L, D, and B.



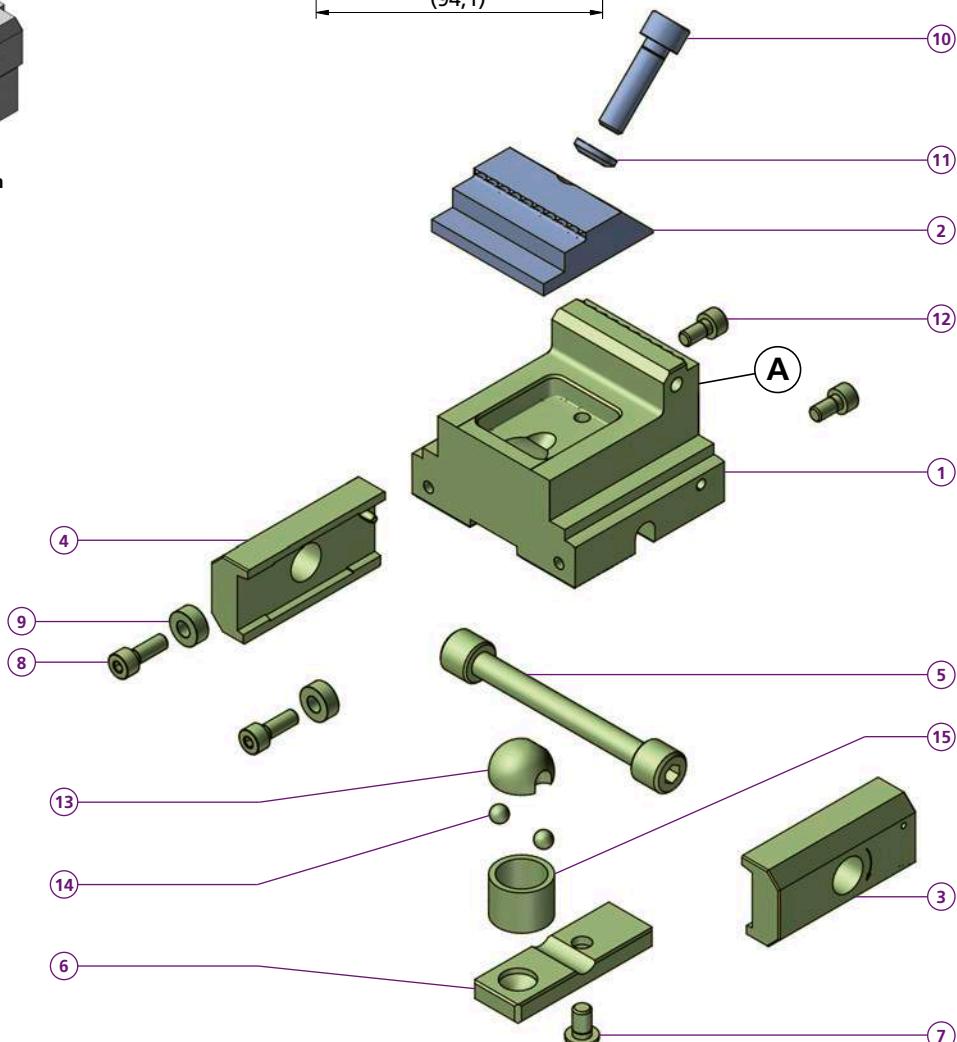
\* = weicher Stahl / soft steel

HM = Hartmetallbeschichtet / Carbide coated

ALU = ENAW-7022



| PS1P48L34-105 |                 |
|---------------|-----------------|
| 1             | 1x TW100098-01  |
| 2             | 1x —            |
| 3             | 1x PCSP60R      |
| 4             | 1x PCSP60L      |
| 5             | 1x PCS14        |
| 6             | 1x PCGU2059     |
| 7             | 1x M6X8ISO7380  |
| 8             | 2x M5X14ISO4762 |
| 9             | 2x PCD005       |
| 10            | 1x M8X28ISO4762 |
| 11            | 1x PCUSR16      |
| 12            | 2x M5X10ISO4762 |
| 13            | 1x PCKMR45M8    |
| 14            | 2x D=6 DIN 5401 |
| H             | = 34            |
| H1            | = 15            |
| kg            | ~1,0            |



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| PS1PF48L34-105 |             |
|----------------|-------------|
| 1              | 1x TK140780 |
| H              | = 49        |
| H1             | = 30        |
| kg             | ~1,0        |

| PS1P48L49-105 |             |
|---------------|-------------|
| 1             | 1x TK120011 |
| 15            | 1x PCD20L15 |
| H             | = 49        |
| H1            | = 30        |
| kg            | ~1,4        |

| PS1PF48L49-105 |             |
|----------------|-------------|
| 1              | 1x TK140781 |
| 15             | 1x PCD20L15 |
| H              | = 49        |
| H1             | = 30        |
| kg             | ~1,4        |

Bestellbeispiel / Ordering example:  
1x PS1P48L34-105 & 1x B115

| Drehmoment<br>Torque | Spannkraft<br>Workholding force |            |       |
|----------------------|---------------------------------|------------|-------|
|                      | Nm (lb·ft)                      | ~daN (~lb) | ~t    |
| 10                   | 7,4                             | = 400      | 880   |
| 20                   | 14,8                            | = 800      | 1'760 |
| 30                   | 22,2                            | = 1'200    | 2'650 |
| 40                   | 29,6                            | = 1'600    | 3'530 |

PS1P94L34-105

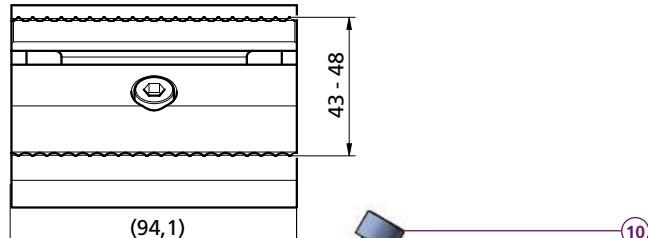
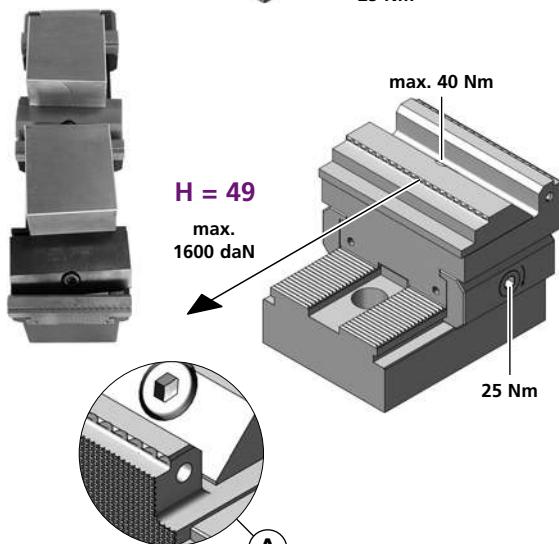
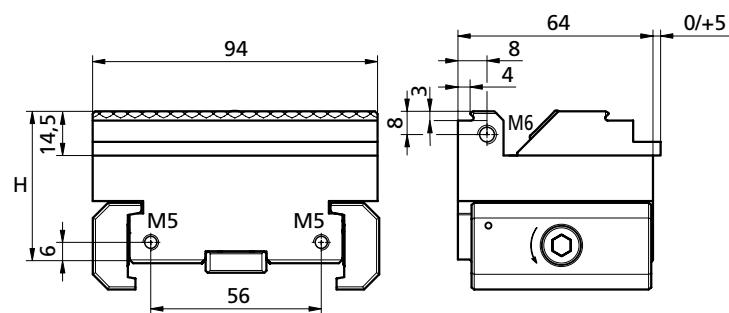
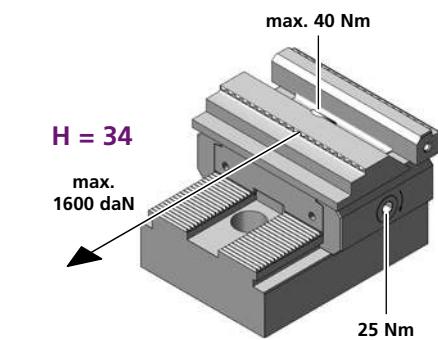
PS1P694L34-105

PS1P94L49-105

PS1PF94L49-105

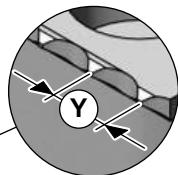
PS1PF94L34-105

powerCLAMP



| PS1P94L34-105 |                 |
|---------------|-----------------|
| 1             | 1x TW100100-01  |
| 2             | 1x              |
| 3             | 1x PCSP60R      |
| 4             | 1x PCSP60L      |
| 5             | 1x PCS14        |
| 6             | 1x PCGU2059     |
| 7             | 1x M6X8ISO7380  |
| 8             | 2x M5X14ISO4762 |
| 9             | 2x PCD005       |
| 10            | 1x M8X28ISO4762 |
| 11            | 1x PCUSR16      |
| 12            | 2x M5X10ISO4762 |
| 13            | 1x PCKMR45M8    |
| 14            | 2x D=6 DIN 5401 |
| H             | = 34            |
| kg            | ~1,1            |

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| PS1P694L34-105 |                |
|----------------|----------------|
| 1              | 1x TW100100-02 |
| Y              | 6,0 mm         |
| kg             | ~1,1           |

| PS1PF94L34-105 |             |
|----------------|-------------|
| 1              | 1x TK140782 |
| H              | = 49        |
| kg             | ~1,1        |

| PS1P94L49-105 |             |
|---------------|-------------|
| 1             | 1x TK120857 |
| 15            | 1x PCD20L15 |

| PS1PF94L49-105 |             |
|----------------|-------------|
| 1              | 1x TK140783 |
| 15             | 1x PCD20L15 |
| H              | = 49        |
| kg             | ~1,8        |


**Bestellbeispiel / Ordering example:**  
 1x PS1P94L34-105 & 1x B120

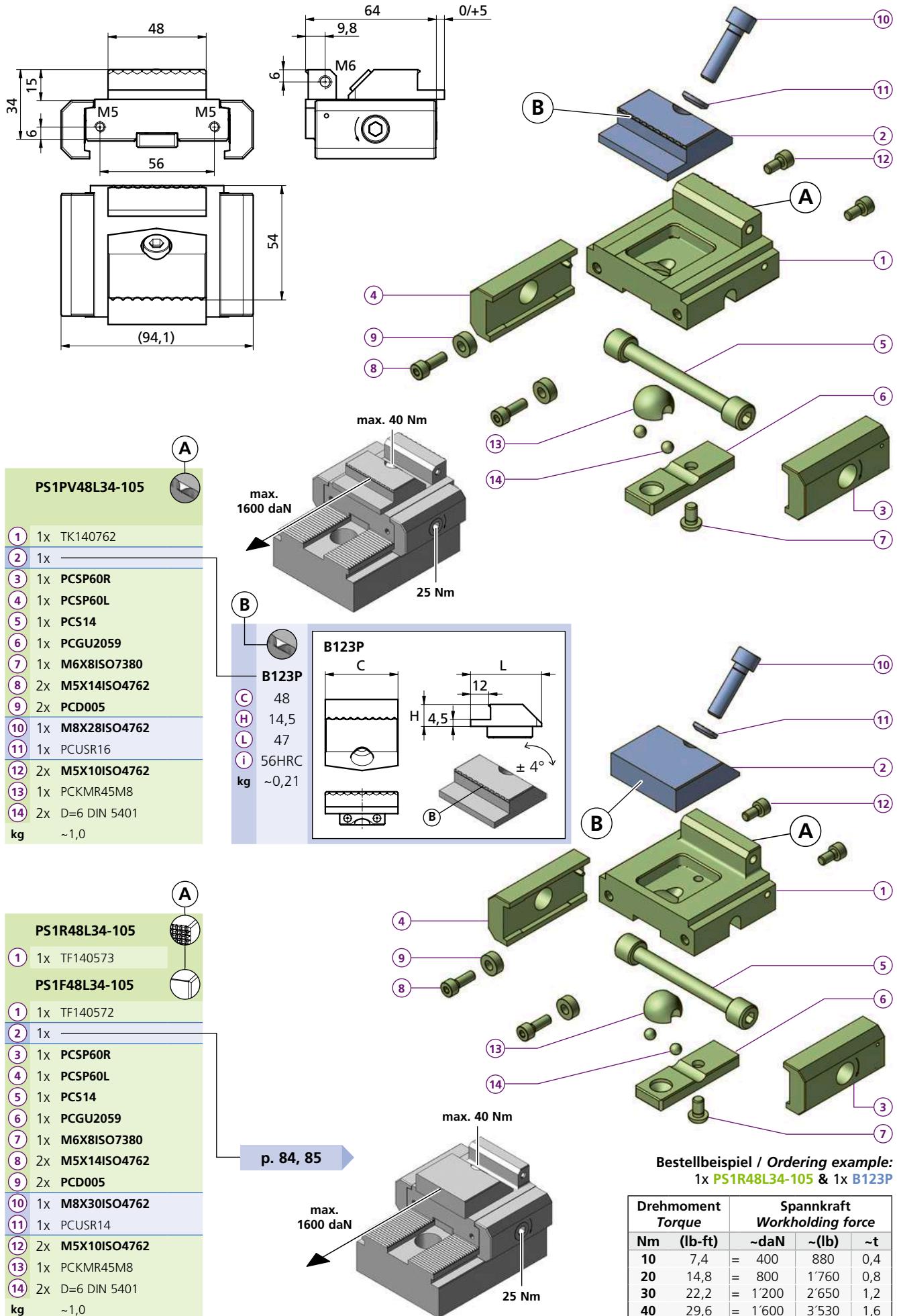
| Drehmoment<br>Torque | Spannkraft<br>Workholding force |            |       |
|----------------------|---------------------------------|------------|-------|
|                      | Nm (lb·ft)                      | ~daN (~lb) | ~t    |
| 10                   | 7,4                             | = 400      | 880   |
| 20                   | 14,8                            | = 800      | 1'760 |
| 30                   | 22,2                            | = 1'200    | 2'650 |
| 40                   | 29,6                            | = 1'600    | 3'530 |

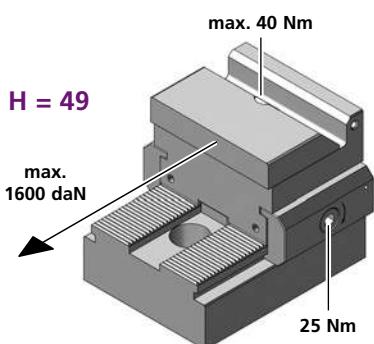
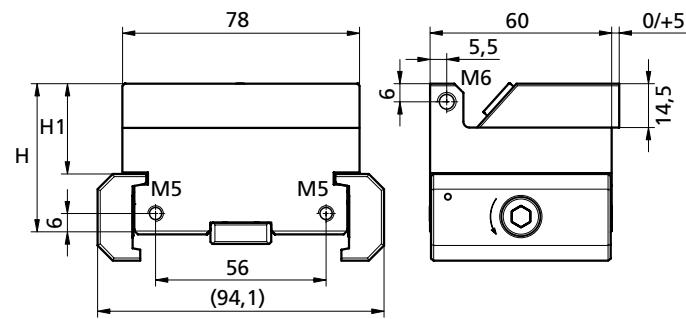
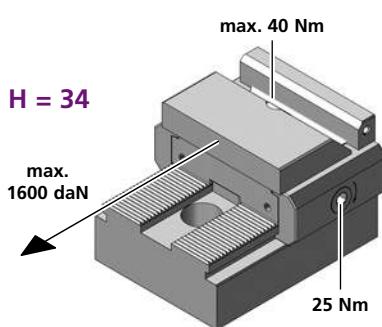
Separat bestellen / Order separately

**PS1PV48L34-105**  
**PS1R/F48L34-105**

**Linear**

**powerCLAMP**

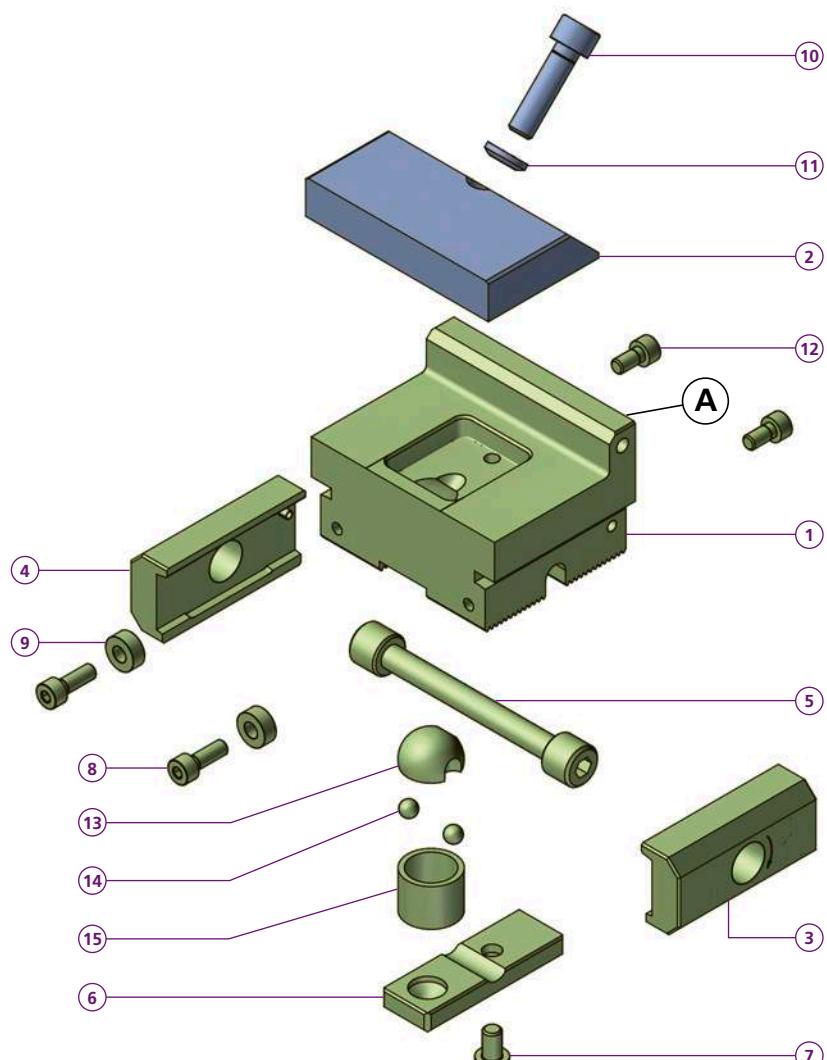




| PS1R78L34-105 |                 |
|---------------|-----------------|
| ①             | 1x TF140575     |
| PS1F78L34-105 |                 |
| ①             | 1x TF140574     |
| ②             | 1x —            |
| ③             | 1x PCSP60R      |
| ④             | 1x PCSP60L      |
| ⑤             | 1x PCS14        |
| ⑥             | 1x PCGU2059     |
| ⑦             | 1x M6X8ISO7380  |
| ⑧             | 2x M5X14ISO4762 |
| ⑨             | 2x PCD005       |
| ⑩             | 1x M8X30ISO4762 |
| ⑪             | 1x PCUSR14      |
| ⑫             | 2x M5X10ISO4762 |
| ⑬             | 1x PCKMR45M8    |
| ⑭             | 2x D=6 DIN 5401 |
| H             | = 34            |
| H1            | = 15            |
| kg            | ~1,0            |

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| PS1R78L49-105 |             |
|---------------|-------------|
| ①             | 1x TK110399 |
| PS1F78L49-105 |             |
| ①             | 1x TK110400 |
| ⑮             | 2x PCD20L15 |
| H             | = 49        |
| H1            | = 30        |
| kg            | ~1,5        |

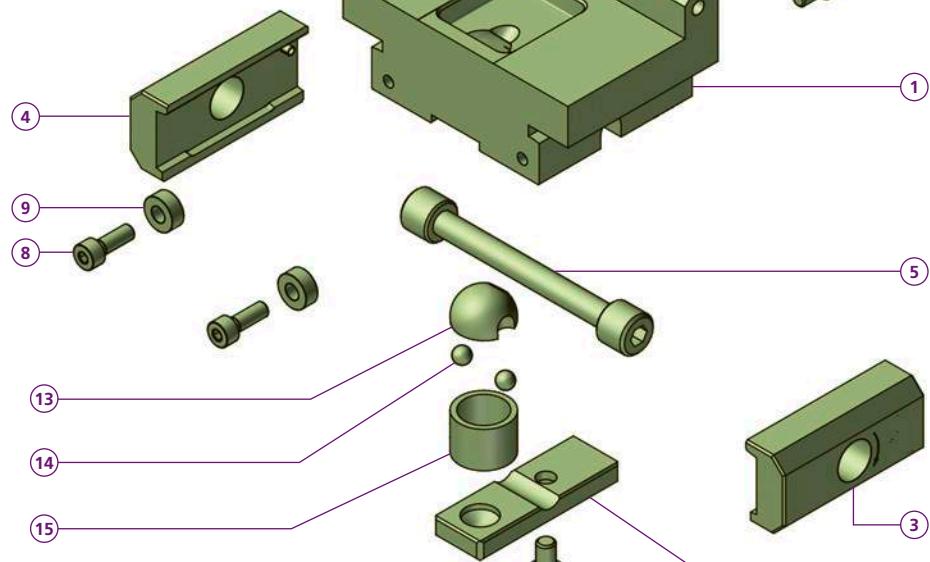
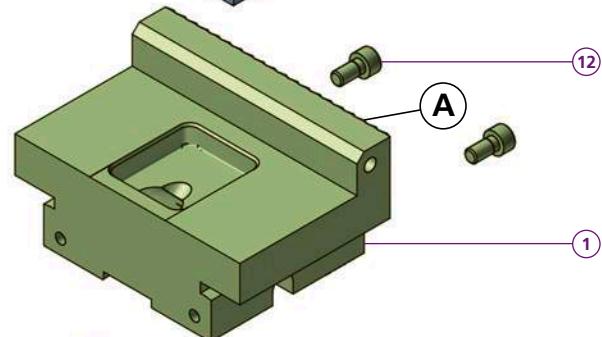
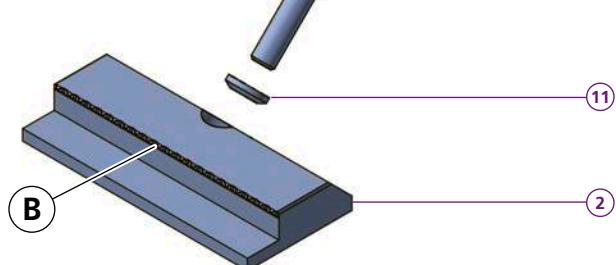
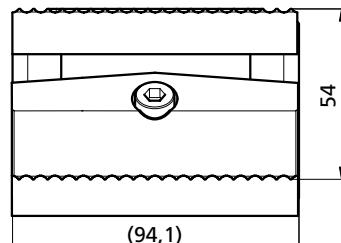
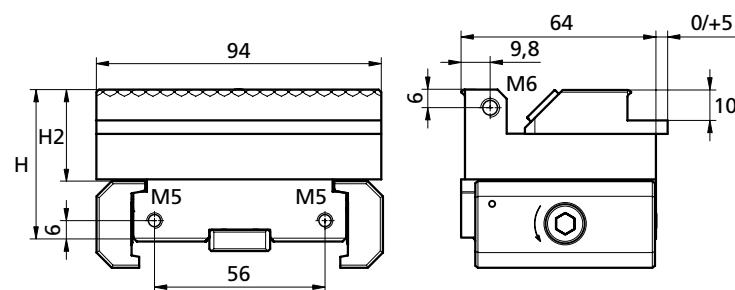
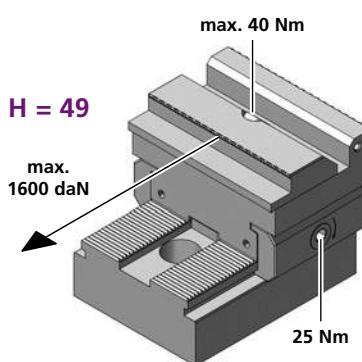
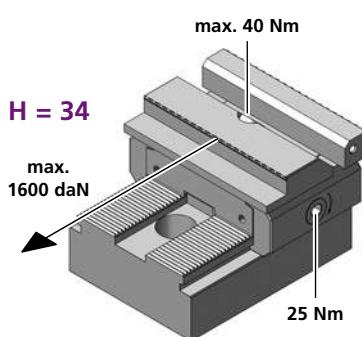


Bestellbeispiel / Ordering example:  
1x PS1R48L34-105 & 1x B105

| Drehmoment<br>Torque |         | Spannkraft<br>Workholding force |       |     |
|----------------------|---------|---------------------------------|-------|-----|
| Nm                   | (lb·ft) | ~daN                            | ~(lb) | ~t  |
| 10                   | 7,4     | = 400                           | 880   | 0,4 |
| 20                   | 14,8    | = 800                           | 1'760 | 0,8 |
| 30                   | 22,2    | = 1'200                         | 2'650 | 1,2 |
| 40                   | 29,6    | = 1'600                         | 3'530 | 1,6 |

**PS1PV94L34-105**

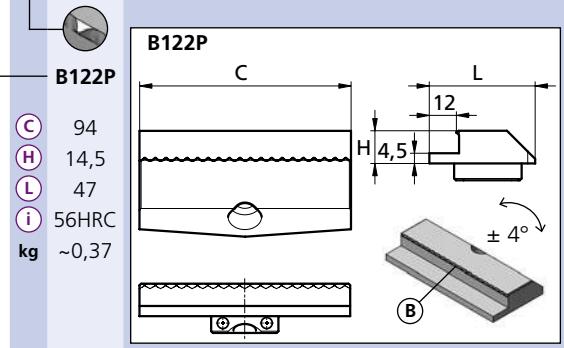
**PS1PV94L49-105**



| <b>PS1PV94L34-105</b> |                 |
|-----------------------|-----------------|
| ①                     | 1x TK120230     |
| ②                     | 1x —            |
| ③                     | 1x PCSP60R      |
| ④                     | 1x PCSP60L      |
| ⑤                     | 1x PCS14        |
| ⑥                     | 1x PCGU2059     |
| ⑦                     | 1x M6X8ISO7380  |
| ⑧                     | 2x M5X14ISO4762 |
| ⑨                     | 2x PCD005       |
| ⑩                     | 1x M8X28ISO4762 |
| ⑪                     | 1x PCUSR16      |
| ⑫                     | 2x M5X10ISO4762 |
| ⑬                     | 1x PCKMR45M8    |
| ⑭                     | 2x D=6 DIN 5401 |
| H =                   | 34              |
| H1 =                  | 15              |
| kg                    | ~1,1            |

| <b>PS1PV94L49-105</b> |             |
|-----------------------|-------------|
| ①                     | 1x TK110250 |
| ⑯                     | 1x PCD20L15 |
| H =                   | 49          |
| H1 =                  | 30          |
| kg                    | ~1,8        |

