

3<sup>th</sup> Years

**STHILL**

# Future of **Converting**



Website  
[www.sthillconverting.com](http://www.sthillconverting.com)







Say Hello to the  
**STHILL TEAM**







## About us

With over 30 years of experience in manufacturing, our founder introduced the **STHILL** brand to the packaging machinery industry in 2006, bringing with him extensive knowledge, experience, and an innovative perspective.

**STHILL** Converting Equipments began its journey by manufacturing friction rings and quickly became a vital link in the supply chain of OEM companies. The industry giants soon took notice of the quality, aesthetics, and performance of its products. In response to increasing inquiries, the company expanded its product line to include complete friction shafts, expanding shafts, safety chucks, knife shafts, shaftless chucks, and adaptors.

Supplying 85% of its total production to OEM companies, **STHILL** has grown into the largest manufacturer in Turkey. It has strengthened its position among industry leaders with exports to more than 50 countries, establishing itself as a global brand.

**STHILL** places great importance on quality, high precision, occupational safety, and sustainability in all its developments. Accordingly, it develops products with extended lifespans that require less downtime and maintenance. So far, it holds patents on friction rings, shaftless chucks, and safety chucks.



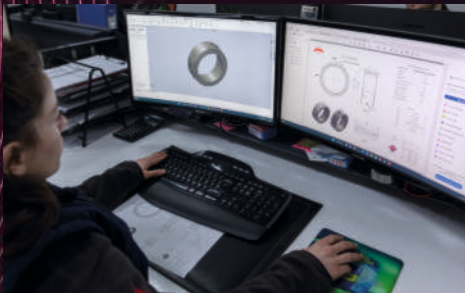
# INTEGRATED PRODUCTION



Research & Development



Quality



Design



Assembly



Production



Warehouse



Coating



Nitriding and Post-Oxidation



Sandblasting



Packaging



# PRODUCTS



STHILL Ring



Friction Shaft



Knife Shaft



STHILL Core Chuck



Expanding Shaft



Automatic Safety Chuck



Expanding Adaptor





# STHILL Ring

**INNOVATION  
SUPER EASY CLEANING**

**90%**  
**LESS  
MAINTENANCE  
TIME**

## STHILL Ring Advantages

- ✓ Increased Lifespan
- ✓ Assembly & Disassembly With a Single Screw
- ✓ No Spare Parts Anymore
- ✓ No Leaf Springs Collecting Dust
- ✓ Super Easy Cleaning
- ✓ 90% Reduced Maintenance Times
- ✓ Extended Maintenance Periods
- ✓ Extended Maximum Clamping Range
- ✓ Reduced Internal Friction



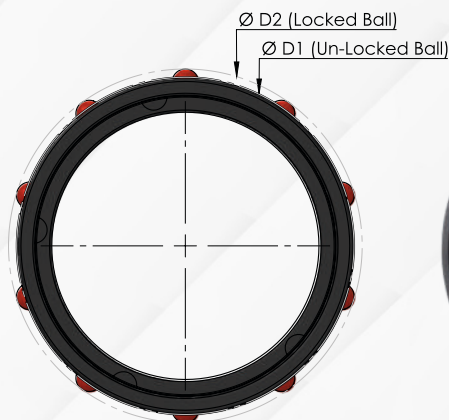
**PCT/TR2022/051150**



## Technical Details

- Diameters ranging from 1.5" to 16"
- Made of steel or aluminum materials
- Pre-centering thanks to spring-loaded balls
- Suitable for unidirectional or bidirectional winding
- Manual and automatic activation options
- Suitable for machines with automatic core loading and unloading function
- Suitable for use in cardboard, plastic, steel and aluminum cores
- Due to reduced internal friction, it is suitable for use in very low-tension applications as well
- All special functions implemented just by adding / removing spiral / round wire springs in the inner ring
- Custom-made solutions possible
- Ball or roller type expanding elements
- Oxy-nitrided Cam-body and Synchro-ring





