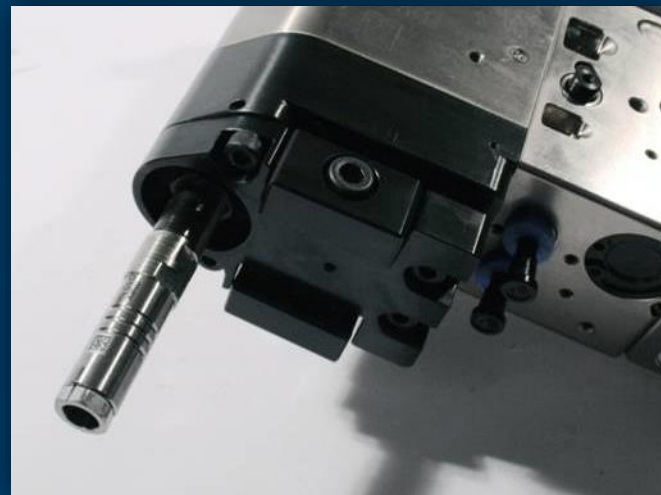


Superior Clamping and Gripping



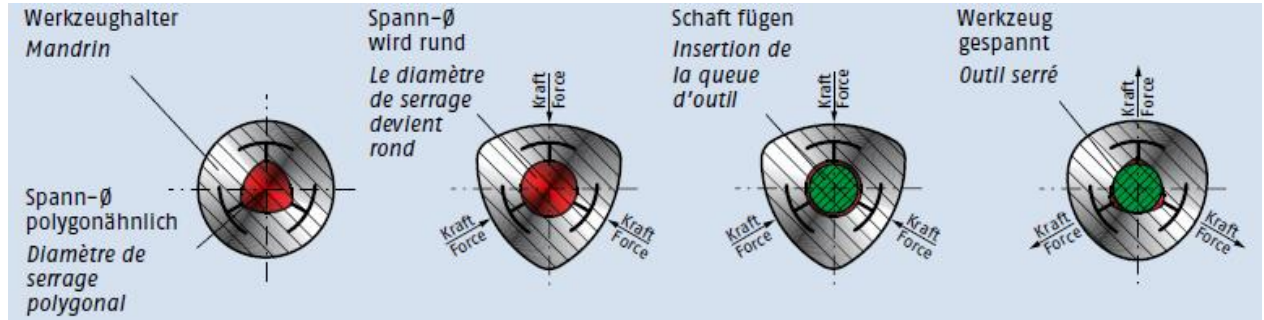
TRIBOS-PSS

Nova tecnologia de fixação poligonal

Tecnologia | Aplicações | Benefícios

Tecnologia TRIBOS

Patente SCHUNK



Pre-set do porta-ferramenta TRIBOS padrão

1. Inserto tipo SRE (interface entre bomba hid. e porta-ferramenta)
2. Ferramenta de corte
3. Porta-ferramenta TRIBOS

Einsatzbeispiel SRE in SVP



Example of application SRE in SVP



- 1 Wechselbarer Reduziereinsatz Typ SRE
 - 2 Zerspanungswerkzeug
 - 3 TRIBOS Werkzeughalter
-
- 1 Changeable insert Type SRE
 - 2 Cutting tool
 - 3 TRIBOS toolholder

Necessidade equipamento extra.

Novidade: TRIBOS PSS

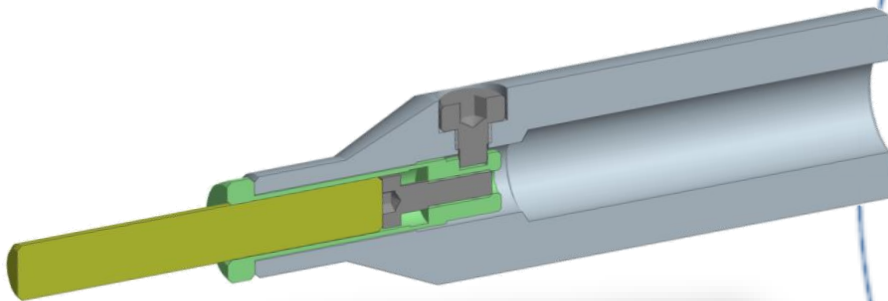
O que distingue a nova tecnologia de fixação poligonal da SCHUNK?

Tecnologia

- Tecnologia de fixação poligonal, **sem** necessidade de equipamentos extras,
- Atualmente isso não é possível no sistema TRIBOS convencional

Aplicações

- Moldes e Matrizes para **Microindústria** (diâmetros de fixação pequenos)
- Máquinas Especiais: **Perfuração para Rebites, Tecn. de Furação Profunda**
- Processos com **Cabeçotes Múltiplos de Perfuração**



Acionamento do TRIBOS PSS

Basta uma chave universal para abrir e fechar porta-ferramenta.

