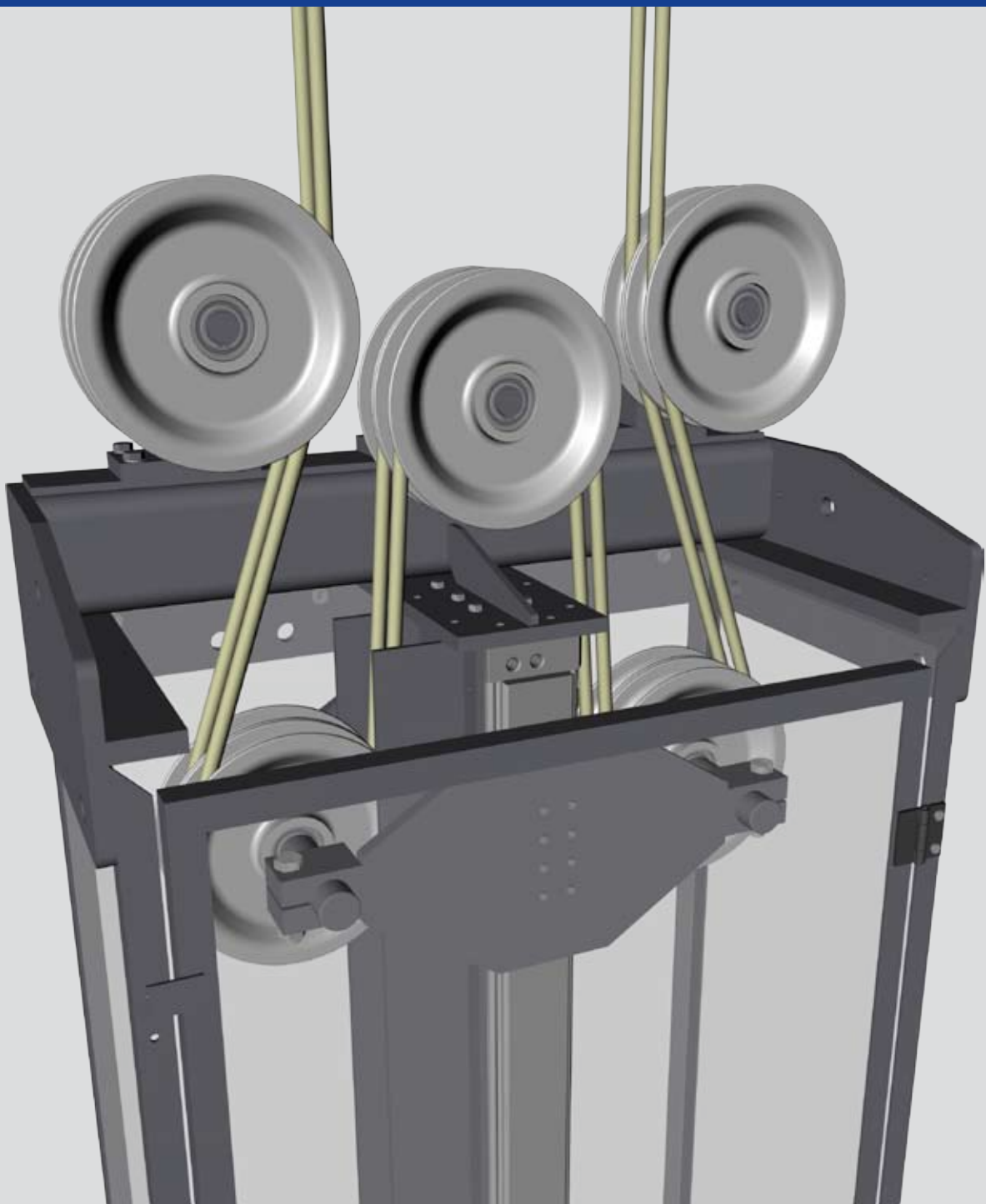


Voith Paper

VOITH

Rope System Components



Rope System Components

Voith Rope Systems provide the reliable sheet threading that the paper industry demands today.



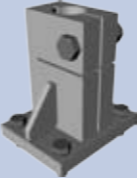

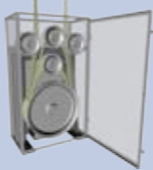


The One Platform Concept from Voith was introduced to ensure the various paper machine modules, process modules and associated technology groups maximize the production performance and profitability for each and every paper grade.

The tail threading process is one such process module of tremendous importance to the overall runnability, efficiency and of course, to the operating and maintenance costs of every paper machine. As a result, Voith has developed a complete range of tail threading technologies to provide the optimal combination of performance, flexibility and reliability necessary to meet the requirements of every new paper machine and to improve the economics of each and every existing paper machine. This process module includes such key technology groups as tail and edge cutting technology, vacuum transfer technology and rope systems technology.

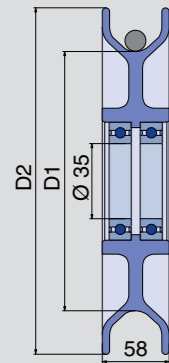
Voith Threading Specialists are experts with the design of new rope systems and the improvement of existing rope systems. Voith experts can solve any problems due to faulty rope system threading and ensure that overall benchmark machine efficiency is met in the production process.

