



Multi-axis backwall system



Roof Cover

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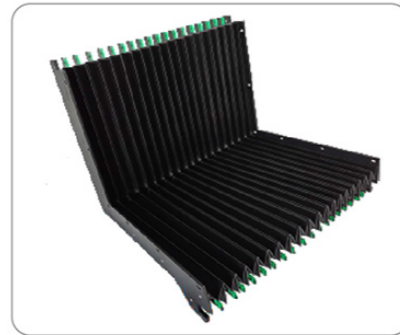
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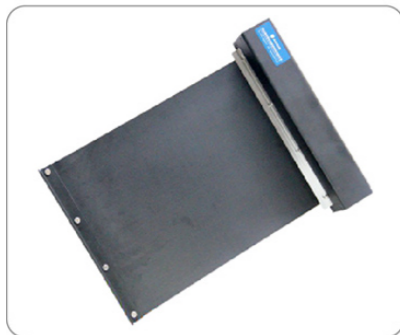
Steel clad Bellows Cover



Fabric Bellows Cover



Fabric bellows for medical industry



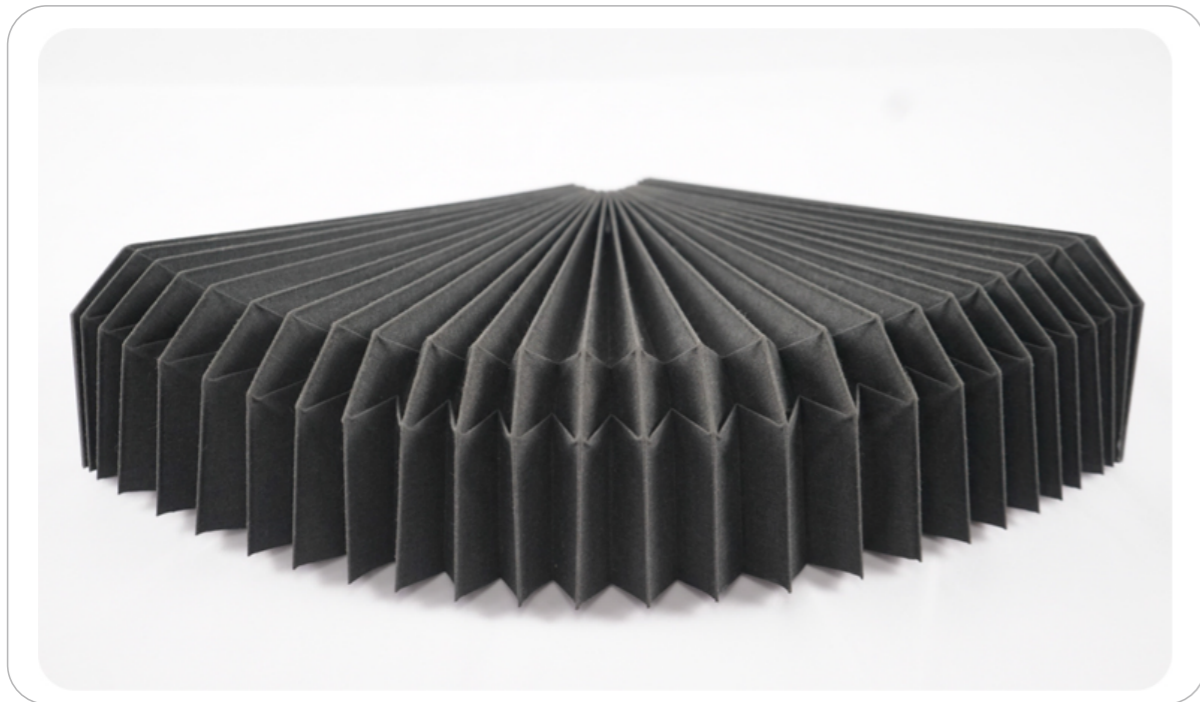
Roll Cover



Round Bellows Cover



Industrial Flush Gun & Dust Blow Gun



Application

Bellows cover base on customer's request, any shape, any size, thickness, other metal or mounting method are available.

Structure

1. Flange

Use proper thickness of plate to fix at both sides or the protective curtain or the punched stiffener, and the other side should be fixed at the guide way. Normally a SPCC sheet metal is applied. Upon customer's request, any shape, thickness, other metal or mounting method are available.

2. PVC Stiffener

The stiffener is a PVC board (meet the ROHS & CE) that provides a support for the inside of bellow covers. It's not only to reduce the contact between the bellow cover and the slide-way, but also to provide a solid support, rigidity and impact resistance. The stiffener is made from wear-resistant plastic with self-lubrication feature. The available thickness is 0.6 / 1.0 / 1.5 / 2.0 mm. Note: the increased thickness of stiffener may affect the compressed size(Lmin) of bellow cover.

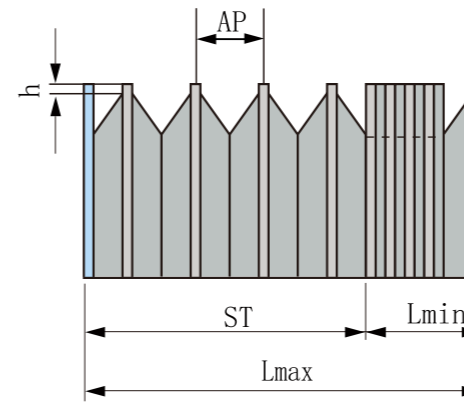
3. Protection fabric

It features excellent waterproof, oil-resistance, dust-proof etc. The material thickness of the bellow cover may vary with customers' environmental temperature, machining condition and chemical reaction.

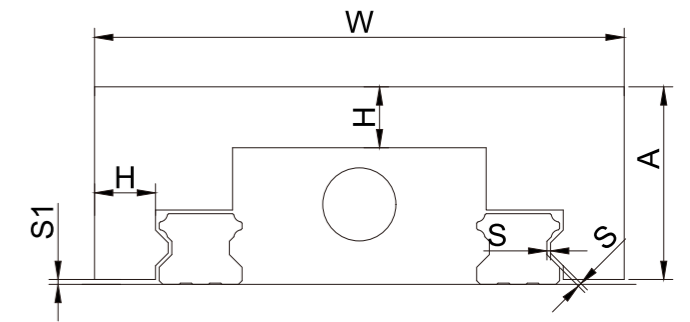
4. Restricted belt

Restricted belt is necessary to prevent over-extending of bellow cover, and suitable for fast moving speed, vertical movement or big size bellow cover. The additional restricted belt is fitted for the bellow cover during closed, add restricted belt properly can extend the service life of fabric bellow cover.

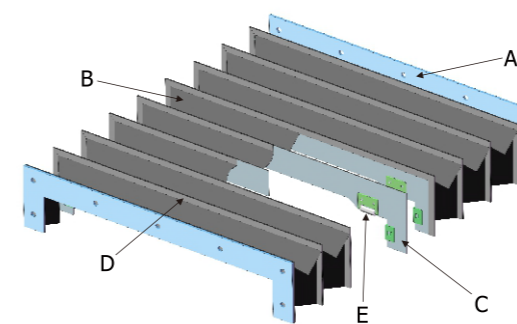
Dimensions



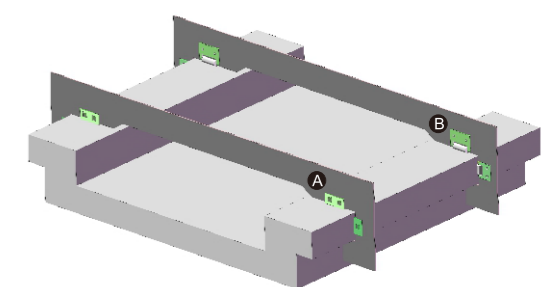
- Lmax = Maximum stretch out length
- Lmin = Minimum compression length
- ST = travel length(Lmax-Lmin)
- W = Outside width
- A = Outside height



