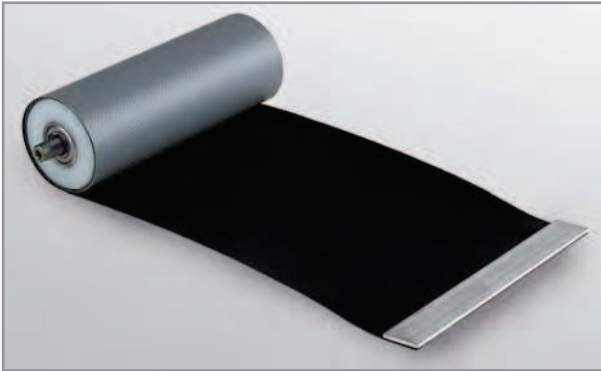


ROLLER COVERS

ROLLER cover systems are a possible substitute for bellow covers in very narrow spaces when only general sealing is required.

Two different types are available:

- ROLLER blind without housing - this type needs less space, best used with smaller diameters and short extensions
- ROLLER blind with housing - we recommend this type for safety reasons when longer extensions are used and especially when steel is used for the band material. They are available in many variants.



ROLLER blind cover without housing

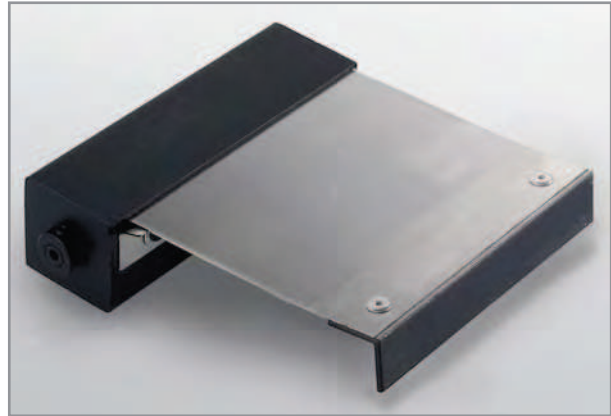
Drives

The ROLLER systems come with different drive concepts:

- Torsion springs TF: Drive separate to cover band
- Steel band drives SA: Cover band forms drive
- Steel band spring drive FM: Drive separate to cover band
- Electrical drive: to customers specifications (see page 62)

Design option	ROLLER with TF drive	ROLLER with SA drive	ROLLER with FM drive
Housing available	■	■	■
Side mount available	■		■
Link Apron available	■ (limited)		■
Outer band synthetic material	■		■
Outer band stainless steel	■ (limited)		■
Outer band normal steel		■	■
Maximum band width in mm	1,500*	300	1,500*
Maximum band extension in mm	3,000	7,500	6,000*
Maximum travelling speed	60 m/min	30 m/min	40 m/min
Rapid change of direction	■	■	limited
Continuous load	very high	average	high
Resistance to dust/dirt	low	average	low
Tension forces	slightly increased when fully extended	increased when fully extended	slightly increased when fully extended
Product costs	low	low	average

*other dimensions on request



ROLLER blind cover with steel band and housing

Torsion springs TF

Torsion springs are very well suited for a long working life performance at low loads. We recommend torsion spring drives primarily with synthetic material covers.

The torsion springs are manufactured from a high quality alloyed wire. This wire material has been proved to reach ten times the service life of a conventional wire spring.

Steel band drive SA

For higher tension forces we recommend SA steel band drives. The steel band for the outer cover also serves as a spring motor. Steel is selected for the band.

Steel band spring drive FM

Also suitable for higher tension forces are the FM steel band spring drives.