CORE ID	RING WIDTH	Expanding Range (D1 – D2)	ROWS OF BALL	WORKING DIRECTION	
Ø 3"	6.5 mm	75.8 – 78.5 mm	Single	Uni-direction	
Ø 3"	9 mm	75.8 – 78.5 mm	Single	Uni-direction	
Ø 6"		151.5– 155 mm			
Ø 3"	11.5 mm	75.8 – 79.5 mm	Single	Uni-direction	
Ø 6"		151.5– 155 mm			
Ø 3"	14 mm	75.8 – 79.5 mm	Single	Uni-direction	
Ø 6"		151.5– 156.5 mm			
Ø 3"	14 mm	75.8 – 78.5 mm	Double	Uni-direction	
Ø 6"		151.5– 154.5 mm			
Ø 3"	19 mm	75.8 – 79.5 mm	Double	Uni-direction	Bi-direction
Ø 6"		151.5– 155 mm			
Ø 3"	24 mm	75.8 – 79.5 mm	Double	Uni-direction	Bi-direction
Ø 6"		151.5– 156.5 mm			
Ø 3"	29 mm	75.8 – 79.5 mm	Double	Uni-direction	Bi-direction
Ø 6"		151.5– 156.5 mm			
Ø 3"	39 mm	75.8 – 79.5 mm	Double	Uni-direction	Bi-direction
Ø 6"		151.5– 156.5 mm			
Ø 3"	49mm	75.8 – 79.5 mm	Double	Uni-direction	Bi-direction
Ø 6"		151.5 – 156.5 mm			

\* This chart represents our standard products. For further information, please reach out to us.



- ① Cam-Lock Body
- ② Synchro Rng
- ③ Balls
- ④ Screw



*Balls are contained in the synchro ring and don't fall out when the synchro ring is removed from the cam body.*





# Friction Shaft

## FUTURE OF CONVERTING



The pneumatic torque control of these friction shafts, which have three or more bladder grooves, is achieved using plastic strips or oiled natural felt strips. These brake pads transmit the pressure generated by flat tubes underneath to the inner diameter surfaces of the friction rings. This design ensures even distribution of air pressure to each friction ring, resulting in uniform tension for each cut. Rolls produced on a friction shaft will always have consistent web tension. It is even possible to produce rolls of different widths simultaneously at the same tension. This indirect friction shaft design prevents contact between the shaft and the paper core, thereby reducing dust generation.

## Friction Shaft Journal Types



### Technical Details

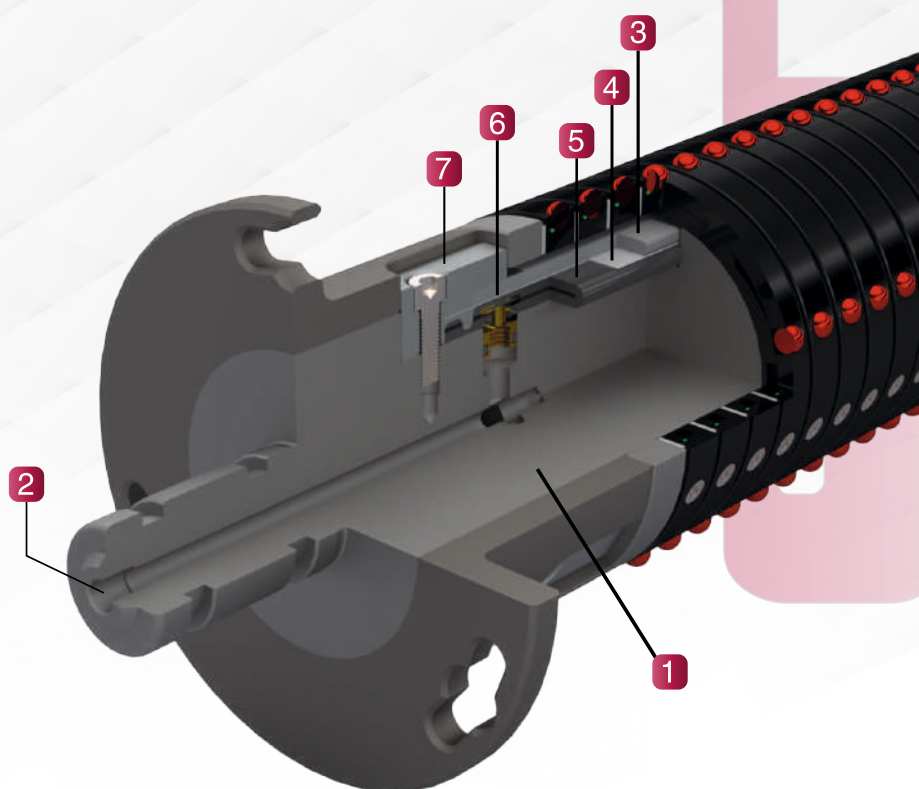
- Suitable for core diameters from 1,5" to 16"
- Shaft body diameters from 25 to 300 mm
- Quenched and tempered Hard chrome plated shaft body
- Oxy-nitrided shaft ends or Electroless nickel plated shaft ends and bladder grooves
- Fixed friction pads



**STHILL**



- 1 Shaft Body
- 2 Air Supply
- 3 Friction Element
- 4 Protection Strip
- 5 Bladder Material
- 6 Filler Neck
- 7 Clamping Parts





# Expanding Shaft

## **STHILL Bearing Supported Shaft**

Thanks to the Bearing Support and Coupling Drive Journal, the STHILL Bearing Supported Shaft offers higher RPM and torque compared to conventional journal types, along with a significantly enhanced degree of coaxial rotation of the safety chuck and shaft.