The Voith Rope System Component Catalog provides an overview, in particular, of the components and solutions within the technology group rope systems, all developed to meet the requirements of the One Platform Concept, and now utilized on Voith paper machines and projects worldwide.

By facilitating access to the individual rope system components and associated solution capabilities within Voith it is now easier than ever before to optimize the economics of a paper machine rope system at any stage in its lifecycle, to achieve - Engineered Reliability.

	Rope Sheaves	1
	Shafts	2
	Mounting	3
	Rope Tensioners	4
	Rope Drives	5
	Accessories / Mounting Examples	6
	Ordering Information / Ordering Form	7

Rope Return Sheaves

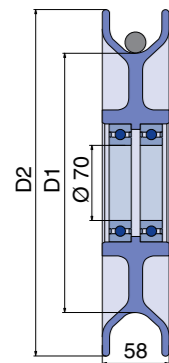


Rope Sheave Type S1

- Tail cannot be carried over this sheave
- Rope groove for 1 rope
- Finished in 3 machine enamel colours

Light Grey	RAL 7035 (standard)
Blue	RAL 5002
Black	RAL 9004

Description	Type	Colour	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S1-120	Grey	417715102	120 mm	200 mm	A B C D
		Blue	417715598			
		Black	417715599			
	S1-240	Grey	417715104	240 mm	320 mm	
		Blue	417715601			
		Black	417715602			
	S1-360	Grey	417715106	360 mm	440 mm	
		Blue	417715603			
		Black	417715604			
	S1-480	Grey	417715395	480 mm	560 mm	
		Blue	417715605			
		Black	417715606			

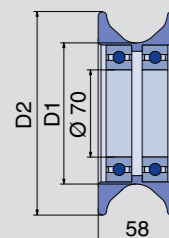


Rope Sheave Type S5

- Adjustable swivel mount sheave
- Tail cannot be carried over this sheave
- Swivel adjustment +/- 25°
- Rope groove for 1 rope
- Finished in 3 machine enamel colours

Light Grey	RAL 7035 (standard)
Blue	RAL 5002
Black	RAL 9004

Description	Type	Colour	Part Number	D1	D2	Shaft Mounting
Adjustable Swivel Rope Sheave	S5-120	Grey	417715207	120 mm	200 mm	E
		Blue	417715607			
		Black	417715608			
	S5-240	Grey	417715210	240 mm	320 mm	
		Blue	417715609			
		Black	417715611			
	S5-360	Grey	417715215	360 mm	440 mm	
		Blue	417715612			
		Black	417715613			
	S5-480	Grey	417715708	480 mm	560 mm	
		Blue	417715614			
		Black	417715615			



Rope Sheave Type S10

- Smallest diameter adjustable swivel mount sheave
- Tail cannot be carried over this sheave
- Swivel adjustment +/- 25°
- Rope groove for 1 rope
- Finished in 3 machine enamel colours

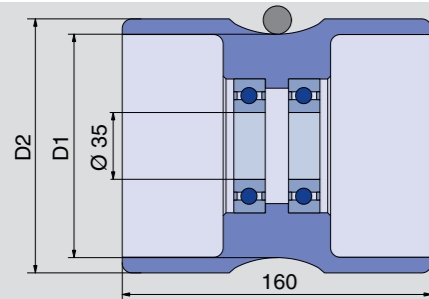
Light Grey	RAL 7035 (standard)
Blue	RAL 5002
Black	RAL 9004

Description	Type	Colour	Part Number	D1	D2	Shaft Mounting
Adjustable Swivel Rope Sheave	S10-120	Grey	417715616	120 mm	170 mm	E
		Blue	417715617			
		Black	417715618			

On multi-rope systems each individual rope run should use sheaves of a distinct colour to facilitate installing new ropes. On single rope systems only sheaves finished in the standard Light Grey RAL 7035 colour should be used.

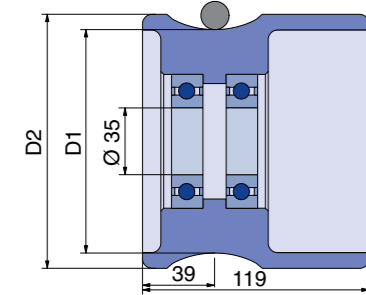
A - F = Options for mounting rope sheaves on shafts

Tail Carrier Sheaves



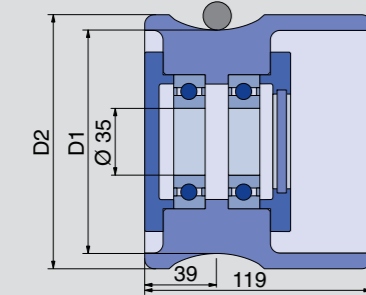
Rope Sheave Type S15

- For 1-3 ropes
- Double extended shoulders to provide better tail support
- Finished in Light Grey RAL 7035 machine enamel



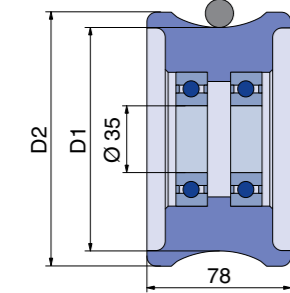
Rope Sheave Type S20

- For 1-3 ropes
- Single extended shoulder to provide better tail support
- Finished in Light Grey RAL 7035 machine enamel