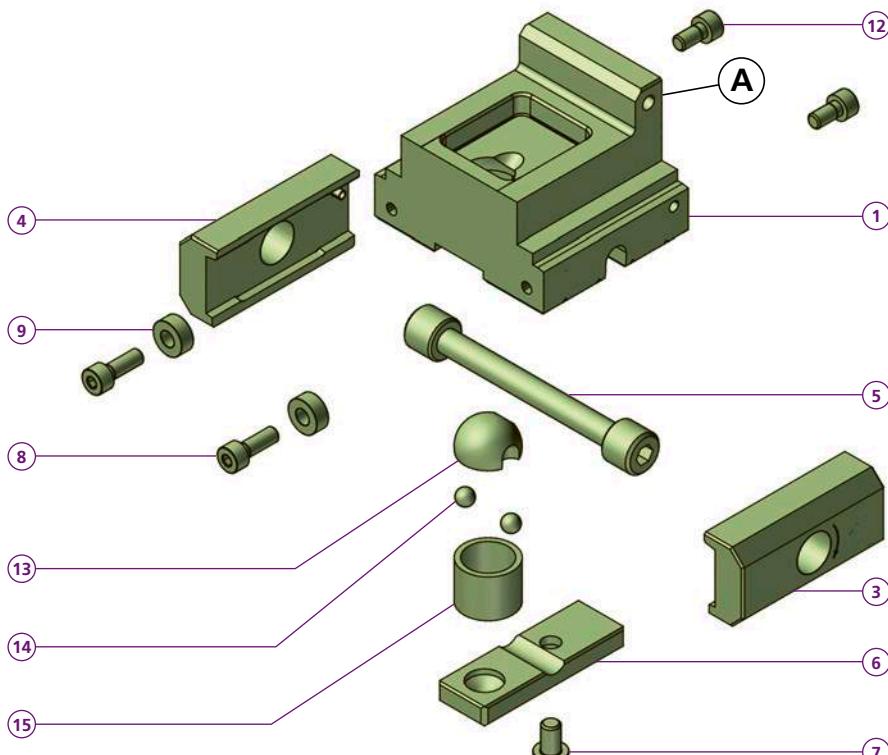
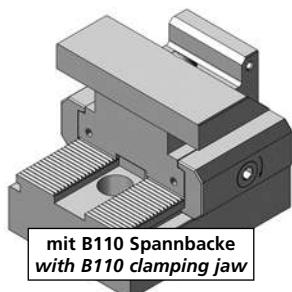
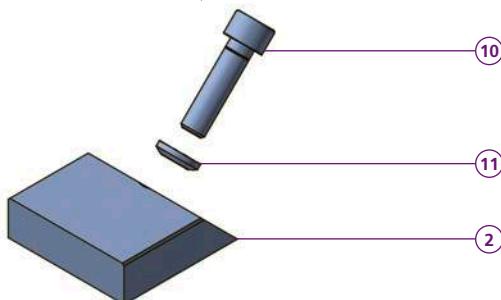
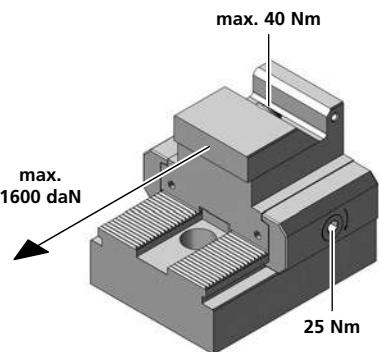
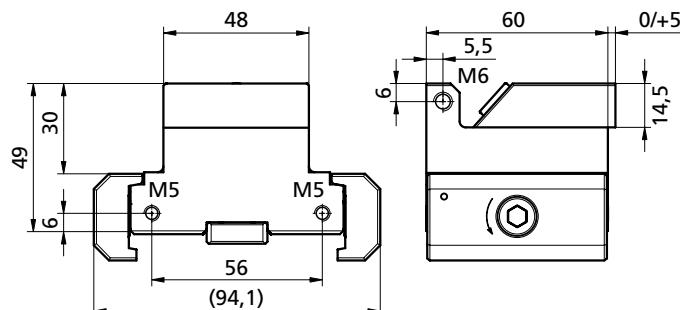
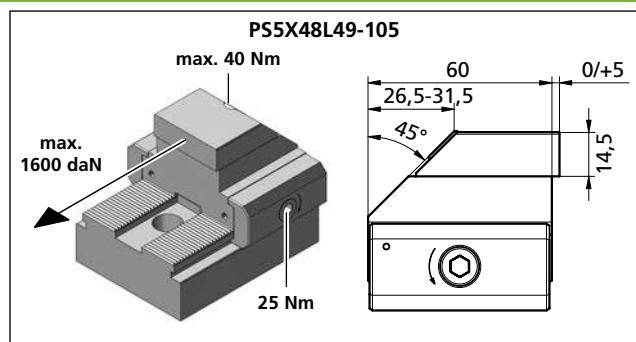


**Bestellbeispiel / Ordering example:**  
1x PS1PV94L49-105 & 1x B122P

| Nm (lb·ft) | Drehmoment<br>Torque | Spannkraft<br>Workholding force |       |     |
|------------|----------------------|---------------------------------|-------|-----|
|            |                      | ~daN                            | ~(lb) | ~t  |
| 10         | 7,4                  | = 400                           | 880   | 0,4 |
| 20         | 14,8                 | = 800                           | 1'760 | 0,8 |
| 30         | 22,2                 | = 1'200                         | 2'650 | 1,2 |
| 40         | 29,6                 | = 1'600                         | 3'530 | 1,6 |

**PS1R/F48L49-105**

**PS5X48L49-105**



|    |                      |
|----|----------------------|
|    | <b>PS5X48L49-105</b> |
| ①  | 1x TF190651          |
| ⑨  | 2x PCD005            |
| ⑧  | 2x M5X14ISO4762      |
| kg | ~1,2                 |
|    | <b>PS1F48L49-105</b> |
| ①  | 1x TF140673          |
|    | <b>PS1R48L49-105</b> |
| ①  | 1x TF140672          |
| ②  | 1x                   |
| ③  | 1x PCSP60R           |
| ④  | 1x PCSP60L           |
| ⑤  | 1x PCS14             |
| ⑥  | 1x PCGU2059          |
| ⑦  | 1x M6X8ISO7380       |
| ⑧  | 2x M5X14ISO4762      |
| ⑨  | 2x PCD005            |
| ⑩  | 1x M8X30ISO4762      |
| ⑪  | 1x PCUSR14           |
| ⑫  | 2x M5X10ISO4762      |
| ⑬  | 1x PCKMR45M8         |
| ⑭  | 2x D=6 DIN 5401      |
| ⑮  | 1x PCD20L15          |
| kg | ~1,3                 |

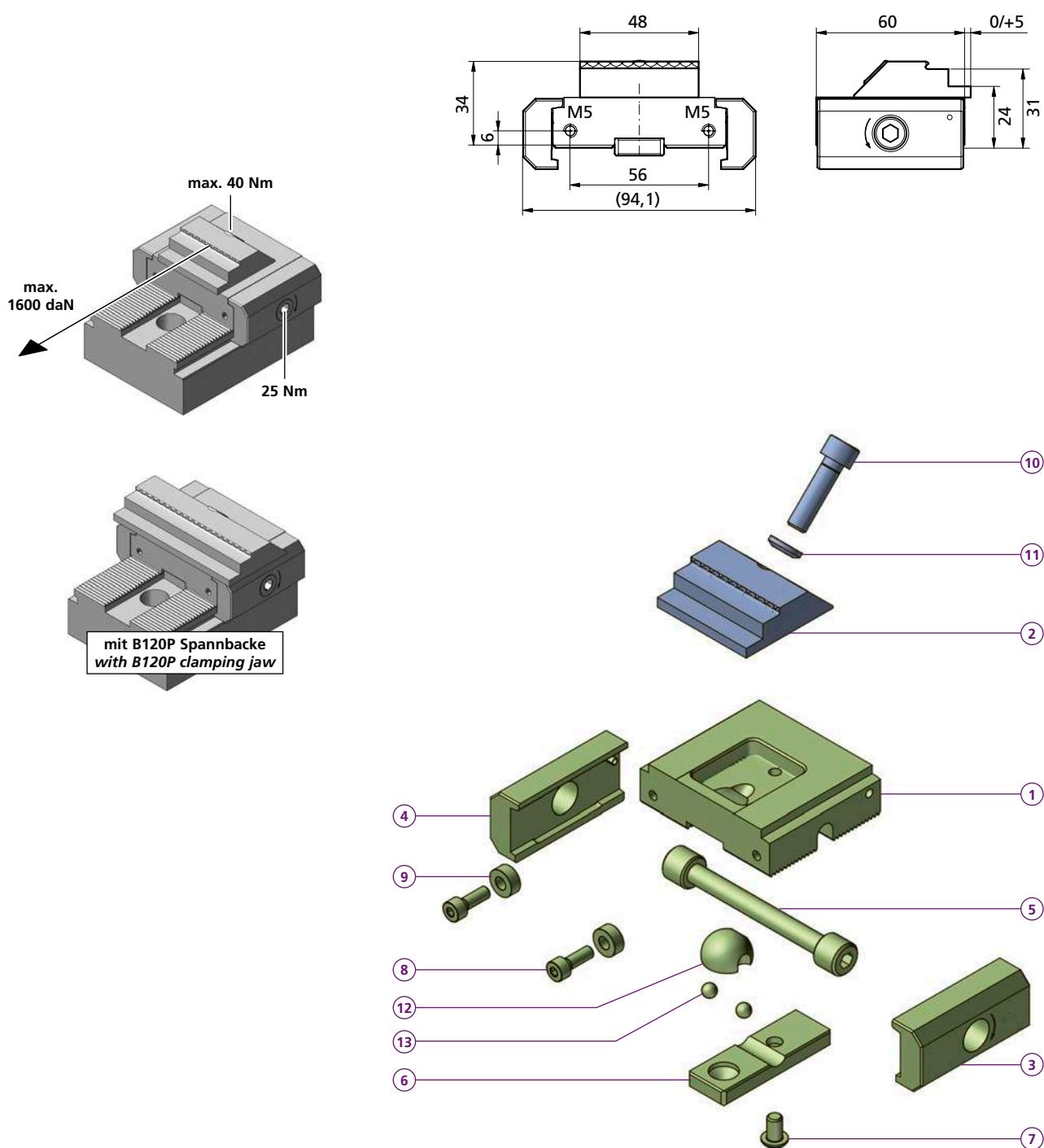
p. 84, 85



**Bestellbeispiel / Ordering example:**  
1x **PS1F48L49-105** & 1x **B105**

| Spannkraft<br>Workholding force |                                 |                   |
|---------------------------------|---------------------------------|-------------------|
| Drehmoment<br>Torque            | Spannkraft<br>Workholding force |                   |
| Nm (lb·ft)                      | ~daN (~lb)                      | ~t                |
| 10                              | 7,4                             | = 400 880 0,4     |
| 20                              | 14,8                            | = 800 1'760 0,8   |
| 30                              | 22,2                            | = 1'200 2'650 1,2 |
| 40                              | 29,6                            | = 1'600 3'530 1,6 |

**PS5X48L34-105**

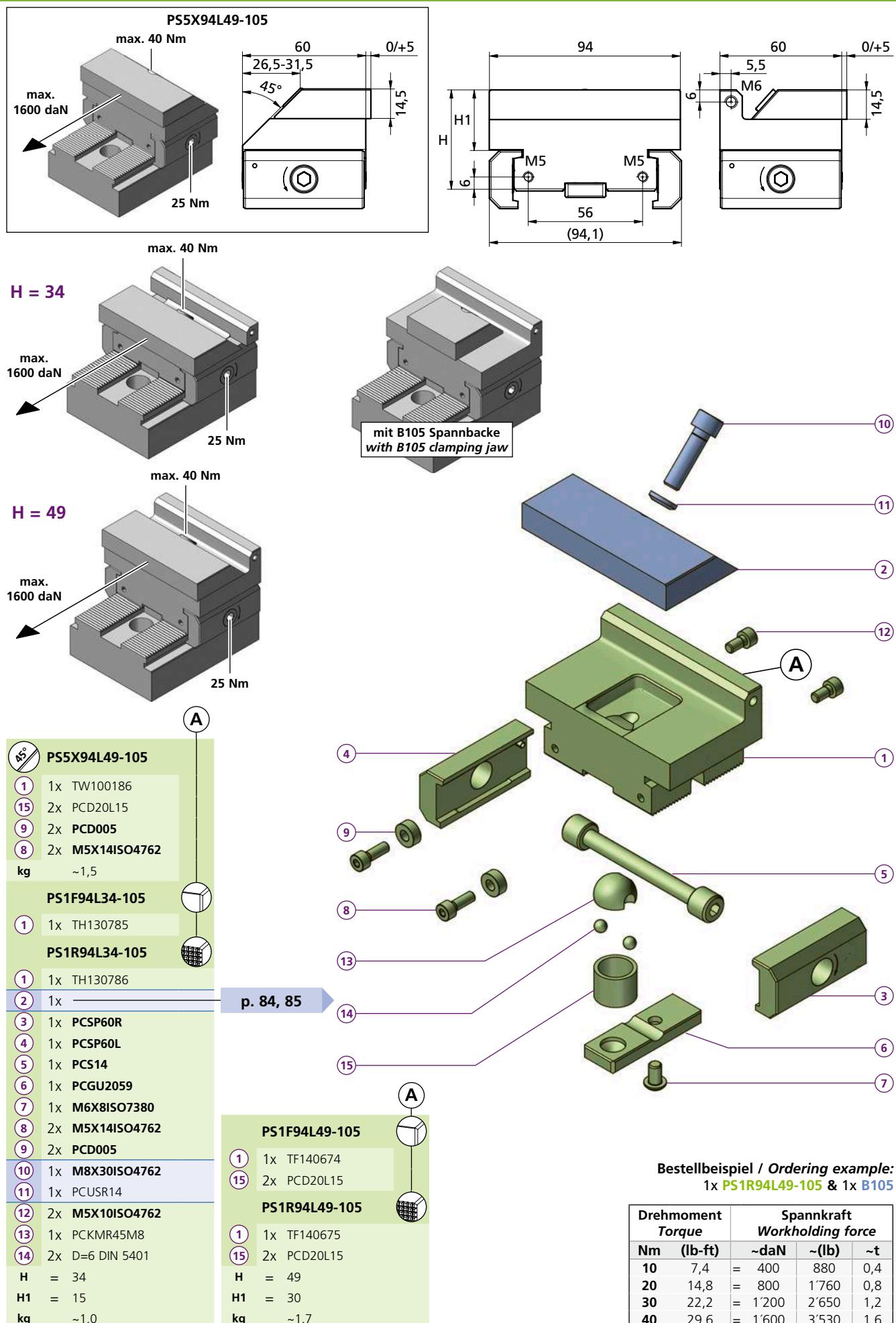


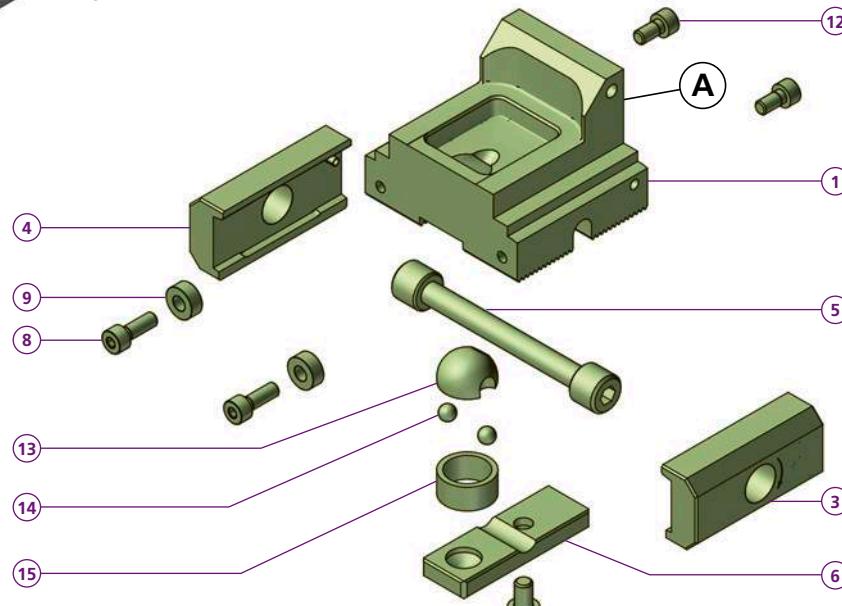
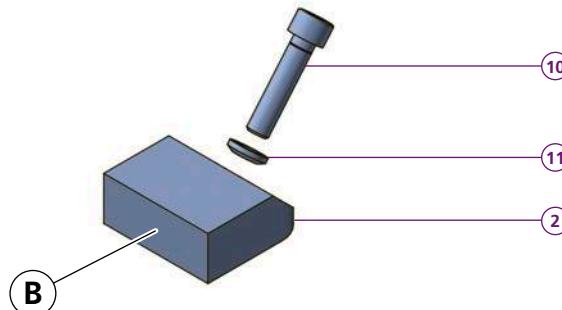
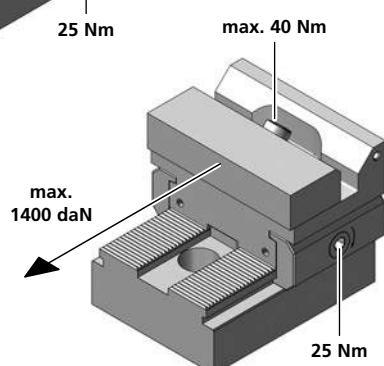
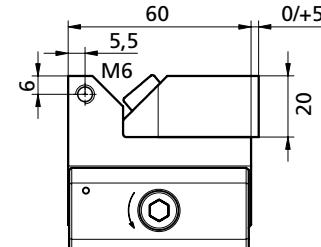
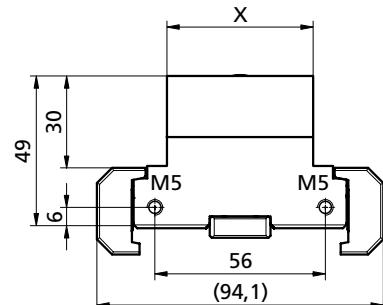
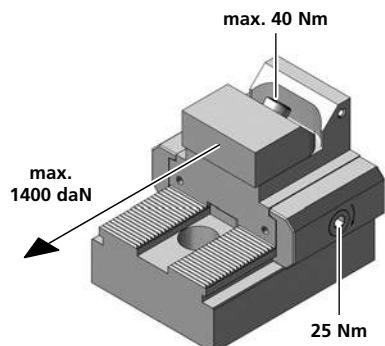
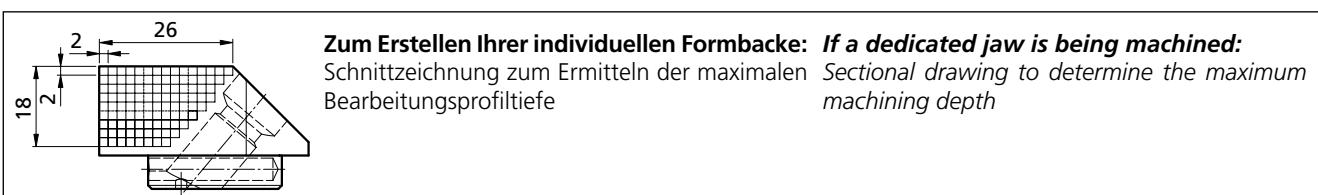
| <b>PS5X48L34-105</b> |                    |
|----------------------|--------------------|
| ①                    | 1x T00365          |
| ②                    | 1x ————— p. 84, 85 |
| ③                    | 1x PCSP60R         |
| ④                    | 1x PCSP60L         |
| ⑤                    | 1x PCS14           |
| ⑥                    | 1x PCGU2059        |
| ⑦                    | 1x M6X8ISO7380     |
| ⑧                    | 2x M5X14ISO4762    |
| ⑨                    | 2x PCD005          |
| ⑩                    | 1x M8X28ISO4762    |
| ⑪                    | 1x PCUSR16         |
| ⑫                    | 1x PCKMR45M8       |
| ⑬                    | 2x D=6 DIN 5401    |
| <b>kg</b>            | ~0,9               |

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**Bestellbeispiel / Ordering example:**  
1x **PS5X48L34-105** & 1x **B105**

| <b>Drehmoment<br/>Torque</b> |                | <b>Spannkraft<br/>Workholding force</b> |              |           |
|------------------------------|----------------|---|--------------|-----------|
| <b>Nm</b>                    | <b>(lb·ft)</b> | <b>~daN</b>                             | <b>~(lb)</b> | <b>~t</b> |
| <b>10</b>                    | 7,4            | = 400                                   | 880          | 0,4       |
| <b>20</b>                    | 14,8           | = 800                                   | 1'760        | 0,8       |
| <b>30</b>                    | 22,2           | = 1'200                                 | 2'650        | 1,2       |
| <b>40</b>                    | 29,6           | = 1'600                                 | 3'530        | 1,6       |





| PS1R48L49-105H20 |              |
|------------------|--------------|
| 1x               | TW100161-01  |
| 1x               |              |
| 1x               | PCSP60R      |
| 1x               | PCSP60L      |
| 1x               | PCS14        |
| 1x               | PCGU2059     |
| 1x               | M6X8ISO7380  |
| 2x               | M5X14ISO4762 |
| 2x               | PCD005       |
| 1x               | M8X35ISO4762 |
| 1x               | PCUSR14      |
| 2x               | M5X10ISO4762 |
| 1x               | PCKMR45M8    |
| 2x               | D=6 DIN 5401 |
| 1x               | PCD20L095    |
| X                | = 48         |
| kg               | ~1,2         |
| PS1R94L49-105H20 |              |
| 1x               | TW100161-07  |
| X                | = 94         |
| kg               | ~1,5         |

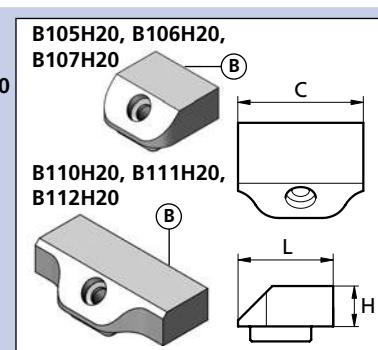
Bestellbeispiel / Ordering example: 1x PS1R48L49-105H20 & 1x B107H20

| B  | B105H20                  | B106H20                  | B107H20 | B110H20                  | B111H20                  | B112H20 |
|----|--------------------------|--------------------------|---------|--------------------------|--------------------------|---------|
| C  | 48                       | 48                       | 48      | 94                       | 94                       | 94      |
| H  | 20                       | 20                       | 20      | 20                       | 20                       | 20      |
| L  | 47                       | 47                       | 47      | 47                       | 47                       | 47      |
| i  | HV700<br>x0,2mm<br>~0,38 | HV700<br>x0,2mm<br>~0,38 | *       | HV700<br>x0,2mm<br>~0,57 | HV700<br>x0,2mm<br>~0,56 | *       |
| kg | ~0,38                    | ~0,38                    | ~0,38   | ~0,57                    | ~0,56                    | ~0,56   |

B105H20, B106H20,  
B107H20

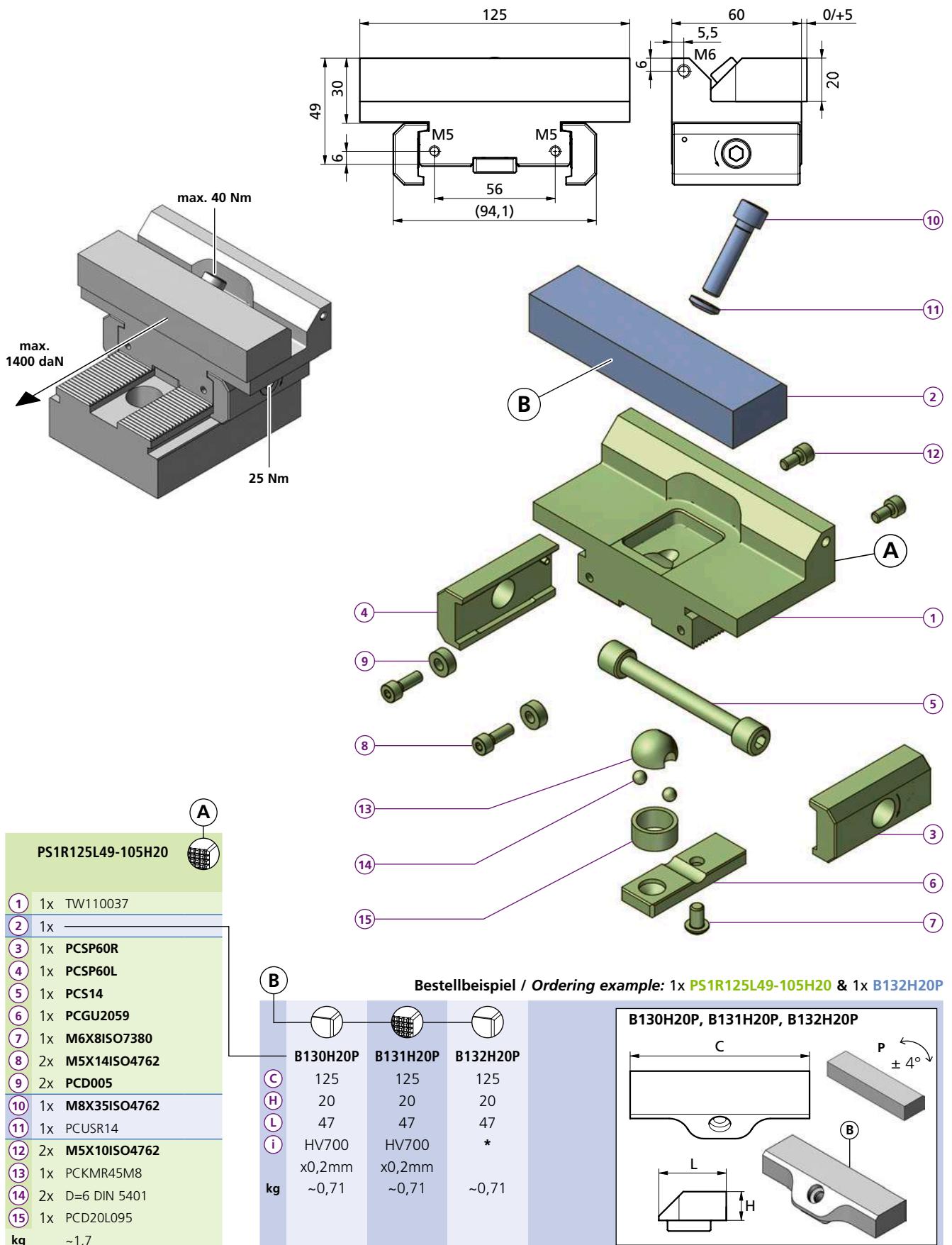
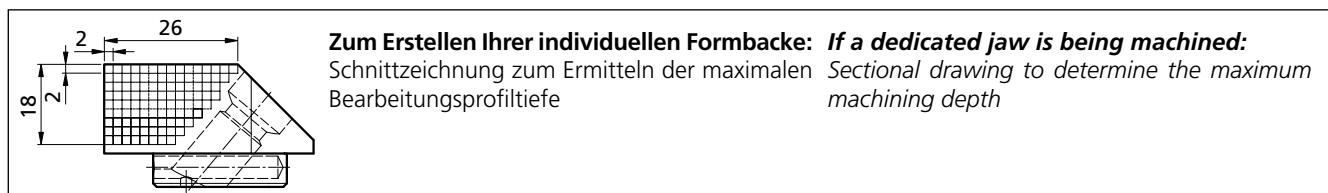
B110H20, B111H20,  
B112H20