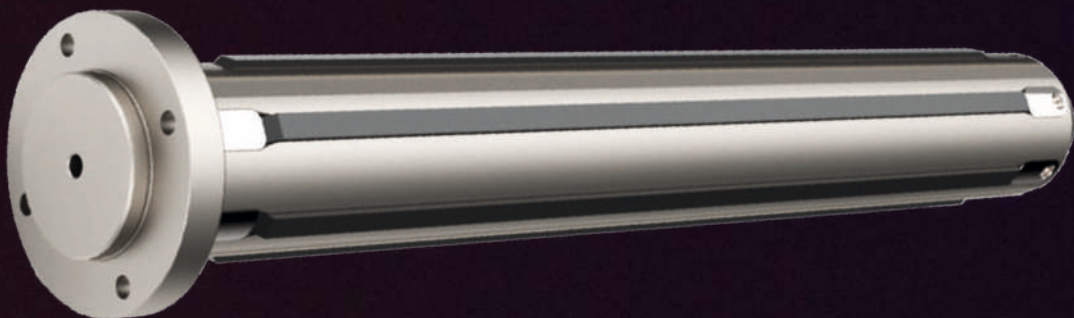
## **Multibladder Aluminium Shaft**

Operator-friendly due to their lightweight aluminum construction, these shafts can be used for light to medium weight winding operations. Multiple rolls can be wound simultaneously on the same shaft.



## **Multibladder Steel Shaft**

Due to their steel construction, these shafts can be used for heavy-duty winding operations. Multiple rolls can be wound simultaneously on the same shaft.





## Technical Details

- 1" to 20" in diameter
- Up to 3000 mm in length
- Electroless nickel-plated or oxy-nitrided shaft ends
- Continuous aluminum ledges or segmented rubber ledges
- Suitable for cores made of cardboard, plastic, steel and aluminum
- Valves can be mounted on the front side, or radially on the shaft body or even axially in the shaft journal



## Shaft Ends

- Bearing Supported Coupling Journal, Flange, journals in trigonal, square, round shape, or according to customer demand
- Optional hardening





# Automatic Safety Chuck

## Super Safe Safety Chuck Super User-Friendly



### Automatic Safety Chuck Advantages

- ✓ No sensor required for angular position, as in conventional safety chucks.
- ✓ No need for the angular aligning of shaft journals with chuck inserts, as in conventional safety chucks.
- ✓ No work safety concerns arising from air loss during operation.
- ✓ No work safety concerns arising from a tilting, sliding or rotating handwheel, as in conventional safety chucks.
- ✓ Higher RPM compared to conventional safety chucks, thanks to bearing support.
- ✓ Higher torque compared to conventional safety chucks, thanks to coupling drive.
- ✓ Significantly enhanced degree of coaxial rotation of chuck and shaft, in contrast to conventional safety chucks.
- ✓ Quenched, Tempered and Oxy-nitrided Crown Gear



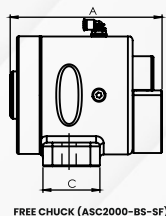
### Technical Details

- Flange mounting
- Foot mounting
- Pneumatic open function
- Mechanical close function
- Coupling drive between chuck and shaft
- Air supply through driven or non-driven chuck
- Suitable for full automation due to:
  - Pneumatic shaft control (inflation/deflation, continuous air supply)
  - Equipable with proximity sensors for the open/close detection

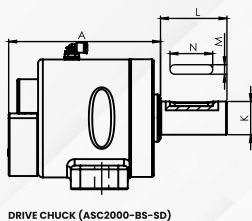
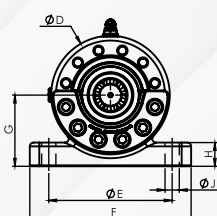
SCAN TO SEE  
HOW IT WORKS