- H = Folding height
- h = Welding height
- S = Gap
- S1 = Gap

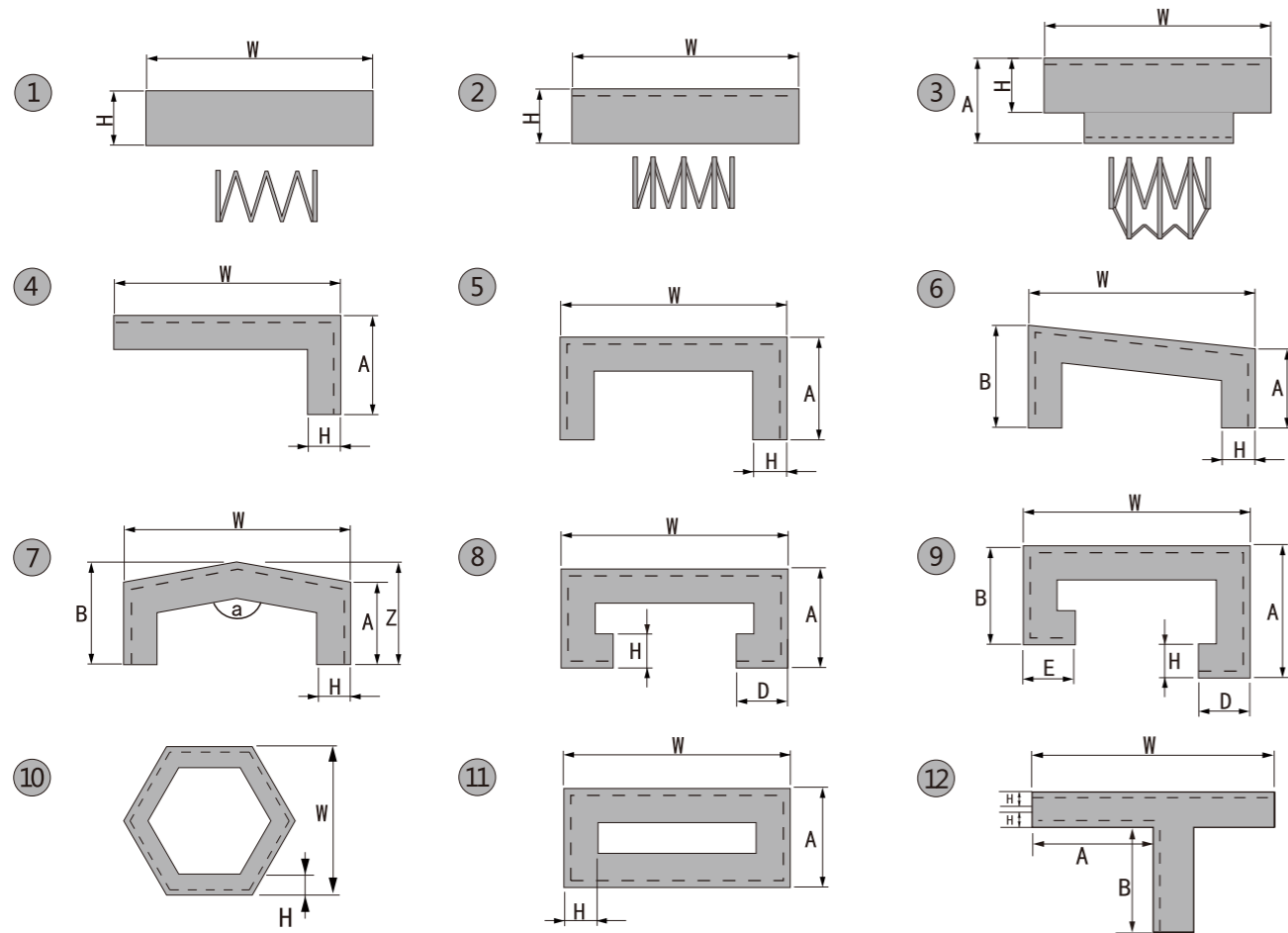


- A: ends Flange
- B: Fabric material
- C: PVC Stiffener
- D: Weld forming
- E: Sliding rollers

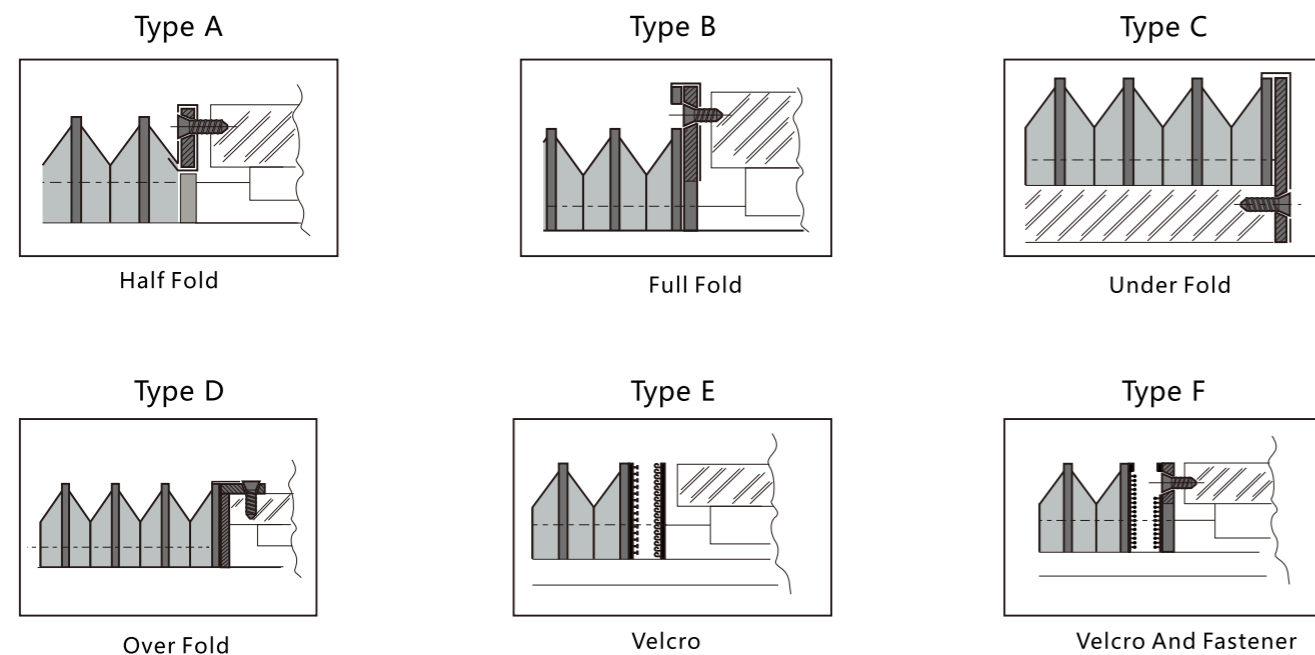


- Slide Block Types
- A. Wear-resistant block
- B. Roller

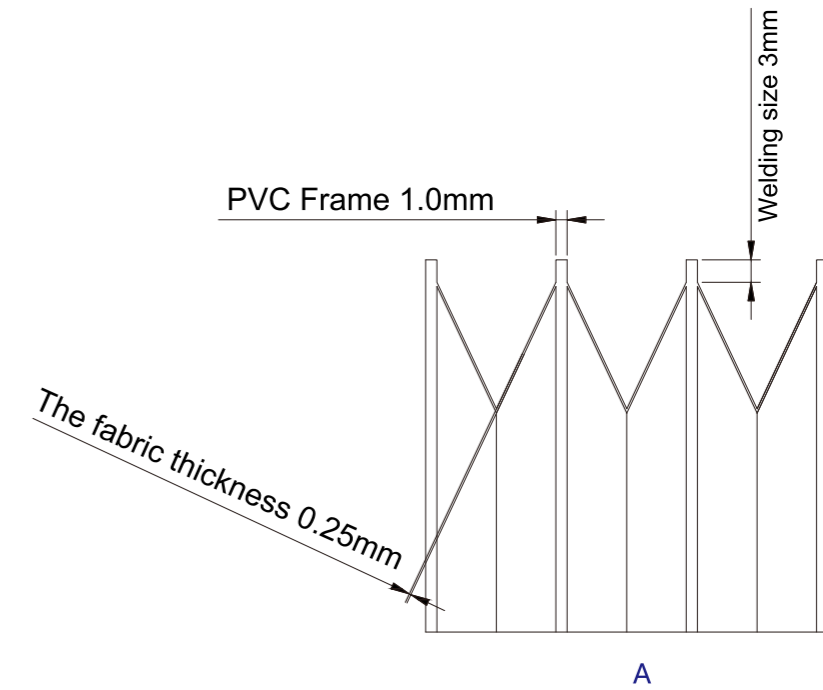
Part of customized bellow cover shapes for reference



Flange fixing method



Quick view of bellow cover parameter

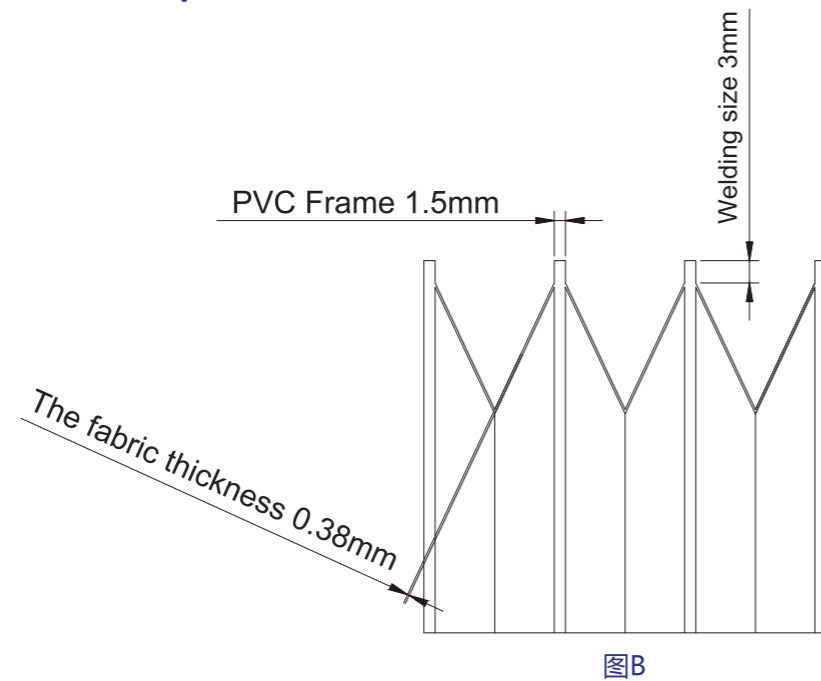


Drawing A Parameter Comparison Table

Lmax	H		10	15	20	25	30	35	40	45	50	55
	Lmin											
100			37	22	19	16	13	13	13	13	13	10
150			53	31	22	19	16	16	16	13	13	13
200			68	37	28	22	19	19	16	16	16	13
250			83	46	34	28	22	22	19	19	16	16
300			99	53	37	31	25	22	22	19	19	16
350			114	62	43	34	28	25	22	22	19	19
400			130	68	50	37	31	28	25	22	22	19
450			145	77	53	43	34	31	28	25	22	22
500			160	83	59	46	37	34	31	28	25	22
550			176	92	65	50	40	37	31	28	28	25
600			191	99	68	53	43	37	34	31	28	25
650			207	108	74	59	46	40	37	34	31	28
700			222	114	80	62	50	43	37	34	31	28
750			238	123	83	65	53	46	40	37	34	31
800			253	130	89	68	56	50	43	37	34	31
850			268	139	96	74	59	50	46	40	37	34
900			284	145	99	77	62	53	46	43	37	34
950			300	154	105	80	65	56	50	43	40	37
1000			315	160	111	83	68	59	53	46	43	37
1500			462	238	150	123	99	83	74	65	59	53
2000			622	315	213	160	130	111	96	83	77	68
2500			776	391	265	201	160	136	117	105	92	83
3000			930	462	315	238	191	160	139	123	111	99
3500			1084	545	367	277	222	188	160	142	127	114
4000			1238	622	419	315	253	213	185	160	145	130
4500			1392	699	462	355	284	238	207	182	160	145
5000			1546	776	521	391	315	265	228	201	179	160

Above table data are calculated based on the parameters in drawing A, unit mm.