Rope Sheave Type S25

- Rope sheave for wet end applications
- Material: stainless steel
- For 1-3 ropes
- Single extended shoulder to provide better tail support



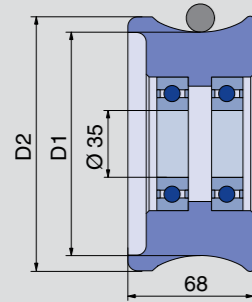
Rope Sheave Type S30

- For 1-3 ropes
- Finished in Light Grey RAL 7035 machine enamel

Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S15-90	417715626	90 mm	106 mm	
	S15-120	417715436	120 mm	136 mm	(A)
	S15-240	417715457	240 mm	255 mm	
Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S20-90	417715037	90 mm	106 mm	
	S20-120	417715060	120 mm	136 mm	(A)
	S20-240	417715069	240 mm	255 mm	
Description	Type	Part Number	D1	D2	Shaft Mounting
Wet End Rope Sheave	S25-120	417715430	120 mm	136 mm	(F)
	S25-240	417715435	240 mm	255 mm	
Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S30-90	417715055	90 mm	106 mm	
	S30-120	417715268	120 mm	136 mm	(A)
	S30-240	417715421	240 mm	255 mm	

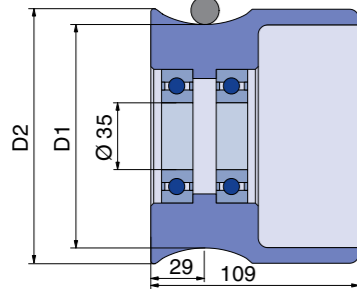
(A) - (F) = Options for mounting rope sheaves on shafts

Tail Carrier Sheaves



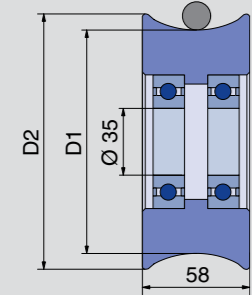
Rope Sheave Type S35

- For 1-3 ropes
- To be mounted in combination with other sheaves on one shaft
- Finished in Light Grey RAL 7035 machine enamel



Rope Sheave Type S40

- For 1-3 ropes
- Single extended shoulder to provide better tail support
- To be mounted in combination with other sheaves on one shaft
- Finished in Light Grey RAL 7035 machine enamel



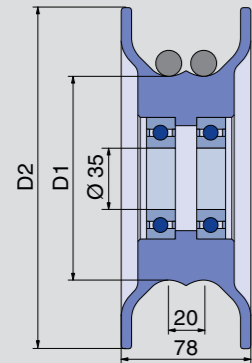
Rope Sheave Type S45

- For 1-3 ropes
- Single extended shoulder to provide better tail support
- To be mounted in the mid-position with other sheaves on one shaft
- Finished in Light grey RAL 7035 machine enamel

Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S35-90	417715041	90 mm	106 mm	
	S35-120	417715627	120 mm	136 mm	(B) (D)
	S35-240	417715628	240 mm	255 mm	
Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S40-90	417715042	90 mm	106 mm	
	S40-120	417715077	120 mm	136 mm	(B) (D)
	S40-240	417715087	240 mm	255 mm	
Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S45-90	417715631	90 mm	106 mm	
	S45-120	417715574	120 mm	136 mm	(C)
	S45-240	417715632	240 mm	255 mm	

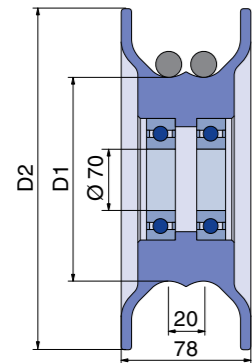
(A) - (F) = Options for mounting rope sheaves on shafts

Rope Sheaves for Rope Nips



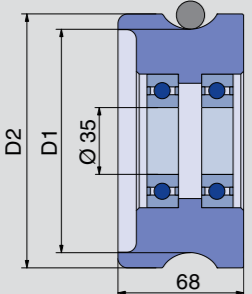
Rope Sheave Type S50

- Rope sheave for guiding 2 ropes to a rope nip on a 3 rope system
- Tail cannot be carried over this sheave
- Separate rope groove for each rope
- Finished in Light Grey RAL 7035 machine enamel



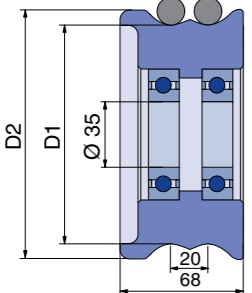
Rope Sheave Type S55

- Adjustable swivel mount sheave for guiding 2 ropes to a rope nip on a 3 rope system
- Swivel adjustment +/- 25°
- Tail cannot be carried over this sheave
- Separate rope groove for each rope
- Finished in Light Grey RAL 7035 machine enamel



Rope Sheave Type S60

- Rope groove carries one rope
- Rope sheave to be mounted in combination with other sheaves on one shaft
- Finished in Light Grey RAL 7035 machine enamel



Rope Sheave Type S65

- Rope sheave for guiding 2 ropes to a rope nip on a 3 rope system
- Separate rope groove for each rope
- Rope sheave to be mounted in combination with other sheaves on one shaft
- Finished in Light Grey RAL 7035 machine enamel

- All rope sheaves fitted with maintenance free bearings. Bearings double sealed and filled with proprietary grease
- Material: cast iron or steel
- Suitable for rope diameters of 8.5 mm - 13 mm

Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S50-120	417715093	120 mm	200 mm	Ⓐ
	S50-240	417715096	240 mm	320 mm	
	S50-360	417715619	360 mm	440 mm	
	S50-480	417715623	480 mm	560 mm	

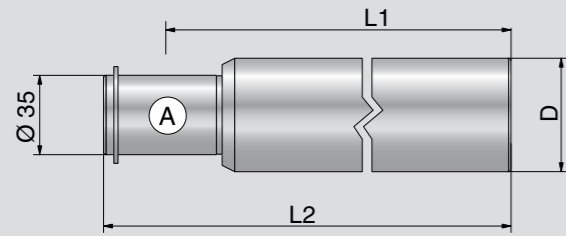
Description	Type	Part Number	D1	D2	Shaft Mounting
Adjustable Swivel Rope Sheave	S55-120	417715160	120 mm	200 mm	Ⓔ
	S55-240	417715167	240 mm	320 mm	
	S55-360	417715624	360 mm	440 mm	
	S55-480	417715625	480 mm	560 mm	

Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S60-90	417715629	90 mm	106 mm	Ⓐ
	S60-120	417715079	120 mm	136 mm	
	S60-240	417715085	240 mm	255 mm	

Description	Type	Part Number	D1	D2	Shaft Mounting
Rope Sheave	S65-90	417715643	90 mm	106 mm	Ⓐ
	S65-120	417715082	120 mm	136 mm	
	S65-240	417715090	240 mm	255 mm	

Ⓐ - Ⓕ = Options for mounting rope sheaves on shafts

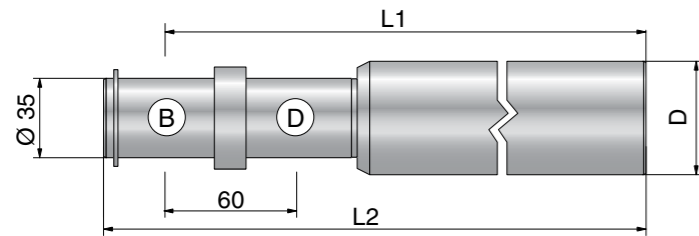
Shafts



Shaft Type B1

- Shaft for mounting 1 rope sheave
- Includes the supply of 1 circlip
- Standard D = 50 mm

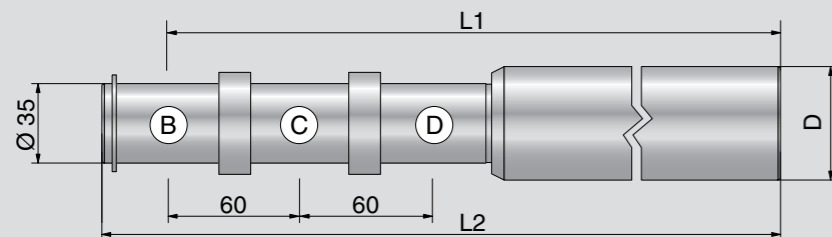
Imperial D = 1 15/16"
Imperial diameter 1 15/16" is available on request. Add an „I“ to the part number in the Quotation Request.



Shaft Type B5

- Shaft for mounting 2 rope sheaves
- Includes the supply of 1 spacer and 1 circlip
- Standard D = 50 mm

Imperial D = 1 15/16"
Imperial diameter 1 15/16" is available on request. Add an „I“ to the part number in the Quotation Request.



Shaft Type B10

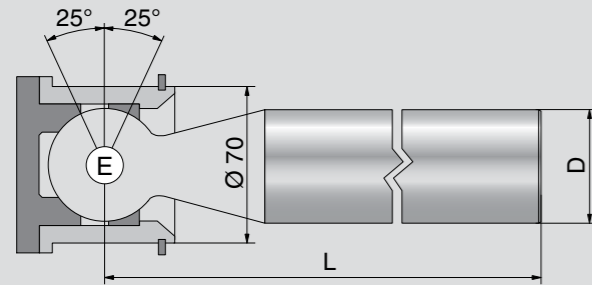
- Shaft for mounting 3 rope sheaves
- Includes the supply of 2 spacers and 1 circlip
- Standard D = 50 mm

Imperial D = 1 15/16"
Imperial diameter 1 15/16" is available on request. Add an „I“ to the part number in the Quotation Request.

Description	Type	Part Number	L1	L2
Single Shaft	B1-50-150	417715000	150 mm	179 mm
	B1-50-200	417715185	200 mm	229 mm
	B1-50-250	417715126	250 mm	279 mm
	B1-50-300	417715533	300 mm	329 mm
	B1-50-350	417715128	350 mm	379 mm
	B1-50-400	417715633	400 mm	429 mm
	B1-50-450	417715130	450 mm	479 mm
	B1-50-500	417715634	500 mm	529 mm
	B1-50-550	417715132	550 mm	579 mm
Description	Type	Part Number	L1	L2
Double Shaft	B5-50-250	417715046	250 mm	279 mm
	B5-50-300	417715182	300 mm	329 mm
	B5-50-350	417715134	350 mm	379 mm
	B5-50-400	417715635	400 mm	429 mm
	B5-50-450	417715136	450 mm	479 mm
	B5-50-500	417715636	500 mm	529 mm
	B5-50-550	417715138	550 mm	579 mm
	Description	Type	Part Number	L1
Triple Shaft	B10-50-250	417715114	250 mm	279 mm
	B10-50-300	417715538	300 mm	329 mm
	B10-50-350	417715140	350 mm	379 mm
	B10-50-400	417715542	400 mm	429 mm
	B10-50-450	417715142	450 mm	479 mm
	B10-50-500	417715597	500 mm	529 mm
	B10-50-550	417715144	550 mm	579 mm

