

# nsb-CR Series

Clean room type



## Ordering Information

nsb 020 CR . 20 . R48

①

②

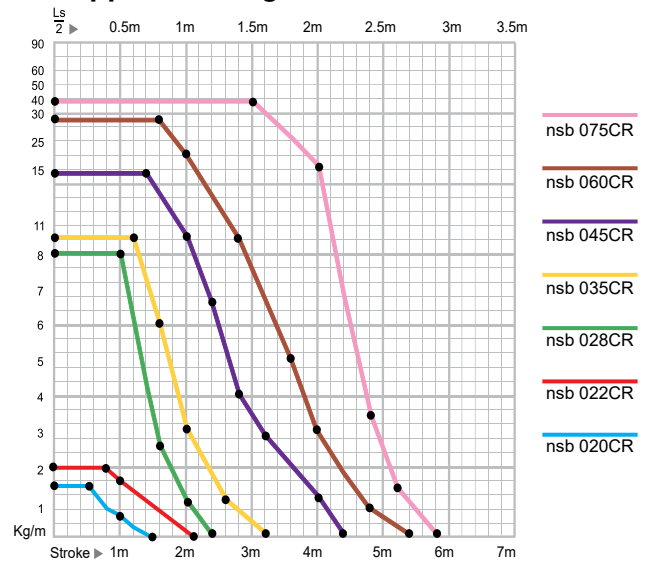
③

① Pitch (mm)	② Inner Width	③ Bending Radius	Size (Unit : mm)				Frame type	Weight (kg/m)
			A	B	C	D		
020	20	28	34	22	20	15	[Diagram]	0.32
	40	38	54		40			0.35
022	16	35	30	29	16	22	[Diagram]	0.43
	27	45	41		27			
	37	75	51		37			
	47	100	61		47			
	67	120	81		67			
			91		77			
028	35	50	55	38	35	26	[Diagram]	0.90
	50		70		50			
	55		75		55			
	75		95		75			
	100		120		100			
	125		145		125			
	150		170		150			
	175		195		175			
	200		220		200			
035	35	75	55	52	35	40	[Diagram]	1.00
	50		70		50			
	55		75		55			
	75		95		75			
	100		125		100			
	125		150		125			
	150		170		150			
	175		195		175			
	200		220		200			
045	50	75	80	70	50	49	[Diagram]	2.59
	75		105		75			
	100		130		100			
	125		155		125			
	150		170		140			
	175		180		150			
	200		195		165			
	250		205		175			
	300		220		190			
			230		200			
			270		240			
			280		250			
			330		300			
060	75	125	115	82	75	56	[Diagram]	3.56
	100		140		100			
	125		165		125			
	150		190		150			
	175		215		175			
	190		230		190			
	200		240		200			
	250		280		240			
	300		290		250			
	350		340		300			
	400		390		350			
			440		400			
	075		75		180			115
100		140	100					
125		155	115					
150		165	125					
175		190	150					
200		215	175					
250		240	200					
300		280	240					
350		290	250					
400		330	290					
450		340	300					
500		390	350					
550		440	400					
600		490	450					
		540	500					
		590	550					
		640	600					

## Specifications

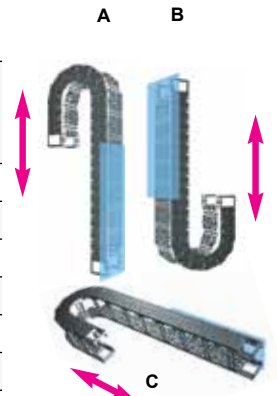
Material	Polyamide with reinforced glass fiber: UL94-HB
Speed	5m/s
Noise level	30dB
Acceleration	15m/s <sup>2</sup>
Temperature	-30°C~+130°C
Special Production	ESD, UV, Customized color
Certificate	CE, IPA, ATEX(Ex), TUV, RoHS