Quick view of bellow cover parameter



Drawing B Parameter Comparison Table

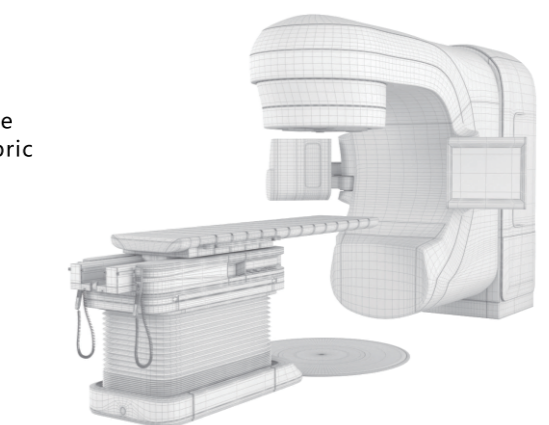
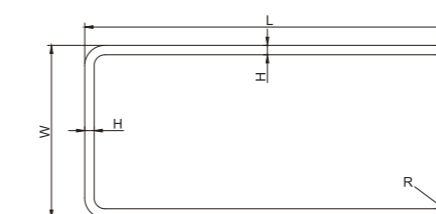
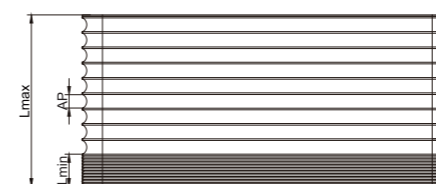
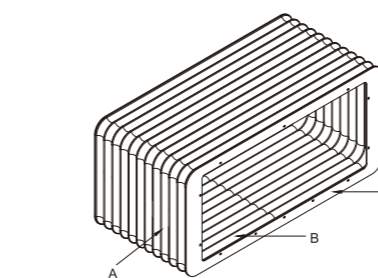
Lmax	H		10	15	20	25	30	35	40	45	50	55
	Lmin											
100	47		27	23	18	15	15	15	15	15	15	11
150	67		39	27	23	18	18	18	15	15	15	15
200	87		47	35	27	23	23	18	18	18	18	15
250	107		59	43	35	27	27	23	23	18	18	18
300	127		67	47	39	31	27	23	23	23	23	18
350	147		79	55	43	35	31	27	27	23	23	23
400	167		87	63	47	39	35	31	27	27	27	23
450	187		99	67	55	43	39	35	31	27	27	27
500	208		107	75	59	47	43	39	35	31	31	27
550	228		119	83	63	51	47	39	35	35	35	31
600	248		127	87	67	55	47	43	39	35	35	31
650	268		139	95	75	59	51	47	43	39	35	35
700	289		147	103	79	63	55	47	43	39	35	35
750	309		159	107	83	67	59	51	47	43	39	39
800	329		167	115	87	71	63	55	47	43	39	39
850	349		179	123	95	75	63	59	51	47	43	43
900	369		187	127	99	79	67	59	55	47	43	43
950	389		199	135	103	83	71	63	55	51	47	47
1000	410		207	143	107	87	75	67	59	55	47	47
1500	612		309	208	159	127	107	95	83	75	67	67
2000	814		410	277	208	167	143	123	107	95	87	87
2500	1016		511	346	261	208	176	152	135	119	107	107
3000	1218		612	410	309	248	208	180	159	143	127	127
3500	1420		713	479	362	289	245	208	184	164	147	147
4000	1622		814	548	410	329	277	241	208	187	167	167
4500	1824		915	612	463	369	309	268	237	208	187	187
5000	2026		1016	681	511	410	346	297	260	233	208	208

Above table data are calculated based on the parameters in drawing A, unit mm.

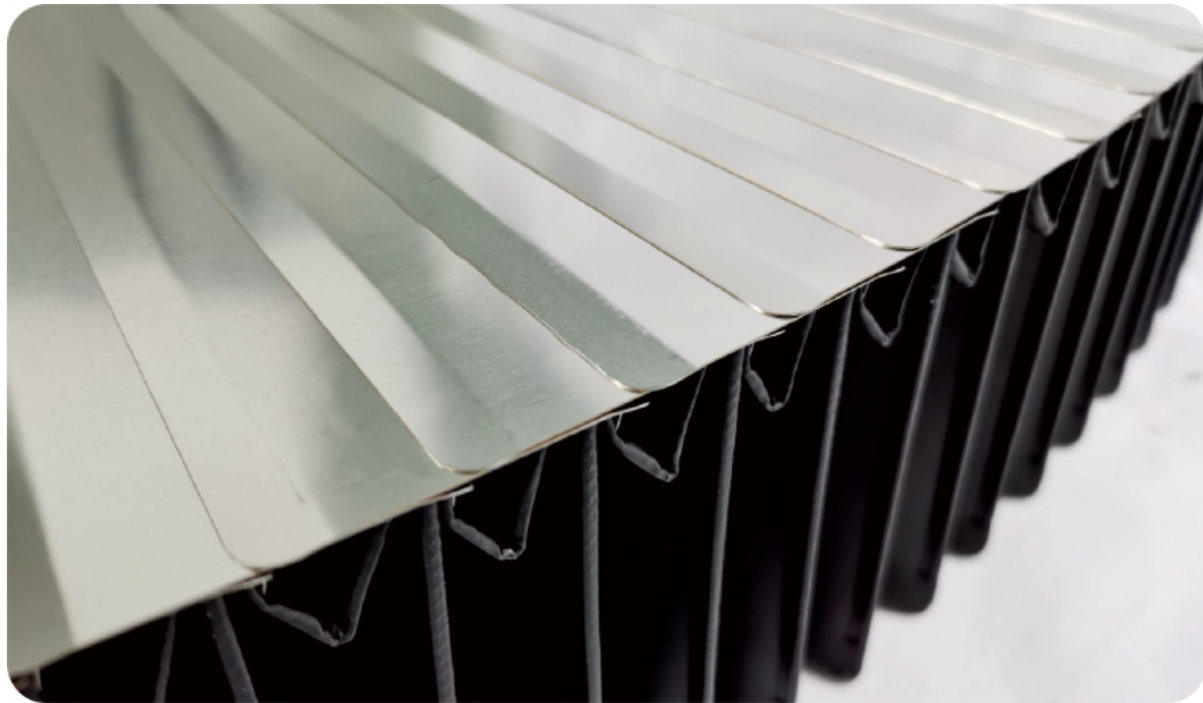
Application

The Bellow used in the medical industry adopts a frame-type structure without support plate, the overall weight is light, and the operation is silent. The protective fabric is made of environmentally friendly materials, normally white.

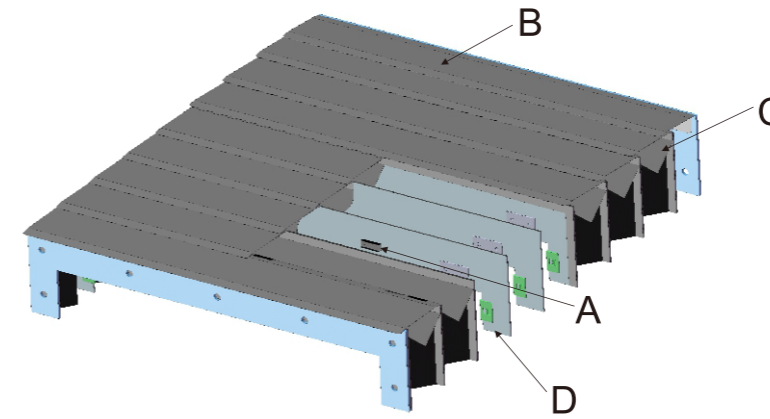
Dimensions



- Lmax = Max stretch out length
- Lmin = Min compression length
- AP = Single fold stretching
- H = Folding height
- W = Bellow width
- L = Bellow length
- R = Radius



Dimensions



- A. Fastener
- B. High hardness stainless steel
- C. Bellows cover
- D. Stiffener

Application

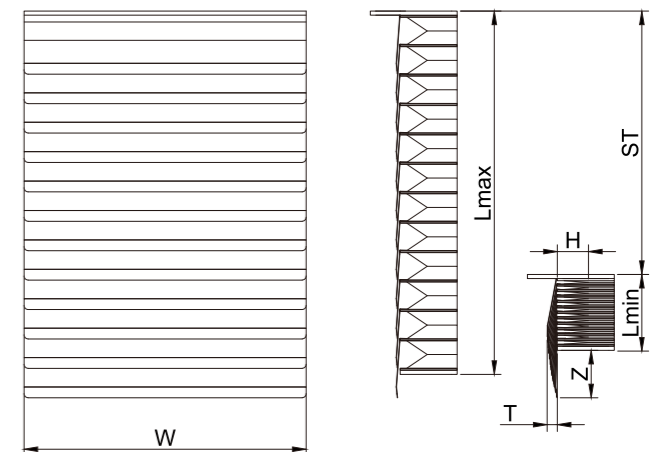
The steel clad bellows cover are suitable for large amounts of high-temperature chips, ultra large travel and insufficient space for mounting telescopic steel cover. Applicable machines include horizontal machining centers, traveling column machining centers and various CNC machining centers. The fabric bellow cover top is equipped with stainless steel or aluminum alloy sheet for surface protection to prevent high temperature from damaging the cover while ensuring superior protection effect.