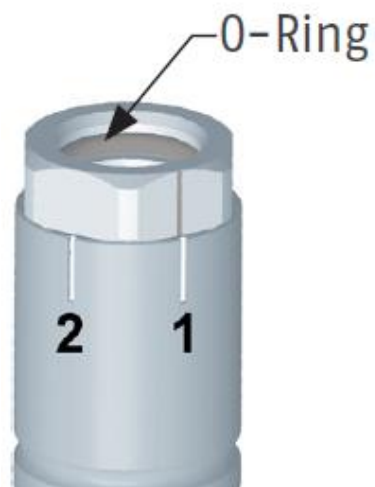
1. Posição aberta
2. Giro de 60° - Posição Fechada



Sugerimos o uso de um pequeno torquímetro para longa vida útil dos adaptadores.



Release position



Clamping position

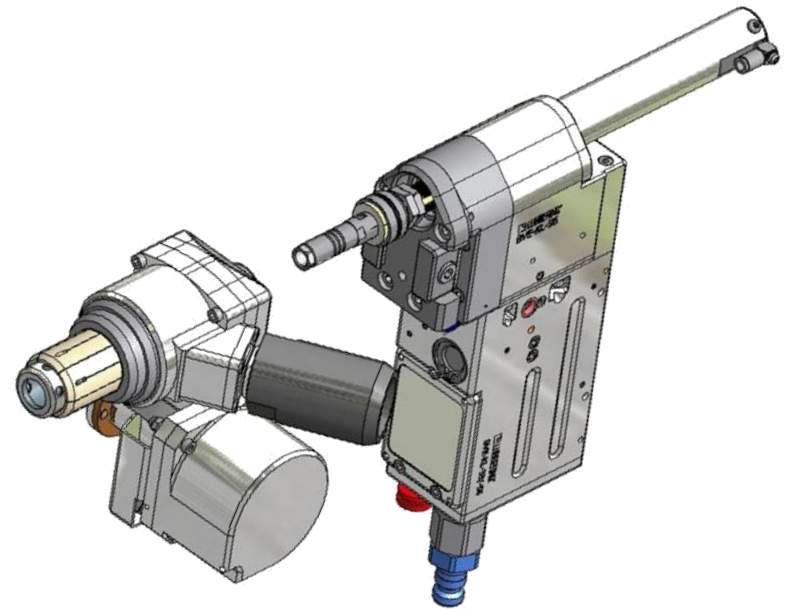
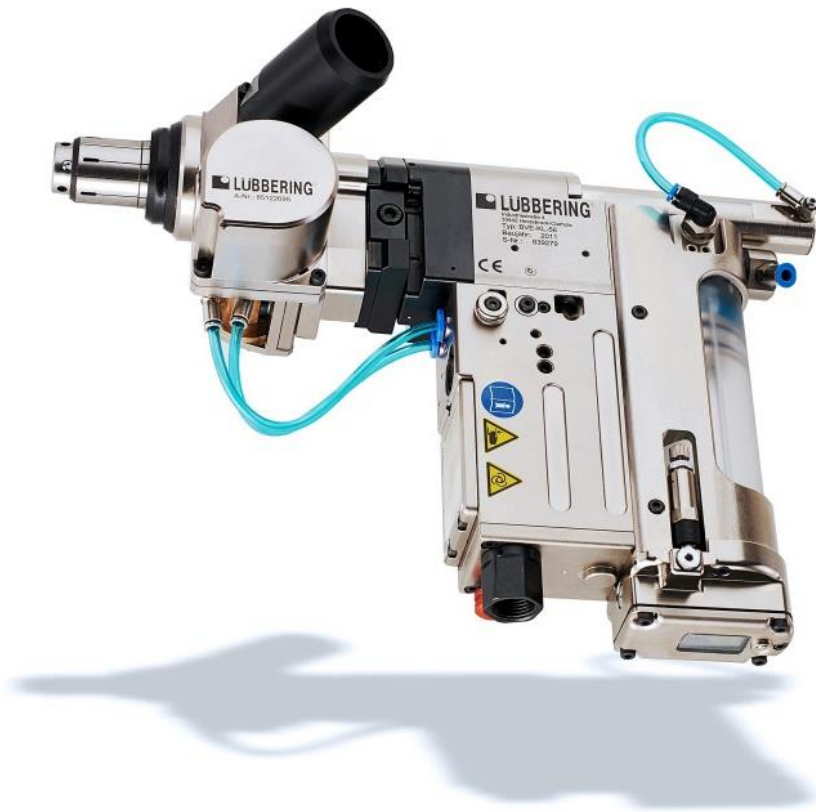


Exemplo:

Unidade de Furação (LÜBBERING)