Ⓐ - Ⓕ = Options for mounting rope sheaves on shafts

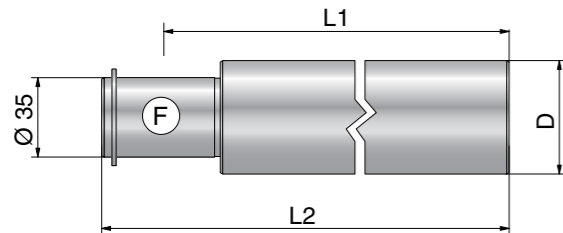
Shafts



Shaft Type B15

- Adjustable swivel shaft for mounting Adjustable Swivel Rope Sheave
- Swivel adjustment +/- 25°
- Includes supply of 1 circlip
- Shaft made of stainless steel material
- Standard D = 50 mm

Imperial D = 1 15/16" is available on request. Add an „I“ to the end of the part number.



Shaft Type B20

- Shaft made of stainless steel material for mounting Rope Sheave type S25
- Includes supply of 1 circlip
- Standard D = 50 mm

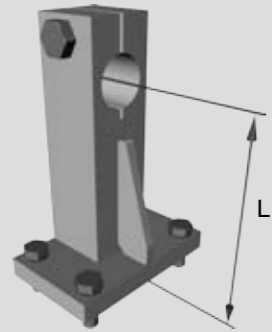
Imperial D = 1 15/16" is available on request. Add an „I“ to the end of the part number.

- Shafts are made of black oxide coated steel unless otherwise noted.
- Shafts of other diameters available on special request.

Description	Type	Part Number	L	
Swivel Shaft	B15-50-250	417715411	250 mm	
	B15-50-300	417715637	300 mm	
	B15-50-350	417715412	350 mm	
	B15-50-400	417715638	400 mm	
	B15-50-450	417715413	450 mm	
	B15-50-500	417715722	500 mm	
	B15-50-550	417715414	550 mm	
Description	Type	Part Number	L1	L2
Stainless Steel Single Shaft	B20-50-150	417715075	150 mm	179 mm
	B20-50-200	417715639	200 mm	229 mm
	B20-50-250	417715146	250 mm	279 mm
	B20-50-300	417715640	300 mm	329 mm
	B20-50-350	417715148	350 mm	379 mm
	B20-50-400	417715641	400 mm	429 mm
	B20-50-450	417715150	450 mm	479 mm
	B20-50-500	417715642	500 mm	529 mm
	B20-50-550	417715152	550 mm	579 mm

Ⓐ - Ⓕ = Options for mounting rope sheaves on shafts

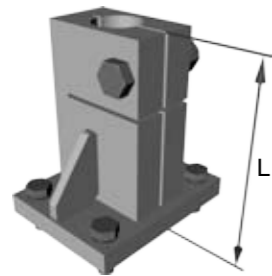
Mounting



Eye-Mount Type H1

- For Shafts, T-arms or Mounting Shafts
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Material: steel
- Includes fasteners and clamp bolt
- Finished in Light Grey RAL 7035 machine enamel

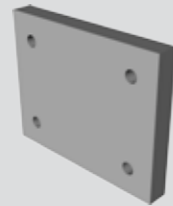
Description	Type	Part Number	L
Eye-Mount	H1-60	417715006	60 mm
	H1-100	417715007	100 mm
	H1-200	417715008	200 mm
	H1-300	417715009	300 mm



Flange-Mount Type H5

- For Shafts, T-arms or Mounting Shafts
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Material: steel
- Includes fasteners and clamp bolt
- Install shaft to a minimum depth of 2 x shaft diameter
- Finished in Light Grey RAL 7035 machine enamel

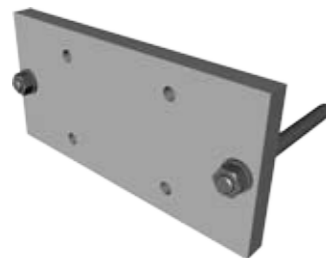
Description	Type	Part Number	L
Flange-Mount	H5-150	417715011	150 mm
	H5-200	417715013	200 mm
	H5-300	417715015	300 mm



Weld-on Base Plate Type H10

- Base plate for Mounts Type H1 & H5. For welding to machine frames or anchor plates cast into foundations
- Material: steel
- Primer coated finish

Description	Type	Part Number
Weld-on Base Plate	H10	417715219



Anchor Plate Type H15

- Base plate for Mounts Type H1 & H5. Fastened to foundation by means of adhesive anchors
- Includes supply of 2 adhesive anchors
- Material: Steel
- Primer coated finish

Description	Type	Part Number
Anchor Plate	H15	417715251

Mounting



Mounting Block Typ H20

- For Shafts, T-arms or Mounting Shafts
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Material: steel
- Includes fasteners and clamp bolt
- Finished in Light Grey RAL 7035 machine enamel