Resist high temperature Chips , Light weight .Bellows cover in combination with high hardness stainless steel make it suitable for metal cutting chips. Outstanding forming technology and structure design enable the series of cover to be ideal for protecting slide ways with extra large traveling. Low noise and long service life. Available to equip with sliding and synchronized mechanism for rapid traverse.

Allows for traverse rate 120 M/min.

Fixed type

1. The bellow cover is matched with high-hardness stainless steel plate, suitable for metal processing.
2. Low noise, long life, with wear-resistant plates and rollers to achieve high-speed movement.
3. Customized solution



Lmax = Max stretch out length

Lmin = Min compression length

ST = travel length (Lmax-Lmin)

H = Folding height

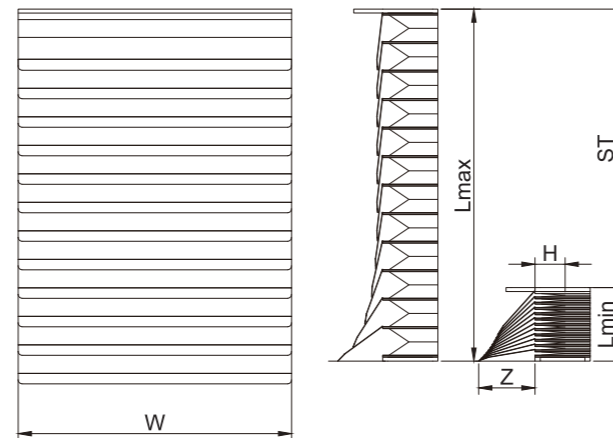
W = Sheet metal width

Z = Extending length of sheet metal

T = Accumulated thickness of protective metal sheet

Rear open-able type steel clad bellows

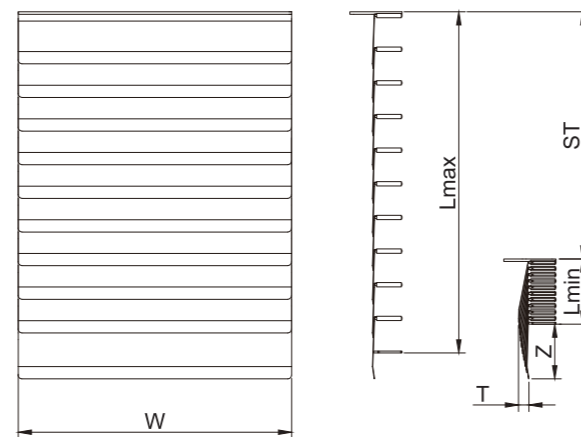
1. The stainless steel sheet can be flexibly flipped.
2. Suitable for installation in limited spaces and insufficient minimum stroke
3. Customized solution.



Lmax = Max stretch out length
 Lmin = Min compression length
 ST = travel length (Lmax-Lmin)
 H = Folding height
 W = Sheet metal width
 Z = Extending length of protective sheet metal

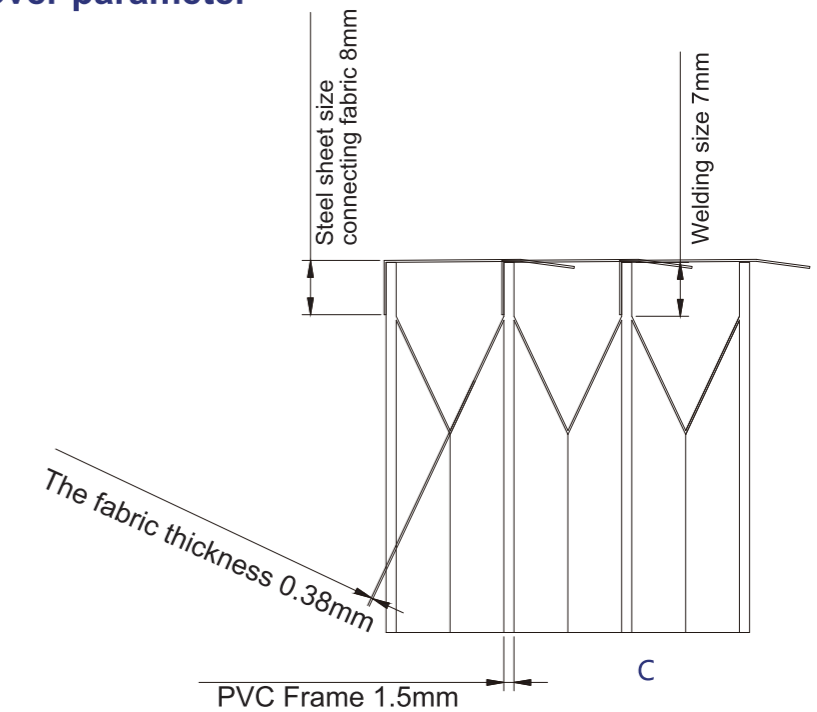
Lightweight type

1. Lightweight stainless steel sheet combined structure, or fabric as carrier structure.
2. It is suitable for installation when the minimum stroke is insufficient in a small space.
3. No need for linear rail or guide rail guidance, install and use with guide groove.
4. Customer solution.



Lmax = Max stretch out length
 Lmin = Min compression length
 ST=Travel length(Lmax-Lmin)
 H= Folding height
 W= Sheet metal width
 Z= Extending length of protective sheet metal
 T= Accumulated thickness of protective metal sheet

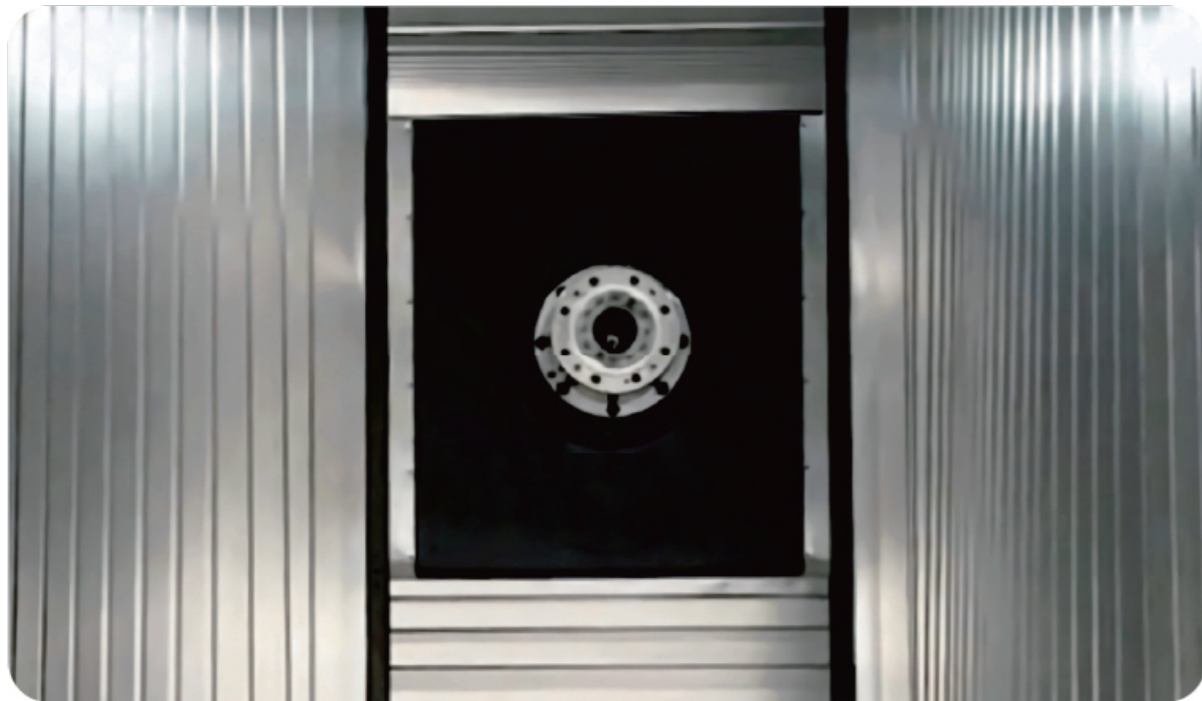
Quick view of bellow cover parameter



Drawing C Parameter Comparison Table

Lmax \ Lmin \ H	15	20	25	30	35	40	45	50	55
100	56	31	26	21	16	16	16	16	16
150	81	46	31	26	21	21	21	16	16
200	106	56	41	31	26	26	21	21	21
250	131	71	51	41	31	31	26	26	21
300	156	81	56	46	36	31	31	26	26
350	181	96	66	51	41	36	31	31	26
400	206	106	76	56	46	41	36	31	31
450	231	121	81	61	51	46	41	36	31
500	256	131	91	71	56	51	46	41	36
550	281	146	101	76	61	56	51	46	41
600	306	156	106	81	66	61	56	51	46
650	331	171	116	91	71	66	61	56	51
700	356	181	126	96	76	71	66	61	56
750	381	206	141	101	81	76	71	66	61
800	406	216	146	106	86	81	76	71	66
850	431	231	156	111	91	86	81	76	71
900	456	246	166	116	96	91	86	81	76
950	481	256	171	121	101	96	91	86	81
1000	506	271	181	131	106	101	96	91	86
1500	-	-	256	196	156	131	116	101	91
2000	-	-	341	256	206	176	151	131	121
2500	-	-	426	321	256	216	186	166	146
3000	-	-	506	381	306	256	221	196	176
3500	-	-	591	446	356	296	256	226	201
4000	-	-	676	506	406	336	291	256	231
4500	-	-	756	571	456	376	326	291	256
5000	-	-	841	631	506	416	361	321	286

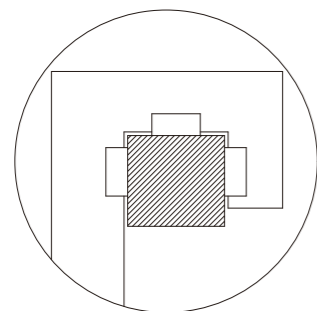
Above table data are calculated based on the parameters in drawing C, unit mm.