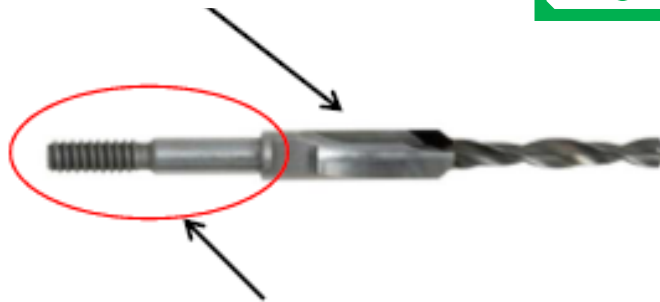


- TRIBOS-PSS
montagem direta na
unidade e fixação da
ferramenta de furação



Cenário Atual

Ferramenta especial de altíssimo custo

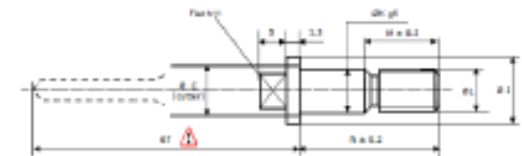


Norma especial da unidade do cliente

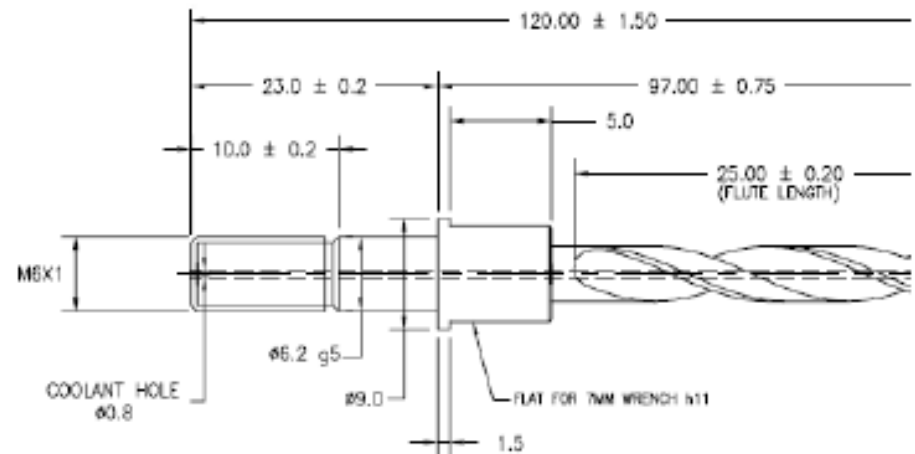


Produto: ADU
Unidade de Furação

3. Attachment & length

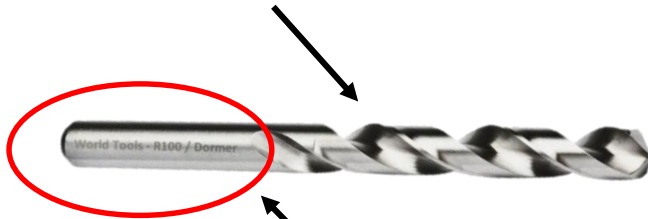


 For Q11.1 (stacks $\geq -45\text{mm}$) and Q12.7 (all stacks), ADFUs must be able to accept a cutter 62mm long (instead of 61mm)

[illegible]

Cenário Proposto: Oportunidade de Economia

Ferramenta standard de
baixo custo

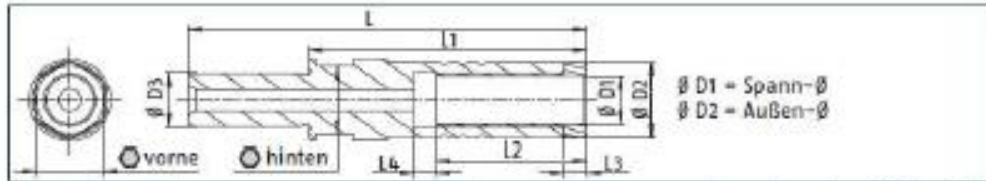


Norma padrão de haste de
ferramenta de metal duro

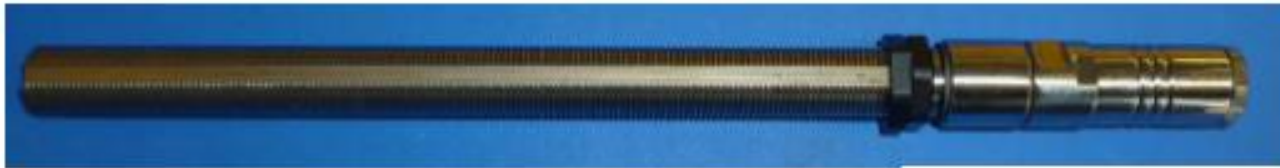


Exemplo: Spindle em haste roscada

Lübbering



D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Mindest- Einspann-Tiefe	L3 mm	L4 mm	⬡ vorne	⬡ hinten	Zulässig übertrag- bares Drehmoment *	Max. Anzugs- moment	Ident-Nr.
6.00	10	6.037	53	37	20 mm	3	3	9	9	4.5 Nm	10 Nm	25002685
6.35	10	6.037	53	37	20 mm	3	3	9	9	4.5 Nm	10 Nm	25003772
8.00	12	7.037	55	39	22 mm	5	3	11	11	9.0 Nm	20 Nm	25004147
10.00	14	8.537	55	39	30 mm	5	3	13	13	12.0 Nm	25 Nm	25004150