## Unsupported Length



## Other Length Restrictions

Type	Vertical standing (Max) A	Vertical Hanging (Max) B	Side Mounted Unsupported (Max) C
nsb 020CR	1.0m	5m	0.5m
nsb 022CR	1.0m	5m	0.5m
nsb 028CR	2.0m	40m	1.0m
nsb 035CR	3.0m	50m	1.0m
nsb 045CR	6.0m	100m	2.5m
nsb 060CR	6.0m	100m	3.0m
nsb 075CR	6.0m	100m	3.0m



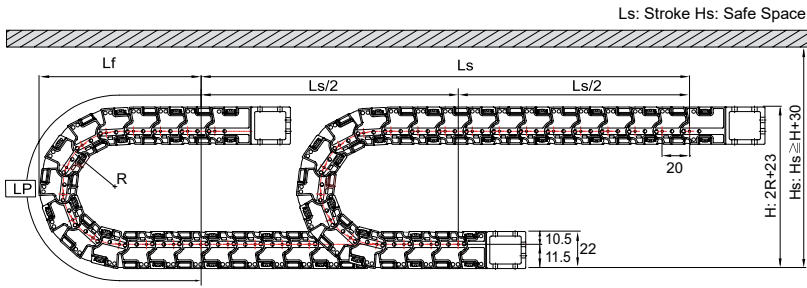
## How to Choose Bending Radius

Bending Radius	The biggest Cable inserted	Multiply 8~10 by the OD of the biggest cable
		The biggest Hydraulic Hose inserted

See page 65 - 66 for accessories

# nsb 020CR

## Calculation of the chain length



$$[ L = \frac{L_s}{2} + L_p ]$$

(Unit : mm)

Bending Radius (R)	L <sub>p</sub> Loop Length	L <sub>f</sub> Loop Projection	H Moving Height
28	162	76	79
38	202	90	99
48	242	105	119

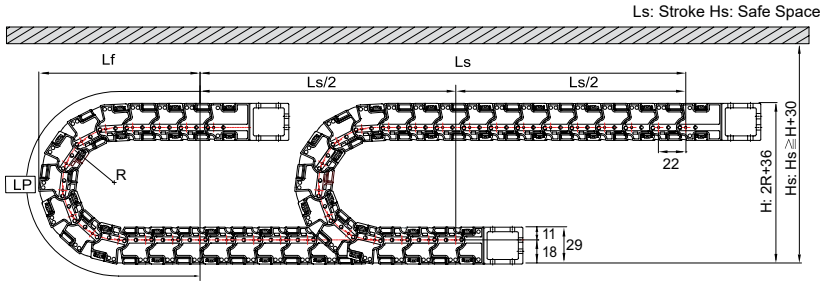
## Accessories

Free end bracket						Tie wrap	
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	
nsb-FEB020CR	38 58	22	20 40	15	16 36	sb-TW018CR.20	sb-TW018CR.40

Dividers	sb-DV018CR	
	<p>Assemble divider every third links.</p>	

# nsb 022CR

## Calculation of the chain length



$$[ L = \frac{L_s}{2} + L_p ]$$

(Unit : mm)

Bending Radius (R)	L p Loop Length	L f Loop Projection	H Moving Height
35	222	108	106
45	266	125	126
75	353	152	186
100	441	182	236
120	485	192	276

## Accessories

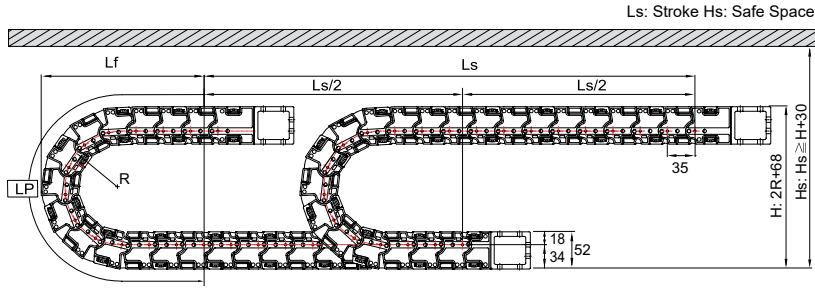
Free end bracket						Tie wrap					
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	Ordering No.	A	B	C	D
nsb-FEB022CR	34 45 55 65 85 95	29	16 27 37 47 67 77	22	12 23 33 43 63 73	sb-TW020CR.16	S-TW033/020CR.27 S-TW033/020CR.37 S-TW033/020CR.47 S-TW033/020CR.67 S-TW033/020CR.77	45 55 65 85 95	27.5 41.0 48.0 68.0 78.0	10.20 8.50 10.40 10.00 8.87	12 22 32 52 62

