

MINIMUM DIAMETER OF PULLEYS

The minimum diameters of the pulleys of belt conveyors are determined by taking into account: the construction of the belt, its weight and the type of splicing.

Three types of pulleys are distinguished:

- Tension pulleys and other pulleys located in the area of highest tension of the belt
- Tail pulleys and other pulleys located in the area of lowest tension of the belt
- Snub or bend pulleys which do not change the direction of the belt by more than 30°.

The minimum diameter of a pulley also varies according to the tension in the belt.

For high types, do not forget that the weaker the surface pressure on the pulley, the better the (belt/pulley) adhesion coefficient will be

Pulley diameters greater than the recommended minimum diameters will increase the service life of the belt.

For large cover thicknesses, it is recommended to increase the diameters of the pulleys.

For belts not indicated in this table, please consult our technical departments.

Textile belts

Belt family		Tension in belt (%)	Minimum diameter of pulleys in mm			
			Drive	Tail and tension	Snub and bend	
TRANSUNIT	CTS/TTS	> 60 %	250	200	160	
		30 to 60 %	200	160	125	
		< 30 %	160	125	100	
ROUGTOP TRANGLIS	250/2	> 60 %	250	200	160	
		30 to 60 %	250	200	160	
		< 30 %	200	160	160	
	400/3	> 60 %	315	250	200	
		30 to 60 %	315	250	200	
		< 30 %	250	200	160	
TRANSPLY TRANSOIL	250/2	> 60 %	250	200	160	
		30 to 60 %	250	200	160	
		< 30 %	200	160	160	
	315/2	> 60 %	315	250	200	
		30 to 60 %	315	250	200	
		< 30 %	250	200	160	
MULTIPLY TRANSLAM TRANSOIL TRANSTHERM	400/3	> 60 %	315	250	200	
		30 to 60 %	315	250	200	
		< 30 %	250	200	160	
MULTITRANS / EP TRANSLAM TRANSTHERM RIP-STOP TRANSOIL	500/3	> 60 %	400	400	315	
		30 to 60 %	400	315	250	
		< 30 %	315	250	250	
	630/3	> 60 %	500	400	315	
		30 to 60 %	400	315	250	
		< 30 %	400	250	250	
	630/4	> 60 %	630	500	400	
		800/3	30 to 60 %	500	400	315
		1000/3	< 30 %	400	315	315

IMPORTANT NOTICE: This brochure has been prepared carefully, to advise our customers. The information stated therein is state of the art and the results of different tests carried out over several years. Individual operating conditions affect any product, which means that a product can only offer the safety that can be expected on the basis of the data provided in our product information. In the event that the product is used otherwise than in conformity with the specifications, such safety may not be assumed. Our responsibility is limited exclusively to delivery of the conveyor belt in accordance with the specifications.

The figures stated in our documents are mean approximate values for information but no specified or warranted values.

Please note: Before using the product in new areas of application which are not covered by the product information a Sempertrans engineer **MUST** be asked for advice. Stocking, care and maintenance of all our products must be performed according to our stocking, care and maintenance guidelines and according to ISO 5285 standard ;

Subject to errors and printing errors.
 Reproduction of any kind - also of excerpts - only upon express written consent of Sempertrans.
 The brochure shall remain the property of Sempertrans and is the most recent version.
 All transactions shall be exclusively subject to our general terms and conditions.
 Date of publication 06/2007 1st edition
 Subject to changes.

Textile belts (continued)