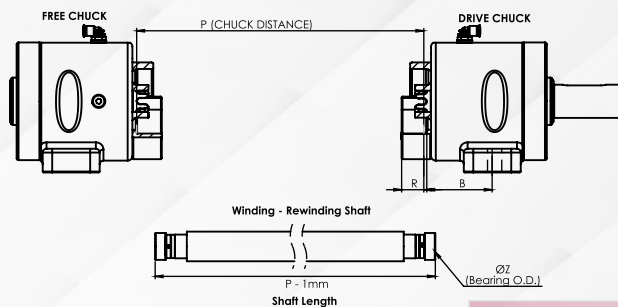




FREE CHUCK (ASC2000-BS-SF)



DRIVE CHUCK (ASC2000-BS-SD)



Air Inlet with Rotary Joint Thru Air Shaft

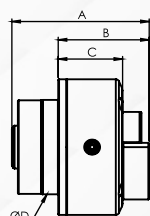


Air Valve or Fitting

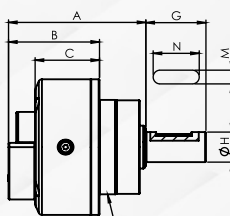
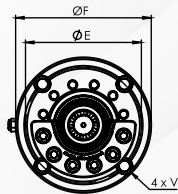


Motion Sensors

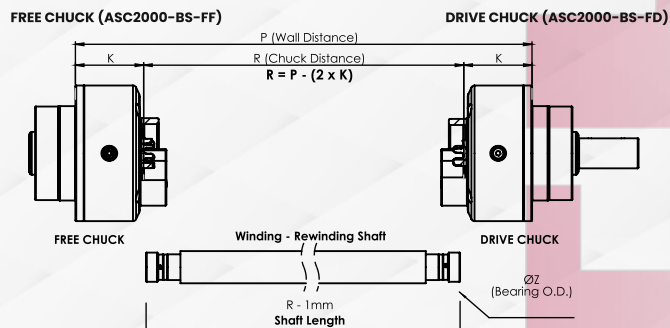
PART NO	A (mm)	B (mm)	C (mm)	ØD	ØE (pcd)	F (mm)	G (mm)	H (mm)	ØJ	ØK	L (mm)	M (mm)	N (mm)	R (mm)	ØZ (O.D.)	Max. Roll Weight (kg)	Max. Torque (Nm)	Max. RPM (1/min)
ASC0750-BS-SF/SD	126	64,5	50	Ø 98	Ø 100	125	50	16	Ø 10,5	Ø 19 h6	46	6	35	20,5	Ø 55	750	145-330	3000
ASC1250-BS-SF/SD	132	57,5	50	Ø 108	Ø 105	140	65	20	Ø 13	Ø 28 h6	70	8	40	20,5	Ø 55	1250	460-540	3000
ASC2000-BS-SF/SD	160	71,5	60	Ø 125	Ø 130	170	75	25	Ø 15	Ø 35 h6	70	10	45	26,5	Ø 68	2000	900-980	3000
ASC3000-BS-SF/SD	205	56,5 136,5	116	Ø 158	Ø 160	195	85	27	Ø 13	Ø 50 h6	110	14	90	32,5	Ø 75	3000	1560	3000



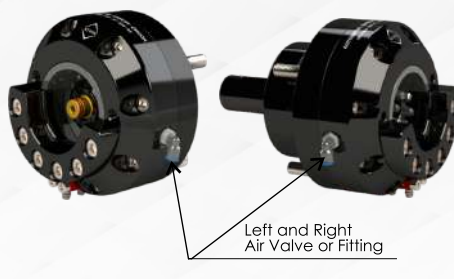
FREE CHUCK (ASC2000-BS-FF)



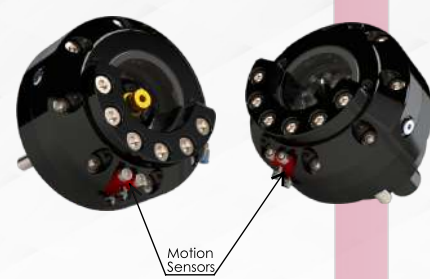
DRIVE CHUCK (ASC2000-BS-FD)