Dividers	sb-DV020CR	
	<p>Assemble divider every third links.</p>	



# nsb 035CR

## Calculation of the chain length



Bending Radius (R)	L p Loop Length	L f Loop Projection	H Moving Height
75	471	226	218
100	550	251	268
125	628	276	318
150	706	301	368
200	863	351	468

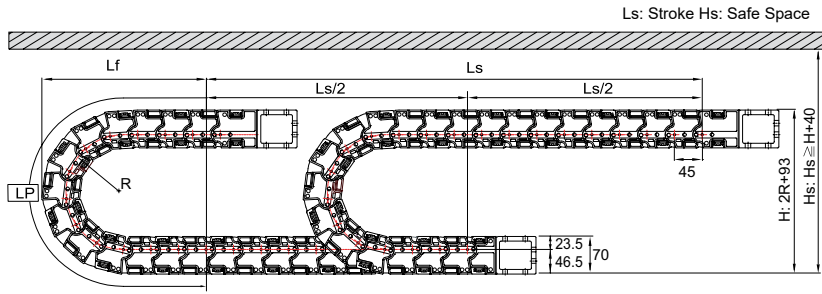
## Accessories

Free end bracket						System tie wrap			Tie wrap				
<p style="text-align: center;">Moving Point</p>													
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	C Frame	Hole Type	Ordering No.	A	B	C	D
nsb-FEB035CR	64	52	35	40	3	S-TW.EB035.35	35	M6 Bolt Holes	S-TW050/035N.50	82	64.5	12.00	5
	79		S-TW.EB035.50		50	S-TW050/035N.55	82		12.00	10			
	84		S-TW.EB035.55		55	S-TW050/035N.75	107		12.13	30			
	104		S-TW.EB035.75		75	S-TW050/035N.100	132		15.25	55			
	129		S-TW.EB035.100		100	S-TW050/035N.125	157		14.70	80			
	154		S-TW.EB035.125		125	S-TW050/035N.150	182		14.35	105			
	179		S-TW.EB035.150		150	S-TW050/035N.175	203		12.31	130			
	204		S-TW.EB035.175		175	S-TW050/035N.200	232		13.88	155			
	229		S-TW.EB035.200		200								

Dividers	① sb-DV035/S				② sb-DV035/M1				③ sb-DV035/M2			
	<p>① S divider is used to fix a separator that is the same length as the frame</p> <p>② M1 divider is used to separate individual cables</p> <p>③ M2 divider is used to fasten a separator that is shorter than the frame length</p> <p>④ T divider can be used at center position to support frame longer than 125mm and up</p> <p>⑤ W (Tie wrap) dividers are used to hold the cables in place at both ends of the cable chain</p>											
<p style="text-align: center;">System Tie Wrap</p>												
Separators					<p>Ordering NO.</p> <p>S-SP/M.35</p> <p>S-SP/M.50</p> <p>S-SP/M.55</p> <p>S-SP/M.75</p> <p>S-SP/M.100</p> <p>S-SP/M.125</p> <p>S-SP/M.150</p> <p>S-SP/M.175</p> <p>S-SP/M.200</p>				<p>Frame</p> <p>35</p> <p>50</p> <p>55</p> <p>75</p> <p>100</p> <p>125</p> <p>150</p> <p>175</p> <p>200</p>			

