

Plarailchain SC, SCL

PISCO®

Cable/Tube Carrier With Low Dust, Low Noise, One-side Open Flap, Hinge Connection Type

⚠ Safety instructions for this product
Safety instructions, Common safety instructions for each product category and Detailed safety instructions for each product are in the end of this catalog and our website.

Model Designation (Example)

*Bracket for moving-end and fixed-end must be ordered separately. For details, see page 817.

SC **3560** - **R75**
(1) (2) (3)

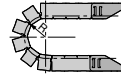
(1) Low dust, Low noise, One-side open flap, Hinge connection type

(2) Size (Storing dimensions: H × W)

Code	1520	2040	2540	2560	2580	3560	35100
Size (mm)	15×20	20×40	25×40	25×60	25×80	35×60	35×100

(3) Bending radius (R) (*The bending radius of SC type signifies minimum bending radius of cables inside.)

Code	R28	R31	R34	R38	R58	R60	R75	R85	R100	R115
1520	○		○							
2040		○		○						
2540								○		
2560					○					
2580					○			○		
3560							○		○	
35100									○	○



(○: Available)

Space-saving type Model designation (Example)

*Bracket for moving-end and fixed-end must be ordered separately. For details, see page 817.

SCL **2570** - **R46**
(1) (2) (3)

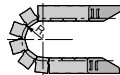
(1) Plarailchain with Low dust, Low noise, One-side open flap, Hinge connection, Space-saving type

(2) Size (Storing dimensions: H × W)

Code	2020	2050	2570	3050
Size (mm)	20×20	20×50	25×70	30×50

(3) Bending radius (R) (*The bending radius of SCL type represents minimum bending radius of cables inside.)

Code	R31	R36	R46	R64
2020		○		
2050	○			
2570			○	○
3050			○	



(○: Available)

Model Designation for Divider (Example)

SB **25** - **SC**
(1) (2)

(1) Divider for Plarailchain

(2) Applicable models

Code	20	25	30	35
Applicable models	SC2040, SCL2050	SC25□, SCL2570	SCL3050	SC35□

Model designation for flap (Example)

SC **3560** **Flap**
(1) (2)

(1) Series

Code	SC	SCL
Series	Standard	Space-saving type

(2) Model

[See Model Designation (2. Size)]

Model Designation for Shelf (Example)

TB **3560** - **SC**
(1) (2)

(1) Shelf for Plarailchain

(2) Applicable models

Code	2540	2560	2570	2580	3050	3560	35100
Applicable models	SC2540	SC2560	SCL2570	SC2580	SCL3050	SC3560	SC35100

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Characteristics

Connecting structure with no sliding parts, managed to minimize the generation of dust.

The bending part employs a hinge structure, and link increase and decrease are also possible.

Noise is reduced by using soft materials with low impact noise.

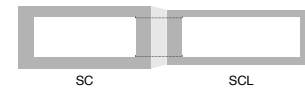
By adopting a frame structure, the inner parts in contact with cables, being made of soft material reduces the wear of cables where as the rigidity of the frame is maintained by the parts made of hard material.

Assembly structure of a hard resin frame combined with a soft resin frame prevents rigidity reduction, which is common to parts made of soft materials.

Flaps are made of the same material as SP series products, making it possible to further increase rigidity while decreasing cable abrasion.

The flaps are designed not only to open left or right as desired, but also to facilitate mounting/removal. They can also be placed in any direction.

Low profile and space-saving type is available.



The SCL type has a reduced body height compared to the standard type with the same storage height.

Three types of brackets are available: standard one-piece type brackets, separate type brackets for 16 different mounting methods, and low-cost, lightweight resin brackets.



Specifications

Series	SC (Standard)							SCL (Space-saving type)			
	1520	2040	2540	2560	2580	3560	35100	2020	2050	2570	3050
Bending radius (mm)	28 34	31 38 58	60 85	60	60 85	75 100	75 100 115	36	31	46 64	46
Max. O.D. of cable/tube (mm)	12	16	20	20	20	28	28	16	16	20	24
Pitch length (mm)	18	20	30	30	30	45	45	20	20	30	30
No. of links (/m)	56	50	33	33	33	23	23	50	50	33	33
Max. free span (m)*	1.1	1.4	1.5	1.5	1.5	2	1.8	1.4	1.4	1.5	1.6
Max. travel stroke (m)	2.15	2.75	2.9	2.9	2.9	3.9	3.5	2.75	2.75	2.9	3.13
Max. contents weight (kg/m)	1	1	3	3	3	6	6	1	1	3	3
Max. travel speed (m/s)	4							4			
Chain weight (kg/m)	0.34	0.7	0.77	0.94	1.2	1.4	2	0.39	0.58	0.96	1.2
Chain material	TPEE, PA6 GF30%										
One-piece type bracket material	SPCC with Trivalent unichrome plating										
Separate type bracket material	SUS304										
Resin bracket material	PA6 GF45%										
Divider material	—							PA6		PA6	
Rack sheet material	—							PA6 GF30%		PA6 GF30%	
Operating temp. range (°C)	-8 to 80										
Operating environment	Avoid using in acid/alkaline atmosphere or in hot water.										