Description	Type	Part Number
Mounting Block	H20	417715695



T-Arm Type H25

- T-Arm allows rope sheaves to be mounted in various positions and angles
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Shafts, T-Arms or Mounting Shafts are fastened by clamping
- Includes supply of 1 clamp bolt
- Material: steel
- Black oxide finish

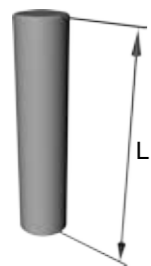
Description	Type	Part Number	L
T-Arm	H25-250	417715441	250 mm
	H25-350	417715442	350 mm
	H25-450	417715443	450 mm
	H25-550	417715444	550 mm



Mounting Clamp Type H30

- For fastening Shafts, T-Arms or Mounting Shafts
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Includes supply of 1 clamp bolt
- Material: steel
- Black oxide finish

Description	Type	Part Number
Mounting Clamp	H30	417715218



Mounting Shaft Type H35

- For Eye-Mounts, Flange Mounts, T-Arms and Mounting Clamps
(not intended for mounting rope sheave bearings)
- Accepts 50 mm diameter shafting (standard)
Imperial D = 1 15/16" is available on request.
Add an „I“ to the end of the part number.
- Material: steel
- Black oxide finish

Description	Type	Part Number	L
Mounting Shaft	H35-200	417715665	200 mm
	H35-400	417715666	400 mm
	H35-600	417715667	600 mm
	H35-800	417715668	800 mm
	H35-1000	417715669	1000 mm

Rope Tensioner



Rope Tensioner

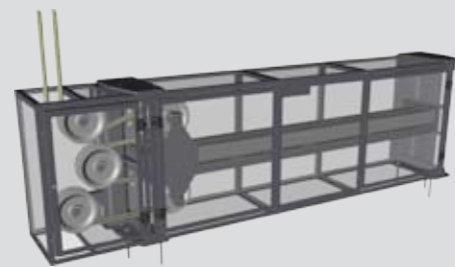
- The following versions of Rope Tensioner are available
 - Horizontal for 1, 2, and 3 rope systems
 - Vertical for 1, 2, and 3 rope systems
 - Take-up of 8, 10, and 14 meters
- Each rope is tensioned by means of a separate rodless pneumatic cylinder
- The Rope Tensioner is supplied complete with safety guards
- All Rope Sheaves fitted with maintenance free bearings
- Framework, guards and rope sheaves finished in Light Grey RAL 7035 machine enamel

- The total take-up stroke required is calculated by following formula:

$$\text{take-up stroke [m]} = L_{\text{Rope}} \text{ [m]} \times 0,08 + 1 \text{ m reserve stroke } (+ L_{\text{Rope Retraction}} \text{ [m]})$$

L_{Rope} = total rope length

$L_{\text{Rope Retraction}}$ = 2 x horizontal retraction travel (optional)



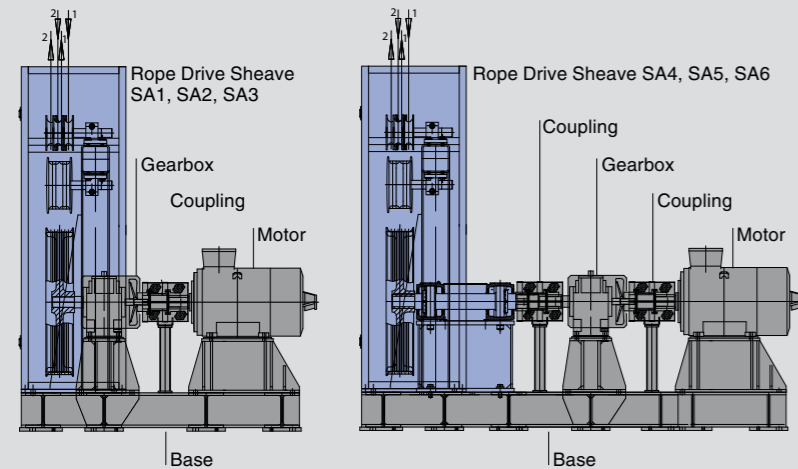
Pneumatic Control Cabinets

- In addition to the Rope Tensioner Voith offers pneumatic rope tensioner controls for 1, 2, and 3 rope systems. The following control settings can be selected manually using hand valves:
 - Apply rope tension
 - Release rope tension
 - Stop (The take-up traveler can be held in a fixed position)
- Air pressure is controlled by means of a pressure regulator
- Stainless steel pneumatic enclosure
- Pneumatic controls equipped with either Festo or Norgren pneumatic components as standard. Other makes of pneumatic components are available on special request.