Belt family		Tension in belt (%)	Minimum diameter of pulleys in mm		
			Drive	Tail and tension	Snub and bend
MULTITRANS / EP TRANSLAM TRANSTHERM RIP-STOP TRANSOIL (continued)	800/4	> 60 %	800	630	500
	800/5	30 to 60 %	630	500	400
	1000/4	< 30 %	500	400	315
	1000/5	> 60 %	1000	800	630
	1250/3	30 to 60 %	800	630	500
	1250/4	< 30 %	630	500	400
	1600/4				
	1250/5				
	1250/6	> 60 %	1250	1000	800
	1500/3	30 to 60 %	1000	800	630
	1600/5	< 30 %	800	630	500
	1800/3				
	1800/5				
	1600/6	> 60 %	1400	1250	1000
	2000/4	30 to 60 %	1250	1000	800
	2000/5	< 30 %	1000	800	630
	2500/5	> 60 %	1600	1400	1000
		30 to 60 %	1400	1250	1000
		< 30 %	1250	1000	800
	3150/5	> 60 %	1800	1600	1250
30 to 60 %		1600	1400	1000	
< 30 %		1250	1250	800	
TRANSRIGID XST2	500/3	> 60 %	250	200	160
		30 to 60 %	250	200	160
		< 30 %	200	160	160
TRANSPROFIL CD 15	250/2	All tensions	315	315	////////
	400/3				
TRANSPROFIL CD 25	250/2	All tensions	400	400	////////
	400/3				
POLYAMIDE PP	400/2	> 60 %	315	250	200
	500/2	30 to 60 %	250	200	160
		< 30 %	200	160	125
	630/2	> 60 %	400	315	250
	630/3	30 to 60 %	315	250	200
	800/2	< 30 %	250	200	160
	800/3				
	800/4				
	1000/2	> 60 %	500	400	315
	1000/3	30 to 60 %	400	315	250
	1000/4	< 30 %	315	250	200
	1250/2				
	1000/5				
	1250/3	> 60 %	630	500	400
	1250/4	de 30 a 60 %	500	400	315
	1250/4	< 30 %	400	315	250
	1250/5				
	1500/3	> 60 %	800	630	500
	1600/4	de 30 a 60 %	630	500	400
1800/3	< 30 %	500	400	315	
1600/5					
1800/5	> 60 %	1000	800	630	
2000/4	de 30 a 60 %	800	630	500	
2000/5	< 30 %	630	500	400	
2250/5					
2000/6	> 60 %	1250	1000	800	
2500/4	de 30 a 60 %	1000	800	630	
3150/4	< 30 %	800	630	500	

IMPORTANT NOTICE: This brochure has been prepared carefully, to advise our customers. The information stated therein is state of the art and the results of different tests carried out over several years. Individual operating conditions affect any product, which means that a product can only offer the safety that can be expected on the basis of the data provided in our product information. In the event that the product is used otherwise than in conformity with the specifications, such safety may not be assumed. Our responsibility is limited exclusively to delivery of the conveyor belt in accordance with the specifications.

The figures stated in our documents are mean approximate values for information but no specified or warranted values.

Please note: Before using the product in new areas of application which are not covered by the product information a Sempertans engineer MUST be asked for advice. Stocking, care and maintenance of all our products must be performed according to our stocking, care and maintenance guidelines and according to ISO 5285 standard ;

Subject to errors and printing errors.

Reproduction of any kind - only upon express written consent of Sempertans.

The brochure shall remain the property of Sempertans and is the most recent version.

All transactions shall be exclusively subject to our general terms and conditions.

Date of publication 06/2007 1st edition

Subject to changes.

Textile belts (continued)

Belt family	Tension in belt (%)	Minimum diameter of pulleys in mm			
		Drive	Tail and tension	Snub and bend	
TRANSLEV EDG TRANSLEV LPWH	340	All tensions	400	400	/////
	350				
	463	All tensions	400	400	/////
	480	All tensions	400	400	/////
	4100	All tensions	400	400	/////
BIATHLON TRIATHLON	4125	All tensions	400	400	/////
	400/2	> 60 %	400	315	250
	500/2	30 to 60 %	315	315	250
	630/2	< 30 %	315	250	250
		> 60 %	500	400	315
	800/2	30 to 60 %	400	315	315
		< 30 %	400	315	250
		> 60 %	630	500	400
	1000/2	30 to 60 %	500	400	315
		< 30 %	400	315	315
		> 60 %	800	630	500
	1250/2	30 to 60 %	630	500	400
		< 30 %	500	400	315

TECHNICAL INFORMATION

IMPORTANT NOTICE: This brochure has been prepared carefully, to advise our customers. The information stated therein is state of the art and the results of different tests carried out over several years. Individual operating conditions affect any product, which means that a product can only offer the safety that can be expected on the basis of the data provided in our product information. In the event that the product is used otherwise than in conformity with the specifications, such safety may not be assumed. Our responsibility is limited exclusively to delivery of the conveyor belt in accordance with the specifications.