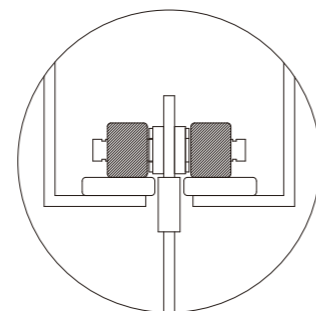
Application

The multi-axis X-Y backwall system also known as linkage type finned bellows cover, is mostly used for horizontal machining center.

1. High-speed displacement, standard slide guide, speed up to 80m/min.
2. Beautiful appearance design, low noise.
3. It can be repaired quickly and conveniently, and the overall cost is lower than single-piece combined.

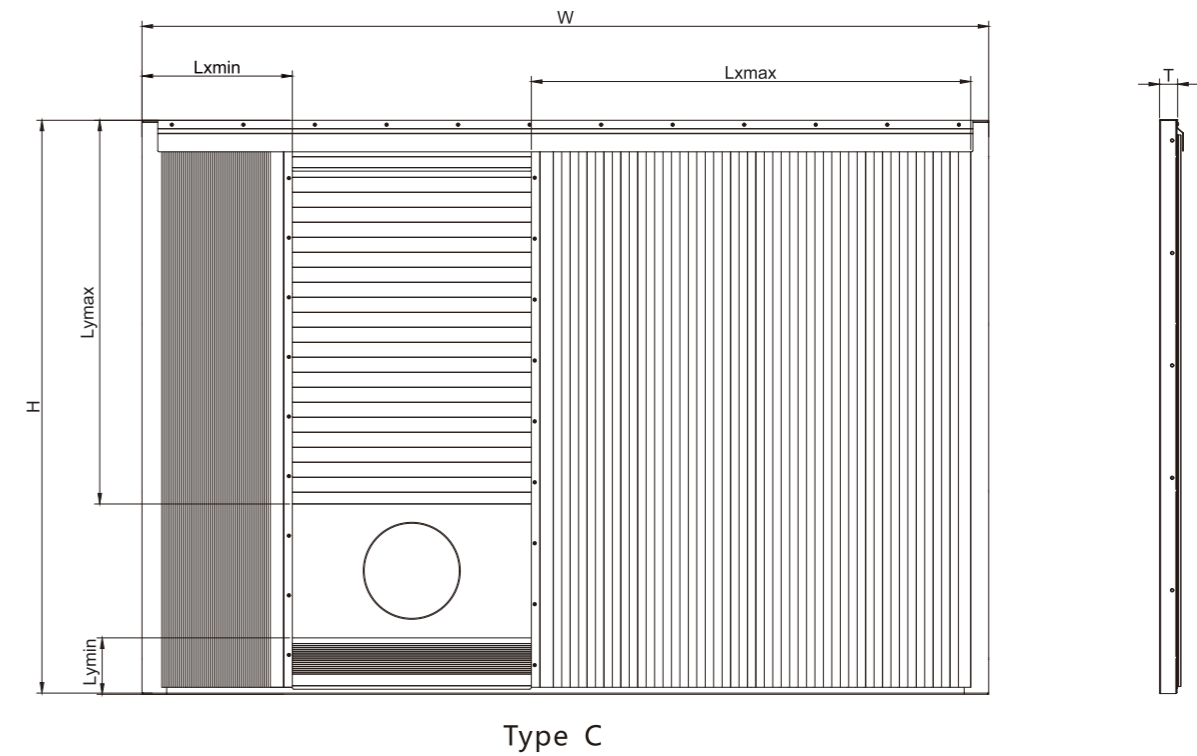
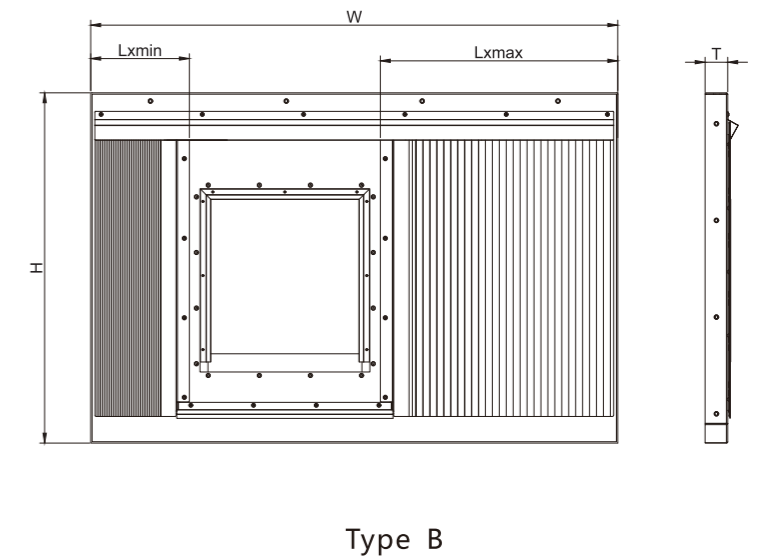
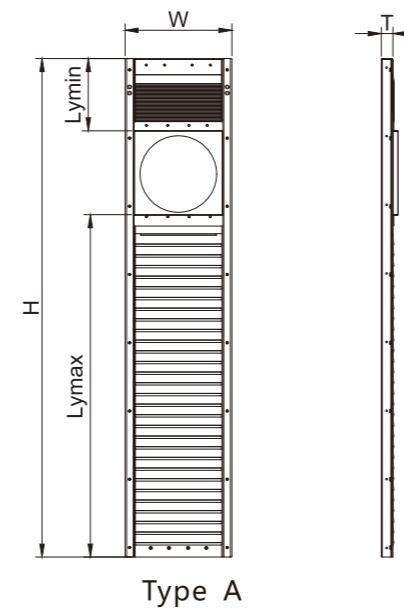