Air Inlet with Rotary Joint Thru Air Shaft



Left and Right Air Valve or Fitting



Motion Sensors

PART NO	A (mm)	B (mm)	C (mm)	ØD	ØE (pcd)	ØF	G (mm)	ØH	K (mm)	M (mm)	N (mm)	V	ØZ (O.D.)	Max. Roll Weight (kg)	Max. Torque (Nm)	Max. RPM (1/min)
ASC0750-BS-FF/FD	126	92	67	Ø 75 f7	Ø 92	Ø 112	45	Ø 19 h6	72	6 P9	35	M8	Ø 55	750	145-330	3000
ASC1250-BS-FF/FD	132	91	66	Ø 90 f7	Ø 115	Ø 135	70	Ø 28 h6	71	8 P9	40	M10	Ø 55	1250	460-540	3000
ASC2000-BS-FF/FD	160	106	75	Ø 110 f7	Ø 135	Ø 158	70	Ø 35 h6	80	10 P9	40	M12	Ø 68	2000	900-980	3000
ASC3000-BS-FF/FD	205	135	98	Ø 130 f7	Ø 170	Ø 198	110	Ø 50 h6	103	14 P9	90	M16	Ø 75	3000	1560	3000

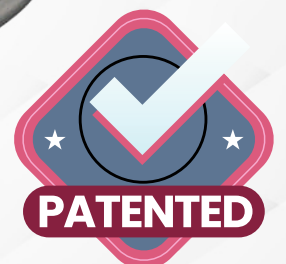


# STHILL Core Chuck

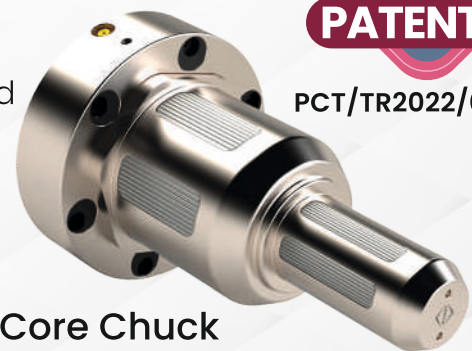


## Pneumo-Mechanical Core Chuck (Air Expanding)

The lugs are kept at the minimum diameter with the help of spring force and clamp the cores by the movement of a piston that is activated by compressed air, whereas the unclamping is done by a spring that moves the piston in the reverse direction when the compressed air released off the system.



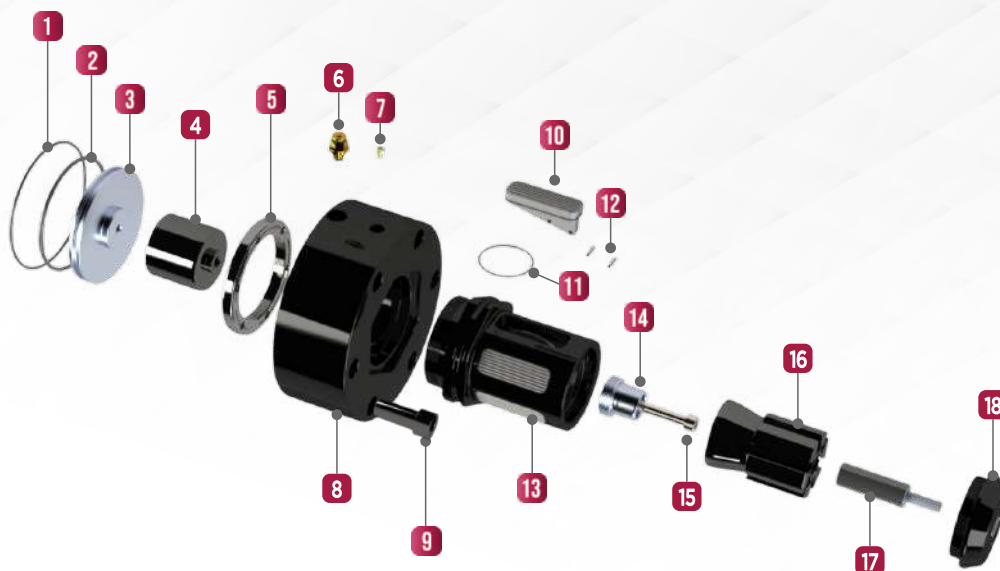
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## Step-Design Core Chuck

## Mechano-Pneumatical Core Chuck (Spring-Force Expanding)

The lugs are kept at the minimum diameter with the help of spring force. In order to insert the chuck into the core, air pressure is applied to a piston that moves the lugs to the minimum diameter. Then the air is released off the system so the lugs can center and clamp the core