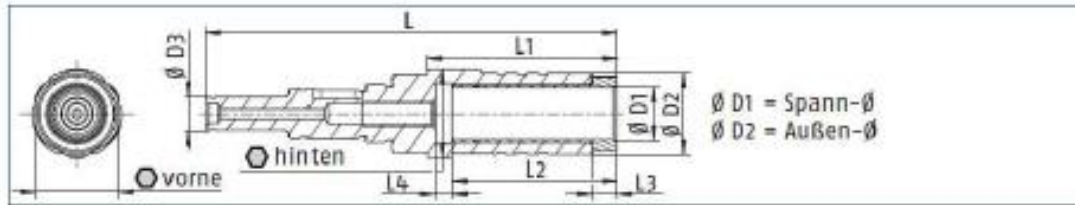
Thread spindle (design two-part)



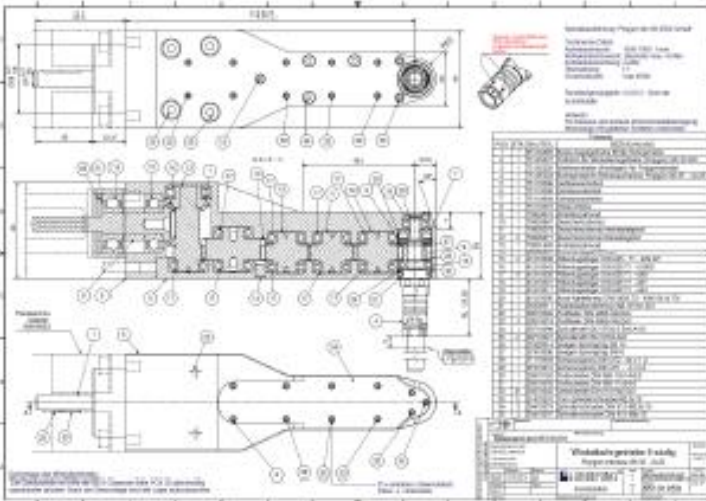
Modelo mais simples de
baixo custo

Exemplo: Spindle em interface especial (cruzeta)

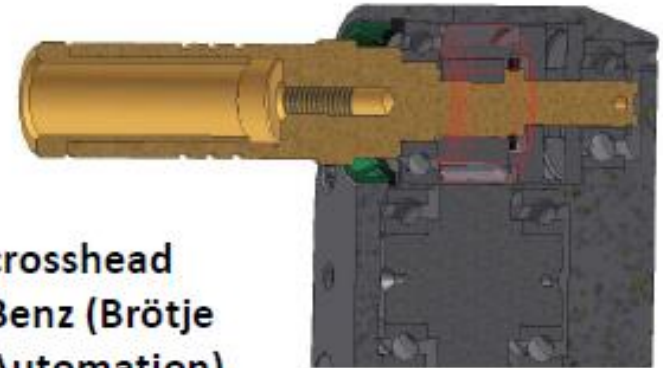
Benz



D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Mindest- Einspann-Tiefe	L3 mm	L4 mm	vorne	hinten	Zulässig übertrag- bares Drehmoment *	Max. Anzugs- moment	Ident-Nr.
6.35	10	4.00	49.5	30.5	20 mm	3	2	9	11	4.5 Nm	10 Nm	25004402



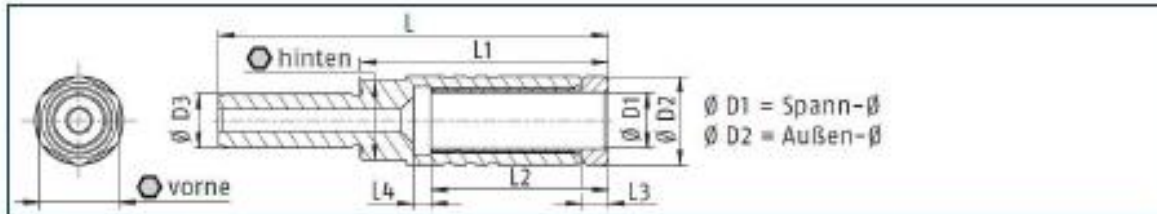
crosshead
Benz (Brötje
Automation)