>40m

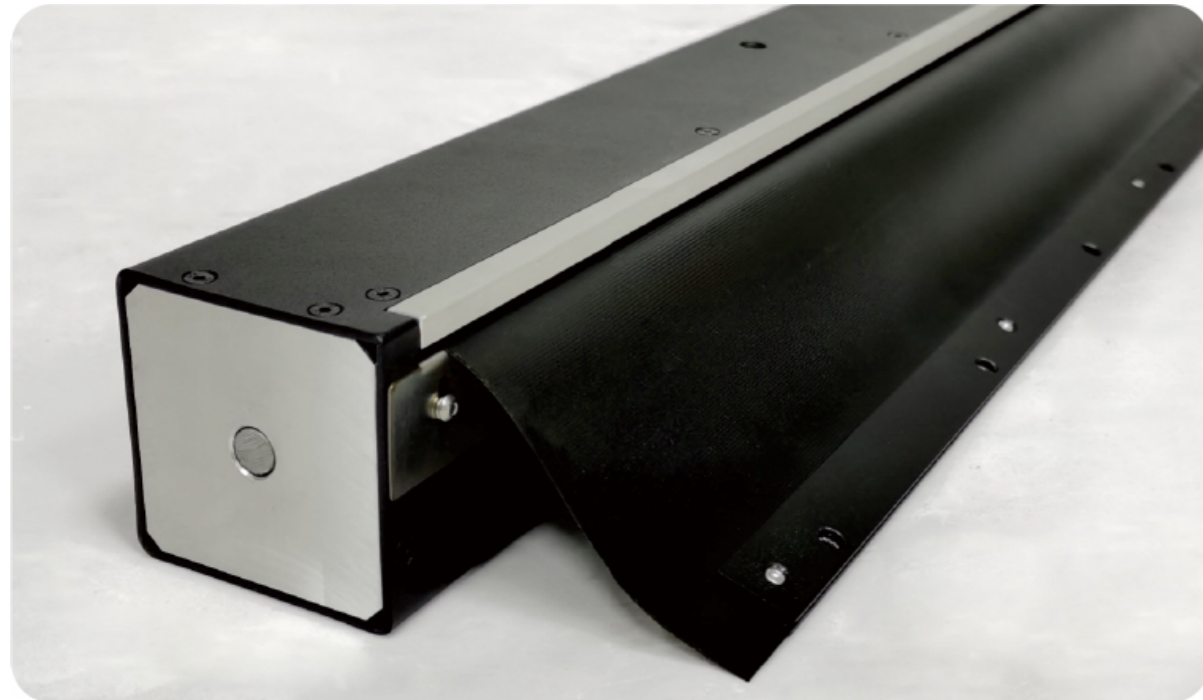


>60m

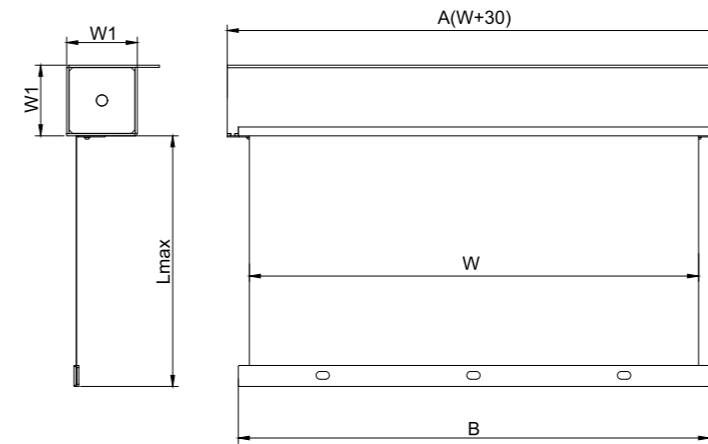
Dimensions



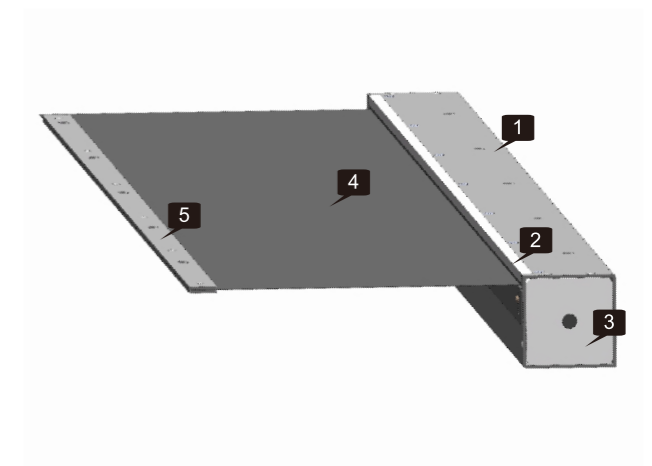
L_{xmax} = X axis max stretch out length
 L_{xmin} = X axis min compression length
 L_{ymax} = Y axis max stretch out length
 L_{ymin} = Y axis min compression length
 W = Frame width
 H = Frame height
 T = Frame thickness



Dimensions



- A : Body width
- B : Width of pull bar
- W : Width of protective curtain
- W1: Metal box size
- Lmax : Max stretch out length

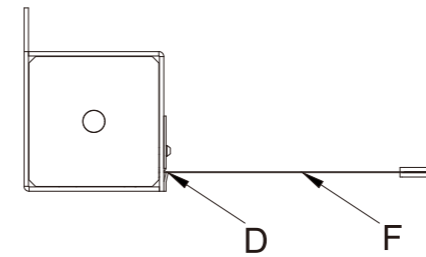


- 1. Body
- 2. Wiper
- 3. Aluminum alloy fixing unit
- 4. Protective curtain
- 5. Pulling bar

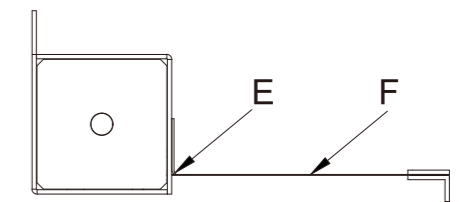
Application

The roll up covers are normally applied for a limited space and in that condition regular bellows cover can't withdraw, such as the back side of the lathe tail protection. This series of cover features wiping function to prevent outer object and dust from entering.

Chips scraping type



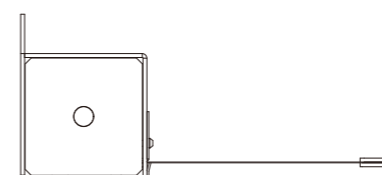
D: Adhesive strips



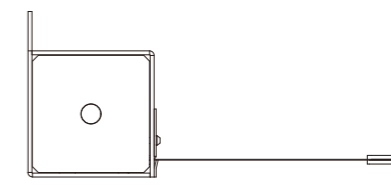
E : Stainless steel sheet

F : Protective curtain

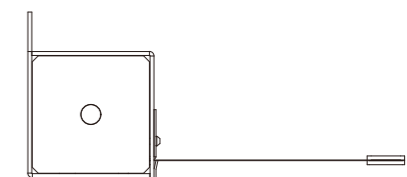
Type of pulling bar



Type A



Type B



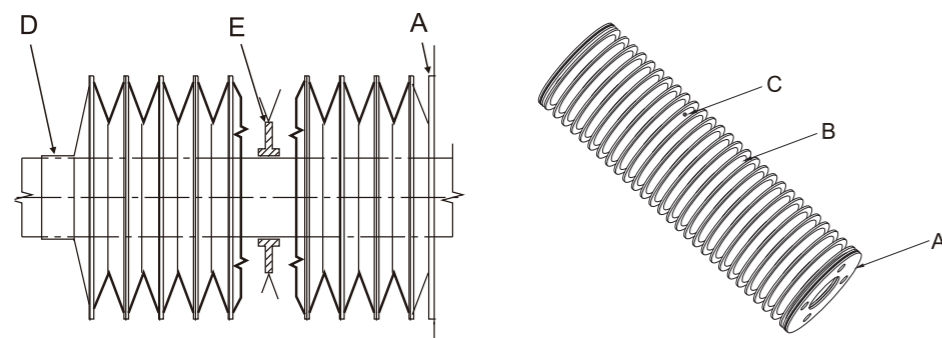
Type C



Application

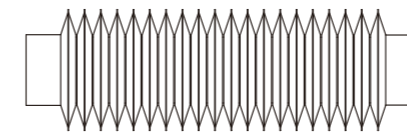
Round bellows used to protect external hydraulic rod and shaft screw with water, oil, temperature, chemical resistance properties, with efficient protection. Regular round bellow covers apply steel ring eyelet structure, compression is relatively large, the appearance is not beautiful

Dimensions

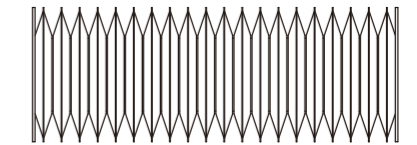


- A : Flange
- B : Protective curtain
- C : Venting hole
- D : Collar structure
- E : Support ring

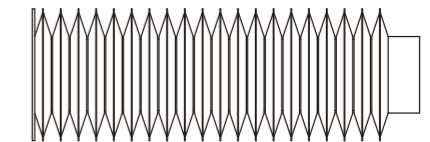
Round Bellows Type



Type B



Type A



Type C

Design reference

Lmax = Max stretch out length

Lmin = Min compression length

OD = Outer diameter

FB = Folding width

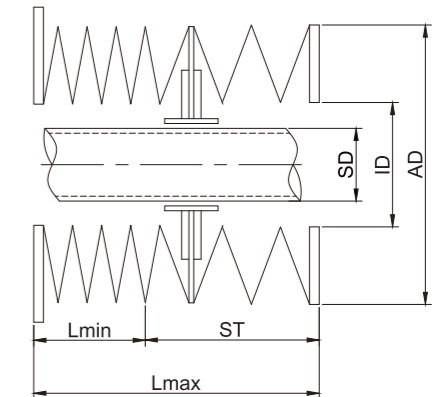
ID = Internal diameter

FAZ = Single fold stretching

FZD = Single fold compression

SD = Maximum diameter of lead screw (shaft) to be protected

ST = Travel length (Lmax-Lmin)



Parameter comparison table

Model	AD	ID	FB	FAZ	FZD	Material
M40	40	20	10	4	1.2	TPU045
M60	60	40	10	4	1.2	TPU045
M66	66	28	19	16	1.2	TPU045
M84	84	52	16	12	1.2	TPU045
M90	90	50	20	17	1.2	TPU045
M95	95	60	17.5	14	1.2	TPU045
M110/1	110	50	30	29	2.2	TPU080
M110/2	110	65	22.5	20	1.2	TPU045
M130/1	130	60	35	35	2.2	TPU080
M130/2	130	70	30	29	2.2	TPU080
M150	150	80	35	35	2.2	TPU080
M160	160	60	50	53	2.2	TPU080
M167	167	97	35	35	2.2	TPU080
M170	170	110	30	29	2.2	TPU080
M185	185	90	47.5	50	2.2	TPU080
M200	200	110	45	47	2.2	TPU080
M210	210	130	40	41	2.2	TPU080
M290	290	200	45	47	2.2	TPU080
M310	310	230	40	41	2.2	TPU080
M350	350	240	55	59	2.2	TPU080

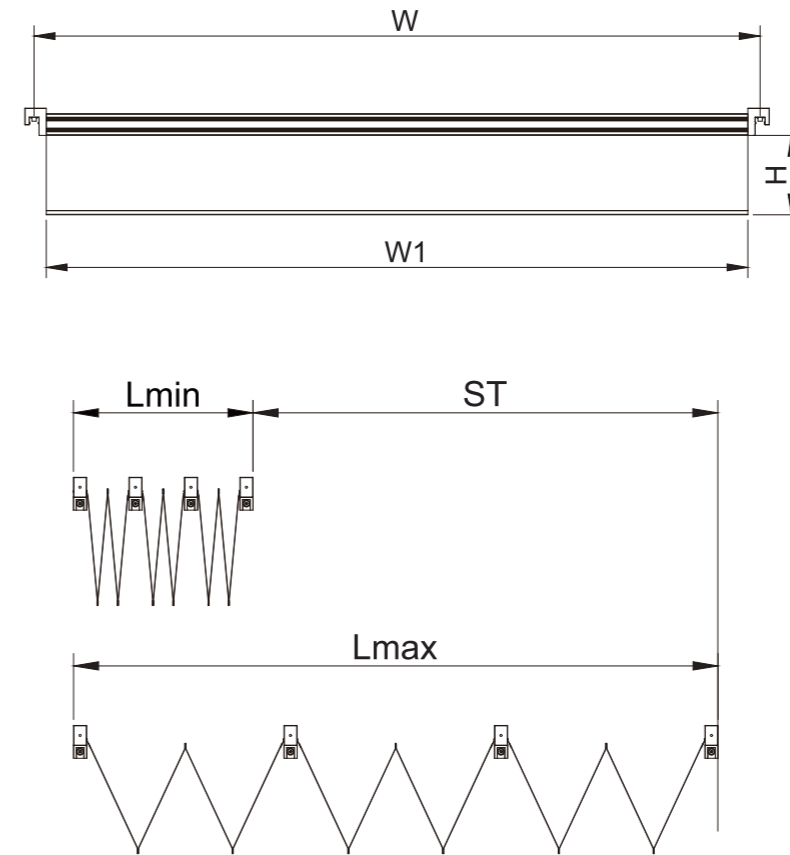
The above dimensions unit mm.