\* = weicher Stahl / soft steel



Separat bestellen / Order separately

## PS1R125L49-105H20





zum Einsatz in unterschiedlichen Spannsituationen  
for use in different clamping situations

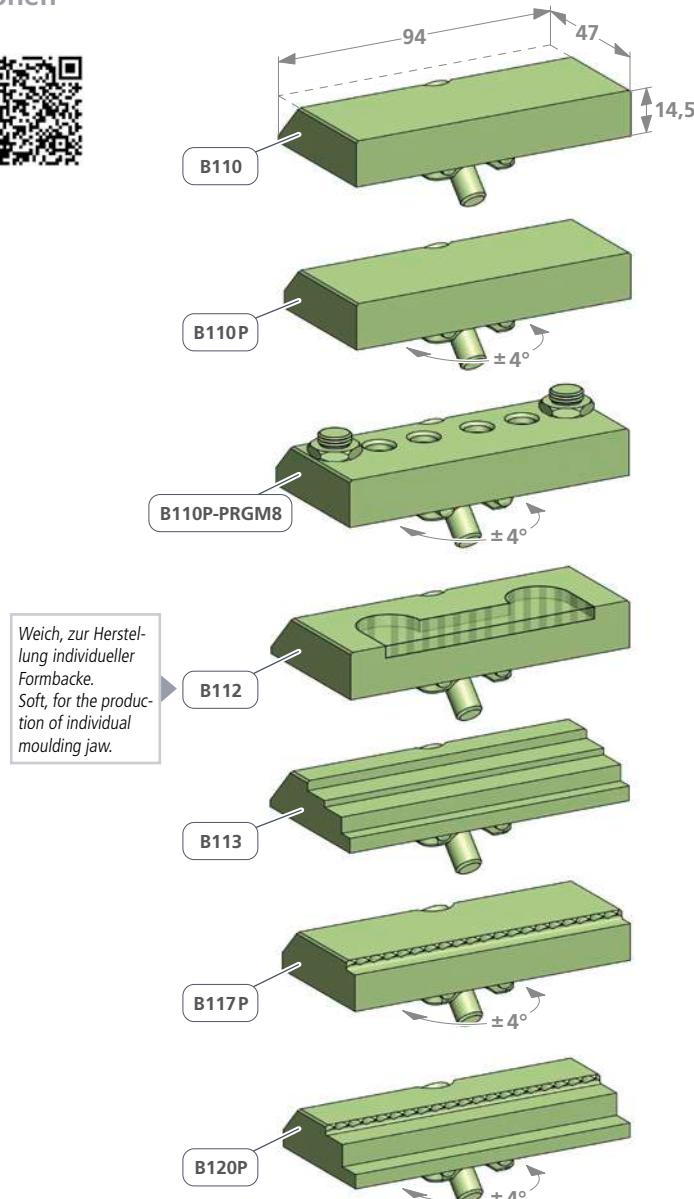
| Art. Nr.     | i             | kg    |
|--------------|---------------|-------|
| <b>B110</b>  | HV700 x 0,2mm | ~0,49 |
| <b>B110P</b> | HV700 x 0,2mm | ~0,49 |



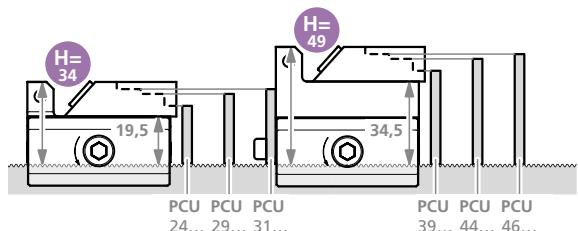
mit Prägeeinsätzen  
with direct-stamping inserts

| Art. Nr.           | i             | kg    |
|--------------------|---------------|-------|
| <b>B110P-PRGM8</b> | HV700 x 0,2mm | ~0,46 |

| Art. Nr.      | i   | kg    |
|---------------|---|-------|
| <b>B111</b>   | HV700 x 0,2mm                                 | ~0,48 |
| <b>B111P</b>  | HV700 x 0,2mm                                 | ~0,48 |
| <b>B112</b>   | weicher Stahl<br>soft steel (1.2312)          | ~0,49 |
| <b>B112P</b>  | weicher Stahl<br>soft steel (1.2312)          | ~0,49 |
| <b>B112HG</b> | Hochgenau<br>High-precision                   | ~0,49 |
| <b>B112E</b>  | Einsatzstahl (1.5752)<br>Case hardening steel | ~0,49 |
| <b>B112EP</b> | Einsatzstahl (1.5752)<br>Case hardening steel | ~0,47 |
| <b>B113</b>   | HV700 x 0,2mm                                 | ~0,39 |
| <b>B113P</b>  | HV700 x 0,2mm                                 | ~0,39 |
| <b>B117P</b>  | 57HRC   | ~0,46 |
| <b>B120</b>   | 57HRC   | ~0,4  |
| <b>B120P</b>  | 57HRC   | ~0,4  |



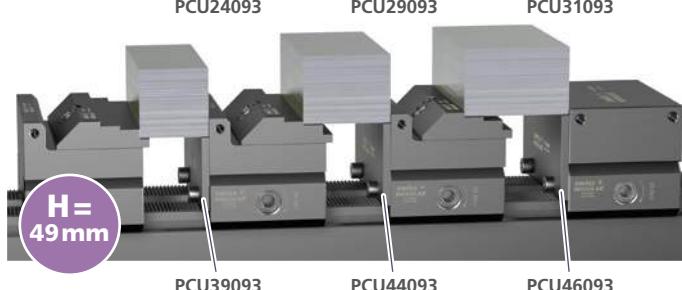
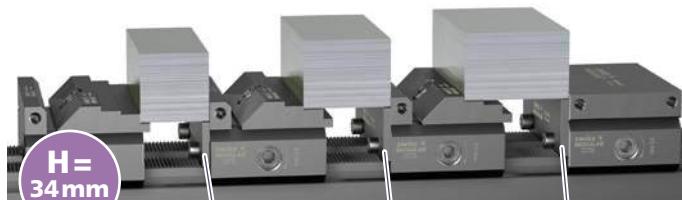
#### Modulhöhen / Module heights 34 / 49 mm



Beim Einsatz einer Stufenbacke, ist die richtige Modulspannhöhe 34 mm/49 mm zu berücksichtigen. Die Werkstücke auf der Anschlagseite werden mit den passenden Parallelunterlagen abgestützt.

When using a step jaw is applied, the correct module clamping height 34 mm/49 mm must be taken into account. The workpieces on the end module are supported with the appropriate steel parallel.

#### Eingesetzte Stufenbacken / Inserted stepped jaws (B113)



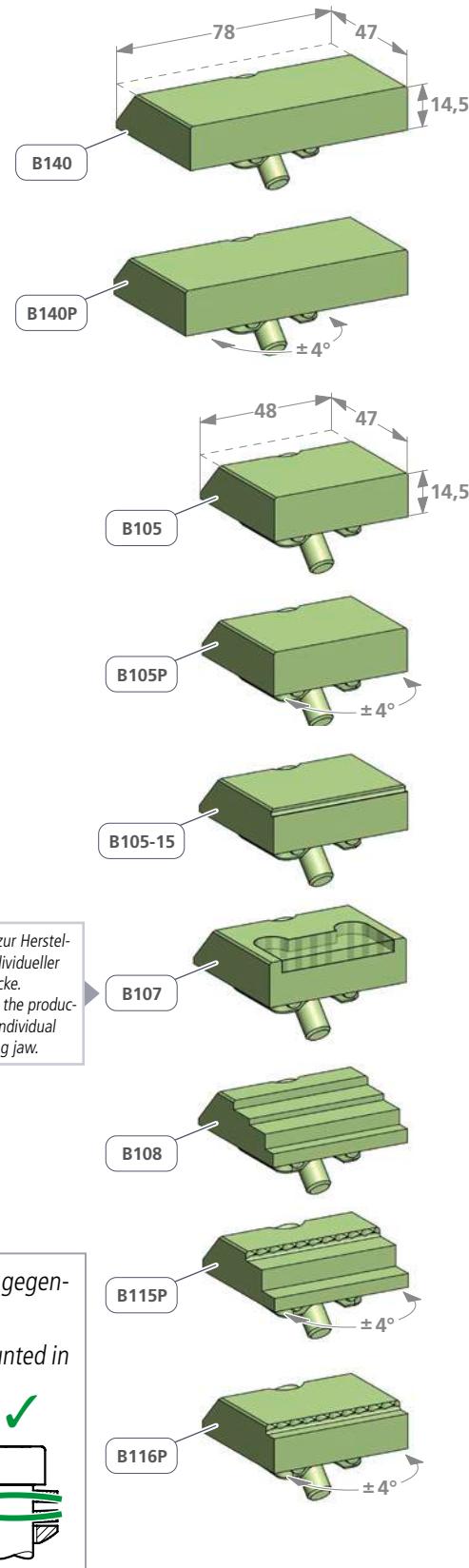
# Linear- Spannbacken ... → | Linear clamping jaws ...



**powerCLAMP**

zum Einsatz in unterschiedlichen Spannsituationen  
for use in different clamping situations

| Art.Nr.        | i                                    | kg    |
|----------------|--------------------------------------|-------|
| <b>B140</b>    | HV700 x 0,2mm                        | ~0,41 |
| <b>B140P</b>   | HV700 x 0,2mm                        | ~0,41 |
| <b>B141</b>    | HV700 x 0,2mm                        | ~0,41 |
| <b>B141P</b>   | HV700 x 0,2mm                        | ~0,41 |
| <b>B105</b>    | HV700 x 0,2mm                        | ~0,27 |
| <b>B105P</b>   | HV700 x 0,2mm                        | ~0,27 |
| <b>B105-15</b> | HV700 x 0,2mm                        | ~0,27 |
| <b>B106</b>    | HV700 x 0,2mm                        | ~0,27 |
| <b>B106P</b>   | HV700 x 0,2mm                        | ~0,27 |
| <b>B107</b>    | weicher Stahl<br>soft steel (1.2312) | ~0,27 |
| <b>B107P</b>   | weicher Stahl<br>soft steel (1.2312) | ~0,27 |
| <b>B108</b>    | HV700 x 0,2mm                        | ~0,22 |
| <b>B108P</b>   | HV700 x 0,2mm                        | ~0,22 |
| <b>B115</b>    | 57HRC                                | ~0,21 |
| <b>B115P</b>   | 57HRC                                | ~0,21 |
| <b>B116P</b>   | 57HRC                                | ~0,25 |



## Für Prägebacken / For stamping jaws

**PF-SET** Krafterhaltung mit Nachfederung  
Spring loaded mechanism to maintain clamping force

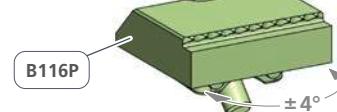
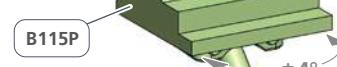
Bei allen Prägebacken kann die Krafterhaltung mit den nachfedern-den Tellerfedern eingesetzt werden um ein Freiwiegeln des Werkstücks zu verhindern.

On every spring loaded stamping jaw, the force retention with the disc springs can be used to prevent the workpiece from wiggling free.

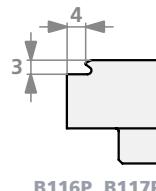
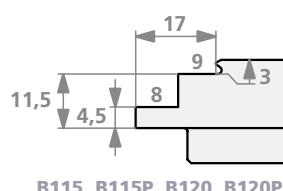
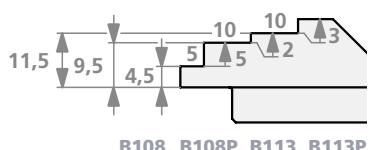


Die Tellerfedern werden gegenläufig montiert.

The disc springs are mounted in opposite directions.



## Detailvermassung der Stufenbacken / Detailed dimensioning of the stepped jaws



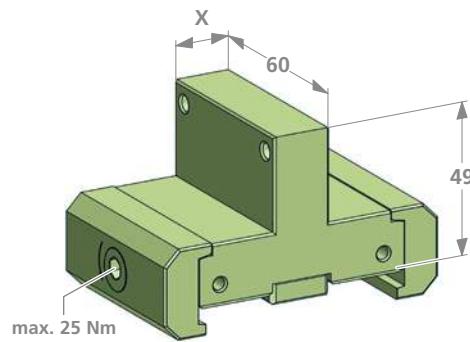
## Anschlagmodule ... End module ...



**5 axes  
powerCLAMP**

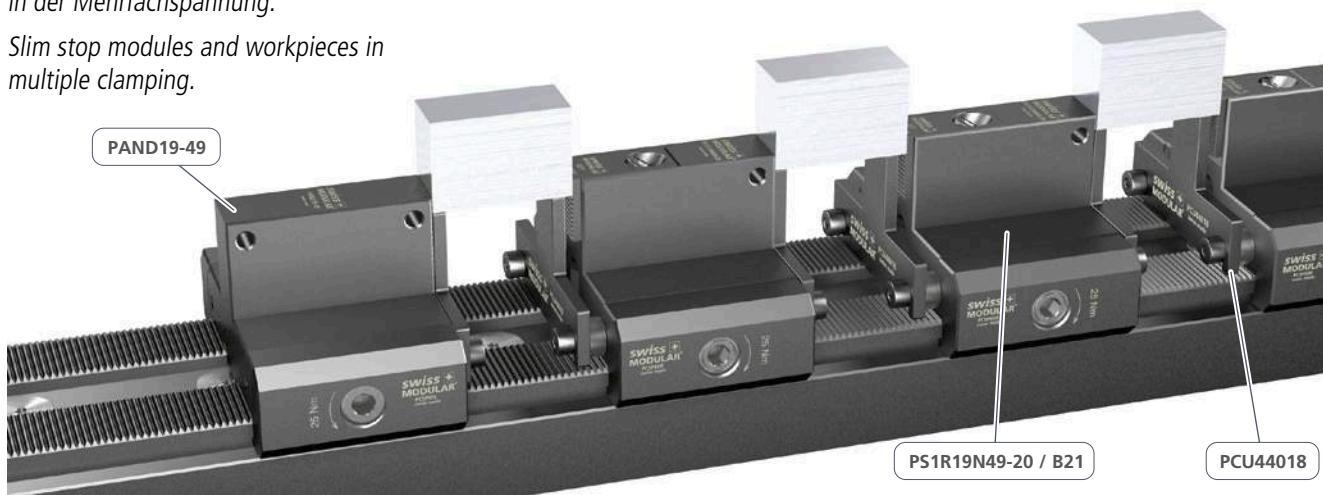
für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

| Art. Nr.  | kg   | X  |
|-----------|------|----|
| PAND19-49 | ~1,2 | 19 |
| PAND26-49 | ~2,2 | 26 |
| PAND34-49 | ~2,3 | 34 |



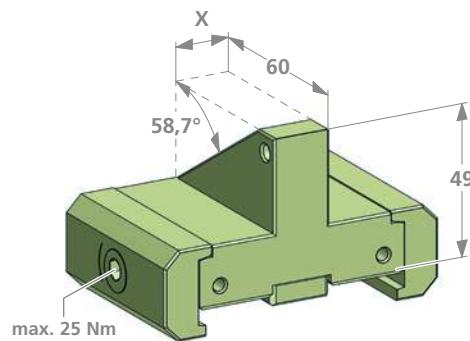
Schmale Anschlagmodule und Werkstücke  
in der Mehrfachspannung.

Slim stop modules and workpieces in  
multiple clamping.



für 5-Achs Bearbeitung  
for 5-axis machining

| Art. Nr.   | kg   | X  |
|------------|------|----|
| PA5X19-49F | ~1,1 | 19 |
| PA5X19-49R | ~1,1 | 19 |
| PA5X26-49F | ~1,2 | 26 |
| PA5X26-49R | ~1,2 | 26 |
| PA5X34-49F | ~1,2 | 34 |
| PA5X34-49R | ~1,2 | 34 |



Modules  
can be used on self  
centrig vises or  
base rails.



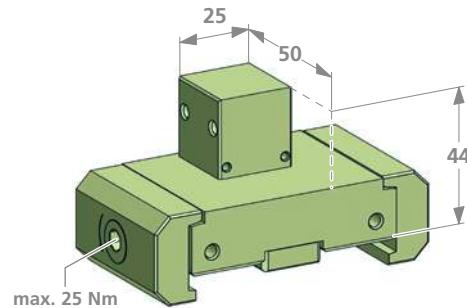
## Anschlagmodule ... End module ...



**powerCLAMP**

für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

| Art. Nr.         | kg   |
|------------------|------|
| <b>PAND25-44</b> | ~1,1 |



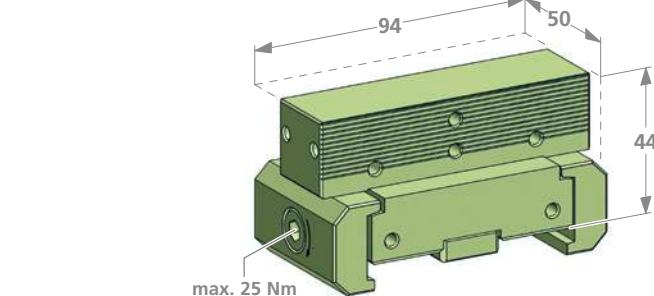
Schlankes und kurzes Anschlagmodul für Kleinteil-Serien (Mehrfachspannung).  
Slim and short end module for small part series (Multiple workholding).

| Art. Nr.         | kg   |
|------------------|------|
| <b>PAND94-44</b> | ~1,3 |



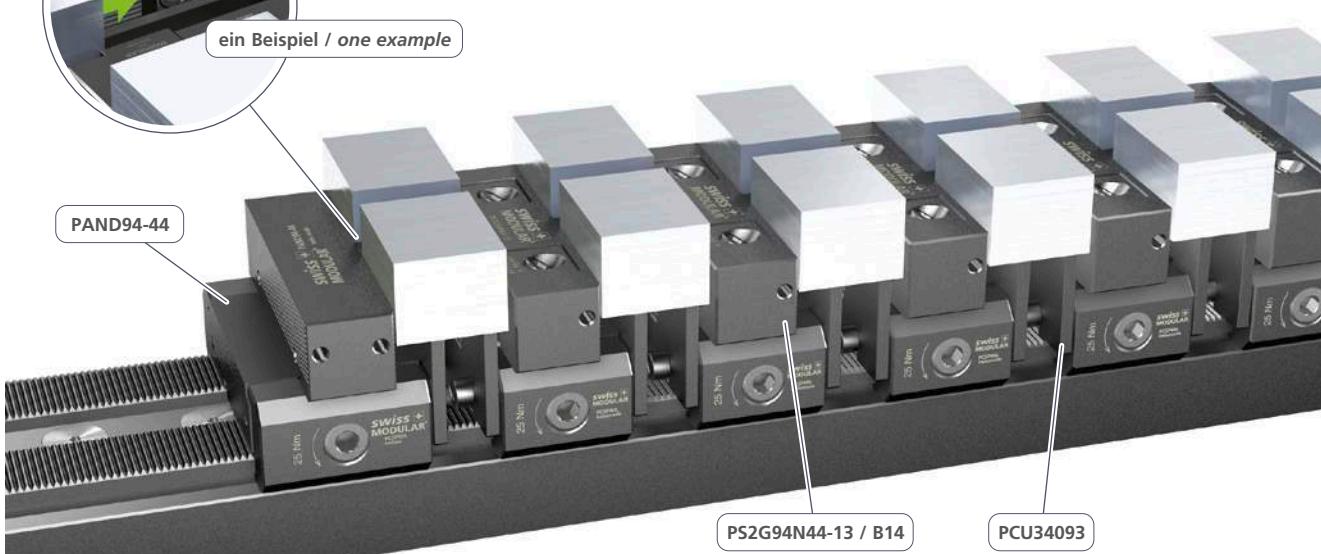
Die Anschlagfläche enthält 2 Passbohrungen. Mit MS50 Passschrauben kann mittig ein Seitenanschlag präzise platziert werden.

The stop surface contains 2 fitting holes. A side stop can be placed precisely in the centre with MS50 fitting screws.



Anschlagmodul mit Doppelspannfunktion. Verdoppelt die Anzahl Spannbereiche auf gleichbleibendem Raum.

End module with double clamping function. Doubles the number of clamping areas in the same amount of working space.



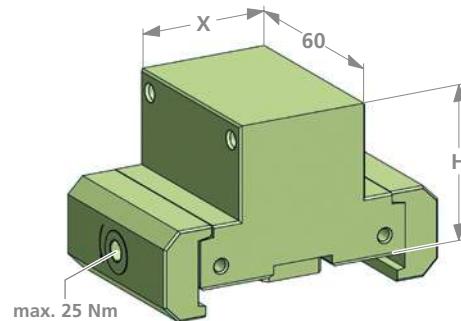
## Anschlagmodule ... End module ...



**5axes**  
**powerCLAMP**

für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

| Art. Nr.  | kg   | X  | H  | QR |
|-----------|------|----|----|----|
| PAND43-49 | ~1,6 | 43 | 49 |    |
| PAND48-34 | ~1,3 | 48 | 34 |    |
| PAND48-49 | ~1,6 | 48 | 49 |    |
| PAND48-75 | ~2,2 | 48 | 75 |    |
| PAND58-34 | ~1,4 | 58 | 34 |    |
| PAND58-49 | ~1,8 | 58 | 49 |    |
| PAND61-34 | ~1,4 | 61 | 34 |    |
| PAND68-34 | ~2,3 | 68 | 34 |    |



43 mm bis 68 mm breite Anschlagmodule  
für die Einzel- und Mehrfachspannung.  
43 mm to 68 mm wide end modules for  
single and multiple clamping.

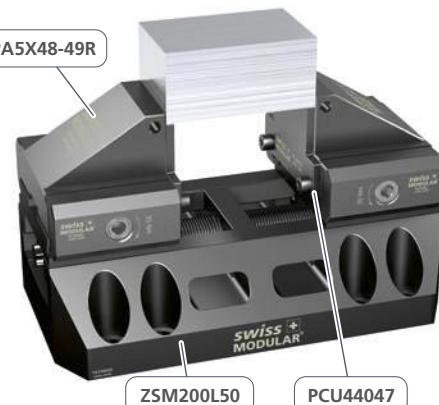
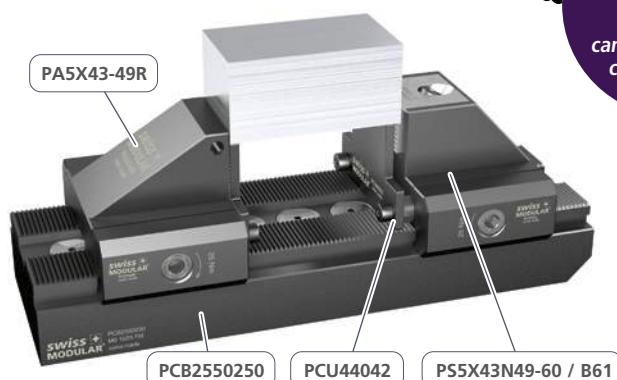
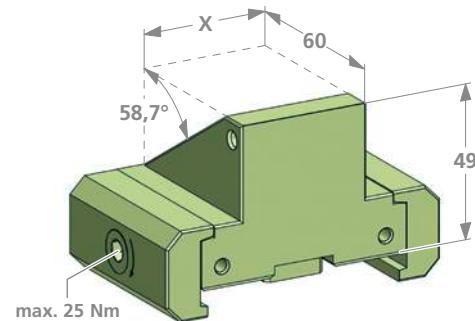


für 5-Achs Bearbeitung  
for 5-axis machining

| Art. Nr.   | kg   | X  | QR |
|------------|------|----|----|
| PA5X43-49F | ~1,3 | 43 |    |
| PA5X43-49R | ~1,3 | 43 |    |
| PA5X48-49F | ~1,4 | 48 |    |
| PA5X48-49R | ~1,4 | 48 |    |



Modules can be used on self centric vises or base rails.



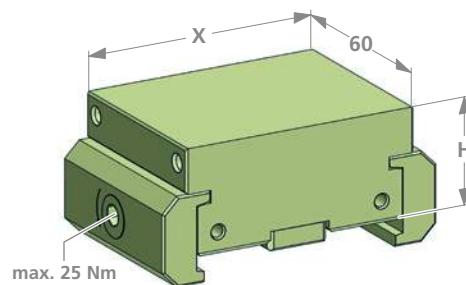
## Anschlagmodule ... End module ...



**5axes**  
**powerCLAMP**

für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

| Art. Nr.   | kg   | X   | H  | QR |
|------------|------|-----|----|----|
| PAND78-34  | ~1,5 | 78  | 34 |    |
| PAND78-49  | ~2,1 | 78  | 49 |    |
| PAND94-34  | ~2,3 | 94  | 34 |    |
| PAND94-49  | ~2,7 | 94  | 49 |    |
| PAND125-49 | ~2,7 | 125 | 49 |    |



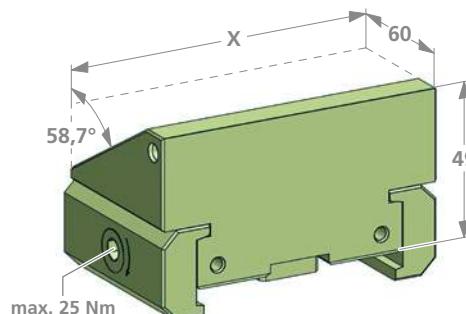
78 mm bis 125 mm breite Anschlagmodule  
für die Einzel- und Mehrfachspannung.