Modelo em interface
específico da norma
da unidade de furação

Exemplo: Diferentes Comprimentos (haste roscada)

Setitec



D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Mindest-Einspann-Tiefe	L3 mm	L4 mm	 vorne	 hinten	Zulässig übertragbares Drehmoment *	Max. Anzugsmoment	Ident-Nr.
6.00	10	6.037	44.0	28.0	20 mm	3	2	9	9	4.5 Nm	10 Nm	25004884
6.35	10	6.037	44.0	28.0	20 mm	3	2	9	9	4.5 Nm	10 Nm	25004886
8.00	12	7.037	46.5	30.5	22 mm	5	2	11	11	9.0 Nm	15 Nm	25004889
10.00	14	8.537	52.5	36.5	28 mm	5	2	13	13	12.0 Nm	25 Nm	25004892

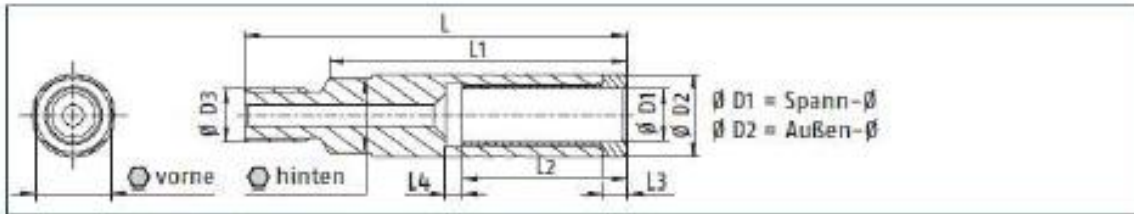


Short-version



Solução específica Apex/Atlas Copco

Thread - cone



D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Mindest- Einspann-Tiefe	L3 mm	L4 mm	vorne	hinten	Zulässig übertrag- bares Drehmoment *	Max. Anzugs- moment	Ident-Nr.
6.35	10	1/4"-28-UNF-2A	46.4	35.8	20 mm	3	2	9	9	4.5 Nm	10 Nm	25004894
8.00	12	5/16"-24F-UNF-2A	49.0	37.1	22 mm	5	2	11	11	9.0 Nm	15 Nm	25004896
10.00	12	3/8"-24F-UNF-2A	57.3	43.4	28 mm	5	2	13	13	12.0 Nm	25 Nm	25004898

Thread-spindle (design two part)

PFD: Positive Feed Drill



Komplettes System
Druckbohrer
Werkzeuggeste
Eigenschaft
Spindelöffnung
Werkzeugbohrer
Abmessung