SERVICE & QUALITY 02

STANDARD BELLOWS 08

SAUMRAL BELLOWS 18

SPECIAL BELLOWS 26

BACKWALL SYSTEMS 36

GLADIATOR STEEL COVERS 38

ROLLER SYSTEMS 47

DURASPRING SPIRAL SPRINGS 58

VIEWING SYSTEMS 68

ROLLER COVERS

	Band width [#]	extension	ROLLER, drive torsion spring (TF) without housing Ø Roller	ROLLER,drive torsion spring (TF) with housing housing LxW	ROLLER, drive spring motor (FM) without housing Ø Roller	ROLLER, drive spring motor (FM) with housing housing LxW	ROLLER drive steel band (SA) with housing housing LxW
02 SERVICE & QUALITY	over 150	bis 300	21 / 28* ●	40 x 40 ●	50 ●	60 x 60 ●	40 x 40 ■
08 STANDARD BELLOWS	over 150	bis 500	21 / 30 ●	50 x 50 ●	50 ●	60 x 60 ●	50 x 50 ■
	over 150	bis 1.000	40 ●	60 x 60 ●	45 / 50 ●	70 x 70 ●	60 x 60 ■
	over 150	bis 1.500	-	-	50 / 60 ●	80 x 80 ●	70 x 70 ■
18 SAUWRAI BELLOWS	over 150	bis 2.000	-	-	60 / 70 ●■	90 x 90 ●■	75 x 75 ■
	over 150	bis 2.500	-	-	70 / 80 ●■	110 x 110 ●■	80 x 80 ■
	over 150	bis 3.000	-	-	80 / 90 ●■	120 x 120 ●■	90 x 90 ■
	over 150	bis 4.000	-	-	90 / 100 ●■	130 x 130 ●■	100 x 100 ■
	over 150	bis 5.000	-	-	100 / 120 ●■	140 x 140 ●■	110 x 110 ■
26 SPECIAL BELLOWS	over 150	bis 7.000	-	-	120 / 133 ●■	150 x 150 ●■	120 x 120 ■
	over 150	bis 9.000	-	-	120 / 133 ●■	160 x 160 ●■	120 x 120 ■
	special dimensions	on request					
34 BACKWALL SYSTEMS	up to 300	up to 300	21 / 28 ●	40 x 40 ●	45 ●■	60 x 60 ●■	40 x 40 ■
	up to 300	up to 500	21 / 28 ●	50 x 50 ●	50 / 60 ●■	70 x 70 ●■	50 x 50 ■
	up to 300	up to 1,000	30 / 32 ●	60 x 60 ●	60 ●■	70 x 70 ●■	60 x 60 ■
	up to 300	up to 1,500	40 / 45 ●	70 x 70 ●■	60 ●■	80 x 80 ●■	70 x 70 ■
	up to 300	up to 2,000	-	80 x 80 ●■	60 / 70 ●■	90 x 90 ●■	75 x 75 ■
38 GLADIATOR STEEL COVERS	up to 300	up to 2,500	-	80 x 80 ●■	70 / 80 ●■	100 x 100 ●■	80 x 80 ■
	up to 300	up to 3,000	-	90 x 90 ●■	80 / 90 ●■	110 x 110 ●■	90 x 90 ■
	up to 300	up to 4,000	-	100 x 100 ●■	90 / 100 ●■	120 x 120 ●■	100 x 100 ■
	up to 300	up to 5,000	-	120 x 120 ●■	90 / 100 ●■	130 x 130 ●■	110 x 110 ■
	up to 300	up to 7,000	-	-	100 / 120 ●■	150 x 150 ●■	120 x 120 ■
48 ROLLER SYSTEMS	up to 300	up to 9.000	-	-	100 / 120 ●	160 x 160 ●	140 x 140 ■
	special dimnsions	on request					
58 DURASPRING SPIRAL SPRINGS	over 300 up to 1,000	up to 300	21 / 28 ●	40 x 40 ●■	40 / 45 ●■	60 x 60 ●■	-
	over 300 up to 1,000	up to 500	21 / 28 ●	50 x 50 ●■	45 / 50 ●■	70 x 70 ●■	-
	over 300 up to 1,000	up to 1,000	30 / 32 ●	60 x 60 ●■	45 / 50 ●■	70 x 70 ●■	-
	over 300 up to 1,000	up to 1,500	45 ●	70 x 70 ●■	50 / 60 ●■	80 x 80 ●■	-
	over 300 up to 1,000	up to 2,000	60 ●■	80 x 80 ●■	60 / 70 ●■	90 x 90 ●■	-
	over 300 up to 1,000	up to 2,500	50 / 60 ●■	80 x 80 ●■	70 / 80 ●■	110 x 110 ●■	-
68 VIEWING SYSTEMS	over 300 up to 1,000	up to 3,000	60 / 70 ●■	90 x 90 ●■	80 / 90 ●■	120 x 120 ●■	-
	over 300 up to 1,000	up to 4,000	70 / 80 ●■	100 x 100 ●■	80 / 100 ●■	130 x 130 ●■	-
	over 300 up to 1,000	up to 5,000	80 / 90 ●■	120 x 120 ●■	90 / 100 ●■	140 x 140 ●■	-
	over 300 up to 1,000	up to 7,000	90 / 100 ●■	130 x 130 ●■	100 / 120 ●■	150 x 150 ●■	-
	over 300 up to 1,000	up to 9,000	100 / 120 ●■	150 x 150 ●■	100 / 120 ●■	160 x 160 ●■	-
	special dimensions	on request					

All dimensions in mm.