78 mm to 125 mm wide end modules for  
single and multiple clamping.



für 5-Achs Bearbeitung  
for 5-axis machining

| Art. Nr.    | kg   | X   | QR |
|-------------|------|-----|----|
| PA5X94-49F  | ~1,8 | 94  |    |
| PA5X94-49R  | ~1,8 | 94  |    |
| PA5X125-49F | ~2,0 | 125 |    |
| PA5X125-49R | ~2,0 | 125 |    |

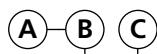


**PAND48-34PRG/F-A1**  
**PAND48-49PRG/F-A1**  
**PAND94-34PRG/F-A1**

**PAND94-49PRG/F-A1**  
**PAND125-49PRG-A1**



**5axes**  
**powerCLAMP**



**PAND48-34PRG-A1**

- ① 1x TH120684

**PAND48-34PRF-A1**

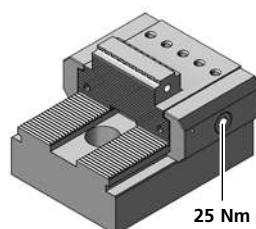
- ① 1x TK140239
- ③ 1x PCSP60R
- ④ 1x PCSP60L
- ⑤ 1x PCS14
- ⑥ 1x PCGU2049
- ⑦ 1x M6X8ISO7380
- ⑫ 4x M5X10ISO4762

X = 48

H = 34

H1 = 15

kg ~1,1



25 Nm

**PAND48-49PRG-A1**

- ① 1x TH120685

**PAND48-49PRF-A1**

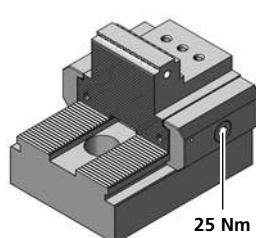
- ① 1x TK140597

X = 48

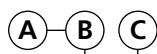
H = 49

H1 = 30

kg ~1,3



25 Nm



**PAND94-34PRG-A1**

- ① 1x TH120686

**PAND94-34PRF-A1**

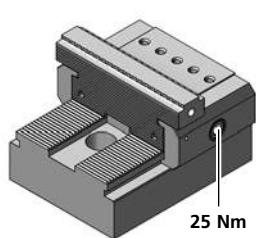
- ① 1x TH140185

X = 94

H = 34

H1 = 15

kg ~1,2



25 Nm

**PAND94-49PRG-A1**

- ① 1x TH120687

**PAND94-49PRF-A1**

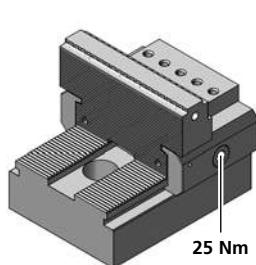
- ① 1x TH130754

X = 94

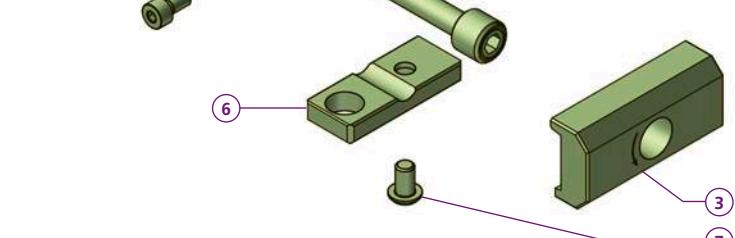
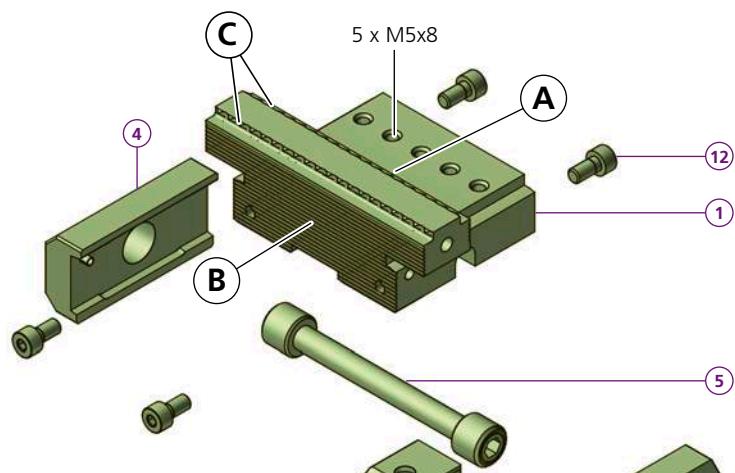
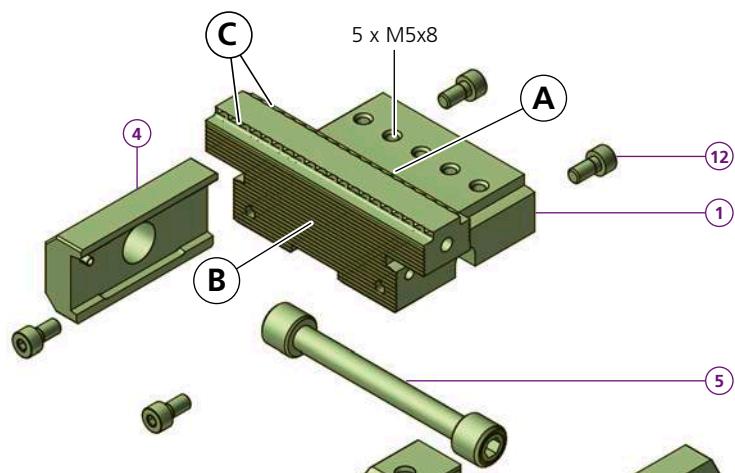
H = 49

H1 = 30

kg ~1,6



25 Nm



**PAND125-49PRG-A1**

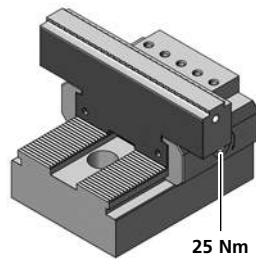
- ① 1x TB160295

X = 125

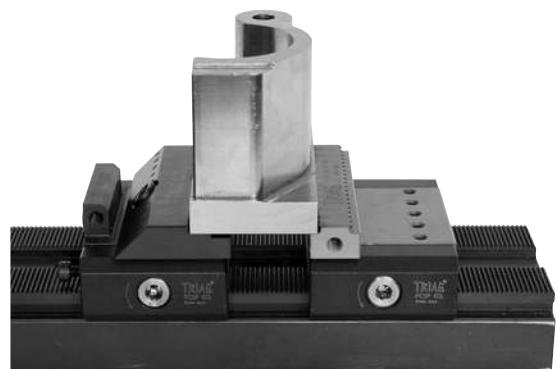
H = 49

H1 = 30

kg ~1,7



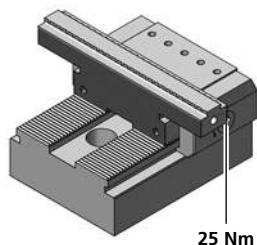
25 Nm



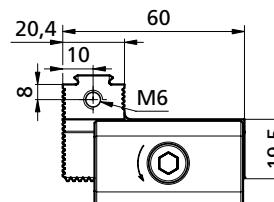
Bestellbeispiel / Ordering example: **PAND94-34PRG-A1**



X = 125

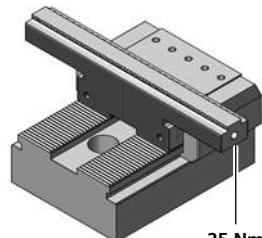


25 Nm

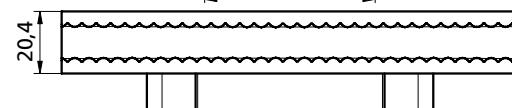


X

X = 150



25 Nm

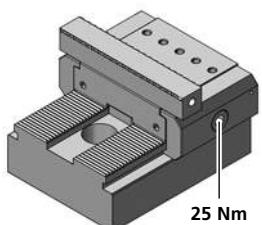


C

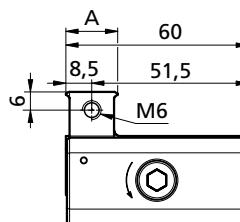
|                         |
|-------------------------|
| <b>PAND125-34PRG-A1</b> |
| (1) 1x TB180899         |
| X = 125                 |
| kg ~1,2                 |
| <b>PAND150-34PRG-A1</b> |
| (1) 1x TB160145         |
| (3) 1x PCSP50R          |
| (4) 1x PCSP50L          |
| (5) 1x PCS14            |
| (6) 1x PCGU2049         |
| (7) 1x M6X8ISO7380      |
| (12) 4x M5X10ISO4762    |
| X = 150                 |
| kg ~1,2                 |

Bestellbeispiel / Ordering example: PAND150-34PRG-A1

H = 34

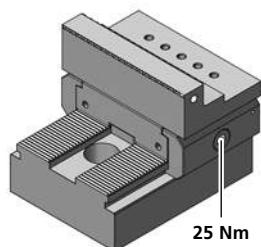


25 Nm

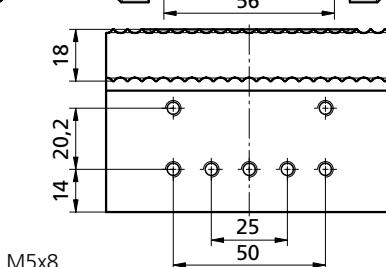


94

H = 49



25 Nm



C

|                      |
|----------------------|
| <b>PAND94-34PRGV</b> |
| (1) 1x TH171180      |
| (3) 1x PCSP60R       |
| (4) 1x PCSP60L       |
| (5) 1x PCS14         |
| (6) 1x PCGU2049      |
| (7) 1x M6X8ISO7380   |
| (12) 4x M5X10ISO4762 |
| H = 34               |
| H1 = 15              |
| A = 17,5             |
| kg ~1,2              |
| <b>PAND94-49PRGV</b> |
| (1) 1x TH171179      |
| H = 49               |
| H1 = 30              |
| A = 17               |
| kg ~1,6              |

Bestellbeispiel / Ordering example: PAND94-34PRGV

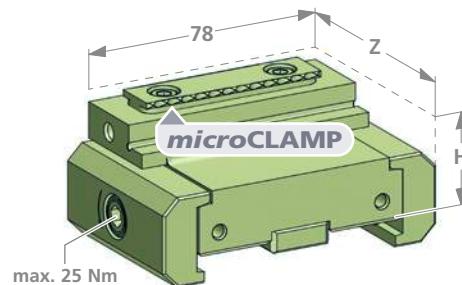
# Anschlagmodule zum Prägen ... End modules for stamping ...



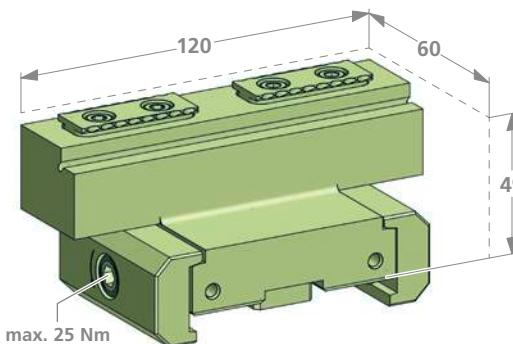
**5axes  
powerCLAMP**

für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

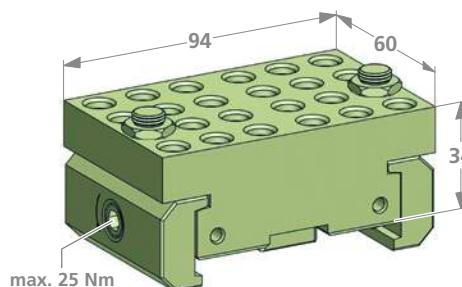
| Art. Nr.                |  | kg   | Z  | H  |
|-------------------------|--|------|----|----|
| <b>PAND78-34UPRG</b>    |  | ~1,2 | 60 | 34 |
| <b>PAND78-49UPRG</b>    |  | ~1,5 | 60 | 49 |
| <b>PAND78-34X50UPRG</b> |  | ~1,0 | 50 | 34 |



| Art. Nr.              |  | kg   |
|-----------------------|--|------|
| <b>PAND120-49UPRG</b> |  | ~1,8 |

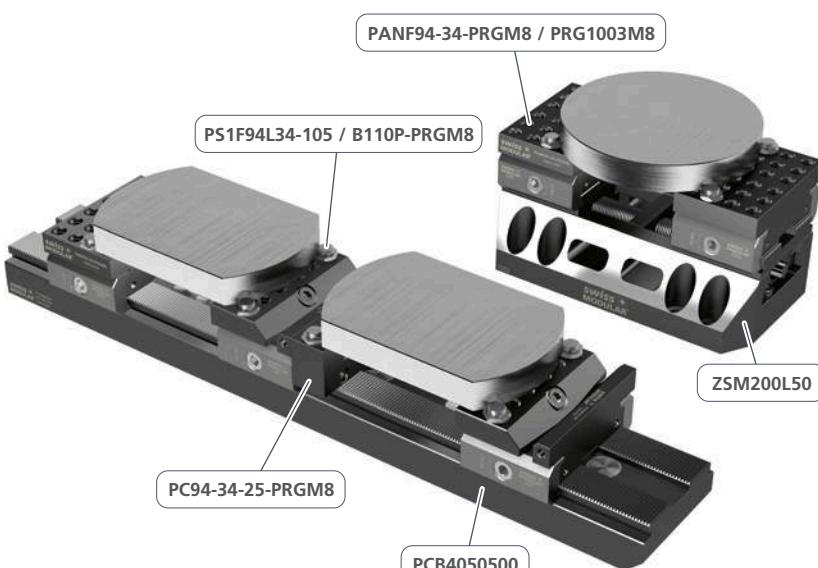


| Art. Nr.              |  | kg   |
|-----------------------|--|------|
| <b>PANF94-34PRGM8</b> |  | ~1,5 |



Der Einsatz dieser Spannmodule erweitert die Spannmöglichkeiten für runde und un-  
förmige Werkstücke erheblich.

The use of these clamping modules ex-  
pands the clamping possibilities for round  
and bulky workpieces considerably.



Bei knapp gespannten Werkstücken sind direkt-  
Prägebacken die ideale Wahl zum spannen.  
For tight clamped workpieces, direct stamping  
jaws are the ideal choice for clamping.

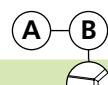
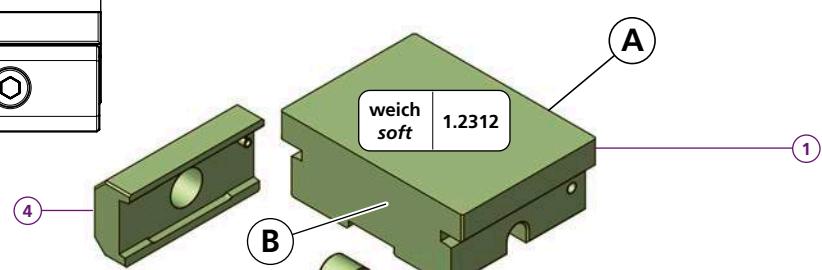
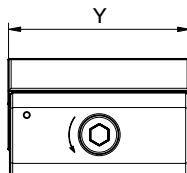
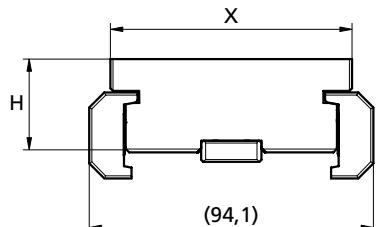


**Rohlingsmodule**  
*Blank module*

**PT-F80-30X60**  
**PT-F80-30X60NS**  
**PT-F80-30X30NS**

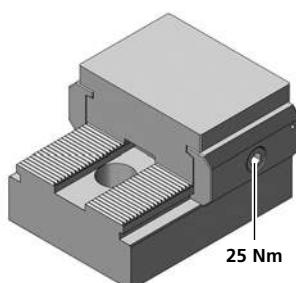
**PT-F61-25X60**  
**PT-F61-25X50**  
**PT-F61-25X30**

**5 axes**  
**powerCLAMP**

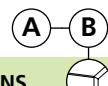


**PT-F80-30X60**

- ① 1x TF140637
  - ③ 1x PCSP60R
  - ④ 1x PCSP60L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2049
  - ⑦ 1x M6X8ISO7380
- X = 80  
H = 30  
Y = 60  
kg ~1,4



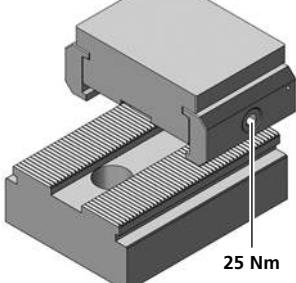
25 Nm



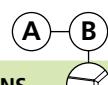
**PT-F80-30X60NS**

- ① 1x TF140635
  - ③ 1x PCSP60R
  - ④ 1x PCSP60L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2049
  - ⑦ 1x M6X8ISO7380
- X = 80  
H = 30  
Y = 60  
kg ~1,4

**NS** = Rohlingsmodul freie Positionierung ohne Verzahnung  
Carrier module without positioning serration for free positioning



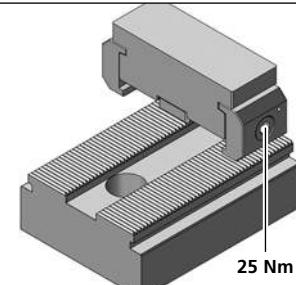
25 Nm



**PT-F80-30X30NS**

- ① 1x TF140749
  - ③ 1x PCSP30R
  - ④ 1x PCSP30L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2030
  - ⑦ 1x M6X8ISO7380
- X = 80  
H = 30  
Y = 30  
kg ~0,7

**NS** = Rohlingsmodul freie Positionierung ohne Verzahnung  
Carrier module without positioning serration for free positioning

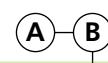
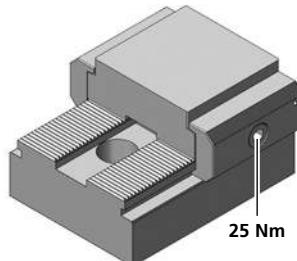


25 Nm



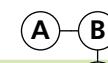
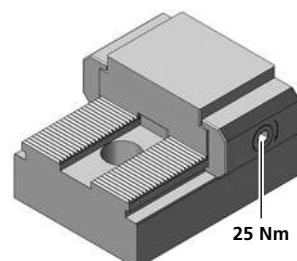
**PT-F61-25X60**

- ① 1x TF140638
  - ③ 1x PCSP60R
  - ④ 1x PCSP60L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2049
  - ⑦ 1x M6X8ISO7380
- X = 61  
H = 25  
Y = 60  
kg ~1,1



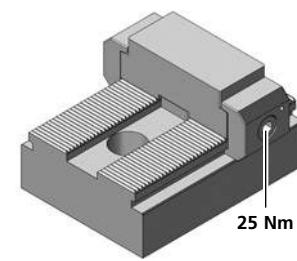
**PT-F61-25X50**

- ① 1x TF140750
  - ③ 1x PCSP50R
  - ④ 1x PCSP50L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2049
  - ⑦ 1x M6X8ISO7380
- X = 61  
H = 25  
Y = 50  
kg ~1,0



**PT-F61-25X30**

- ① 1x TF140636
  - ③ 1x PCSP30R
  - ④ 1x PCSP30L
  - ⑤ 1x PCS14
  - ⑥ 1x PCGU2049
  - ⑦ 1x M6X8ISO7380
- X = 61  
H = 25  
Y = 30  
kg ~0,6



**Bestellbeispiel / Ordering example:** **PT-F80-30X60**

**Rohlingsmodule**  
*Blank module*

**PR94-49SET**

**PR125-49SETALU**

**PT-F132-34RDSET**

**PR94-39-50SET**

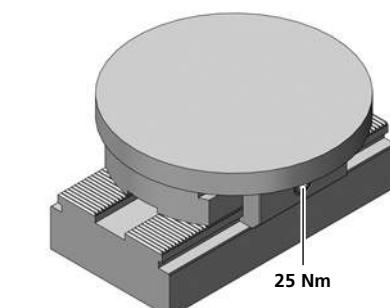
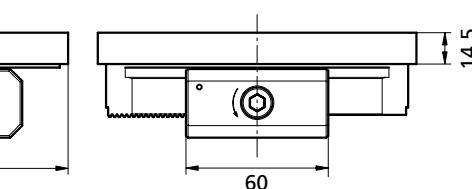
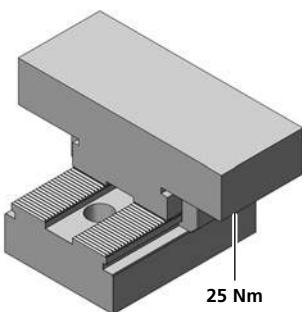
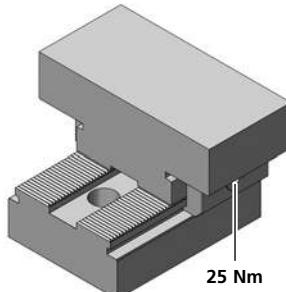
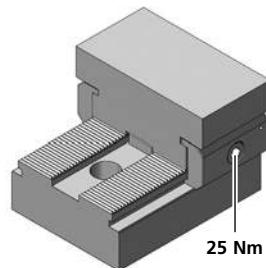
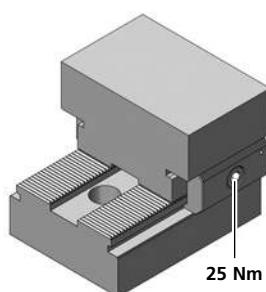
**PR150-49SET**

**PR125-49SET**

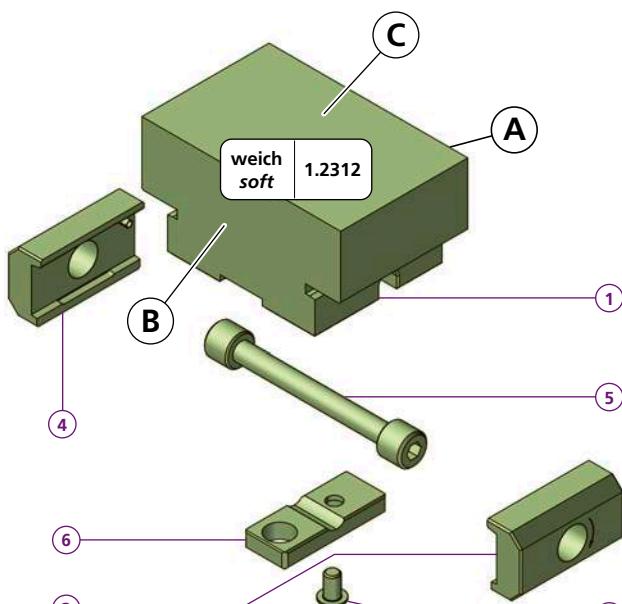
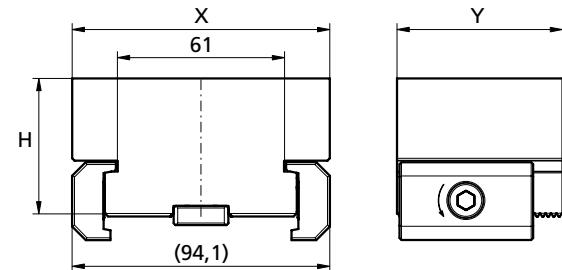
**5axes**

**powerCLAMP**

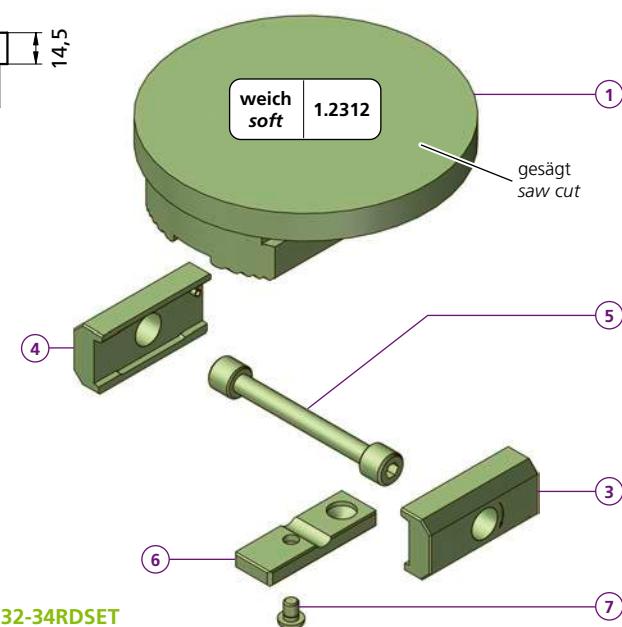
|                       | A | B | C |
|-----------------------|---|---|---|
| <b>PR94-49SET</b>     |   |   |   |
| ① 1x PR94-49          |   |   |   |
| ③ 1x PCSP50R          |   |   |   |
| ④ 1x PCSP50L          |   |   |   |
| ⑤ 1x PCS14            |   |   |   |
| ⑥ 1x PCGU2049         |   |   |   |
| ⑦ 1x M6X8ISO7380      |   |   |   |
| X = 94                |   |   |   |
| H = 49                |   |   |   |
| Y = 60,4              |   |   |   |
| kg ~2,3               |   |   |   |
| <b>PR94-39-50SET</b>  |   |   |   |
| ① 1x PR94-39-50       |   |   |   |
| X = 94                |   |   |   |
| H = 39                |   |   |   |
| Y = 50,4              |   |   |   |
| kg ~1,6               |   |   |   |
| <b>PR125-49SET</b>    |   |   |   |
| ① 1x PR125-49         |   |   |   |
| X = 125               |   |   |   |
| H = 49                |   |   |   |
| Y = 60,4              |   |   |   |
| kg ~2,7               |   |   |   |
| <b>PR125-49SETALU</b> |   |   |   |
| ① 1x *PR125-49ALU     |   |   |   |
| X = 125               |   |   |   |
| H = 49                |   |   |   |
| Y = 60,4              |   |   |   |
| kg ~0,83              |   |   |   |
| <b>PR150-49SET</b>    |   |   |   |
| ① 1x PR150-49         |   |   |   |
| X = 150               |   |   |   |
| H = 49                |   |   |   |
| Y = 60,4              |   |   |   |
| kg ~3,1               |   |   |   |