# nsb 045CR

## Calculation of the chain length



$$[ L = \frac{L_s}{2} + L_p ] \quad (\text{Unit : mm})$$

Bending Radius (R)	L p Loop Length	L f Loop Projection	H Moving Height
75	587	279	243
100	665	304	293
120	728	324	333
140	791	344	373
200	979	404	493
250	1,136	454	593
300	1,293	504	693

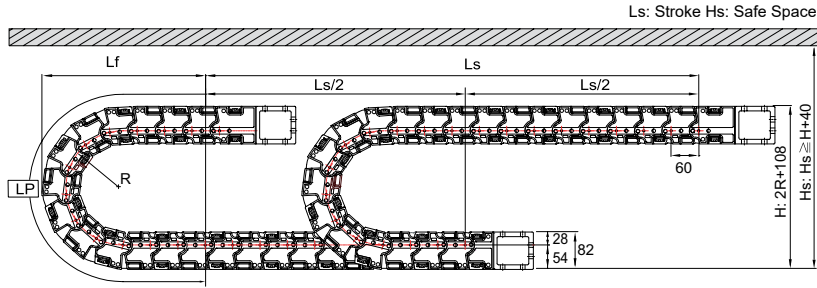
## Accessories

Steel end bracket						System tie wrap			Tie wrap				
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	C Frame	Hole Type	Ordering No.	A	B		
nsb-FEB045CR	86	70	50	49	10	S-TW.EB045.50	50	M6 Bolt Holes	S-TW50	58	65		
	111				35	S-TW.EB045.75	75					S-TW75	82
	136				60	S-TW.EB045.100	100					S-TW100	105
	161				75	S-TW.EB045.125	125					S-TW125	129
	176				100	S-TW.EB045.140	140					S-TW140	148
	186				125	S-TW.EB045.150	150					S-TW150	
	201				150	S-TW.EB045.165	165						
	211				175	S-TW.EB045.175	175						
	226				200	S-TW.EB045.190	190						
	236				250	S-TW.EB045.200	200						
	276				300	S-TW.EB045.240	240						
	286					S-TW.EB045.250	250						
	336					S-TW.EB045.300	300						

Dividers	<p>① S divider is used to fix a separator that is the same length as the frame</p> <p>② M divider is used to separate individual cables</p> <p>③ T divider can be used at center position to support frame longer than 200mm and up</p>	
		<p>① sb-DV045/S</p>
	<p>③ sb-DV045/T</p>	<p>④ sb-DV060/W</p>
Separators	<p>← 20 - 300 mm →</p>	
	<p>Ordering NO.</p> <p>sb-SP/400.400 Cut to length (400 mm)</p>	

# nsb 060CR

## Calculation of the chain length



$$[ L = \frac{L_s}{2} + L_p ]$$

(Unit : mm)

Bending Radius (R)	L <sub>p</sub> Loop Length	L <sub>f</sub> Loop Projection	H Moving Height
125	854	389	358
140	901	404	388
190	1,058	454	488
220	1,152	484	548
270	1,309	574	648
390	1,686	654	888