The band with is depending on the kind of drive FM or TF), a FM drive requests a band width of 50 mm min., a TF type : 50 mm min.

* 21/28 means a roller diameter of 21 mm for regular load and 28 mm for high load. Other types and sizes on request. Square outer housing, rollo size is equivalent to outer dimension of the tube. Type without housing: first number: standard spring force/second number: enlarged spring force is required.

● non-metallic band possible

■ steel band possible

ROLLER COVERS

Dimensions of housings

The measurements for the ROLLER System housings must take into account the band width, length of extension and also type of drive.

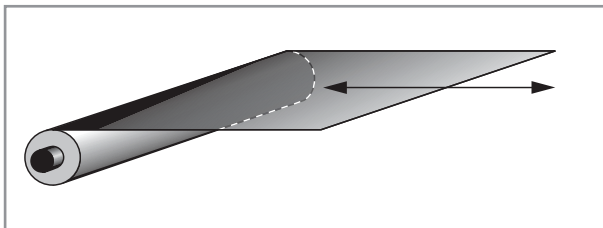
Design data for calculation

For the design of the ROLLER covers the following factors should be considered:

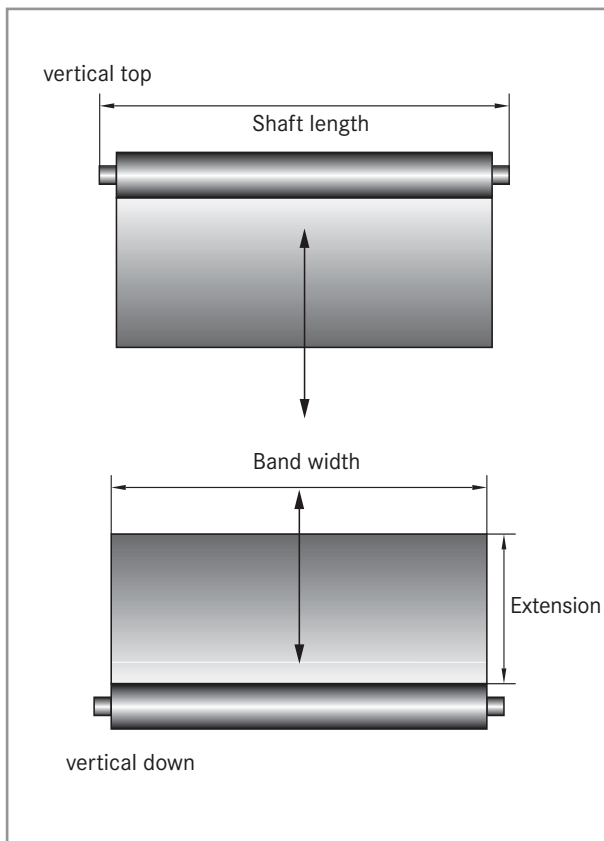
- speed of travel
- intended total number of cycles, working life
- frequency and speed of changes in travel direction
- mounting position, direction of swarf

Operating position

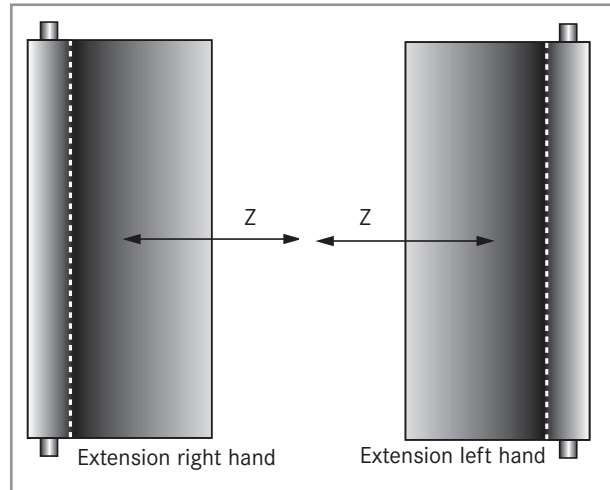
The operating position can be vertical, horizontal or transverse, with an extension to the left, right, top or bottom side.