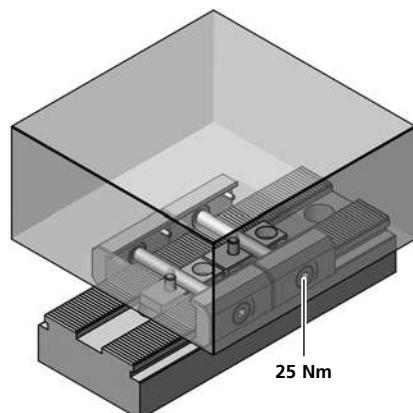
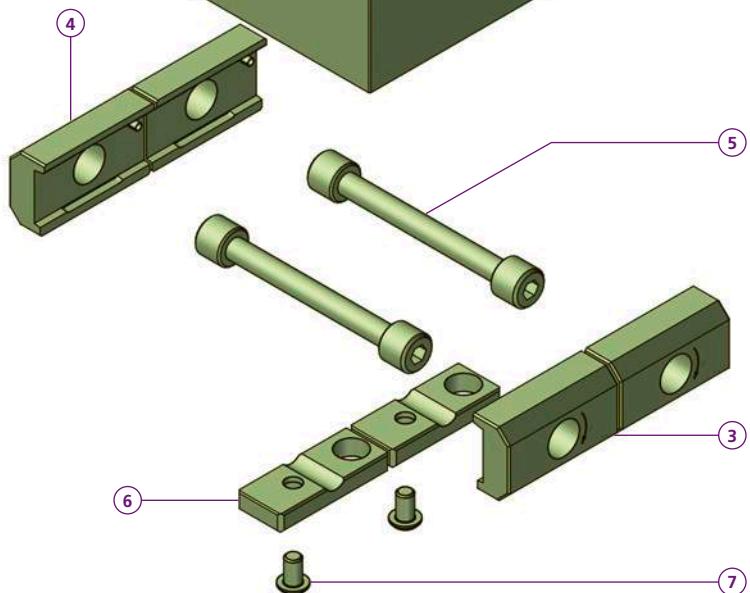
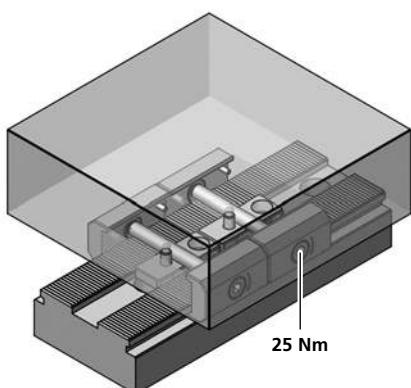
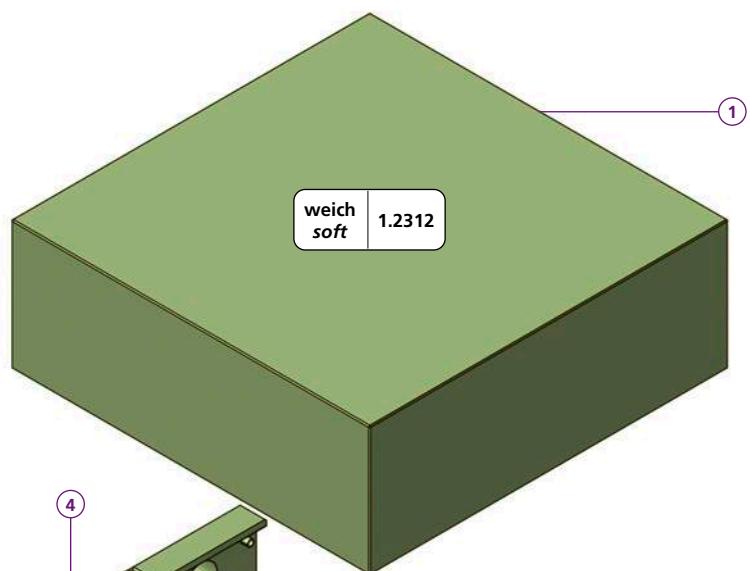
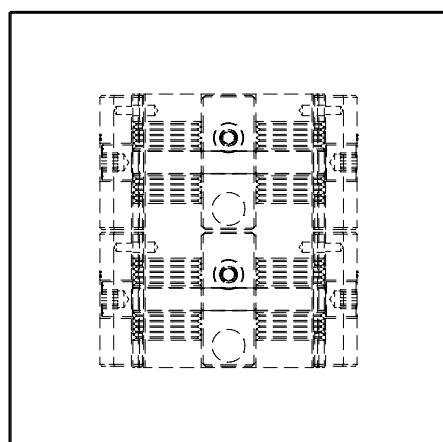
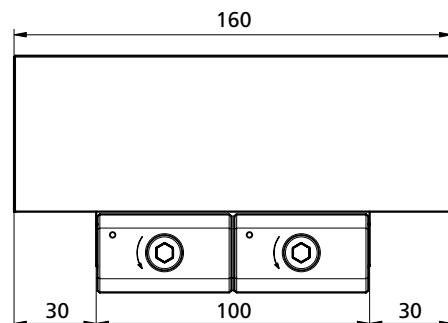
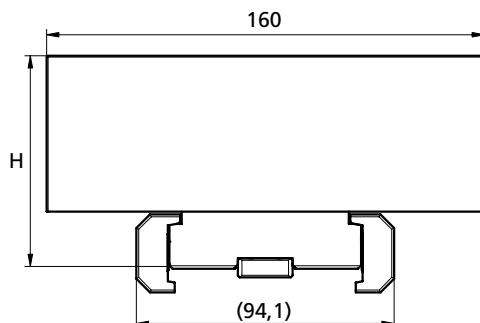
Bestellbeispiel / Ordering example: PT-F132-34RDSET



\* ALU = ENAW-7022 Bestellbeispiel / Ordering example: PR94-49SET



|                        |  |  |  |
|------------------------|--|--|--|
| <b>PT-F132-34RDSET</b> |  |  |  |
| ① 1x PT-F132-34RD      |  |  |  |
| ③ 1x PCSP60R           |  |  |  |
| ④ 1x PCSP60L           |  |  |  |
| ⑤ 1x PCS14             |  |  |  |
| ⑥ 1x PCGU2059          |  |  |  |
| ⑦ 1x M6X8ISO7380       |  |  |  |
| kg ~3,1                |  |  |  |

**PTX160-57S**

- ① 1x TH130539
  - ③ 2x PCSP50R
  - ④ 2x PCSP50L
  - ⑤ 2x PCS14
  - ⑥ 2x PCGU2049
  - ⑦ 2x M6X8ISO7380
- H = 57  
kg ~9

**PTX160-77S**

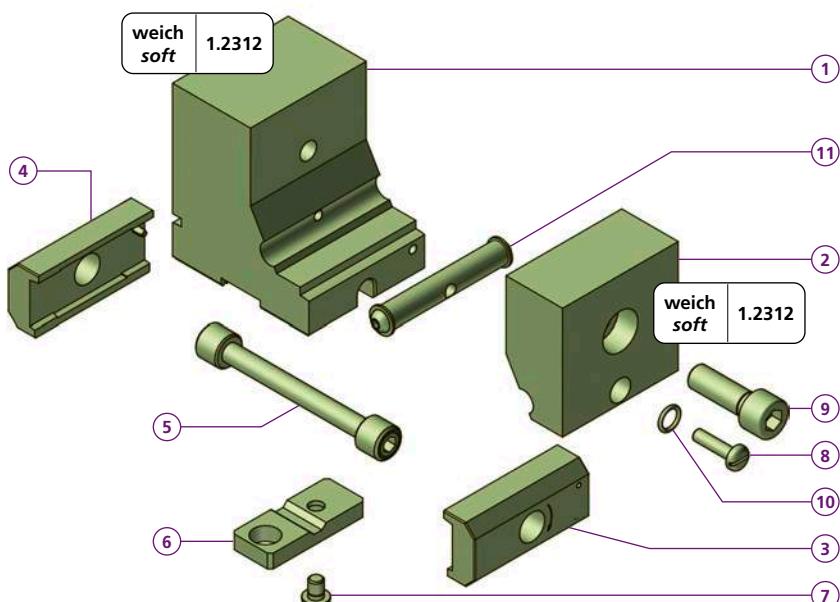
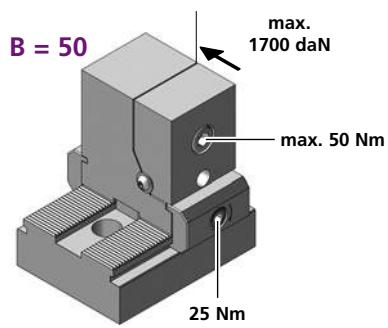
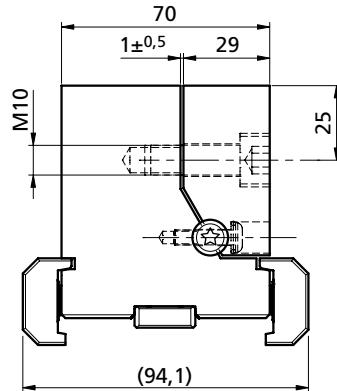
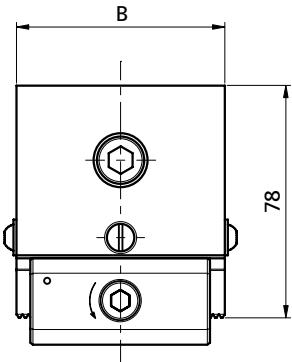
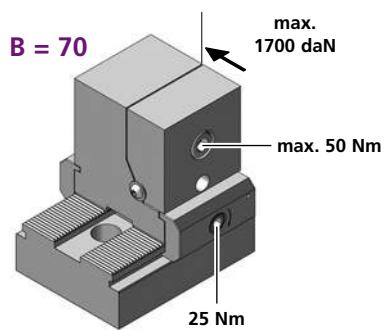
- ① 1x TH130723
- H = 77
- kg ~13

Bestellbeispiel / Ordering example: PTX160-57S

## Schnellwechsel - Spannbacken - Rohling

### Quick change - jaw blank

## 5axes powerCLAMP



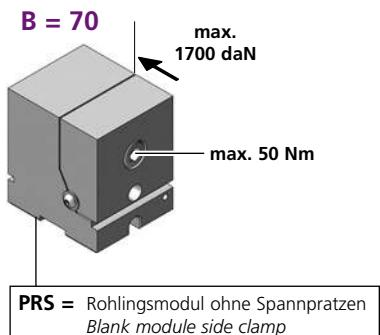
| Drehmoment<br>Torque |         | Spannkraft<br>Workholding force |       |     |
|----------------------|---------|---------------------------------|-------|-----|
| Nm                   | (lb·ft) | ~daN                            | ~(lb) | ~t  |
| 10                   | 7,4     | = 400                           | 880   | 0,4 |
| 20                   | 14,8    | = 800                           | 1'760 | 0,8 |
| 30                   | 22,2    | = 1'200                         | 2'650 | 1,2 |
| 40                   | 29,6    | = 1'600                         | 3'530 | 1,6 |

| PS1X70L78ST |                  |
|-------------|------------------|
| 1           | 1x PRS7078AST    |
| 2           | 1x PRS7078SST    |
| 3           | 1x PCSP60R       |
| 4           | 1x PCSP60L       |
| 5           | 1x PCS14         |
| 6           | 1x PCGU2049      |
| 7           | 1x M6X8ISO7380   |
| 8           | 1x M5X20BN1362   |
| 9           | 1x M10X30ISO4762 |
| 10          | 1x OR Ø 8x1,5    |
| 11          | 1x PRS7078G      |
| B           | = 70             |
| kg          | ~3,2             |

| PS1X50L78ST |               |
|-------------|---------------|
| 1           | 1x PRS5078AST |
| 2           | 1x PRS5078SST |
| 3           | 1x PCSP50R    |
| 4           | 1x PCSP50L    |
| 11          | 1x PRS5078G   |
| B           | = 50          |
| kg          | ~2,3          |

| PRS70L78ST |               |
|------------|---------------|
| 1          | 1x PRS7078AST |
| 2          | 1x PRS7078SST |
| 11         | 1x PRS7078G   |
| B          | = 70          |
| kg         | ~2,8          |

| PRS50L78ST |               |
|------------|---------------|
| 1          | 1x PRS5078AST |
| 2          | 1x PRS5078SST |
| 11         | 1x PRS5078G   |
| B          | = 50          |
| kg         | ~2,0          |



PRS = Rohlingsmodul ohne Spannpratzen  
Blank module side clamp



Spannbacken Rohling auf Kundenwunsch angepasst  
Jaw blank machined to customer specification

Bestellbeispiel / Ordering example: PS1X70L78ST

# Anschlagmodule ...

## Clamping module ...



**5axes**  
**powerCLAMP**

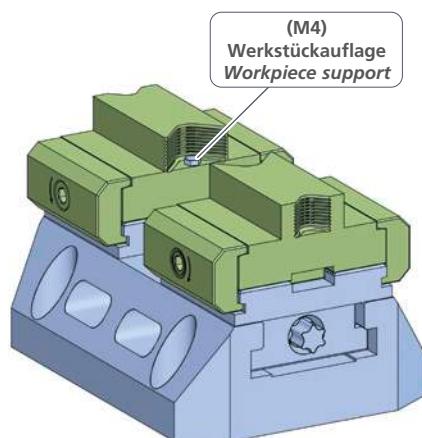
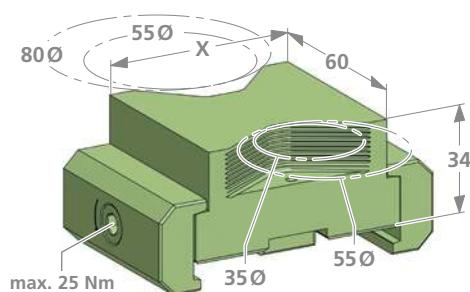
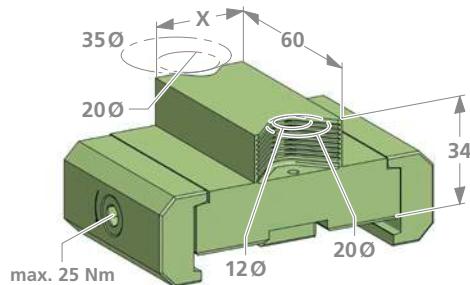
Anschlagmodul für runde Werkstücke  
Endmodule for round workpieces

| Art. Nr.                |  | Ø       | X  | kg    |
|-------------------------|--|---------|----|-------|
| <b>PAND30-34RV12-35</b> |  | 12 – 35 | 30 | ~1,1  |
| <b>PAND61-34RV35-80</b> |  | 35 – 80 | 61 | ~1,26 |



Runde Werkstücke, die einen Durchmesserbereich von 12 – 80 mm abdecken, können auf vielfältige Art gespannt werden.

Round workpieces covering a diameter range from 12 - 80 mm can be clamped in a variety of ways.



| Drehmoment<br>Torque |         |         |       |     |
|----------------------|---------|---------|-------|-----|
| Nm                   | (lb·ft) | ~daN    | ~lb   | ~t  |
| 10                   | 7,4     | = 200   | 440   | 0,2 |
| 20                   | 14,8    | = 500   | 1'102 | 0,5 |
| 30                   | 22,2    | = 1'000 | 2'204 | 1,0 |
| 40                   | 29,6    | = 1'300 | 2'866 | 1,3 |
| 50                   | 37,0    | = 1'600 | 3'527 | 1,6 |

### NUSS3/8"TX30E14

**WICHTIG!**  
Bitte separat bestellen  
**IMPORTANT!**  
Please order separately

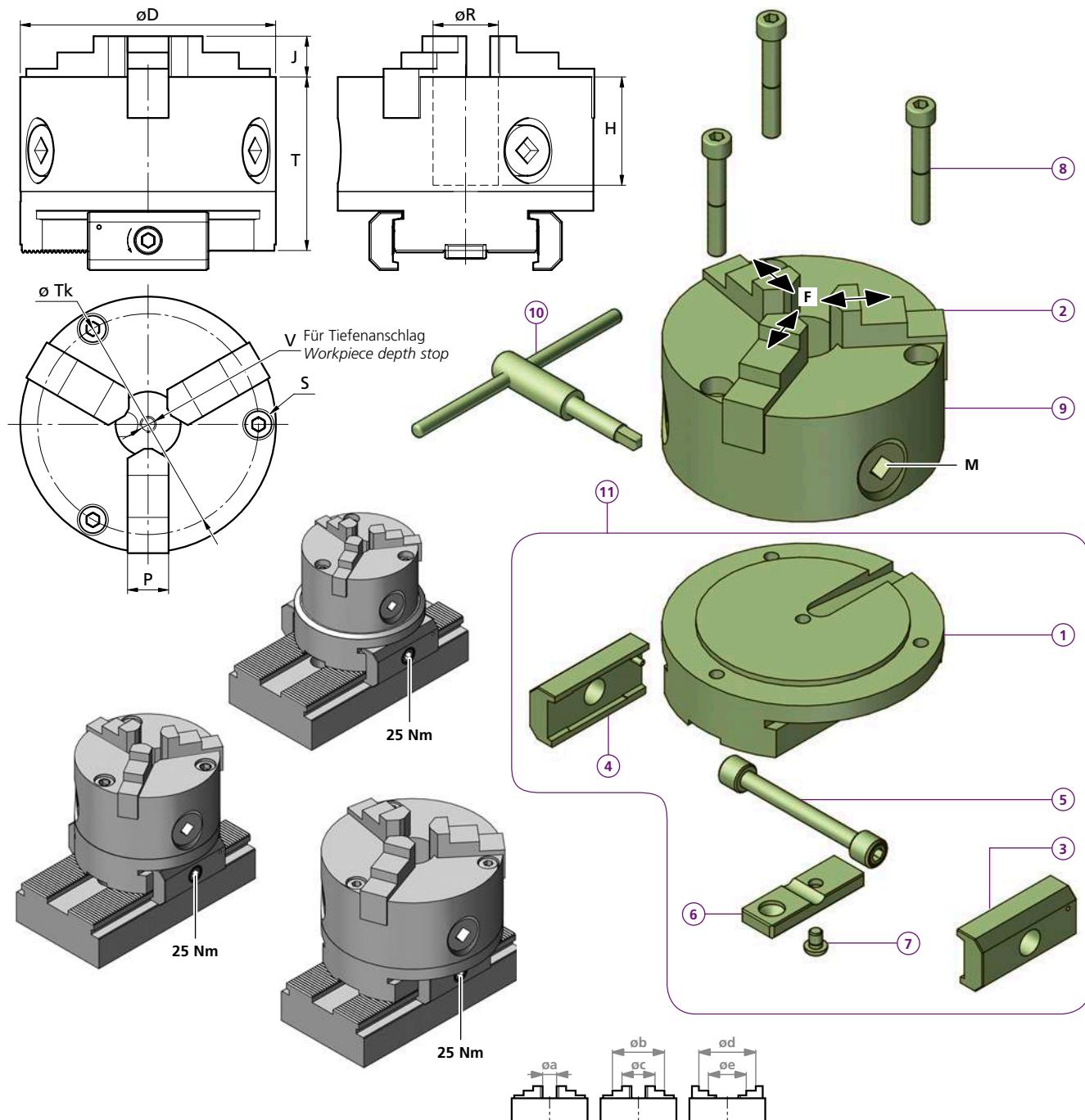


SEPARAT BESTELLEN  
ORDER SEPARATELY

**Dreibackenfutter**  
**Three jaw chuck**

**PS3X80L75BSET**  
**PS3X100L82BSET**  
**PS3X125L87BSET**

**5axes**  
**powerCLAMP**



|                       | D   | J  | T  | R  | H    | P  | V  | a mm   | b mm     | c mm    | d mm     | e mm    | M (max.) | F (max.) | Ø Tk | S  |
|-----------------------|-----|----|----|----|------|----|----|--------|----------|---------|----------|---------|----------|----------|------|----|
| <b>PS3X80L75BSET</b>  | 80  | 13 | 75 | 15 | 42,5 | 10 | M6 | 3...27 | 48...73  | 23...48 | 52...76  | 27...51 | 28 Nm    | 1300 daN | 67   | M6 |
| <b>PS3X100L82BSET</b> | 100 | 17 | 82 | 20 | 49,5 | 14 | M8 | 3...39 | 58...94  | 24...60 | 64...100 | 30...66 | 38 Nm    | 1600 daN | 83   | M8 |
| <b>PS3X125L87BSET</b> | 125 | 19 | 87 | 32 | 55   | 16 | M8 | 3...49 | 70...116 | 30...75 | 83...125 | 38...84 | 55 Nm    | 2600 daN | 108  | M8 |

| <b>PS3X80L75BSET</b> |   | <b>PS3X100L82BSET</b> |   | <b>PS3X125L87BSET</b> |   | Ø<br>80<br>100<br>125 | Ø<br>80<br>100<br>125 | Ø a |   | Ø b |   | Ø d |   | M (max.) | F (max.) | Ø Tk | S |
|----------------------|---|-----------------------|---|-----------------------|---|-----------------------|-----------------------|-----|---|-----|---|-----|---|----------|----------|------|---|
| 1                    | 2 | 1                     | 2 | 1                     | 2 |                       |                       | 3   | 4 | 5   | 6 | 7   | 8 | 9        | 10       | 11   |   |
| 1x TW90013_01        |   | 1x TW90012_01         |   | 1x TW80027_01         |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 2x 3 Stk. / pcs      |   | 2x 3 Stk. / pcs       |   | 2x 3 Stk. / pcs       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x PCSP60R           |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x PCSP60L           |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x PCS14             |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x PCGU2059          |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x M6X8ISO7380       |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 3x M6X45ISO4762      |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x 243809.0083220    |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 1x 243864.0080000    |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| 11 PTX80-30          |   |                       |   |                       |   |                       |                       |     |   |     |   |     |   |          |          |      |   |
| kg ~2,8              |   | kg ~4,3               |   | kg ~6,3               |   |                       |                       |     |   |     |   |     |   |          |          |      |   |

Separat bestellen / Order separately

Bestellbeispiel / Ordering example: PS3X125L87BSET

# Spannzangenmodule

## Collet modules



**5axes**  
**powerCLAMP**

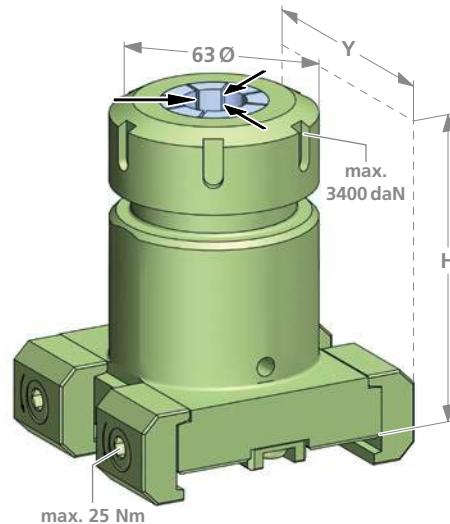
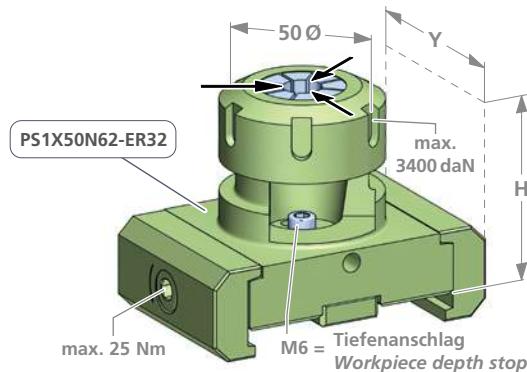
für die horizontale und vertikale Bearbeitung  
for horizontal and vertical machining

| Art. Nr.               | kg   | Ø    | Y  | H   |
|------------------------|------|------|----|-----|
| <b>PS1X50N62-ER32</b>  | ~1,3 | 2-22 | 60 | 62  |
| <b>PS1X50N100-ER32</b> | ~2,2 | 2-22 | 60 | 100 |
| <b>PS1X63N100-ER40</b> | ~2,3 | 3-29 | 80 | 100 |



Diese Spannzangenmodule ermöglichen das ideale Spannen und Bearbeiten von Stangenmaterial.

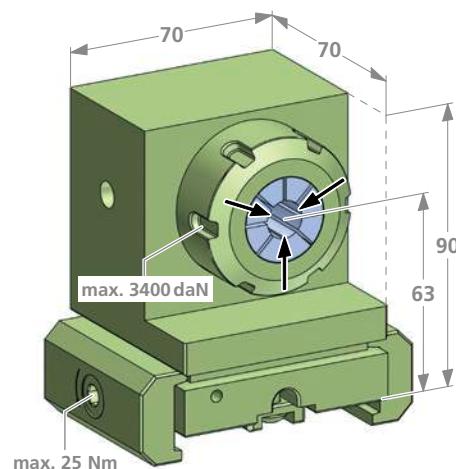
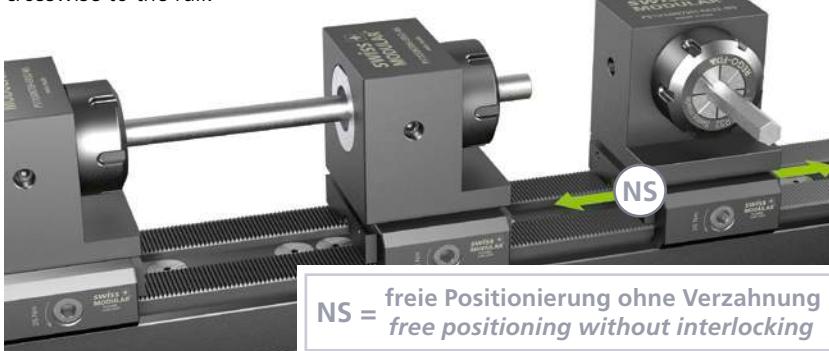
These collet modules enable ideal clamping and machining of bar material.



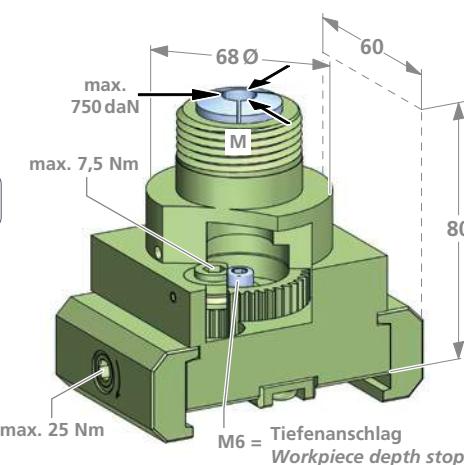
| Art. Nr.                  | kg    | Ø    |
|---------------------------|-------|------|
| <b>PS1X50N70H-ER32-NS</b> | ~2,98 | 2-22 |

Die seitlichen Spannpratzen können um 90° gedreht werden, dadurch kann das Spannzangenmodul auch quer zur Schiene platziert werden.

The side clamps can be turned by 90°, the module can therefore be placed crosswise to the rail.