*Max. free span: Length that the upper runs in straight line with no sag.

RoHS2 (2011/65/EU+EU2015/863) compliant

Series	Model code
Low dust, Low noise, One-side open, Hinge connection type SC	SC1520- ^③
	SCL2020-R36
	SC2040- ^③
	SCL2050-R31
	SC2540- ^③
	SC2560-R60
	SCL2570- ^③
	SC2580- ^③
	SCL3050-R46
	SC3560- ^③
SC35100- ^③	



Notes

*1. For ^③ in model code, please select a code for bending radius.

*2. See page 792 for size selection instructions.

*3. See page 797 for the calculation method of the number of links.



CAD data is available at PISCO website.

Related product



Low Friction Polyurethane Tube

▶ P.94

One-piece type bracket material for SC series (Standard type only)				Resin bracket for SC series			
Application	For moving-end		For fixed-end		Application	For fixed-end	
Type					Type		
Screwing position	Inside		Inside		Screwing position	Inside	
Orientation	Outer periphery	Inner periphery	Outer periphery	Inner periphery	Orientation	Outer periphery	Inner periphery
Type	Model code		Model code		Type	Model code	
SC1520	SC1520-K		SC1520		SC1520	SC15-P	
SC2040	SC2040-K		SC2040		SC2040	SC20-P	
SC2540	SC2540-K		SC2540		SC2540	SC25-P	
SC2560	SC2560-K		SC2560		SC2560	SC25-P	
SC2580	SC2580-K		SC2580		SC2580	SC25-P	
SC3560	SC3560-K		SC3560		SC3560	SC35-P	
SC35100	SC35100-K		SC35100		SC35100	SC35-P	
			SCL2020		SCL2020	SCL20-P	
			SCL2050		SCL2050	SCL20-P	
			SCL2570		SCL2570	SCL25-P	
			SCL3050		SCL3050	SCL30-P	

Separate type bracket material for SC series							
Application	For moving-end				For fixed-end		
Type							
Screwing position	Inside		Outside		Inside		Outside
Orientation	Outer periphery	Inner periphery	Outer periphery	Inner periphery	Outer periphery	Inner periphery	Outer periphery
Type	Model code		Model code		Model code		Model code
SC1520	SC15-A		SC15-B		SC15-A		SC15-B
SC20□	SC20-A		SC20-B		SC20-A		SC20-B
SC25□	SC25-A		SC25-B		SC25-A		SC25-B
SC35□	SC35-A		SC35-B		SC35-A		SC35-B
SCL2020	SCL20-A		SCL20-B		SCL20-A		SCL20-B
SCL2050	SCL20-A		SCL20-B		SCL20-A		SCL20-B
SCL2570	SCL25-A		SCL25-B		SCL25-A		SCL25-B
SCL3050	SCL30-A		SCL30-B		SCL30-A		SCL30-B

Notes
 *1. Separate type bracket and one-piece bracket have common brackets for the moving/fixed-end. Two sets are required for the moving-end and the fixed-end.
 *2. Two types of brackets are required, each for separate type bracket and one-piece bracket. Select best-suited bracket for your application from above selection. Moving-end and fixed-end must be ordered separately.