Operating position: horizontal flat



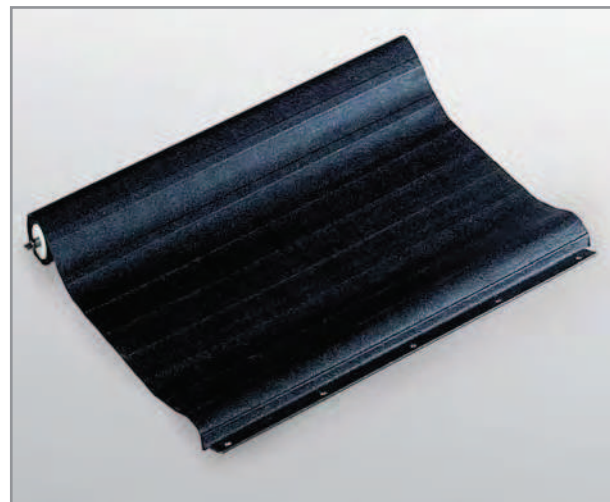
Operating position: vertical flat



Operating position: horizontal upright, e.g. for X axis covers

Pre-loading

- ROLLER systems with housing are pre-loaded at the factory to customer or HEMA specifications and are ready to install.
- ROLLER systems without housing are not pre-loaded.



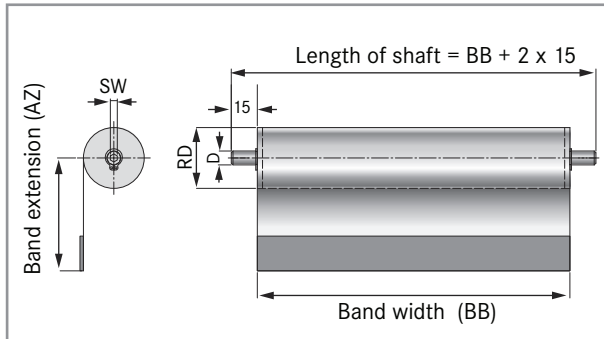
Roller blind with cover band

Cover material

The outer band is subjected to a wide variety of stresses; the material chosen depends on the field of application:

- Steel bands with rounded edges (standard and stainless steel): Protection from cold and hot chips, coolants. Maximum width of steel band standard 300 mm, steel band stainless 1000 mm
- Synthetic bands, e.g. Preotex, awning cloth, Neoprene, etc., Protection from dust, coolants, contact guard
- Link aprons: Protection from large chips, coolants: Recommended for applications requiring additional lateral stability

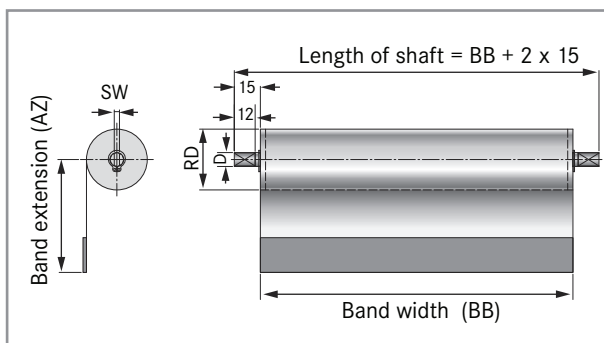
ROLLER COVERS



Standard shaft for ROLLER blind without housing

Type of shaft	inner hexagon (SW)	Projecting
E1-08	4	2 x 15
E1-10	4 / 6 optional	2 x 15
E1-12	6	2 x 15

Standard shaft for ROLLER blind without housing



Shaft for ROLLER blind without housing (optional)

Type of shaft	inner hexagon (SW)	Maximum width across flats
E2-08	4	3 x 12
E2-10	4 / 6 optional	4 x 12
E2-12	6	6 x 12

Shaft for ROLLER blind without housing (optional)

Mounting

A variety of mounting positions is available. ROLLER covers with housing can be mounted at the standard positions shown in the next column.