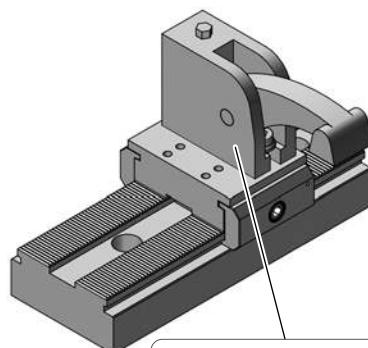
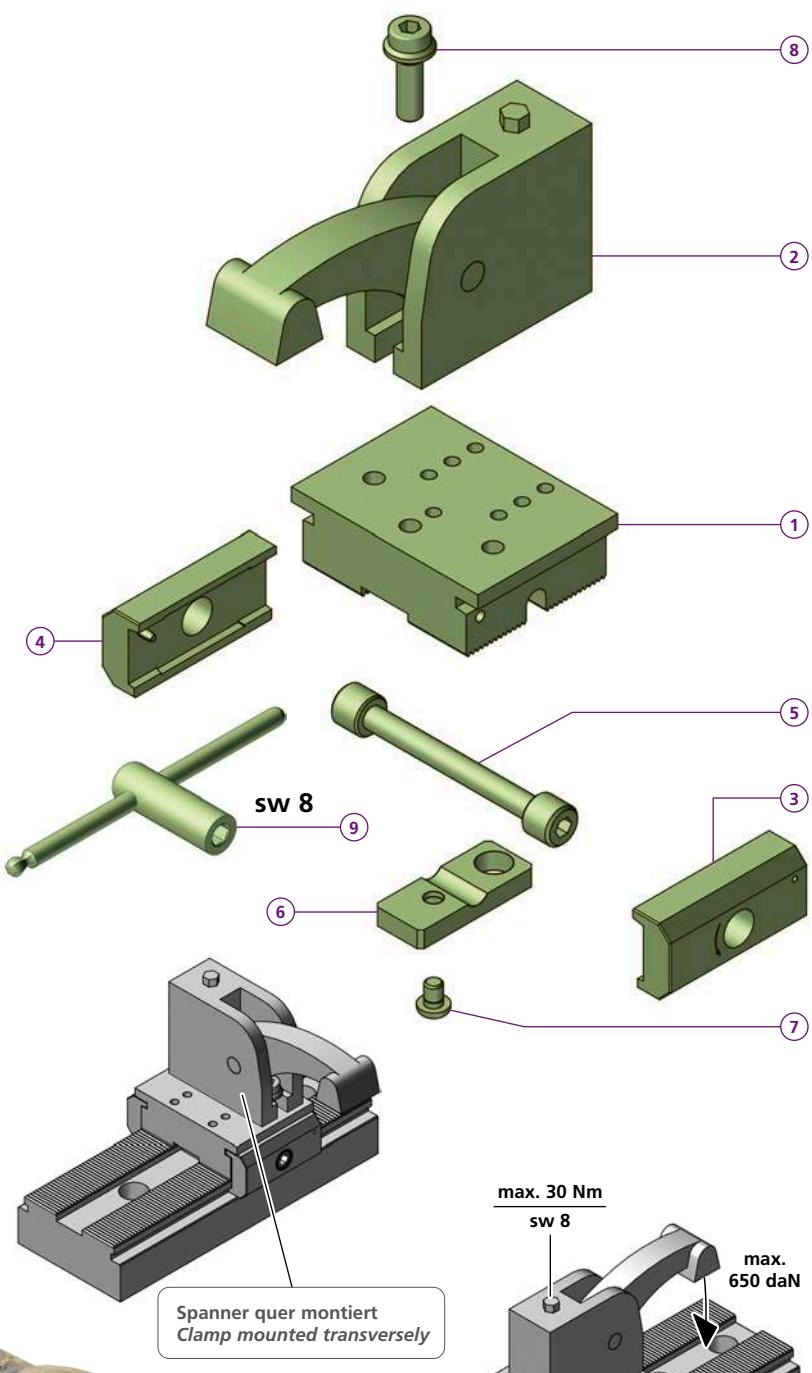
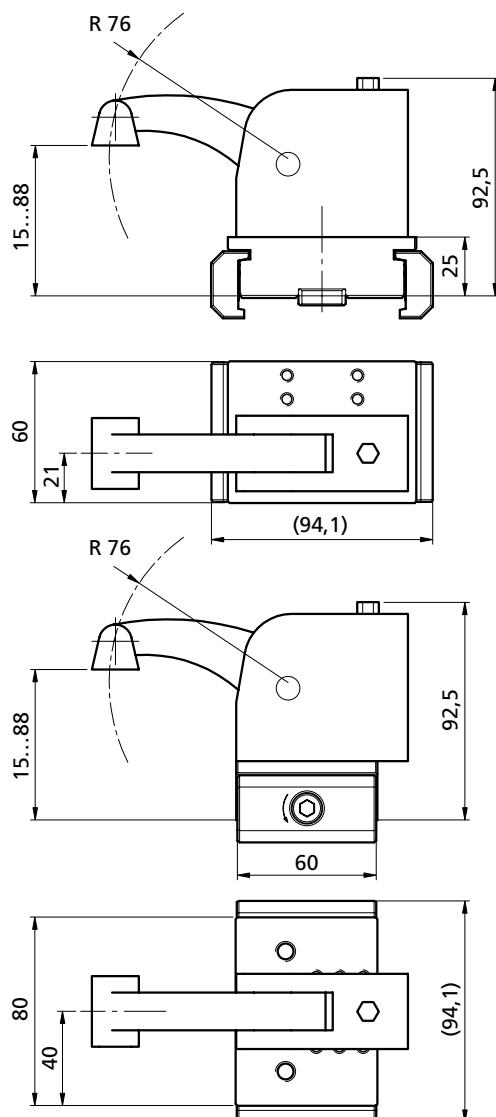


| Art. Nr.             | kg   | Ø      | M       |
|----------------------|------|--------|---------|
| <b>PS1X68N80-W20</b> | ~1,8 | 0,5-20 | M37,6x3 |

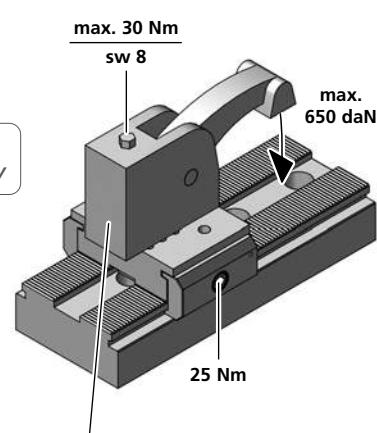


**PS1F-KLD1**  
**PS1F-KLD1NS**

**powerCLAMP**



Spanner quer montiert  
Clamp mounted transversely



Spanner längs montiert  
Clamp mounted longitudinally

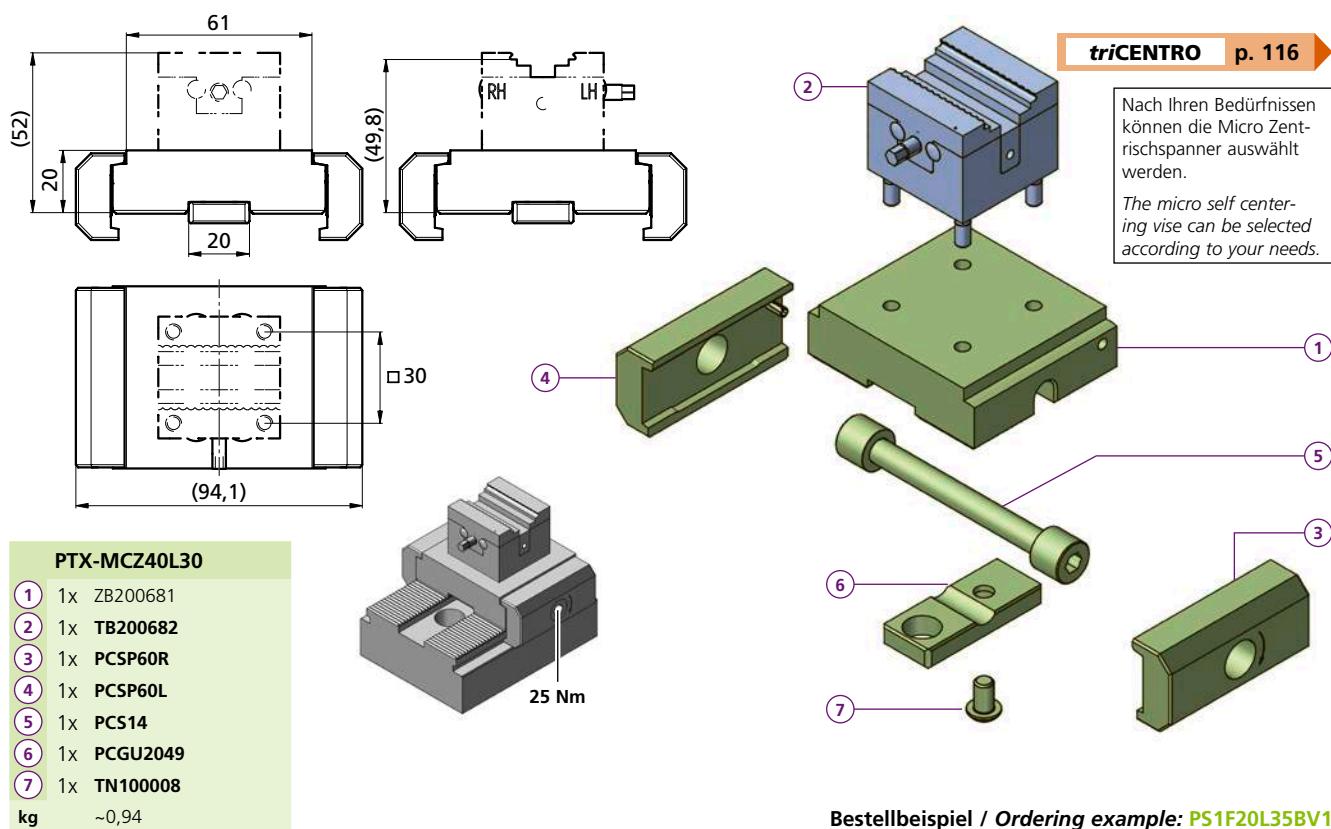
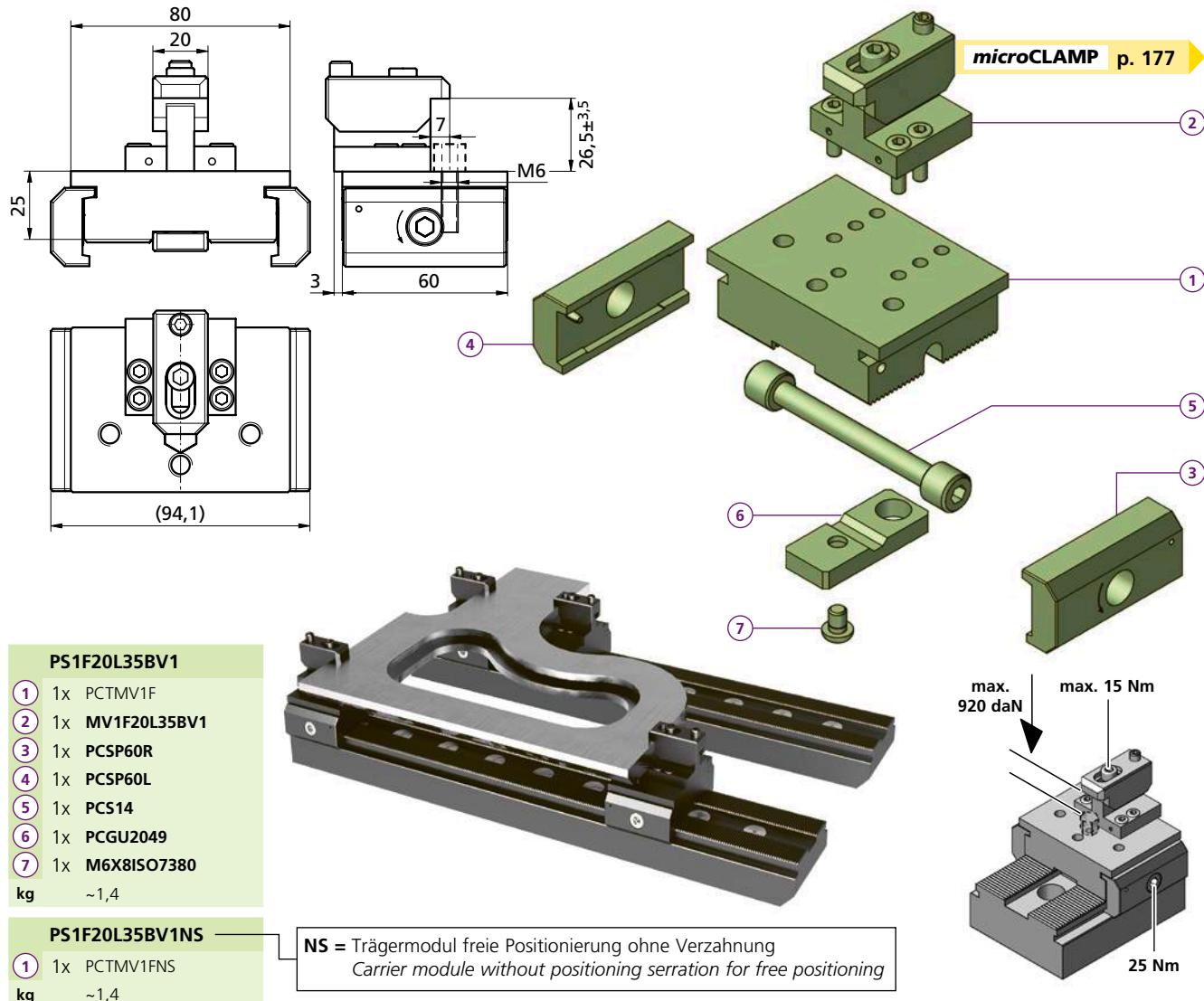


**NS** = Trägermodul freie Positionierung ohne Verzahnung  
Carrier module without positioning serration for free positioning

| <b>PS1F-KLD1</b>   |                      |
|--------------------|----------------------|
| <b>1</b>           | 1x PCTMV1F           |
| <b>2</b>           | 1x 07-020            |
| <b>3</b>           | 1x PCSP60R           |
| <b>4</b>           | 1x PCSP60L           |
| <b>5</b>           | 1x PCS14             |
| <b>6</b>           | 1x PCGU2049          |
| <b>7</b>           | 1x M6X8ISO7380       |
| <b>8</b>           | 1x M8x25 TW080012-02 |
| <b>9</b>           | 1x 07-180            |
| <b>kg</b>          | ~2,1                 |
| <b>PS1F-KLD1NS</b> |                      |
| <b>2</b>           | 1x PCTMV1FNS         |
| <b>kg</b>          | ~2,1                 |

Bestellbeispiel / Ordering example: **PS1F-KLD1NS**

**Plattenspanner / Plate clamping modul PS1F20L35BV1**  
**Trägermodul für Micro Zentrischspanner PS1F20L35BV1NS**  
**Support module for micro self centering vise PTX-MCZ40L30 powerCLAMP**

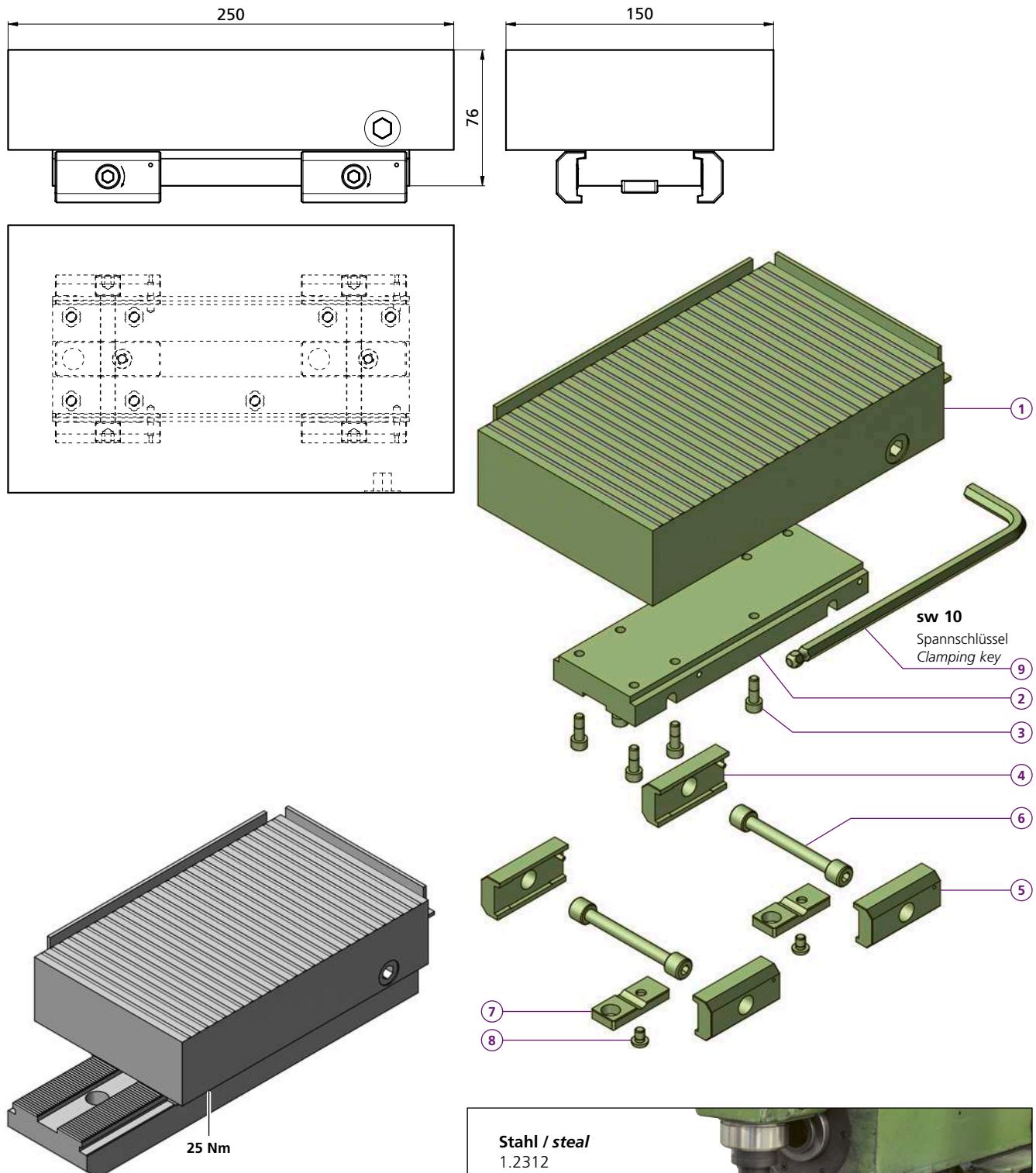


# Magnetspannplatte

## Magnetic chuck

**PS1X150L60-250MAG11**

**powerCLAMP**



**PS1X150L60-250MAG11**

- 1** 1x XNeomill 250x150
- 2** 1x TL110010-01
- 3** 7x MS60
- 4** 2x PCSP60L
- 5** 2x PCSP60R
- 6** 2x PCS14
- 7** 2x PCGU2049
- 8** 2x M6X8ISO7380
- 9** 1x ISL10 DIN 911L
- kg** ~19,5

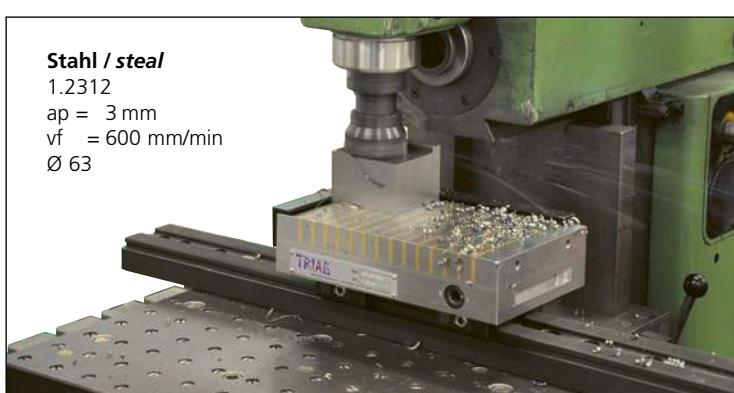
### Stahl / steal

1.2312

ap = 3 mm

vf = 600 mm/min

Ø 63



**max. Haltekraft / max. holding force = 120 N/cm<sup>2</sup>**

- Werkstücke ab 26 mm Länge und 6 mm Stärke werden optimal gespannt
- Workpieces from 26 mm length and 6mm thickness will be optimally hold

**Bestellbeispiel / Ordering example: PS1X150L60-250MAG11**

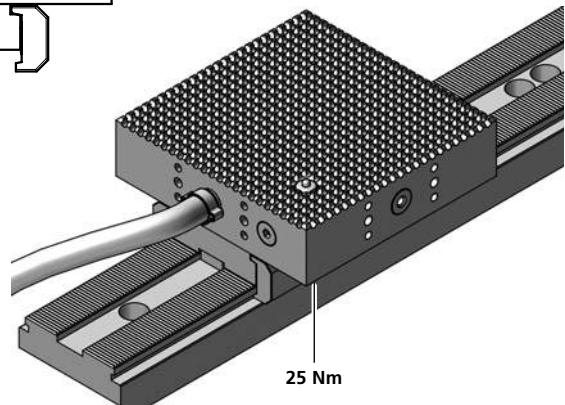
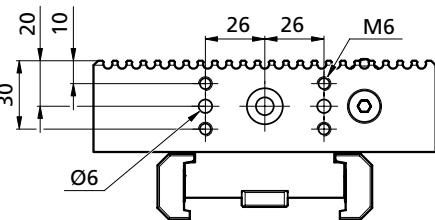
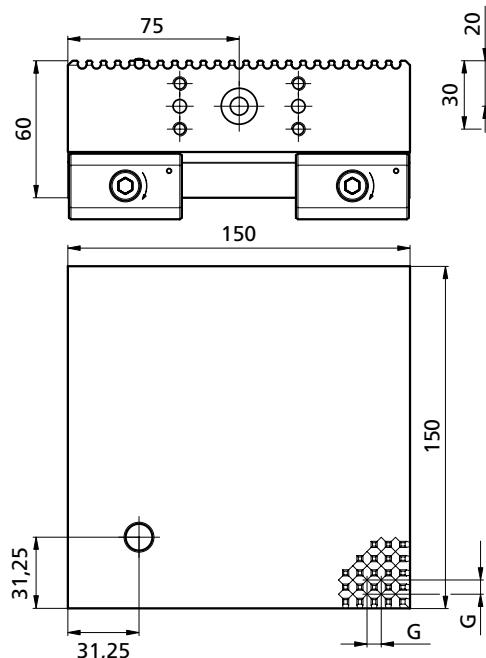
## Vakuum-Modul

Vacuum module

PS1X150L60-VAC

5axes

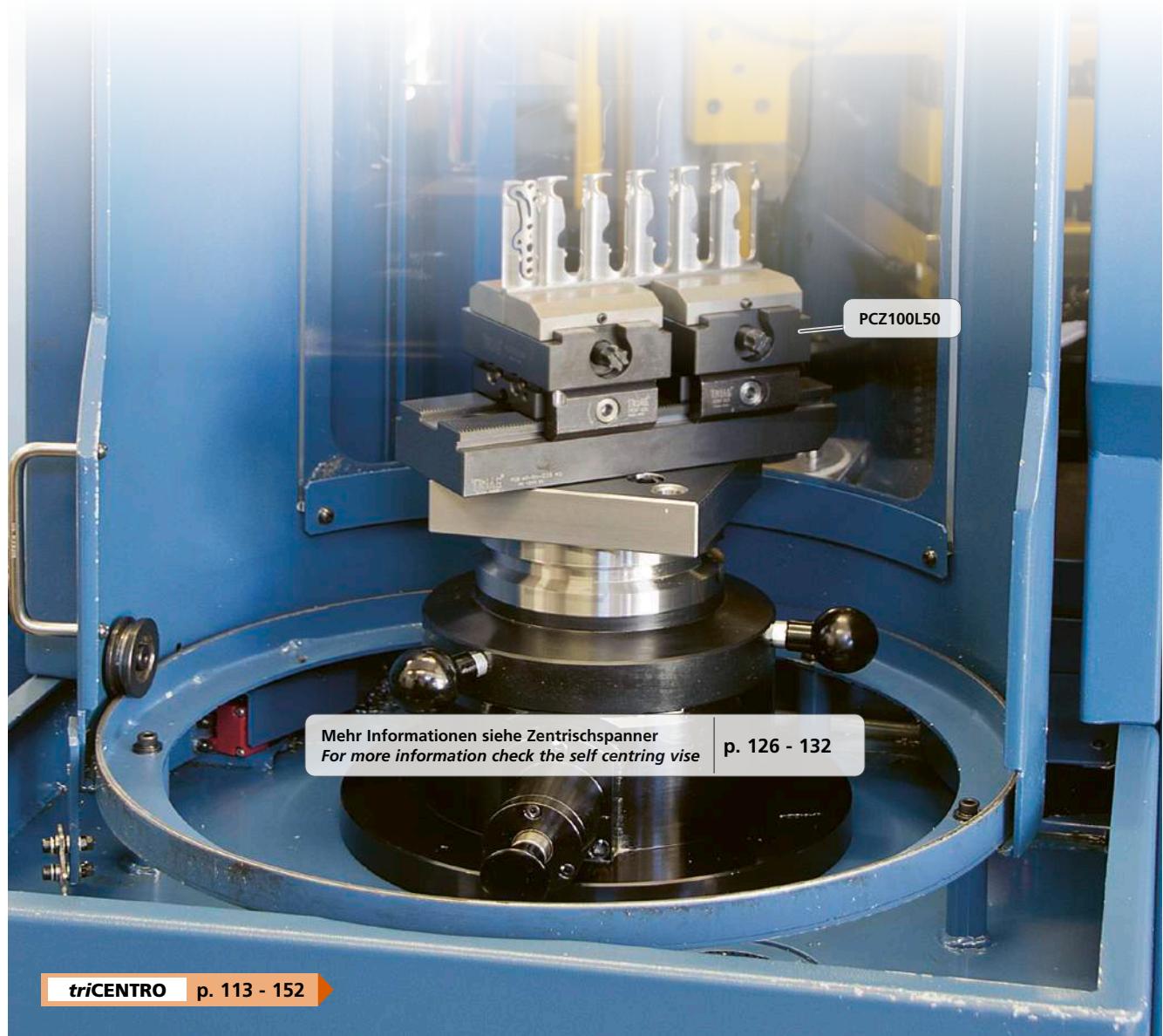
powerCLAMP

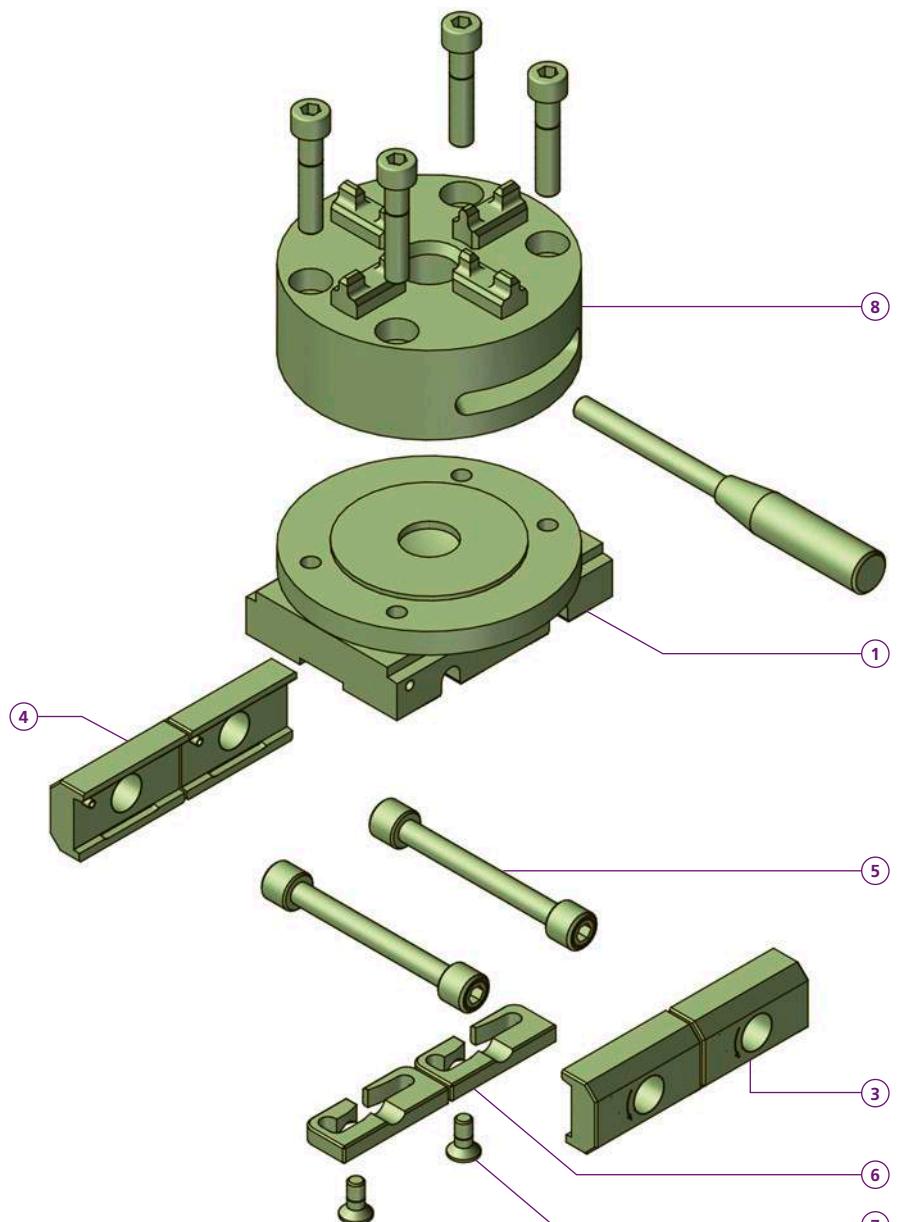
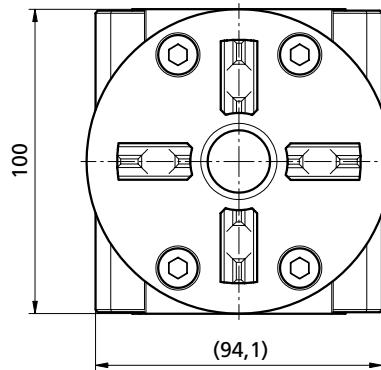
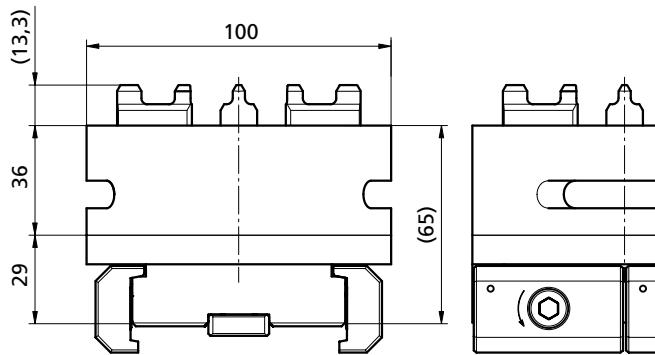


trivaCLAMP p. 318

Bestellbeispiel / Ordering example: PS1X150L60-VAC

Mehr Informationen siehe Vacuum  
For more information check the vacuum workholding