The figures stated in our documents are mean approximate values for information but no specified or warranted values.

Please note: Before using the product in new areas of application which are not covered by the product information a Sempertrans engineer **MUST** be asked for advice. Stocking, care and maintenance of all our products must be performed according to our stocking, care and maintenance guidelines and according to ISO 5285 standard ;

Subject to errors and printing errors.
 Reproduction of any kind - also of excerpts - only upon express written consent of Sempertrans.
 The brochure shall remain the property of Sempertrans and is the most recent version.
 All transactions shall be exclusively subject to our general terms and conditions.
 Date of publication 06/2007 1st edition
 Subject to changes.

Metal belts

Belt family	Tension in belt (%)	Minimum diameter of pulleys in mm			
		Drive	Tail and tension	Snub and bend	
METALCORD M METALTRANS M AUTOSTABLE M	500 630	> 60 %	400	315	250
		30 to 60 %	315	250	200
	800 1000	< 30 %	250	250	200
		> 60 %	500	400	315
	1250 1400	30 to 60 %	400	315	250
		< 30 %	315	315	250
	1600 1800	> 60 %	630	500	400
		30 to 60 %	500	400	315
	2000	< 30 %	400	315	250
		> 60 %	800	630	630
		30 to 60 %	630	500	500
		< 30 %	500	400	400
METALCORD E METALTRANS E	800 1000	> 60 %	630	500	400
		30 to 60 %	500	400	315
	1250 1400	< 30 %	400	315	315
		> 60 %	800	630	500
	1600 1800	30 to 60 %	630	500	400
		< 30 %	500	400	315
	2000 2250	> 60 %	1000	800	630
		30 to 60 %	800	630	500
	2500 2800	< 30 %	630	500	500
		> 60 %	1250	1000	800
	3150 3500	30 to 60 %	1000	800	630
		< 30 %	800	630	630
ST STEELCORD cord diameter 3.7, 4.4 and 5.2 mm	800	> 60 %	800	630	500
	1000	30 to 60 %	630	500	400
	1400	< 30 %	500	400	315
	1500	> 60 %	1400	1250	1000
	1600	30 to 60 %	1250	1000	800
ST STEELCORD cord diameter 6.8 and 7.6 mm	2500	< 30 %	800	630	500
	3150	> 60 %	1400	1250	1000
		30 to 60 %	1250	1000	800
ST STEELCORD cord diameter 8.2 and 8.8 mm	3500	< 30 %	1000	800	630
	4000	> 60 %	1600	1400	1250
		30 to 60 %	1400	1250	1000
ST STEELCORD cord diameter 9.6 and 10.6 mm	4500	< 30 %	1250	1000	800
	5000	> 60 %	1800	1600	1250
		30 to 60 %	1600	1250	1000
ST STEELCORD cord diameter 11.2	5400	< 30 %	1250	1000	800
		> 60 %	1800	1600	1250
		30 to 60 %	1600	1250	1000
TRANSLEV LPM	1000	All tensions	800	800	////////
	1250				
	1600				
	2000				

IMPORTANT NOTICE: This brochure has been prepared carefully, to advise our customers. The information stated therein is state of the art and the results of different tests carried out over several years. Individual operating conditions affect any product, which means that a product can only offer the safety that can be expected on the basis of the data provided in our product information. In the event that the product is used otherwise than in conformity with the specifications, such safety may not be assumed. Our responsibility is limited exclusively to delivery of the conveyor belt in accordance with the specifications.

The figures stated in our documents are mean approximate values for information but no specified or warranted values.

Please note: Before using the product in new areas of application which are not covered by the product information a Sempertans engineer MUST be asked for advice. Stocking, care and maintenance of all our products must be performed according to our stocking, care and maintenance guidelines and according to ISO 5285 standard ;

Subject to errors and printing errors.
 Reproduction of any kind - also of excerpts - only upon express written consent of Sempertans.
 The brochure shall remain the property of Sempertans and is the most recent version.
 All transactions shall be exclusively subject to our general terms and conditions.
 Date of publication 06/2007 1st edition
 Subject to changes.