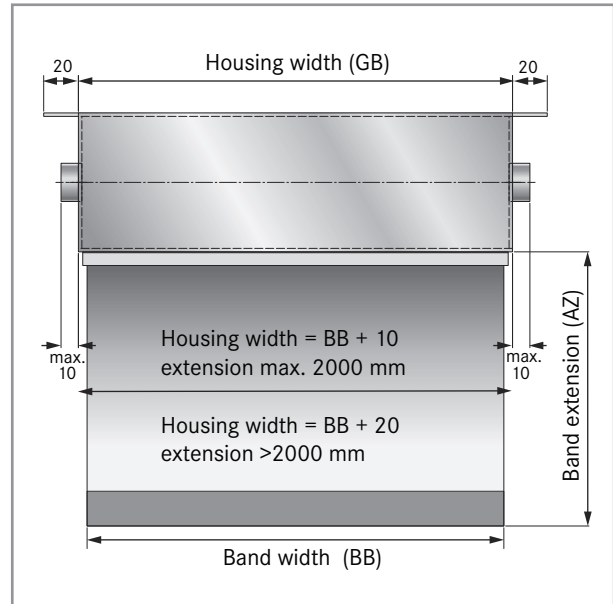
For mounting roller covers without housing two holder types are available for easy and permanent fixing:

- Standard holder (HL)
- Heavy duty holder (HS)

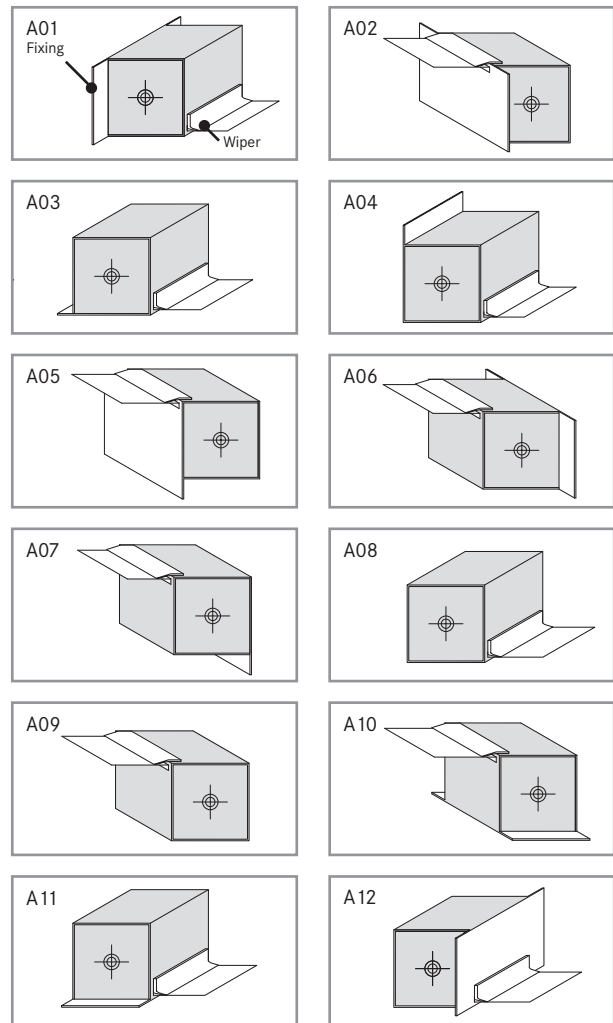
Customized holders can be produced for special requirements.

Please note

ROLLER covers ordered without housing are produced with round shafts as standard.

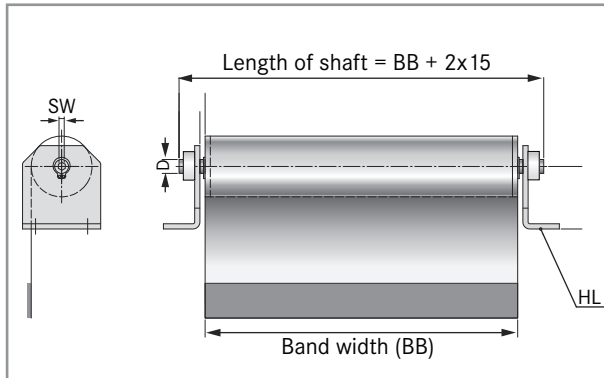


Calculation of housing dimension

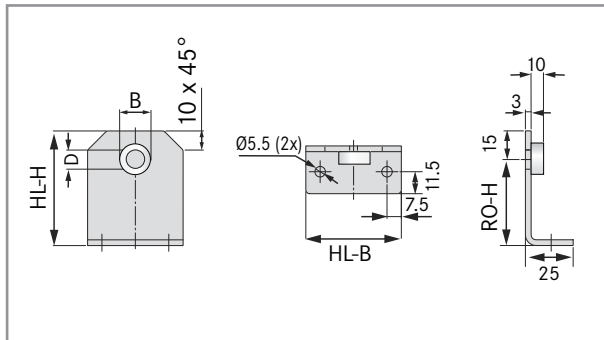


Fixing types for ROLLER with housing

ROLLER COVERS



Standard holder (HL)