**PS1X100-65ER-036345**

- ① 1x PTX100-29
  - ③ 2x PCSP50L
  - ④ 2x PCSP50R
  - ⑤ 2x PCS14
  - ⑥ 2x PCGU2049F
  - ⑦ 2x M6X14ISO10642
  - ⑧ 1x ER-036345
- kg** ~4,0

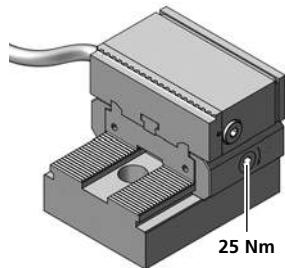
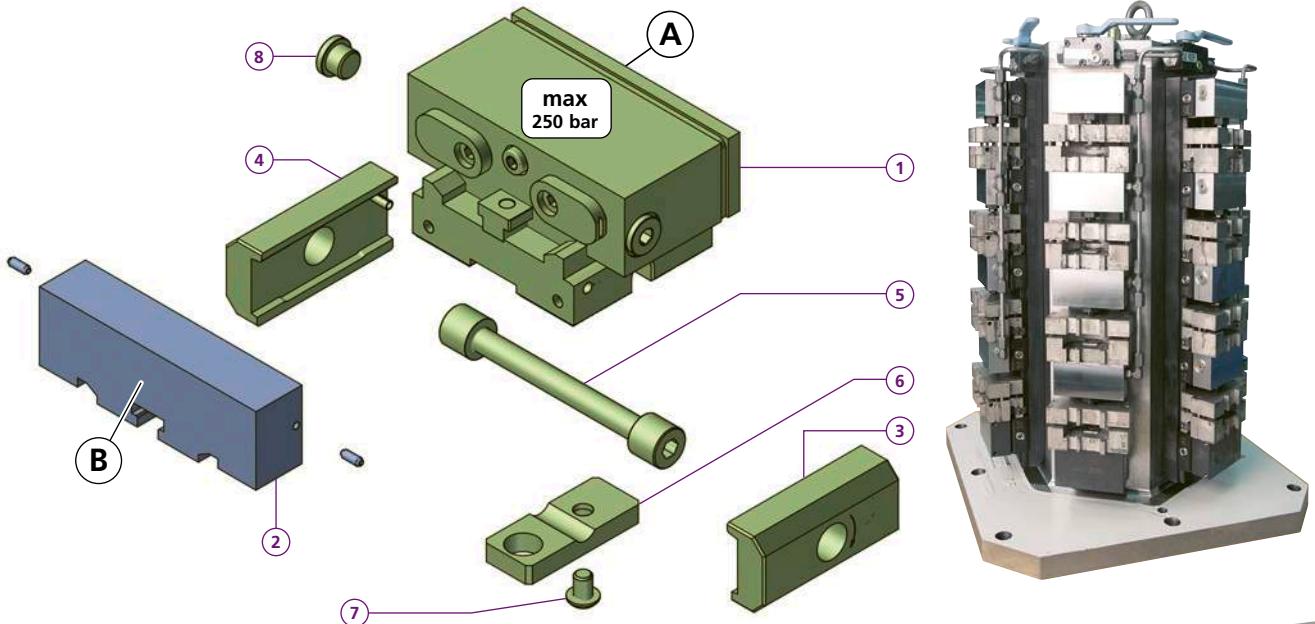
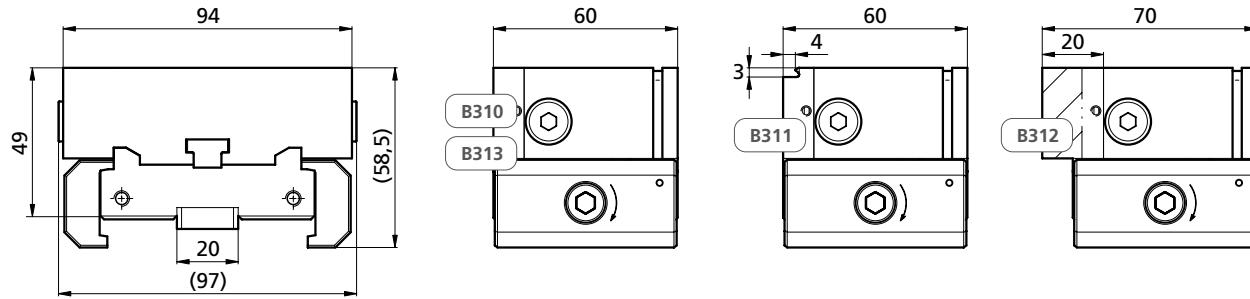
Bestellbeispiel / Ordering example: **PS1X100-65ER-036345**

# Hydraulisches Spannmodul

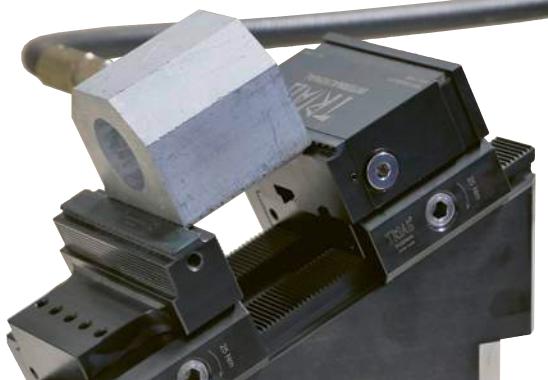
## Hydraulic clamping module

PSH1X94L49-310

5 axes  
powerCLAMP

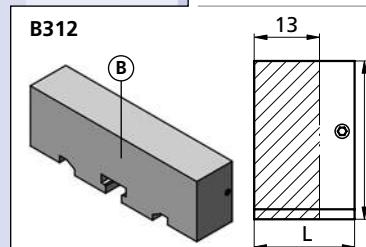
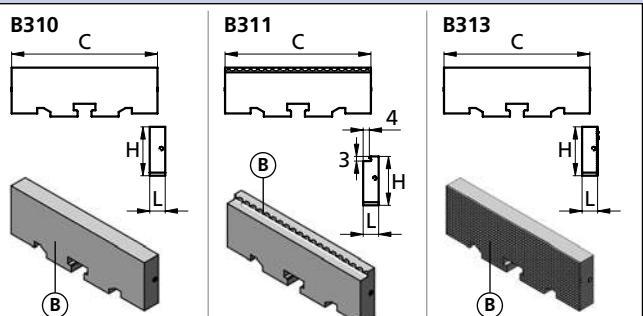


| Ölvolumen / Oil volume   |         |       |      |
|--------------------------|---------|-------|------|
| Spannen / Clamping       |         |       |      |
| 8 cm³                    |         |       |      |
| <b>5 mm Hub / Stroke</b> |         |       |      |
| bar                      | ~daN    | ~(lb) | ~t   |
| 100                      | = 960   | 2116  | 0,96 |
| 150                      | = 1'440 | 3175  | 1,44 |
| 200                      | = 1'920 | 4233  | 1,92 |
| 250                      | = 2'400 | 5291  | 2,4  |



Bestellbeispiel / Ordering example: PSH1X94L49-310 & 1 x B310

|                           |        |             |             |             |             |
|---------------------------|--------|-------------|-------------|-------------|-------------|
| <br><b>PSH1X94L49-310</b> |        |             |             |             |             |
|                           |        | <b>B310</b> | <b>B311</b> | <b>B312</b> | <b>B313</b> |
| <b>C</b>                  | 94     | 94          | 94          | 94          |             |
| <b>H</b>                  | 31,5   | 31,5        | 31,5        | 31,5        |             |
| <b>L</b>                  | 10     | 10          | 20          | 10          |             |
| <b>i</b>                  | HV700  | 57HRC       | *           | HV700       |             |
|                           | x0,2mm |             |             | x0,2mm      |             |
| <b>kg</b>                 | ~0,18  | ~0,17       | ~0,39       | ~0,17       |             |



### Zum Erstellen Ihrer individuellen Formbacke:

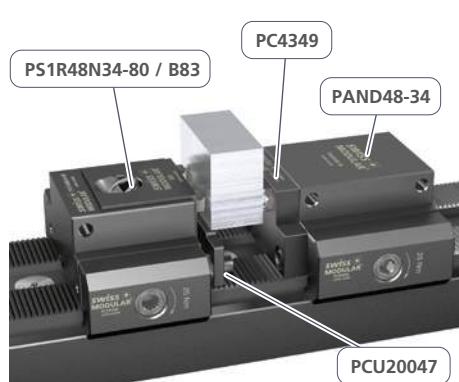
Schnitzeichnung zum Ermitteln der maximalen Bearbeitungsprofiltiefe

If a dedicated jaw is being machined:  
Sectional drawing to determine the maximum machining depth

\* = weich / soft (1.7225 Vergütungsstahl / Tempering steel )

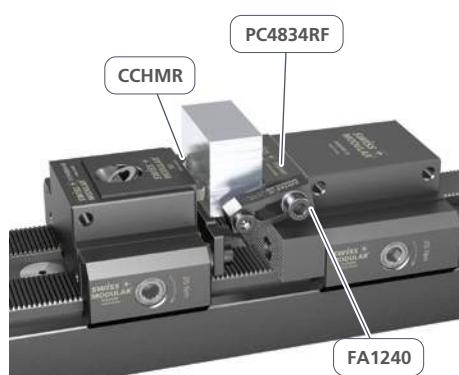
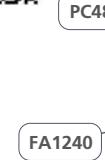
für Hartmetalldruckstücke  
for carbide grippers

| Art. Nr. | kg    | Y   | X  |
|----------|-------|-----|----|
| PC4349   | ~0,21 | 43  | 49 |
| PC4834   | ~0,17 | 48  | 34 |
| PC12549  | ~0,46 | 125 | 49 |



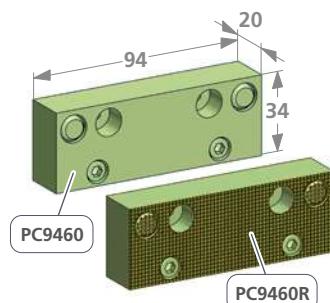
für Hartmetalldruckstücke und Fräsanschlag  
for carbide grippers and milling buffer

| Art. Nr. | kg    | X  |
|----------|-------|----|
| PC4834RF | ~0,34 | 34 |
| PC4849RF | ~0,44 | 49 |
| PC9434RF | ~0,43 | 34 |
| PC9449RF | ~0,63 | 49 |



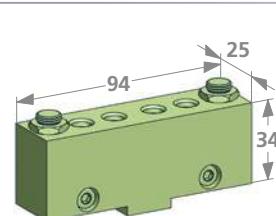
mit pendelnden Kugeldruckstücken  
with swinging ball thrust grippers

| Art. Nr. | kg    |
|----------|-------|
| PC9460   | ~0,45 |
| PC9460R  | ~0,45 |



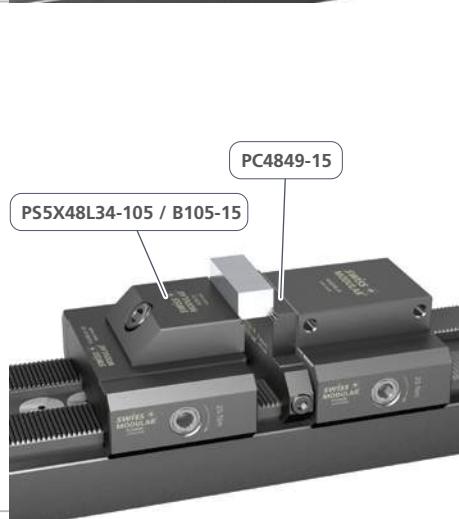
mit Prägeeinsätzen  
with embossed inserts

| Art. Nr.       | kg    |
|----------------|-------|
| PC9434-25PRGM8 | ~0,64 |



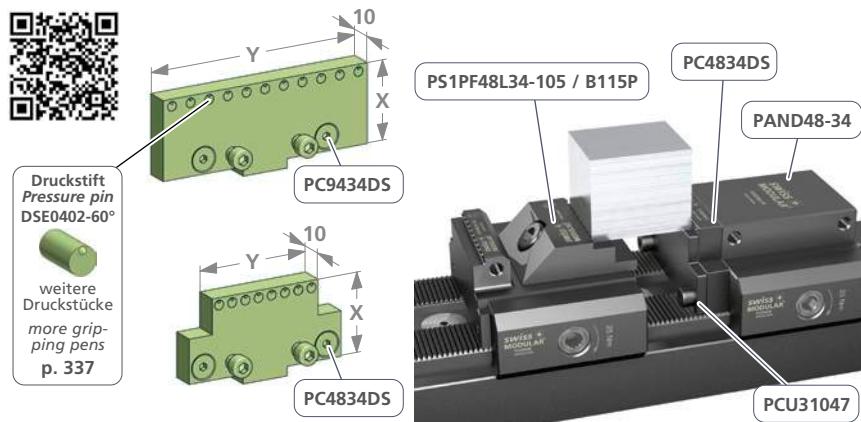
mit direkt-Prägezähnen und Spannstufen  
with direct stamping teeth and clamping steps

| Art. Nr.   | kg    | H  |
|------------|-------|----|
| PC48-34PRG | ~0,18 | 34 |
| PC48-49PRG | ~0,24 | 49 |
| PC94-34PRG | ~0,25 | 34 |
| PC94-49PRG | ~0,48 | 49 |
| PC4834-15  | ~0,19 | 34 |
| PC4849-15  | ~0,24 | 49 |



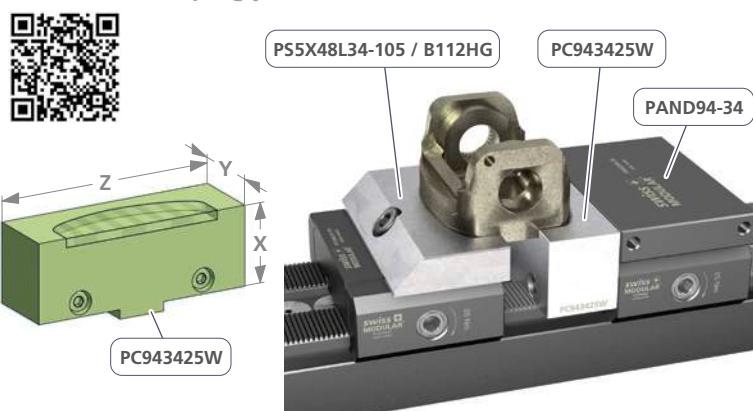
mit Druckstiften  
with pressure pins

| Art. Nr.         | kg    | Y   | X  |
|------------------|-------|-----|----|
| <b>PC4349DS</b>  | ~0,22 | 43  | 49 |
| <b>PC4834DS</b>  | ~0,17 | 48  | 34 |
| <b>PC4849DS</b>  | ~0,23 | 48  | 49 |
| <b>PC9434DS</b>  | ~0,27 | 94  | 34 |
| <b>PC9449DS</b>  | ~0,38 | 94  | 49 |
| <b>PC12549DS</b> | ~0,49 | 125 | 49 |



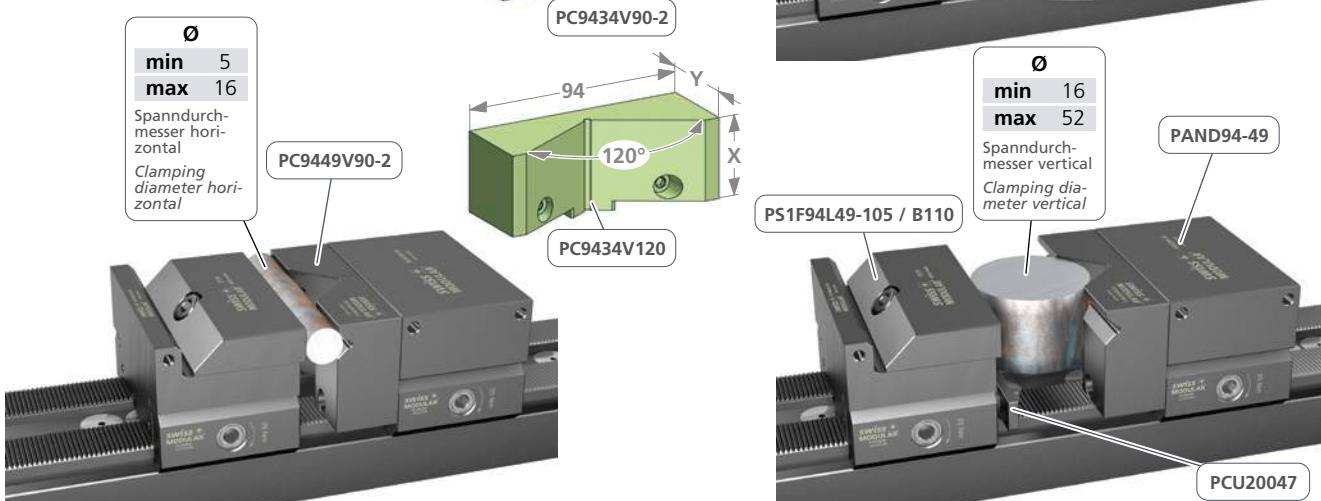
aus weichem Stahl, zur Herstellung Ihrer individuellen Backe  
made of soft steel, for the production of your individual clamping jaw

| Art. Nr.          | i                                    | kg    | Z   | Y  | X  |
|-------------------|--------------------------------------|-------|-----|----|----|
| <b>PC943425W</b>  | weicher Stahl<br>soft steel (1.0570) | ~0,64 | 94  | 25 | 34 |
| <b>PC943430W</b>  | weicher Stahl<br>soft steel (1.0570) | ~0,77 | 94  | 30 | 34 |
| <b>PC944930W</b>  | weicher Stahl<br>soft steel (1.0570) | ~1,10 | 94  | 30 | 49 |
| <b>PC1254930W</b> | weicher Stahl<br>soft steel (1.0570) | ~1,46 | 125 | 30 | 49 |



in Prismiform  
in prism form

| Art. Nr.           | kg    | Y  | X  |
|--------------------|-------|----|----|
| <b>PC9434V90-2</b> | ~0,58 | 28 | 34 |
| <b>PC9449V90-2</b> | ~0,58 | 28 | 49 |
| <b>PC9434V120</b>  | ~0,62 | 35 | 34 |
| <b>PC9449V120</b>  | ~0,89 | 35 | 49 |



## Linearset

PCL4349N

PCL9449N

PCL12549N

PCL4834N

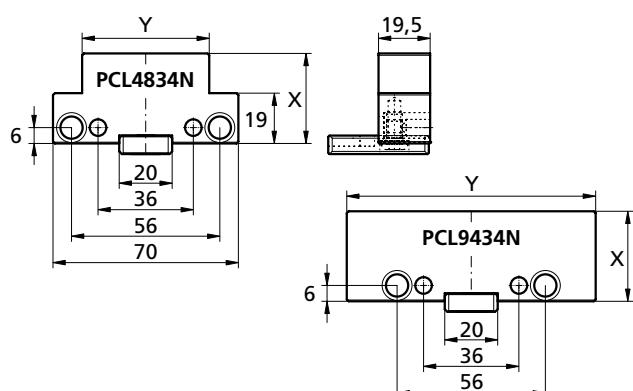
PCL9434N

BL-SET

**powerCLAMP**

Von Niederzug zu Linear!

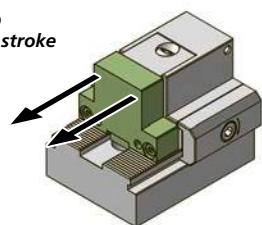
From pull down jaws to linear stroke!



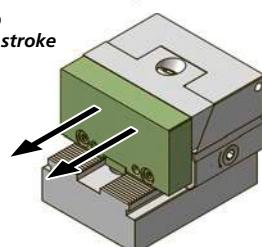
### PCL4349N

- ① 1x TF140697
- ② 2x FED10175
- ③ 2x PCD0813
- ④ 2x M5X20BN1392
- ⑤ 1x PCGU2028
- ⑥ 1x PCGU2030LB
- ⑦ 2x M6X8ISO7380
- X = 49
- Y = 43
- kg ~0,43

Spannhub  
Clamping stroke  
0/+3,8



Spannhub  
Clamping stroke  
0/+3,8

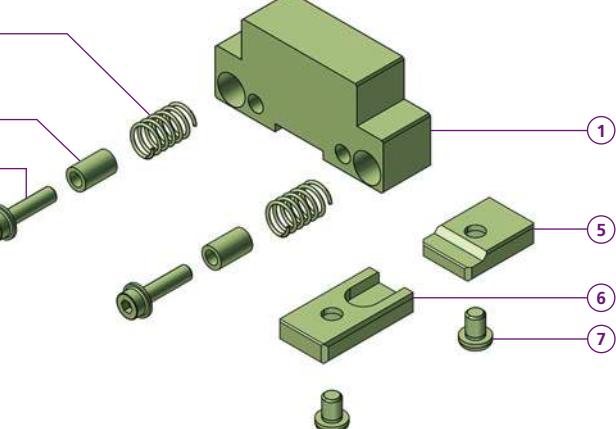


### PCL9449N

- ① 1x TF140700
- X = 49
- Y = 94
- kg ~0,74

### PCL12549N

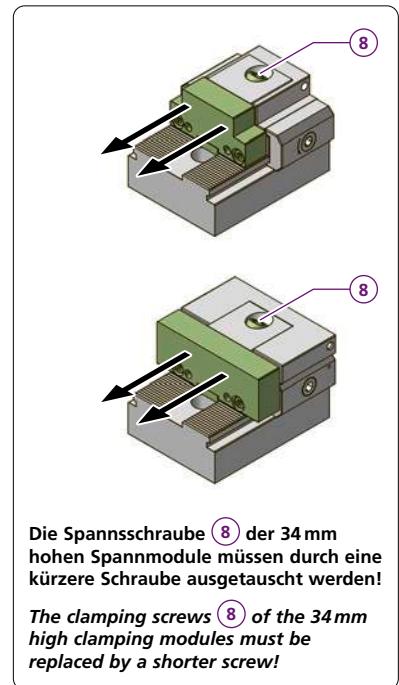
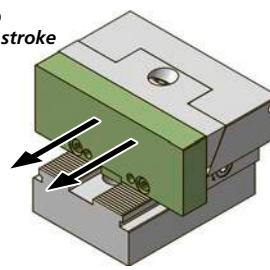
- ① 1x T00317
- X = 49
- Y = 125
- kg ~0,97



### PCL4834N

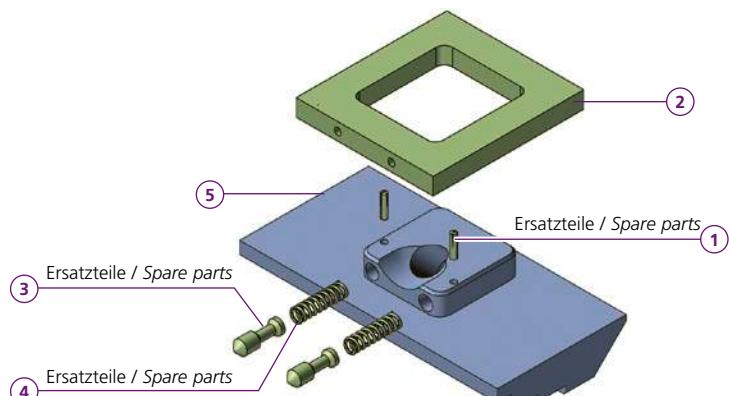
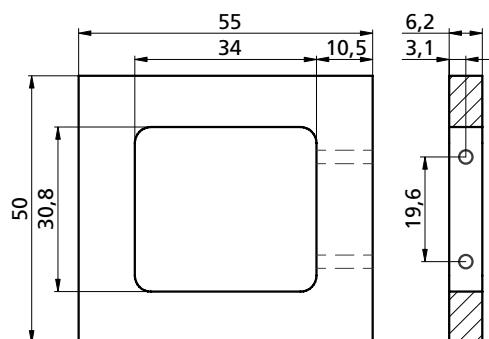
- ① 1x TF140698
- ② 2x FED10175
- ③ 2x PCD0813
- ④ 2x M5X20BN1392
- ⑤ 1x PCGU2028
- ⑥ 1x PCGU2030LB
- ⑦ 2x M6X8ISO7380
- ⑧ 1x M10X22ISO4762
- X = 34
- Y = 48
- kg ~0,35

Spannhub  
Clamping stroke  
0/+4,8



Bestellbeispiel / Ordering example: PCL4834N

## Montagehilfe und Ersatzteile für Linearbacken Assembling tool for linear jaws and spare parts



### BL-SET

- ① 2x TN100823
- ② 1x TK160609
- ③ 2x PCRB0516
- ④ 2x TN100614
- ⑤ 1x \_\_\_\_\_
- kg ~0,08

p. 84, 85

Alle Linearbacken  
All linear jaws

### Version mit Stiften / Version with pins

ab August / as of August 2018



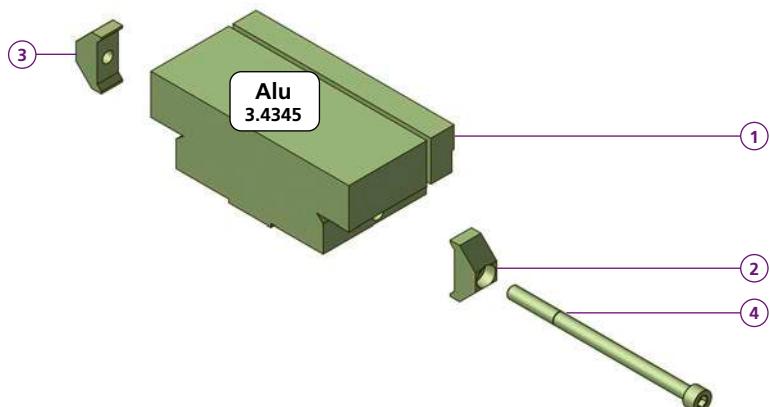
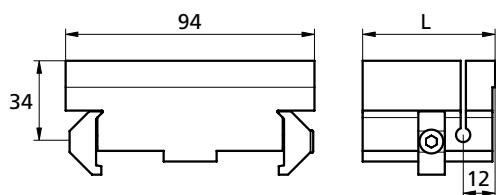
Montageanleitung siehe Video  
Assembly instructions see video