Description	Type	Part Number	Stroke	Ropes
Single Rope Tensioner Vertical	SP1-8000-V	417715500	8000 mm	1
	SP1-10000-V	417715540	10000 mm	
	SP1-14000-V	417715730	14000 mm	
Double Rope Tensioner Vertical	SP2-8000-V	417715510	8000 mm	2
	SP2-10000-V	417715550	10000 mm	
Triple Rope Tensioner Vertical	SP3-8000-V	417715670	8000 mm	3
	SP3-10000-V	417715680	10000 mm	
	SP3-14000-V	417715690	14000 mm	
Single Tensioner Horizontal	SP1-8000-H	417715520	8000 mm	1
	SP1-10000-H	417715560	10000 mm	
	SP1-14000-H	417715750	14000 mm	
Double Tensioner Horizontal	SP2-8000-H	417715530	8000 mm	2
	SP2-10000-H	417715570	10000 mm	
Triple Tensioner Horizontal	SP3-8000-H	417715800	8000 mm	3
	SP3-10000-H	417715810	10000 mm	
	SP3-14000-H	417715820	14000 mm	
Description	Type	Part Number	Vendor Components	
Single Rope Control Cabinet	PSP1	417715701	Festo	
		417715711	Norgren	
Double Rope Control Cabinet	PSP2	417715702	Festo	
		417715712	Norgren	
Triple Rope Control Cabinet	PSP3	417715703	Festo	
		417715713	Norgren	

Rope Drives

Configurations

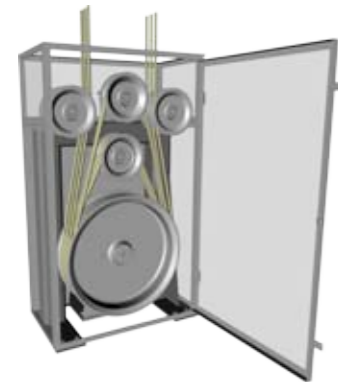


Complete Rope Drive

- Rope Drives available for 1, 2, and 3 rope systems
- On request Voith can supply a Complete Rope Drive including: rope drive sheave, motor, gearbox, base and variable frequency controller. Please contact your local Voith representative to develop the specific solution for your rope system requirements.

- Standard Catalogue Parts (see below)
- Accessories

Description	Type	Part Number	Ropes
Complete Rope Drive	SAK1	On Request	1
	SAK2	On Request	2
	SAK3	On Request	3



Rope Drive Sheave Assembly

- Triple wrapped drive sheave to minimize rope slippage
- Guarding and guide sheaves included
- The rope drive sheave can be installed directly onto the motor or gearbox
- Motor, gearbox and base not included

Description	Type	Part Number	Ropes
Drive Sheave Assembly	SA1	417715600	1
	SA2	417715610	2
	SA3	417715620	3



Rope Drive Sheave Assembly with Integral Sheave Support

- Triple wrapped drive sheave to minimize rope slippage
- Guarding and guide sheaves included
- When motor or gearbox bearing loads exceed manufacturers recommendations (e.g. for a 3 rope system), the rope drive sheave is mounted on an independent bearing support
- Motor, gearbox, and base not included

Description	Type	Part Number	Ropes
Drive Sheave with Integral Sheave Support	SA4	417715671	1
	SA5	417715672	2
	SA6	417715621	3

- All rope sheaves fitted with maintenance free bearings
- Framework, guards and rope sheaves finished in Light Grey RAL 7035 machine enamel

Accessories (on special request)



Rope Retraction Units

A Rope Retraction Unit is required when a scanner head cannot traverse the full sheet width due to possible interference with the threading ropes. To prevent this interference the ropes must be retracted to allow full sheet scanning. The retraction unit has 2 directions of motion: Horizontal to retract the ropes, and vertical to lift and lower the device.

To prevent possible interference with the tail during the threading

process, the retraction unit is stored below and well clear of the ropes.

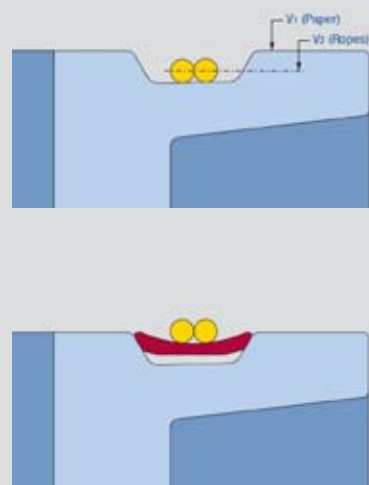
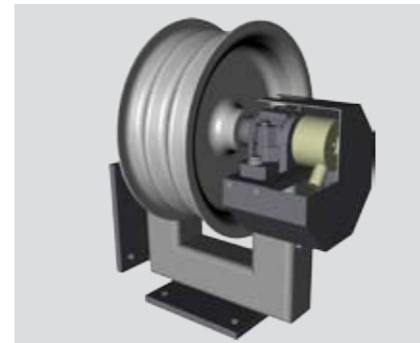
Voith Rope Retraction units can be used on 1, 2, and 3 rope systems.

The Rope Retraction Unit will be custom designed to suit the customer's specific application taking into consideration such issues as sheet run angles and mounting configuration.

Rope Speed Measurement

To monitor rope speed, a Rope Speed Measurement device can be incorporated into the rope system. This unit can be used on 1, 2, and 3 rope systems. At least 90° of wrap are required on the sheave to minimize rope slippage.

Suitable for integration and display in customer DCS.



RopeRing™

A dryer rope groove that is too deep will result in a differential speed between the threading rope and the face of the dryer cylinder. At higher operating speeds this can cause unreliable tail threading, possibly breaking the tail. The resulting increased threading time will reduce machine efficiency.