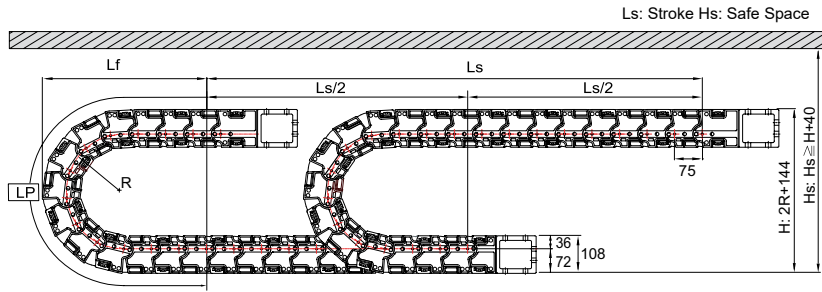
## Accessories

Steel end bracket						System tie wrap			Tie wrap		
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	C Frame	Hole Type	Ordering No.	A	B
nsb-FEB060CR	115	82	75	55	24	S-TW.EB060.75	75	M10 Bolt Holes	S-TW50	58	65
	140				49	S-TW.EB060.100	100				
	165				74	S-TW.EB060.125	125				
	190				99	S-TW.EB060.150	150				
	215				124	S-TW.EB060.175	175				
	230				139	S-TW.EB060.190	190				
	240				149	S-TW.EB060.200	200				
	270				179	S-TW.EB060.230	230				
	280				189	S-TW.EB060.240	240				
	290				199	S-TW.EB060.250	250				
	340				249	S-TW.EB060.300	300				
	390				299	S-TW.EB060.350	350				
	440				349	S-TW.EB060.400	400				

Dividers	<ul style="list-style-type: none"> <li>① S divider is used to fix a separator that is the same length as the frame</li> <li>② M divider is used to separate individual cables</li> <li>③ R Side position roller divider to protect abrasion of moving cable at inner side of chain</li> <li>④ T divider can be used at center position to support frame longer than 200mm and up</li> <li>⑤ W (Tie wrap) dividers are used to hold the cables in place at both ends of the cable chain</li> </ul>			
		<p>① sb-DV060/S</p>	<p>② sb-DV060/M</p>	<p>③ sb-DV060/R</p>
	<p>④ sb-DV060T</p>	<p>⑤ sb-DV060/W</p>	<p>System Tie Wrap</p>	
Separators	<p>Ordering NO.</p> <p>sb-SP/400.400 Cut to length (400 mm)</p>			

# nsb 075CR

## Calculation of the chain length



$$[ L = \frac{Ls}{2} + Lp ] \quad (\text{Unit : mm})$$

Bending Radius (R)	L p Loop Length	L f Loop Projection	H Moving Height
180	1,147	515	504
200	1,210	535	544
250	1,367	585	644
300	1,524	635	744
350	1,681	685	844
400	1,838	735	944
500	2,152	835	1,144

## Accessories

Steel end bracket						System tie wrap			Tie wrap					
<p>Moving Point</p>														
Ordering No.	A Width (Outer)	B Height (Outer)	C Frame	D Height (Inner)	E M.EB Bolt hole width	Ordering No.	C Frame	Hole Type	Ordering No.	A	B			
nsb-FEB075CR	125	108	78	78	15	S-TW.EB075.75	75	M10 Bolt Holes	S-TW50	58	65			
	150				40	S-TW.EB075.100	100					S-TW75	75	82
	165				55	S-TW.EB075.115	115					S-TW100	98	105
	175				65	S-TW.EB075.125	125					S-TW125	122	129
	200				90	S-TW.EB075.150	150					S-TW150	141	148
	225				115	S-TW.EB075.175	175							
	250				140	S-TW.EB075.200	200							
	290				180	S-TW.EB075.240	240							
	300				190	S-TW.EB075.250	250							
	340				230	S-TW.EB075.290	290							
	350				240	S-TW.EB075.300	300							
	400				290	S-TW.EB075.350	350							
	450				340	S-TW.EB075.400	400							
	500				390	S-TW.EB075.450	450							
	550				440	S-TW.EB075.500	500							
	600				490	S-TW.EB075.550	550							
650	540	S-TW.EB075.600	600											

Dividers	① sb-DV075/S			② sb-DV075/M			③ sb-DV075/R		
	<p>①S divider is used to fix a separator that is the same length as the frame</p> <p>②M divider is used to separate individual cables</p> <p>③R Side position roller divider to protect abrasion of moving cable at inner side of chain</p> <p>④T divider can be used at center position to support frame longer than 300mm and up</p> <p>⑤W (Tie wrap) dividers are used to hold the cables in place at both ends of the cable chain</p>								
Separators	④ sb-DV075/T			⑤ sb-DV075/W			System Tie Wrap		
<p>Ordering NO.</p> <p>sb-SP/600.600 Cut to length (600 mm)</p>									