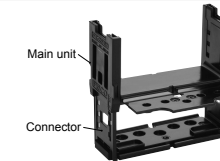
Plarailchain SC, SCL

Divider for SC series			Flap for SC series	
SB20-SC	Model code	Applicable models	SC Flap	
SB25-SC	SB20-SC	SC2040, SCL2050		
SB35-SC	SB25-SC	SC25□, SCL2570		
	SB30-SC	SCL3050		
	SB35-SC	SC35□		
	Model code	Applicable models		
	SC1520Flap	SC1520		
	SCL2020Flap	SCL2020		
	SC2040Flap	SC2040		

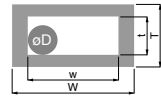
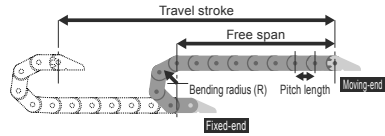
Shelf for SC series				
TB□-SC	Model code	Applicable models	SCL2050Flap	SCL2050
	TB2540-SC	SC2540	SC2540Flap	SC2540
	TB2560-SC	SC2560	SC2560Flap	SC2560
	TB2570-SC	SCL2570	SCL2570Flap	SCL2570
	TB2580-SC	SC2580	SC2580Flap	SC2580
	TB3050-SC	SCL3050	SCL3050Flap	SCL3050
	TB3560-SC	SC3560	SC3560Flap	SC3560
	TB35100-SC	SC35100	SC35100Flap	SC35100

Main unit for SC series		Connector for SC series	
SC Main-body	Model code	SC Joint	Model code
	SC1520-R28Main-body		SC1520Joint
	SC1520-R34Main-body		SC2040Joint
	SC2040-R31Main-body		SC2540Joint
	SC2040-R38Main-body		SC2560Joint
	SC2040-R58Main-body		SC2580Joint
	SC2540-R60Main-body		SC3560Joint
	SC2540-R85Main-body		SC35100Joint
	SC2560-R60Main-body		SCL2020Joint
	SC2580-R60Main-body		SCL2050Joint
	SC2580-R85Main-body		SCL2570Joint
	SC3560-R75Main-body		SCL3050Joint
	SC3560-R100Main-body		
	SC35100-R75Main-body		
	SC35100-R100Main-body		
	SC35100-R115Main-body		
	SCL2020-R36Main-body		
	SCL2050-R31Main-body		
	SCL2570-R46Main-body		
	SCL2570-R64Main-body		
	SCL3050-R46Main-body		

Unit connection drawing



Selection chart for Plarailchain series

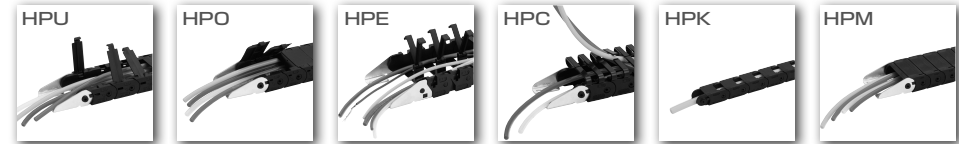


T : Height
 W : Width
 t : Inner height
 w : Inner width
 øD: Max. O.D. of cable/tube

Open-close flap type		Bending radius (mm)	Pitch length (mm)	No. of links (/m)	Max. free span (m)*	Max. travel stroke (m)	Max. contents weight (kg/m)	Max. travel speed (m/s)	Chain weight (kg/m)	Divider	Open/close system
HPU	102	19	20	50	0.46	0.7	1.5	2.5	0.12	—	Snap open on either side (along the outer radius).
	202	25, 30, 45	25	40	0.75	1.4	1.2		0.25	—	
	203	30, 45							0.26	—	
	204	38, 50	32	32	1	1.9	2		0.5	—	
	206								0.56	—	
	306	50, 100, 150	45	23	1.5	2.9	6		0.64	—	
	408	1.1							●		
	412	50, 75, 100, 150, 200							1.3	●	
	615	75, 100, 150, 200							2.46	●	
HPO <small>Fully-enclosed type</small>	202	30, 45	20	50	0.75	1.4	1.9	2.5	0.28	—	Snap open on either side (along the outer radius).
	203								0.31	—	
	204	38, 50	26	39	1.75	3.4	10		0.5	—	
	206								0.6	—	
	408	70, 100, 150, 200	45	23	4.5	8.8	30.6		1.36	●	
	412	1.7							●		
	512	100							2.15	●	
	819	150, 200, 250, 300, 400	90	11	2.5	4.6	35		4.4	●	
HPE <small>Open-close split flap type</small>	408	50, 75, 100, 150, 200	45	23	1.5	2.9	2.5	2.5	1.1	—	Twin gull-wing crossbars operate independently.
	412								1.3	—	
HPC <small>Simple flap type</small> <small>Low noise</small>	203	30, 45, 60	25	40	0.9	1.7	2.5	2.5	0.37	—	Cut apart crossbars by a cutter (at the spot indicated by the arrow) so that cables / tubings can be easily installed.
	204	50, 90, 150	32	32	1	1.8	4		0.59	—	
	306	50, 100, 150	45	23					0.78	—	
	50	60	25	40	1.06	1.9	5		0.358	—	
	100	90			0.608	—					
200	105	1			1.8	1.056	—				