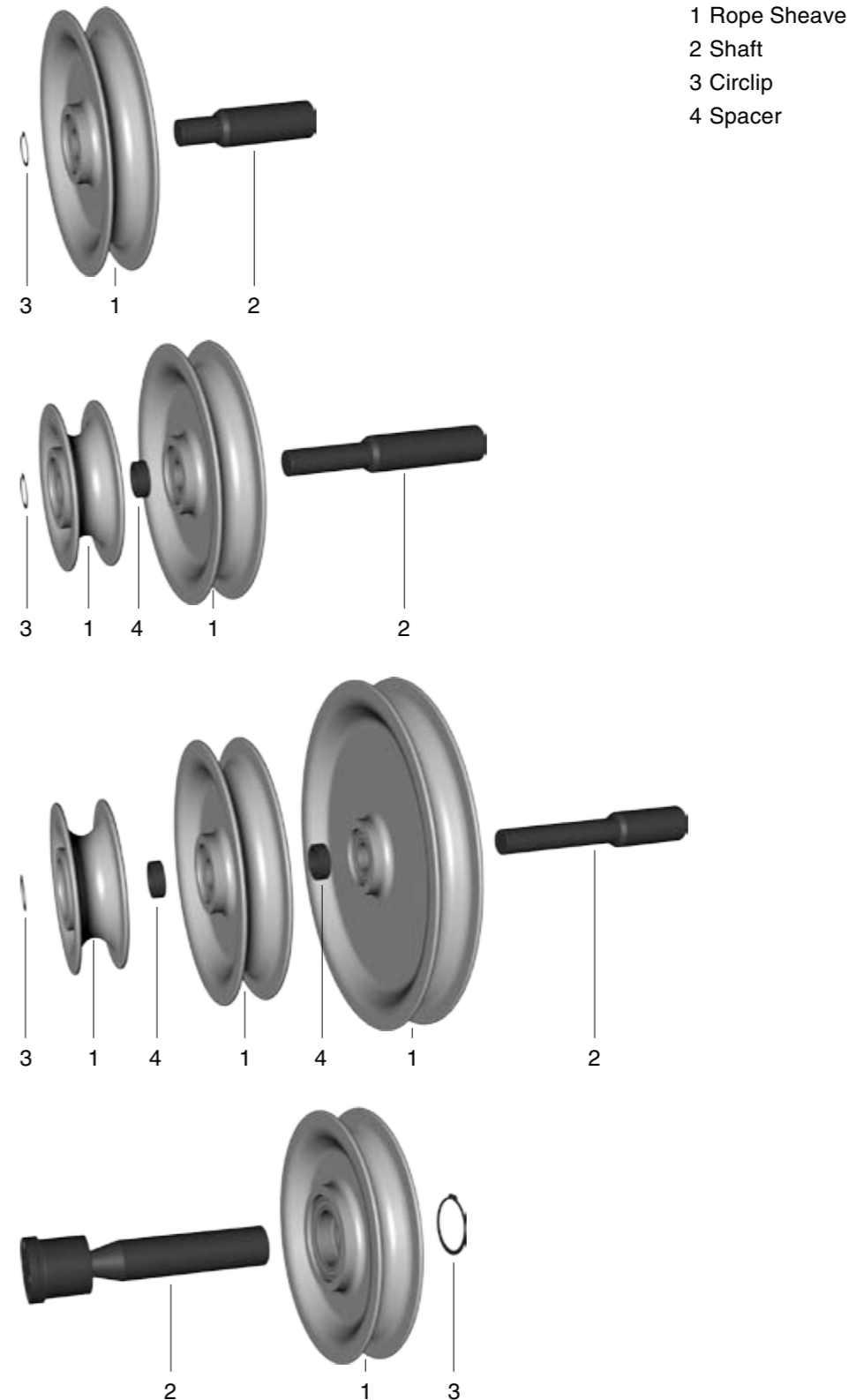
RopeRing™ solves this problem.

Rope grooves that are too deep can be filled with a steel ring profiled to

increase the radius over which the ropes are guided. Due to the lower differential speeds between rope and dryer face, threading times are reduced and efficiency is increased.

RopeRing™ can be fitted to any type of rope groove, including those found on free wheeling dryer sheaves.

Installation Examples



- 1 Rope Sheave
- 2 Shaft
- 3 Circlip
- 4 Spacer

Ordering Information

1. Select the desired items from the Rope System Components catalogue
2. Please use a copy of the Quotation Request Form included in this catalogue
3. Copy the information onto the request form making sure to include the part number and quantity required
4. Forward the completed request form by e-mail, fax or regular mail to your local Voith representative (see back side of the catalog) or the appropriate technical center
5. You will promptly receive a quotation indicating price and delivery
6. Place an order for your requirements referencing the quotation received
7. Feel free to contact your local Voith representative by phone to discuss your rope system and other tail threading needs
8. We would be pleased to provide you information on our complete rope audit capabilities

Quotation Request

Voith Paper _____	Company _____
_____	Street Address _____
_____	City / Country / Postal Code _____
_____	To the attention of: _____
_____	Telephone _____
_____	e-mail address _____

We request a quotation for the following items:

Item	Description	Type	Part Number	Quantity	Notes
1			417715 . . .		
2			417715 . . .		
3			417715 . . .		
4			417715 . . .		
5			417715 . . .		
6			417715 . . .		
7			417715 . . .		
8			417715 . . .		
9			417715 . . .		
10			417715 . . .		
11			417715 . . .		
12			417715 . . .		
13			417715 . . .		
14			417715 . . .		
15			417715 . . .		

Date, Signature

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