Spindel 1-8
Spindel 9
Spindel 10
Spindel 11
Spindel 12



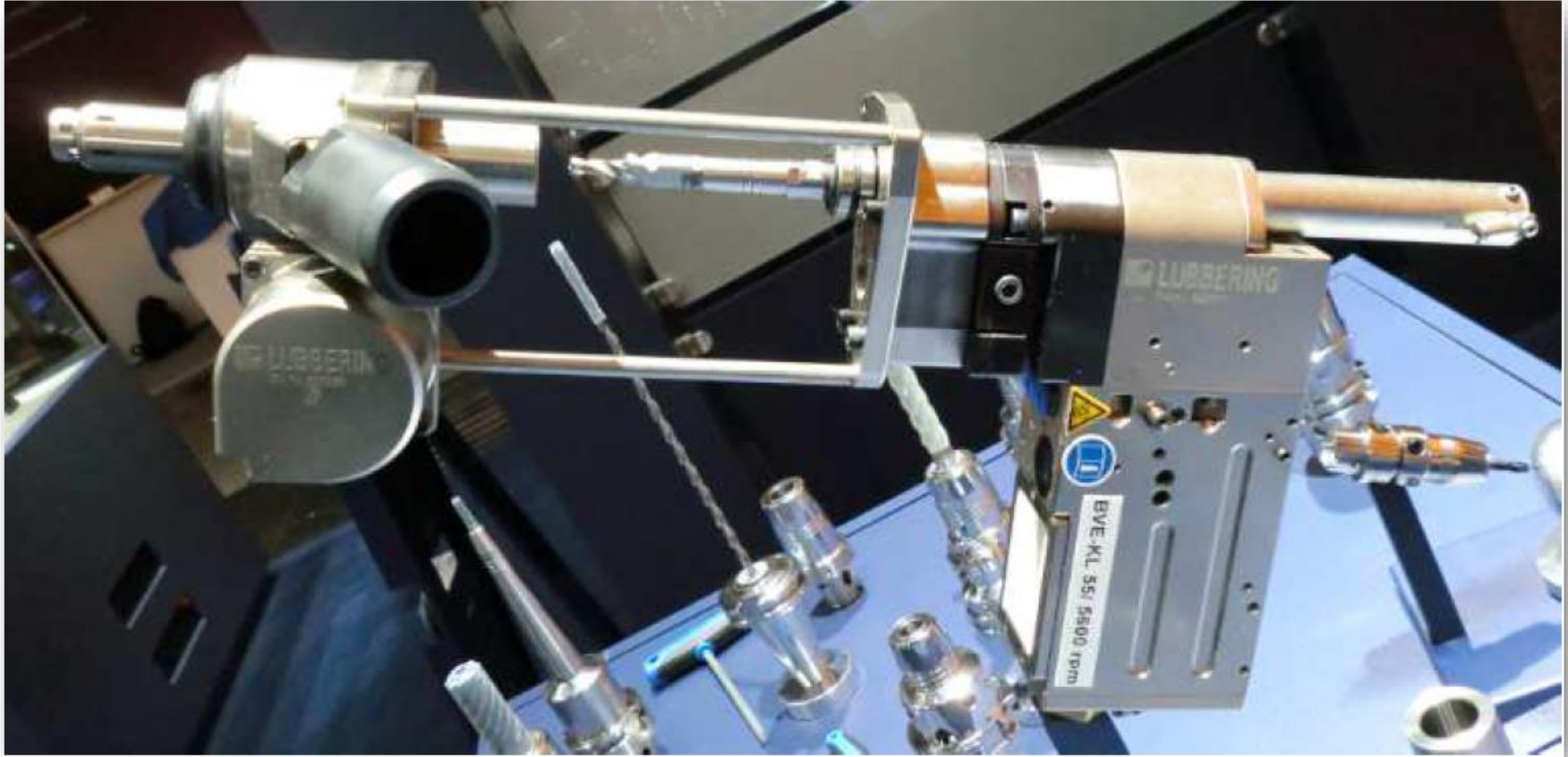
PFD 1500
9/16"-18



PFD 1100
3/8"-24

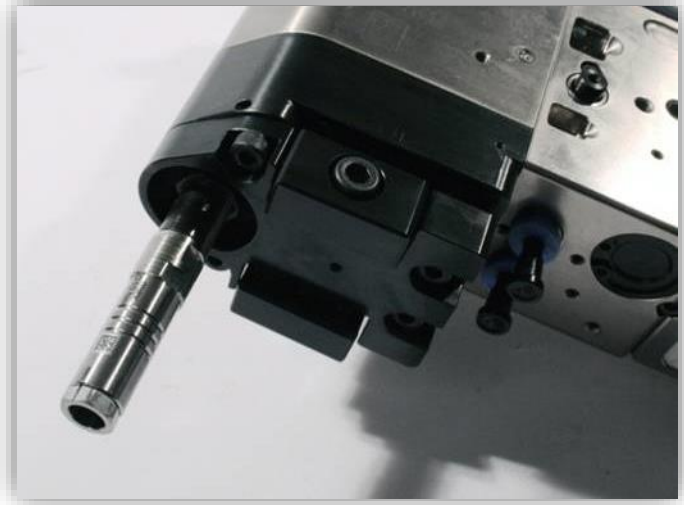
Modelo duplo (adaptador roscado com pinça + TRIBOS PSS),
possibilitando **+ flexibilidade**

Exemplo de aplicação em máquinas automatizadas



Fabricantes já compatíveis com nossa tecnologia

Product	Builder
ADU	Seti-Tec; Recoules; Quackenbush; Lübbering; PV Tool; Sugino; Atlas-Copco; Novator, Fives



Benefícios da tecnologia TRIBOS PSS



Menor custo de
ferramenta (broca)