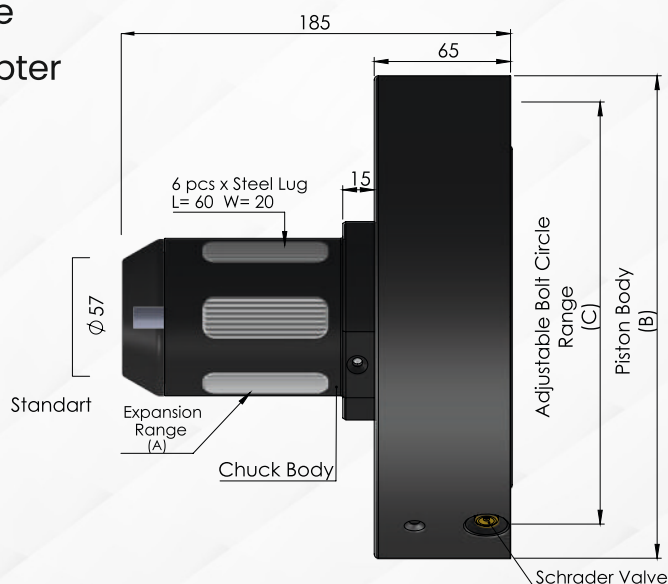
### Detailed View

- 1 O-ring
- 2 O-ring
- 3 Piston
- 4 Piston Rod Reverser
- 5 KM Nut
- 6 Air Valve
- 7 Pneumatic Exhaust Muffler
- 8 Piston Body
- 9 Screw Centering Guide
- 10 Steel Lug (PU, Rubber, Steel)
- 11 O-ring
- 12 Needle Roller
- 13 Chuck Body
- 14 Piston Rod Connector
- 15 Piston Rod Connector Screw
- 16 Piston Rod
- 17 Gas Spring
- 18 Front Cap



## Sthill Core Chuck Advantages

- ✓ Core Diameters From 70 to 500 mm.
- ✓ Adjustable Pitch Circle Diameter (PCD) and Screw Size
- ✓ Reduced Costs and Lead Times Due to Modular Design
- ✓ Low Maintenance Due to Prevention of Dust Ingress and Lubricant Leakage
- ✓ Hardened and Coated with Oxy-nitriding Method
- ✓ Maintenance Without Dismantling Chuck From Machine
- ✓ Quick and Easy Adaptor Change
- ✓ One-Bolt Fixed Mechanical Adapter
- ✓ Wide Tension Range
- ✓ Optional Lugs Design



CORE ID	EXPANSION RANGE (A)	PISTON BODY (B)	BOLT CIRCLE RANGE (mm) (C)	MAX ROLL WEIGHT (kg)	MAX TORQUE (Nm)
Ø70 mm	69-80 mm	Ø170 mm	Ø130 - Ø145	900	170
		Ø200 mm	Ø150 - Ø175	1250	235
		Ø230 mm	Ø180 - Ø205	2000	375
		Ø250 mm	Ø200 - Ø225	2500	480
		Ø270 mm	Ø220 - Ø245	3200	600
Ø3"	75-85 mm	Ø170 mm	Ø130 - Ø145	900	210
		Ø200 mm	Ø150 - Ø175	1250	320
		Ø230 mm	Ø180 - Ø205	2000	460
		Ø250 mm	Ø200 - Ø225	2500	650
		Ø270 mm	Ø220 - Ø245	3200	820
Ø150 mm Ø6"	148-158 mm	Ø230 mm	Ø180 - Ø205	3200	930
		Ø250 mm	Ø200 - Ø225	4000	1220
		Ø270 mm	Ø220 - Ø245	5000	1550

\* This chart represents our standard products. For further information, please reach out to us.



# Knife Shaft

Pneumatically operating knife shaft, suitable for manual or automated set up of circular knives.

Hardchrome plated shaft body, with electroless nickel plated bladder grooves and journals.



## Technical Details

- Pneumatically operating
- Hardchrome (42CrMo4) plated shaft body
- Can be used for circular knives
- Easy to maintain
- Suitable for manual or automated knife set up



# Expanding Adaptor

**STHILL**

Multibladder Adaptors, which are used for winding on cores made of cardboard and other materials, offer an economical solution, that allows for an existing winding shaft to be adjusted within seconds to a larger core diameter and thus saves you the purchase of a larger winding shaft. The adaptors are fixed by inflating the carrier shaft and with optional clamps.



## Technical Details

- Continuous aluminum ledges or segmented rubber ledges
- The optional pneumatic connection between adaptors
- Adaptor body in lightweight aluminum construction
- Special sizes on customer request









**Excellent products**  
go through excellent  
processes

# REYMAK



Sthill Converting Equipment  
is a brand of REYMAK

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