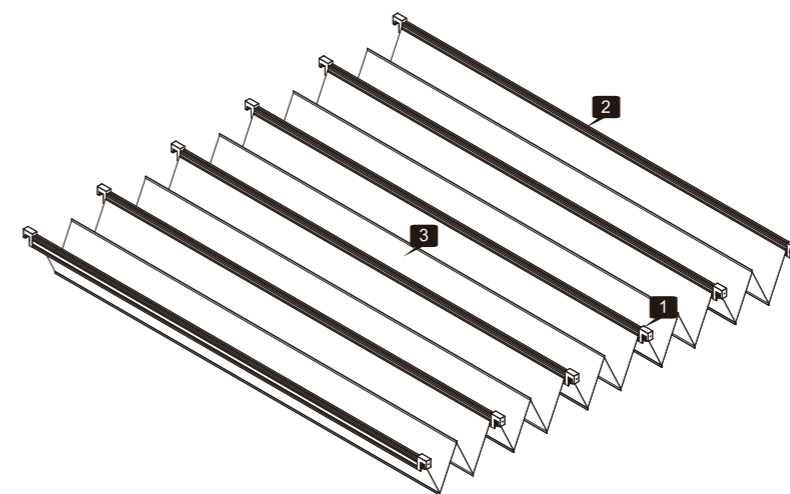
Application

The Roof Cover can apply to gantry machining center to prevent iron chips, aluminum chips, dust, oil and gas from the working environment. The movable horizontal beam design together with CNC mechanism switch controller, does not hinder crane hanging operation and convenient for work pieces movement. Combine with bellow cover design elements to achieve a fully enclosed guard. We use high-strength aluminum alloy profiles and guide rails. The ceiling system can be easily installed on existing or new machine tools. Due to the structural characteristics of roof cover, the machine can be effectively sealed.

Dimensions



Lmax = Max stretch out length
 Lmin = Min compression length
 ST = travel length (Lmax-Lmin)
 W = guide rail span
 W1 = folder width
 H = folding height



1 : Guide structure
 2 : Aluminum alloy frame
 3 : Protective material

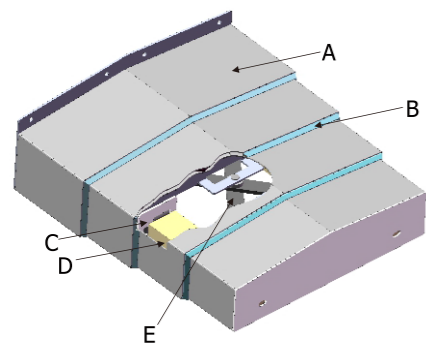
1. Different sizes, construction and mounting methods are available to meet various working environments and machine structures.
2. Allows for maximum moving speed up to 60 M/min. with low noise and resistance of chips, dust, coolant and oil.
3. Protection curtain material: great weather resistance, waterproof, anti-static, tear resistance, high strength.
4. Maximum span 6-8M.



Application

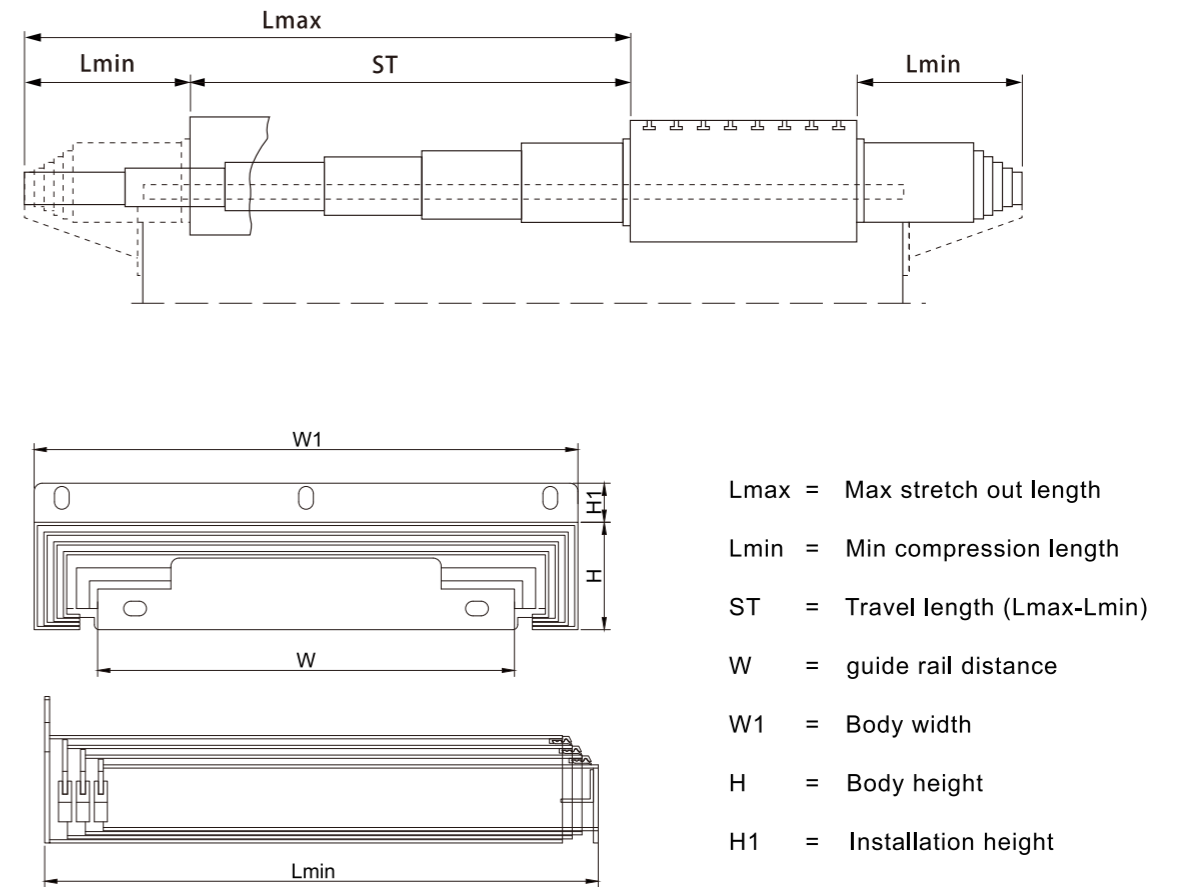
The telescopic steel cover is mostly used for CNC machining center X, Y, Z axis, suitable for all kinds of vertical machining center, gantry milling machine, moving speed can reach 20 to 60m/min, running steady, smooth, good waterproof, anti-oil, dust-proof performance . Provide customized solution base on customers' machine structure.

Dimensions

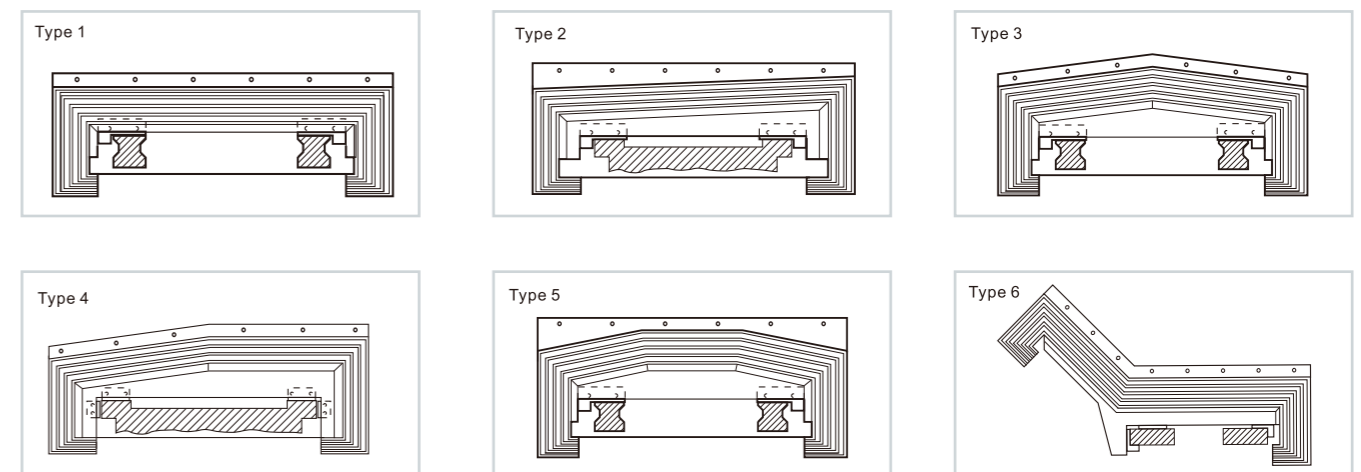


- A : Steel body
- B : Scraping strip
- C : Support pulley
- D : Slide way
- E : Hinges

Design reference



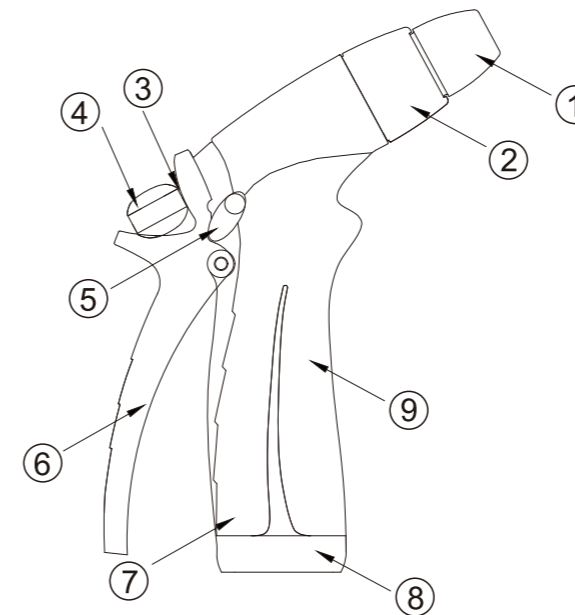
Telescopic steel cover structure for reference



NOTE: Only a few standard configurations of telescopic steel covers are shown above.