Maior
facilidade no
pre-set

Maior
precisão nas
furações

Lista de Itens Standard

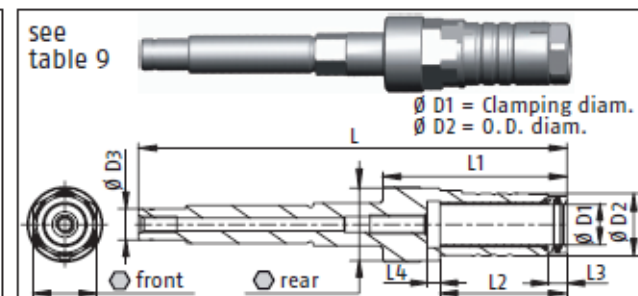
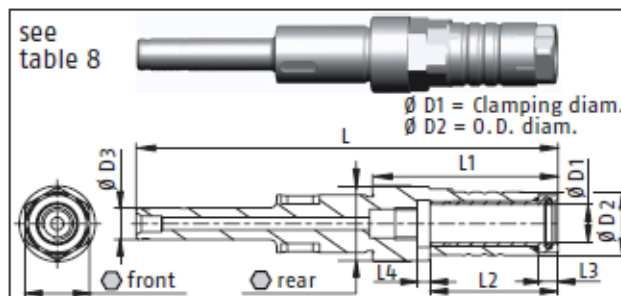
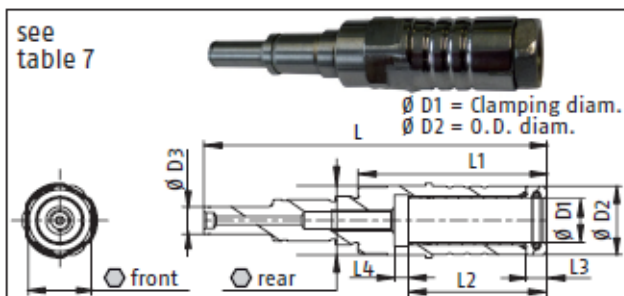
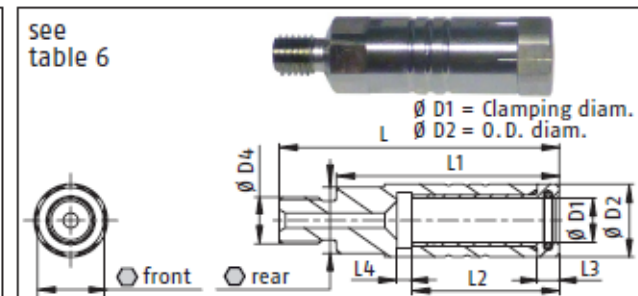
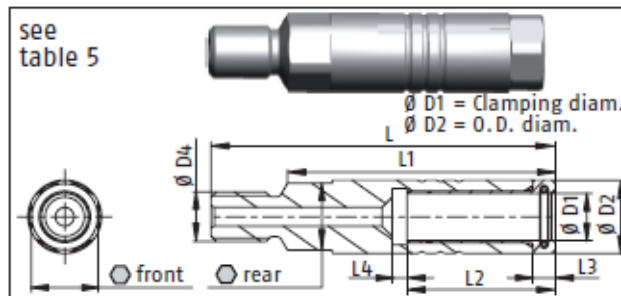
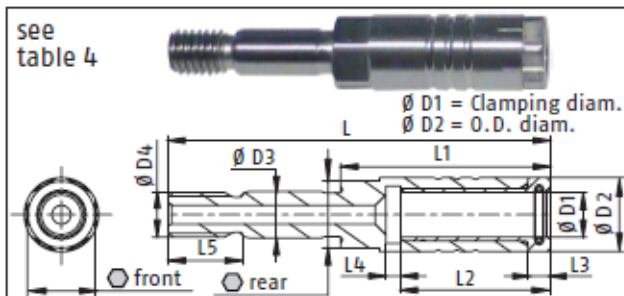
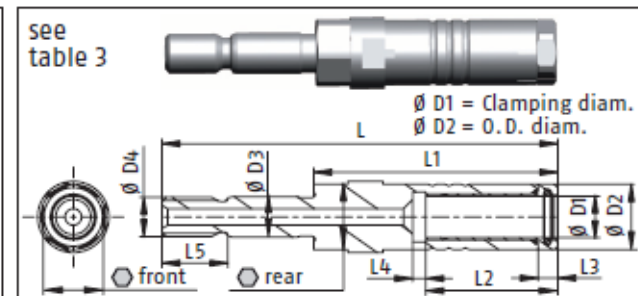
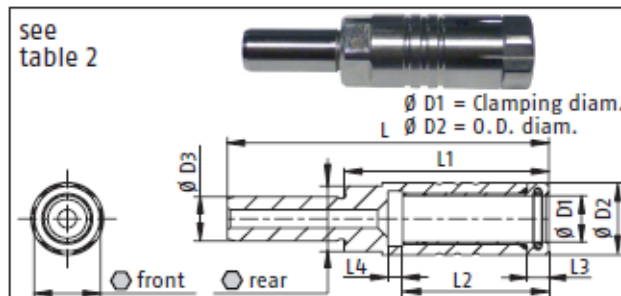
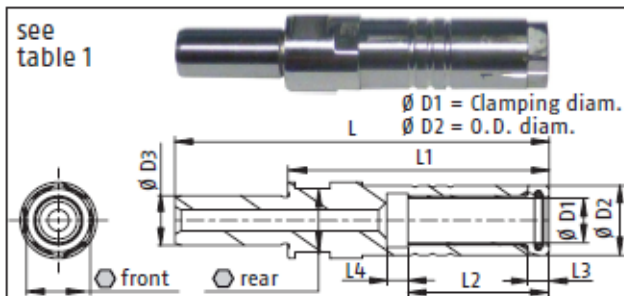