### Version mit Kugeln / Version with balls

vor August / before August 2018



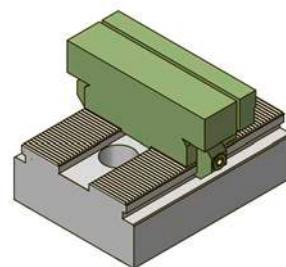
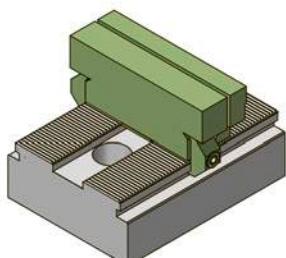
Separat bestellen / Order separately

**Click-Flex****PCFX30****PCFX35****PCFX50****PCFX70****powerCLAMP**

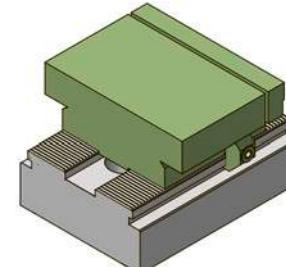
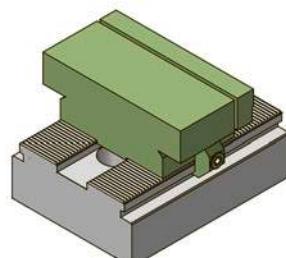
| PCFX30 |                 |
|--------|-----------------|
| (1)    | 1x TF140702     |
| (2)    | 1x PCSP10B      |
| (3)    | 1x PCSP10G      |
| (4)    | 1x M5X85ISO4762 |
| L      | = 30            |
| kg     | ~0,27           |

| PCFX35 |             |
|--------|-------------|
| (1)    | 1x TF140703 |
| L      | = 35        |
| kg     | ~0,31       |



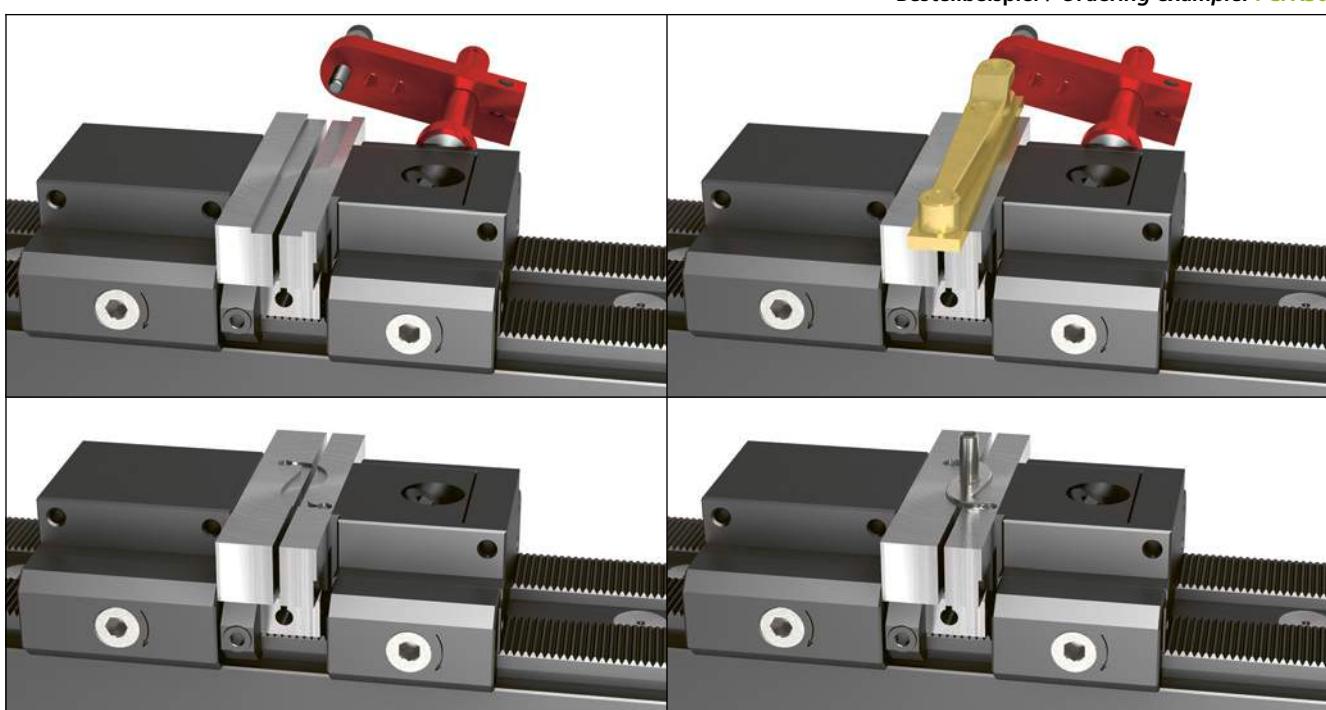
| PCFX50 |                 |
|--------|-----------------|
| (1)    | 1x TF140704     |
| (2)    | 1x PCSP10B      |
| (3)    | 1x PCSP10G      |
| (4)    | 1x M5X85ISO4762 |
| L      | = 50            |
| kg     | ~0,45           |

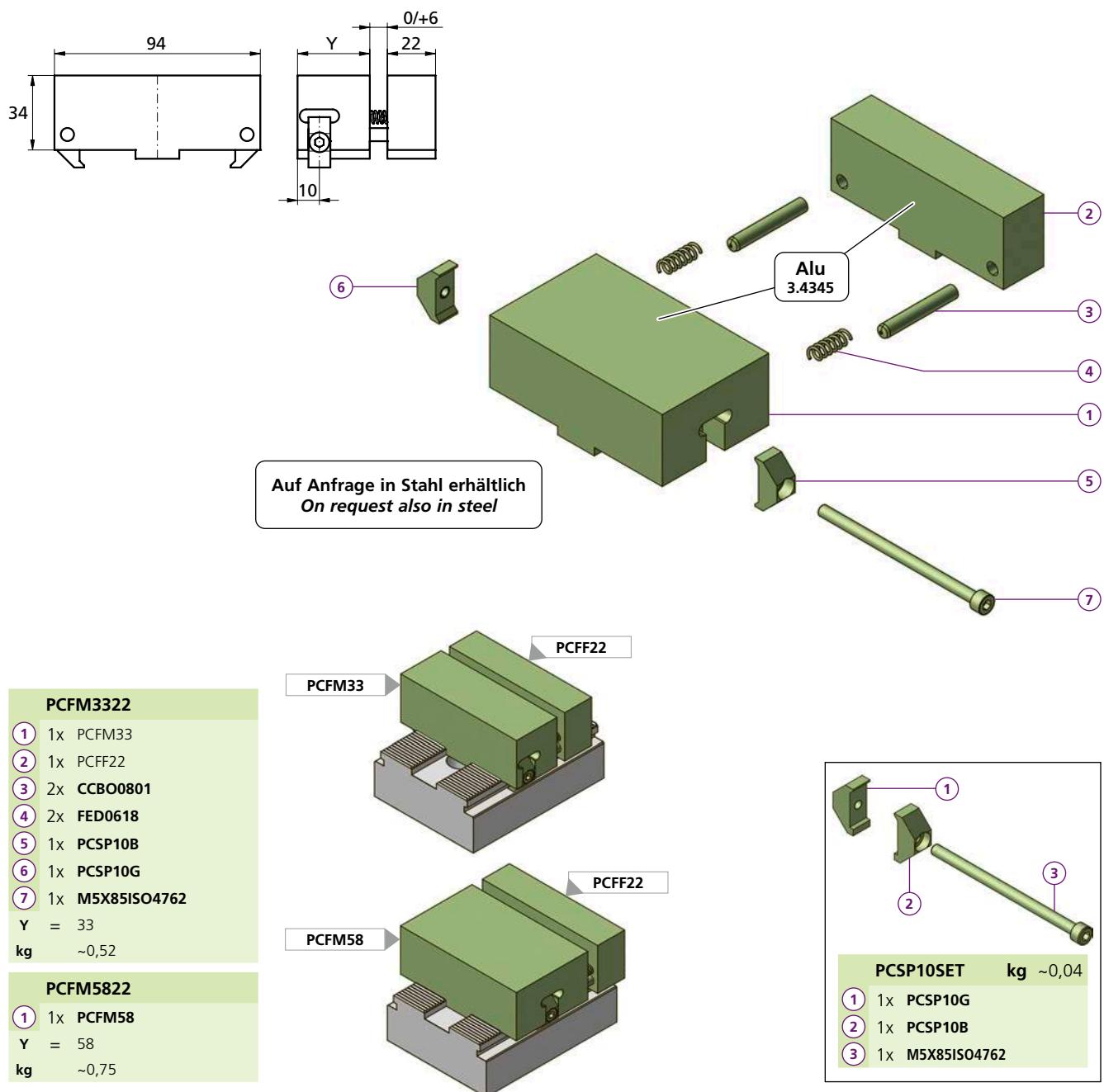


| PCFX70 |             |
|--------|-------------|
| (1)    | 1x TF140705 |
| L      | = 70        |
| kg     | ~0,62       |

Auf Anfrage in Stahl erhältlich  
On request also in steel

Bestellbeispiel / Ordering example: **PCFX30**



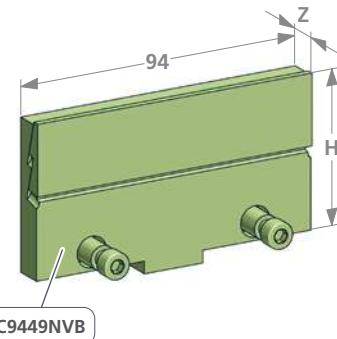
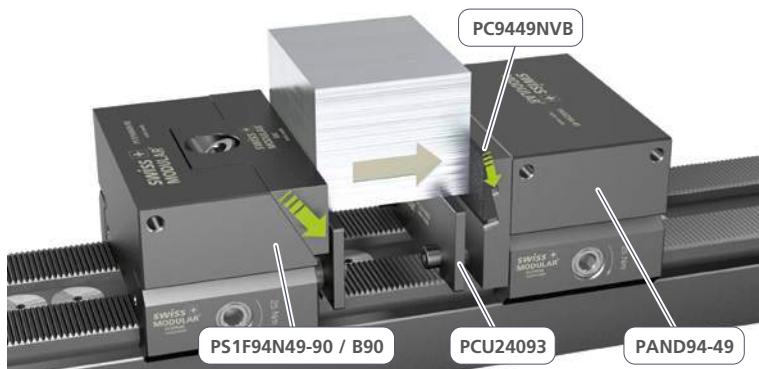


Bestellbeispiel / Ordering example: PCFM3322

| <b>Anschlagbacke flach</b><br><b>Jaw flat stop</b> |             |    | <b>Unterlagen gehärtet und geschliffen</b><br><b>Parallels hardened and ground</b> |       |         |                       |
|--|-------------|----|--|-------|---------|-----------------------|
| Type   | B           | H  | kg   | B     | H       |                       |
| I  | PCUD34093TG | 93 | 34   | ~0,05 | 56HRC   | 4 ± 0,02              |
| I  | PCUD49093TG | 93 | 49   | ~0,14 | 56HRC   | Geschliffen<br>Ground |
| I  | PCUD14093   | 93 | 14   | ~0,05 | 56HRC   | 4,2                   |
| I  | PCUD20093   | 93 | 20   | ~0,06 | Type I  |                       |
| I  | PCUD24093   | 93 | 24   | ~0,08 | Type II |                       |
| I  | PCUD29093   | 93 | 29   | ~0,09 |         |                       |
| II   | PCUD31093   | 93 | 31   | ~0,10 |         |                       |
| I  | PCUD34093   | 93 | 34   | ~0,11 |         |                       |
| I  | PCUD39093   | 93 | 39   | ~0,12 |         |                       |
| I  | PCUD44093   | 93 | 44   | ~0,14 |         |                       |
| II   | PCUD46093   | 93 | 46   | ~0,14 |         |                       |
| I  | PCUD47093   | 93 | 37   | ~0,15 |         |                       |

Niederzugbacken für die Anschlagseite  
Pull-down jaws for the solid reference face

| Art. Nr.         | kg    | H         | z          |
|------------------|-------|-----------|------------|
| <b>PC9434NVB</b> | ~0,24 | 49,8 – 49 | 10,21 – 10 |
| <b>PC9449NVB</b> | ~0,35 | 34,8 – 34 | 10,21 – 10 |

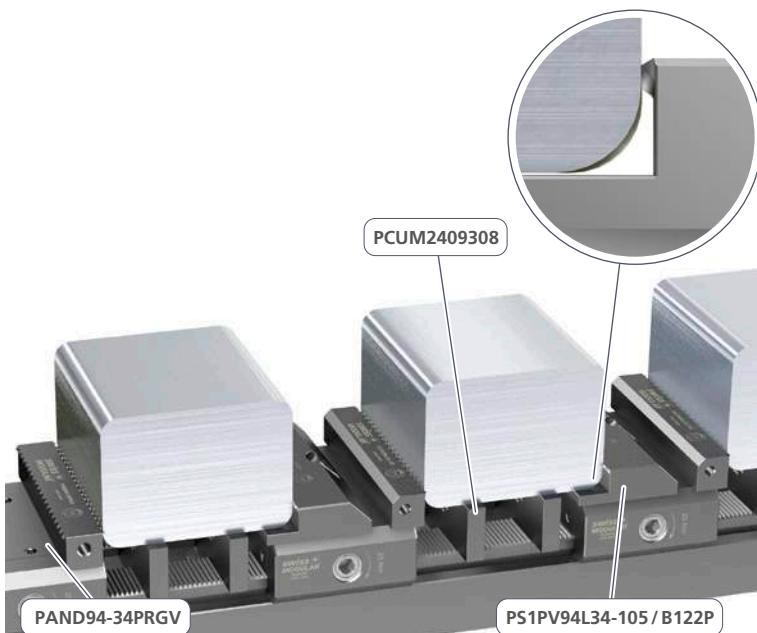
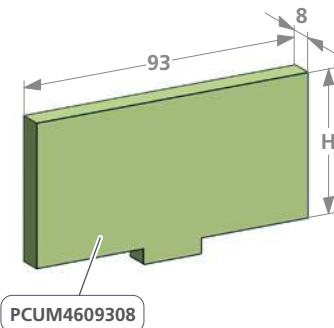


Die Niederzugbacke dient um einen zusätzlichen Niederzug-Klemmdruck auf der Anschlagseite zu erhalten.

The pull-down jaw is used to obtain an additional pull-down clamping pressure on the end module side.

Magnetische Parallelunterlagen  
Magnetic steel parallels

| Art. Nr.           | kg    | H  |
|--------------------|-------|----|
| <b>PCUM1409308</b> | ~0,09 | 14 |
| <b>PCUM2009308</b> | ~0,13 | 20 |
| <b>PCUM2409308</b> | ~0,15 | 24 |
| <b>PCUM2909308</b> | ~0,18 | 29 |
| <b>PCUM3109308</b> | ~0,20 | 31 |
| <b>PCUM3409308</b> | ~0,21 | 34 |
| <b>PCUM3909308</b> | ~0,24 | 39 |
| <b>PCUM4409308</b> | ~0,27 | 44 |
| <b>PCUM4609308</b> | ~0,28 | 46 |



Mit diesen magnetischen Parallelunterlagen ist die Positionierung auf der Basisschiene frei wählbar. Bei Werkstücken mit grösseren Rundungen sind die Spannbacken B122P / B123P zusammen mit den Anschlagmodulen PAND94-34PRGV / PAND94-49PRGV bestens geeignet.

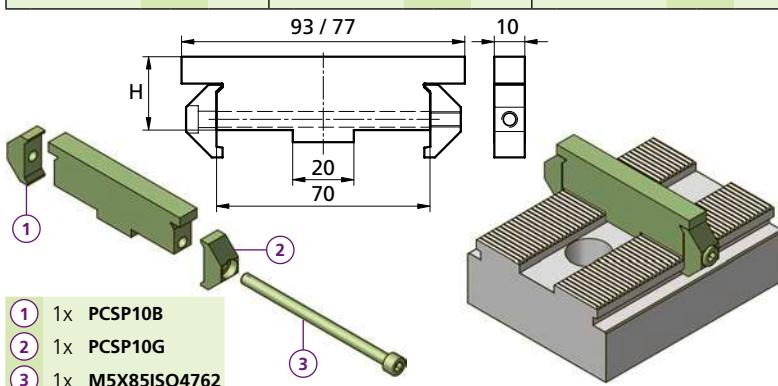
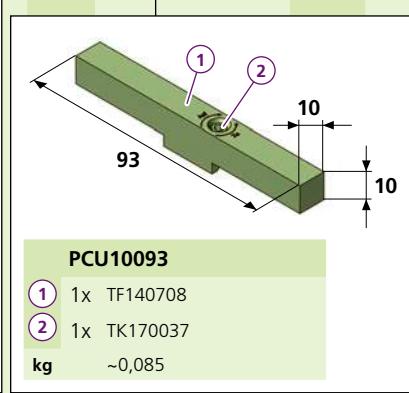
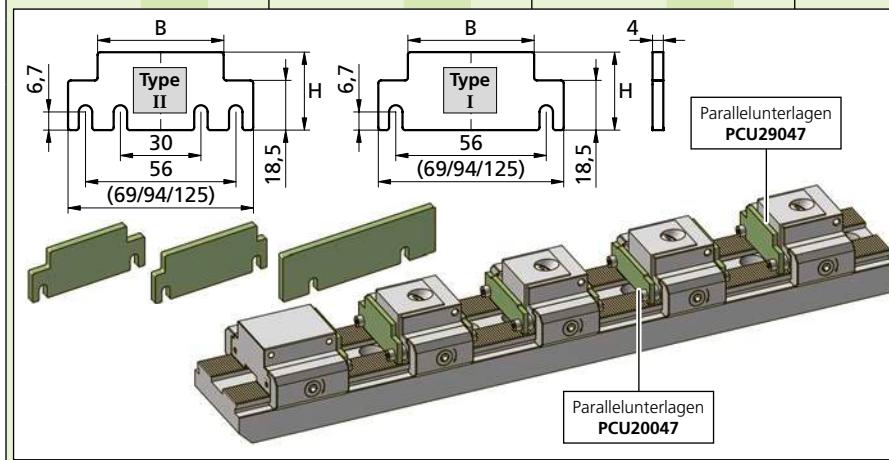
With these magnetic steel parallels, the positioning on the base rail is freely selectable. For workpieces with larger curves, the clamping jaws B122P / B123P together with the end modules PAND94-34PRGV / PAND94-49PRGV are best suited.

# Parallelunterlage

## Steel parallels

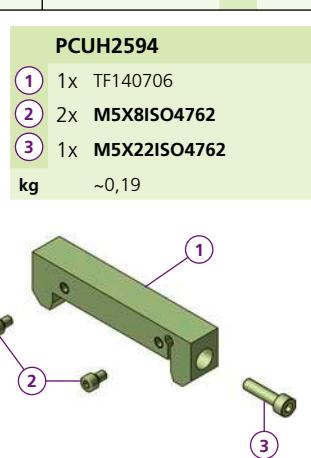
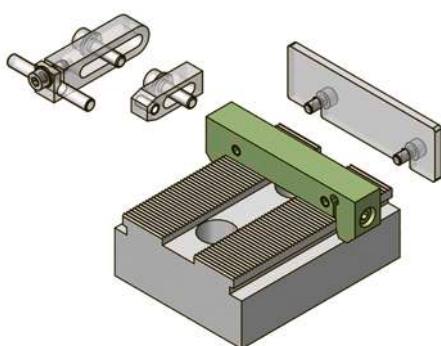
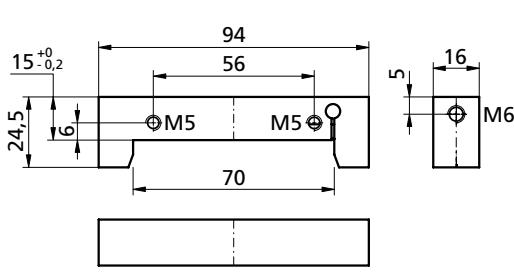
**powerCLAMP**

| Type | 19mm     | B  | H    | kg    | Type | 34mm     | B  | H    | kg    | Type | 48mm     | B  | H  | kg    | Type | 61mm     | B  | H  | kg    | Type     | 94mm     | B   | H     | kg    |
|------|----------|----|------|-------|------|----------|----|------|-------|------|----------|----|----|-------|------|----------|----|----|-------|----------|----------|-----|-------|-------|
| I    | PCU20018 | 18 | 20   | ~0,04 | I    | PCU20033 | 33 | 20   | ~0,04 | I    | PCU20047 | 47 | 20 | ~0,04 | I    | PCU20060 | 60 | 20 | ~0,04 | I        | PCU14093 | 93  | 14    | ~0,04 |
| I    | PCU24018 | 18 | 24   | ~0,04 | I    | PCU24033 | 33 | 24   | ~0,05 | I    | PCU24047 | 47 | 24 | ~0,05 | I    | PCU24060 | 60 | 24 | ~0,05 | I        | PCU20093 | 93  | 20    | ~0,06 |
| I    | PCU29018 | 18 | 29   | ~0,05 | I    | PCU29033 | 33 | 29   | ~0,05 | I    | PCU29047 | 47 | 29 | ~0,05 | I    | PCU29060 | 60 | 29 | ~0,06 | I        | PCU24093 | 93  | 24    | ~0,07 |
| I    | PCU31018 | 18 | 31   | ~0,05 | I    | PCU31033 | 33 | 31   | ~0,05 | II   | PCU31047 | 47 | 31 | ~0,05 | I    | PCU31060 | 60 | 31 | ~0,06 | I        | PCU29093 | 93  | 29    | ~0,09 |
| I    | PCU34018 | 18 | 34   | ~0,05 | I    | PCU34033 | 33 | 34   | ~0,06 | I    | PCU34047 | 47 | 34 | ~0,07 |      |          |    |    |       | I        | PCU31093 | 93  | 31    | ~0,09 |
| I    | PCU39018 | 18 | 39   | ~0,05 | I    | PCU39033 | 33 | 39   | ~0,06 | I    | PCU39047 | 47 | 39 | ~0,07 |      |          |    |    |       | I        | PCU34093 | 93  | 34    | ~0,10 |
| I    | PCU44018 | 18 | 44   | ~0,05 | I    | PCU44033 | 33 | 44   | ~0,07 | I    | PCU44047 | 47 | 44 | ~0,08 | I    | PCU20067 | 67 | 20 | ~0,04 | I        | PCU39093 | 93  | 39    | ~0,11 |
| I    | PCU46518 | 18 | 46,5 | ~0,06 | II   | PCU46033 | 33 | 46   | ~0,06 | I    | PCU46047 | 47 | 46 | ~0,08 | I    | PCU24067 | 67 | 24 | ~0,05 | I        | PCU44093 | 93  | 44    | ~0,12 |
|      |          |    |      |       | I    | PCU46533 | 33 | 46,5 | ~0,07 | I    | PCU31067 | 67 | 31 | ~0,07 | I    | PCU29067 | 67 | 29 | ~0,06 | I        | PCU46093 | 93  | 46    | ~0,14 |
|      |          |    |      |       |      |          |    |      |       |      |          |    |    |       |      |          |    |    | I     | PCU47093 | 93       | 47  | ~0,14 |       |
|      |          |    |      |       |      |          |    |      |       |      |          |    |    |       |      |          |    |    |       |          |          |     |       |       |
| Type | 26mm     | B  | H    | kg    | Type | 43mm     | B  | H    | kg    | Type | 58mm     | B  | H  | kg    | Type | 78mm     | B  | H  | kg    | Type     | 125mm    | B   | H     | kg    |
| I    | PCU20025 | 25 | 20   | ~0,04 | I    | PCU20042 | 42 | 20   | ~0,04 | I    | PCU20057 | 57 | 20 | ~0,04 | I    | PCU20077 | 77 | 20 | ~0,05 | I        | PCU20124 | 124 | 20    | ~0,08 |
| I    | PCU24025 | 25 | 24   | ~0,05 | I    | PCU24042 | 42 | 24   | ~0,05 | I    | PCU24057 | 57 | 24 | ~0,05 | I    | PCU24077 | 77 | 24 | ~0,06 | I        | PCU24124 | 124 | 24    | ~0,09 |
| I    | PCU29025 | 25 | 29   | ~0,05 | I    | PCU29042 | 42 | 29   | ~0,05 | I    | PCU29057 | 57 | 29 | ~0,06 | I    | PCU29077 | 77 | 29 | ~0,07 | I        | PCU29124 | 124 | 29    | ~0,11 |
| I    | PCU31025 | 25 | 31   | ~0,05 | I    | PCU31042 | 42 | 31   | ~0,06 | I    | PCU31057 | 57 | 31 | ~0,06 | I    | PCU31077 | 77 | 31 | ~0,08 | I        | PCU31124 | 124 | 31    | ~0,12 |
| I    | PCU34025 | 25 | 34   | ~0,05 | I    | PCU34042 | 42 | 34   | ~0,06 |      |          |    |    |       | I    | PCU34077 | 77 | 34 | ~0,08 | I        | PCU34124 | 124 | 34    | ~0,13 |
| I    | PCU39025 | 25 | 39   | ~0,06 | I    | PCU39042 | 42 | 39   | ~0,07 |      |          |    |    |       | I    | PCU39077 | 77 | 39 | ~0,09 | I        | PCU39124 | 124 | 39    | ~0,15 |
| I    | PCU44025 | 25 | 44   | ~0,06 | I    | PCU44042 | 42 | 44   | ~0,07 |      |          |    |    |       | I    | PCU44077 | 77 | 44 | ~0,11 | I        | PCU44124 | 124 | 44    | ~0,17 |
| I    | PCU46525 | 25 | 46,5 | ~0,06 | I    | PCU46042 | 42 | 46   | ~0,08 | I    | PCU47042 | 42 | 47 | ~0,08 |      |          |    |    |       | II       | PCU46124 | 124 | 46    | ~0,18 |



| weich / soft   | 1.7225   | hart / hardened | HV700<br>x0,2mm |
|----------------|----------|-----------------|-----------------|
| H= +0,15 +0,25 | H kg     | H= ± 0,005      | H kg            |
| PCU20077B10-W  | 20 ~0,15 | PCU20077B10     | 20 ~0,15        |
| PCU24093B10-W  | 24 ~0,19 | PCU24093B10     | 24 ~0,19        |
| PCU39093B10-W  | 39 ~0,29 | PCU29093B10     | 29 ~0,23        |
| PCU44093B10-W  | 44 ~0,33 | PCU31093B10     | 31 ~0,24        |
| PCU46093B10-W  | 46 ~0,34 | PCU34093B10     | 34 ~0,27        |
|                |          | PCU39093B10     | 39 ~0,29        |
|                |          | PCU44093B10     | 44 ~0,33        |
|                |          | PCU46093B10     | 46 ~0,34        |

### Unterlagen- und Fräsanenschlaghalter Holder for parallels and workpiece stop



Bestellbeispiel / Ordering example: PCUH2594