Industrial flush gun



Dimensions

No.	Name
1	Aluminum gun head
2	Water outlet shape adjustment switch
3	Copper tie rod
4	Adjustment switch
5	Labor-saving switch
6	Pressure handle
7	Aluminum gun body
8	TPR handle
9	Connect 3/4" quick copper connector

Working environment

Working temperature: 5 °C~50 °C
Working pressure: 0~8 bar
Pressure resistance: 10 bar

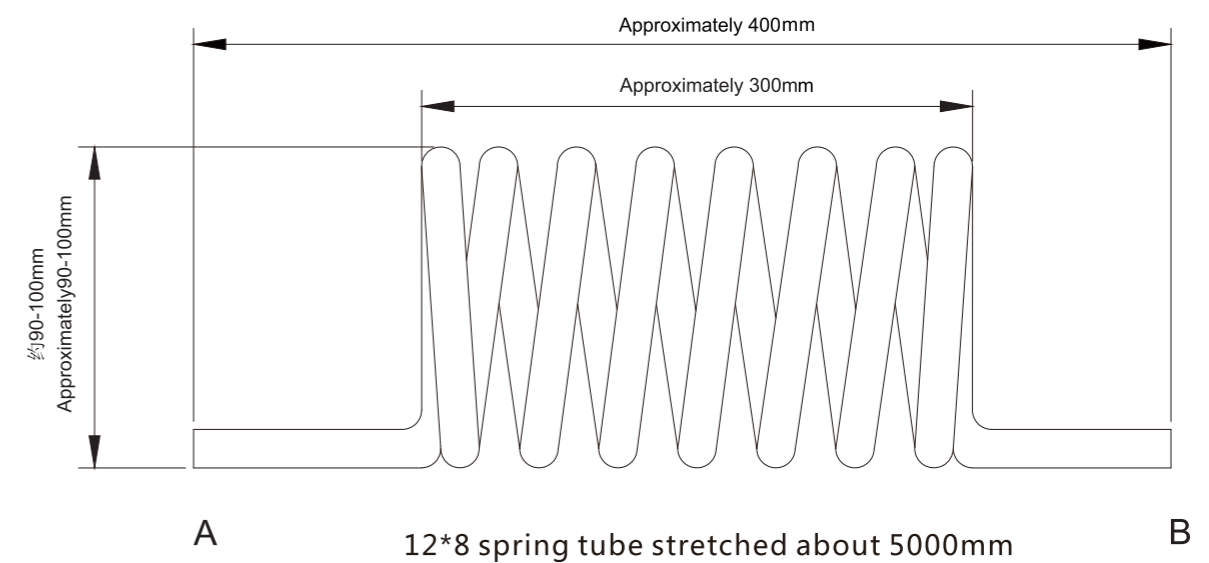
Application

Industrial dust blowing gun, powerful blowing, low consumption and energy saving. The nozzle of the slender tube sprays high speed and narrow air flow, which can be injected into deep holes, blind holes, and narrow slits that are not easy to clean. It is suitable for use in places where dust blowing is required in various processing and production industries. It is convenient and safe, with strong wind, quality assurance, no rust, and long use time.

The industrial flush gun adopts an integrated aluminum alloy gun body design, and the gun body is wrapped in TPR material for a comfortable grip. PA material pressure handle, more unique labor-saving switch design, aluminum alloy gun head, adjustable water output and shape. It is suitable for all types of processing machine tools to clean the chips, dust and oil generated in the production and processing, so as to facilitate the operation, inspection and inspection of the processed products by the operator.

For the daily maintenance and cleaning of equipment in various occasions, industrial flushing guns and dust blowing guns have become indispensable products.

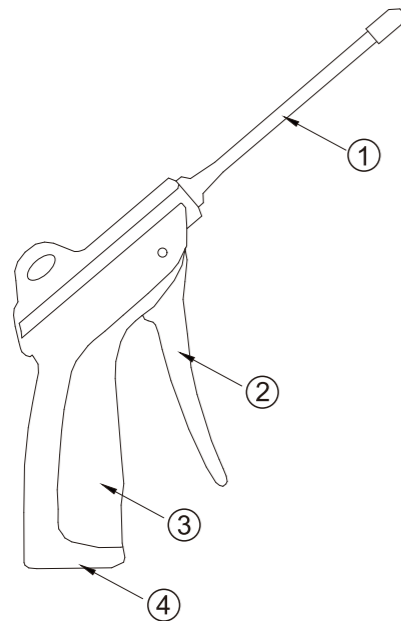
Assembly composition



Model	A	B
1	3/4 "Quick Copper Connector	3/4 "Quick Copper Connector
		1/2 "Quick Copper Connector
		3/8 "Quick Copper Connector

Note: The length and material of the spring tube can be customized.

Industrial dust blow gun



Dimensions

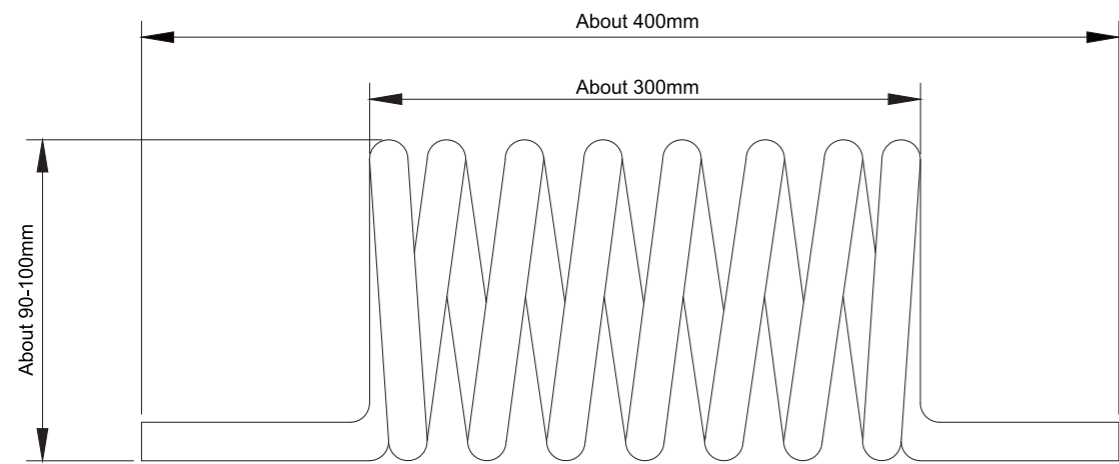
No.	Name
1	Stainless steel nozzle
2	Pressure handle
3	POM gun body
4	1/4"connector (PM-20)

Muzzle model	Long
1	18mm/standard muzzle
2	130mm/Long muzzle
3	300mm/Long muzzle
Remarks	Barrel length can be customized

Working environment

Working temperature: -5°C ~60° C
Working pressure: 0~8 kg
Pressure resistance: 10 kg

Assembly composition



A 10*6.5 spring tube stretched about 5000mm B

Model	A	B
1	SP-30 quick connector	PP-30 quick connector

Note: The length and material of the spring tube can be customized.

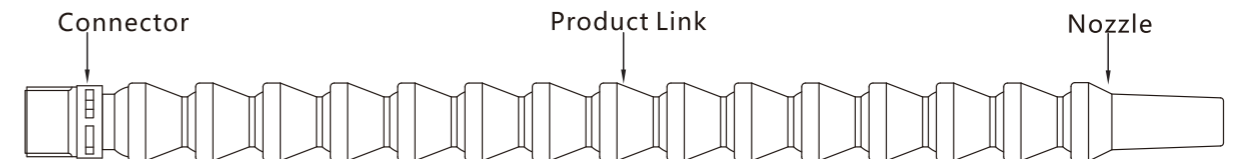


Application

Length and angle can be freely adjusted, suitable for most fluids(liquids and gases), hose orifice can be changed as needed. Can be used for air or for water/oil supply to metal processing machinery.

- 1.Made using superior POM plastic steel; is strongly resistant to oils and chemicals.
- 2.Maximum use temperature: 65°C
- 3.When using Adjustable Coolant Hose, changes in the situation may affect the maximum pressure. It is recommended that tests be performed whenever changes are made.

Dimensions



Commonly used type

Type	PT Connector	Product Link	Nozzle Type				
			Round Nozzle(mm)		Flat Nozzle(mm)		
1/4	1/4	custom made	3	6	10	25	16 Hole
3/8	3/8	custom made	6	9	32	64	
1/2	3/8 1/2	custom made	6	9	12	32	64

Hose Pressure and Flow Characteristics

Size	Recommended pressure	Recommended flow
1/4" system	2.0~3.0 kg/cm ²	900 L/H
3/8" system	2.0~3.0 kg/cm ²	1500 L/H
1/2" system	1.4~2.0 kg/cm ²	1700 L/H