Table 1

D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	front	rear	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.00	10	7.037	53	37	20 mm	3	3	9	9	4.5 Nm	10 Nm	25002685
6.35	10	7.037	53	37	20 mm	3	3	9	9	4.5 Nm	10 Nm	25003772
8.00	12	7.037	55	39	22 mm	5	3	11	11	9.0 Nm	20 Nm	25004147
10.00	14	8.537	55	39	30 mm	5	3	13	13	12.0 Nm	25 Nm	25004150

Table 2

D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	front	rear	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.00	10	6.037	44.0	28.0	17 mm	3	2	9	9	4.5 Nm	10 Nm	25004884
6.35	10	6.037	44.0	28.0	17 mm	3	2	9	9	4.5 Nm	10 Nm	25004886
8.00	12	7.037	46.5	30.5	17 mm	5	2	11	11	9.0 Nm	20 Nm	25004889
10.00	14	8.537	52.5	36.5	23 mm	5	2	13	13	12.0 Nm	25 Nm	25004892

Table 3

D1 mm	D2 mm	D3 mm	D4 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	L5 mm	vorne	hinten	Zulässig übertrag- bares Drehmoment *	Max. Anzugs- moment	Ident-Nr.
6.00	10	Ø 6.2 g5	M6	60.0	37.0	20 mm	3	2	10	9	10	4.5 Nm	10 Nm	25004390
6.35	10	Ø 6.2 g5	M6	60.0	37.0	20 mm	3	2	10	9	10	4.5 Nm	10 Nm	25003921

Table 4

D1 mm	D2 mm	D3 mm	D4 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	L5 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.00	10	Ø 6.2 g5	M6	51.0	28.0	20 mm	3	2	10	9	9	4.5 Nm	10 Nm	25005493
6.35	10	Ø 6.2 g5	M6	51.0	28.0	20 mm	3	2	10	9	9	4.5 Nm	10 Nm	25005887
8.00	12	Ø 6.2 g5	M6	53.5	30.5	22 mm	5	2	10	11	11	9.0 Nm	20 Nm	25005766
8.00	12	Ø 8.2 g5	M8x1	63.5	30.5	22 mm	5	2	10	11	11	9.0 Nm	20 Nm	25005675
10.00	14	Ø 6.2 g5	M6	59.5	36.5	28 mm	5	2	10	13	13	12.0 Nm	25 Nm	25005767
10.00	14	Ø 8.2 g5	M8x1	69.5	36.5	28 mm	5	2	10	13	13	12.0 Nm	25 Nm	25005768
10.00	14	Ø 10.2 g5	M10x1	69.5	36.5	28 mm	5	2	10	13	13	12.0 Nm	25 Nm	25005676

Table 5

D1 mm	D2 mm	D4 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.35	10	1/4"-28-UNF-2A	46.4	37.2	20 mm	3	2	9	9	4.5 Nm	10 Nm	25004894
8.00	12	5/16"-24F-UNF-2A	49.0	38.9	22 mm	5	2	11	11	9.0 Nm	20 Nm	25004896
10.00	12	3/8"-24F-UNF-2A	57.3	45.3	28 mm	5	2	13	13	12.0 Nm	25 Nm	25004898

Table 6

D1 mm	D2 mm	D4 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.00	10	1/4"-28-UNF-2A	38.0	30.2	20 mm	3	2	9	9	4.5 Nm	10 Nm	25005769
8.00	12	1/4"-28-UNF-2A	40.0	32.2	22 mm	5	2	11	11	9.0 Nm	20 Nm	25005770
10.00	14	1/4"-28-UNF-2A	47.0	39.2	28 mm	5	2	13	13	12.0 Nm	25 Nm	25005784
8.00	12	5/16"-24-UNF-2A	42.0	32.2	22 mm	5	2	11	11	9.0 Nm	20 Nm	25005785
10.00	14	5/16"-24-UNF-2A	49.0	39.2	28 mm	5	2	13	13	12.0 Nm	25 Nm	25005771

Table 7

D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.35	10	4.00	49.5	30.5	20 mm	3	2	9	10	4.5 Nm	10 Nm	25004402

Table 8

D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.00	10	4.95	66.0	29.0	20 mm	3	2	9	10	4.5 Nm	10 Nm	25005497

Table 9

D1 mm	D2 mm	D3 mm	L mm	L1 mm	L2 Min. chucking depth	L3 mm	L4 mm	vorne	hinten	Admissible trans- missible torque *	Max. tightening torque	Id.-No.
6.35	10	4.95 h7	67.5	29.0	20 mm	3	2	9	10	4.5 Nm	10 Nm	25005444

TRIBOS PSS



Key width
SW 9
SW 11
SW 13
Torque wrench

Part number
25005127
25005128
25005129
25005177

Superior Clamping and Gripping



www.schunk.com