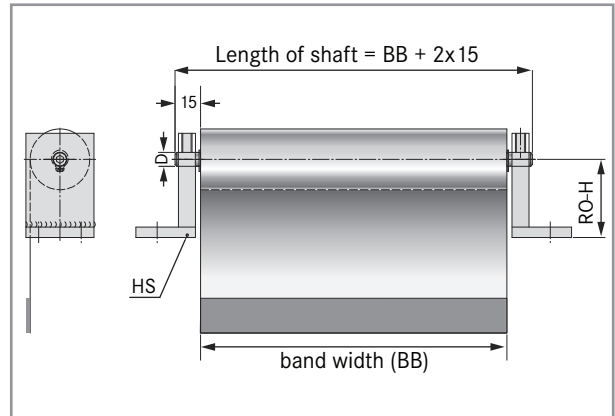


Standard holder (HL)

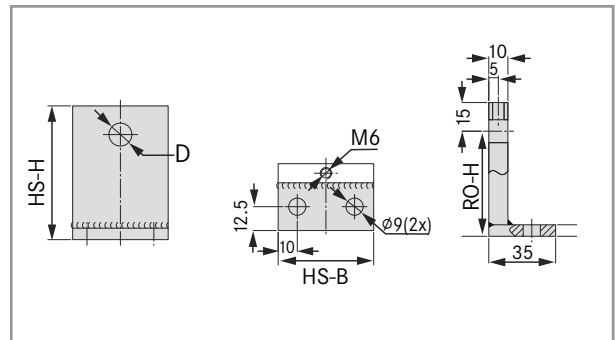
Legend

- D Diameter of axle
- B Collar
- SW Wrench size
- RO-H Space axis to holder
- HL-B/HS-B Width holder standard/holder heavy duty
- HL-H/HS-H Height holder standard/holder heavy duty

Halter-Typ	RO-H	D	B	HL-B	HL-H
HL-30/8	30	8	16	40	45
HL-30/10	30	10	20	40	45
HL-30/12	30	12	22	40	45
HL-40/8	40	8	16	45	55
HL-40/10	40	10	20	45	55
HL-40/12	40	12	22	45	55
HL-45/8	45	8	16	50	60
HL-45/10	45	10	20	50	60
HL-45/12	45	12	22	50	60
HL-50/8	50	8	16	65	65
HL-50/10	50	10	20	65	65
HL-50/12	50	12	22	65	65
HL-60/10	60	10	20	65	75
HL-60/12	60	12	22	65	75
HL-70/10	70	10	20	65	85
HL-70/12	70	12	22	65	85
HL-80/10	80	10	20	65	95
HL-80/12	80	12	22	65	95



Heavy duty holder (HS)



Heavy duty holder (HS)

Type of holder	RO-H	D	HS-B	HS-H
HS-45/10	45	10.2	50	60
HS-45/12	45	12.2	50	60
HS-50/10	50	10.2	50	65
HS-50/12	50	12.2	50	65
HS-60/10	60	10.2	70	75
HS-60/12	60	12.2	70	75
HS-70/10	70	10.2	70	85
HS-70/12	70	12.2	70	85
HS-80/10	80	10.2	90	95
HS-80/12	80	12.2	90	95
HS-90/10	90	10.2	90	105
HS-90/12	90	12.2	90	105
HS-100/10	100	10.2	100	115
HS-100/12	100	12.2	100	115
HS-120/10	120	10.2	100	135
HS-120/12	120	12.2	100	135
HS-140/10	140	10.2	100	155
HS-140/12	140	12.2	100	155
HS-150/10	150	10.2	100	165
HS-150/12	150	12.2	100	165

SERVICE & QUALITY	02
STANDARD BELLOWS	08
SAUWRAI BELLOWS	18
SPECIAL BELLOWS	26
BACKWALL SYSTEMS	36
GLADIATOR STEEL COVERS	38
ROLLER SYSTEMS	51
DURASPRING SPIRAL SPRINGS	58
VIEWING SYSTEMS	68