Fixed flap type		Bending radius (mm)	Pitch length (mm)	No. of links (/m)	Max. free span (m)*	Max. travel stroke (m)	Max. contents weight (kg/m)	Max. travel speed (m/s)	Chain weight (kg/m)	Divider	Open/close system
HPK <small>Compact</small>	101	19	20	50	0.5	0.8	1.5	1	0.105	—	No flap
	202	30, 45	25	40	0.75	1.4	3		0.222	—	
	203								0.24	—	
	204	0.45	—								
HPM <small>Fully-enclosed type</small>	204	28	15	67	1	1.8	3	2.5	0.34	—	No flap
	205								0.39	—	
	206								38, 50	22	

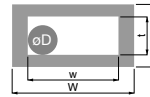
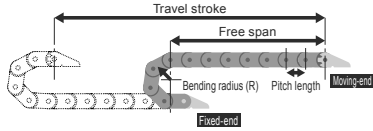
*Max. free span is the maximum length that the upper runs in straight line with no sag.



		Size (Max. O.D. of cable/tube) (mm)									
HPU	102	202	203	204	206	615					
	306	408	412								
HPO	202	203	204	206	819						
	408	412	512								
HPE	408	412									
HPC	203	204	306	50	100	200					
HPM	204	205	206								

— Highlighted line indicates approximate positions where a divider can be installed.

Selection chart for Plarailchain series



T : Height
 W : Width
 t : Inner height
 w : Inner width
 øD: Max. O.D. of cable/tube

Low Abrasion, Low Noise, Open-Close Flap Type.

SP	SPO	Bending radius (mm)	Pitch length (mm)	No. of links (/m)	Max. free span (m) ¹	Max. travel stroke (m)	Max. contents weight (kg/m)	Max. travel speed (m/s)	Chain weight (kg/m)	Divider	Rack	Open/close system						
1520 ²	—	30, 50, 75	25	40	1.25	2.4	2.2	3	0.36(0.35)	—	—	Snap open on either side (along the outer radius).						
2035 ²	—	45	32	32	1.25	2.4	2.3		0.5(0.48)	●	—							
2550 ²	—	50, 75, 100, 150	36	28	1.63	3.1	6.5		0.86(0.83)	●	—							
2560 ²	—				1.75	3.3	8	0.85(0.82)	●	—								
2585 ²	—	60, 75, 100, 150	43.5	23	1.88	3.6	8	1.05(1.01)	●	—	3	Snap open on either side along both the inner radius and the outer radius.						
3580	—	100, 125, 150, 175, 200	62.5	16	2.25	4.4	10	1.76	●	—								
35105	—				2.38	4.6	13	1.96	●	—								
4542	—	75, 100, 125, 150, 175, 200, 250	67	15	2.13	4.2	32	3	2.3	●	●	Snap open on either side along both the inner radius and the outer radius.						
4575	4575								2.4[3]	●	●							
45100	45100								2.6[3.3]	●	●							
45115	—								2.7	●	●							
45125	45125								2.8[3.6]	●	●							
45150	45150								3.0[3.9]	●	—							
45175	—								3.1	●	—							
45200	—								3.2	●	—							
45250	—								(75 and 100 are not available for SPO.)	3.5	●		—					
5575	5575								135, 150, 200, 250	91	11		5	9.8	65	3	3.5[3.9]	●
55100	55100	3.6[4]	●	—														
55125	55125	3.7[4.1]	●	—														
55150	55150	3.8[4.2]	●	—														
55175	—	3.9	●	—														
55200	—	4.0	●	—														
55250	—	4.1	●	—														
55300	—	(135 is not available for SPO.)	4.2	●	—													
8075	—	150, 200, 250, 300, 350, 400	100	10	5	9.8	70	3				4.7					●	—
80100	—											4.8					●	—
80125	—								4.9	●	—							
80150	—								5.1	●	—							
80175	—								5.2	●	●							
80200	—								5.3	●	●							
80250	—								5.6	●	●							
80300	—								5.8	●	●							



Size (Max. O.D. of cable/tube) (mm)	

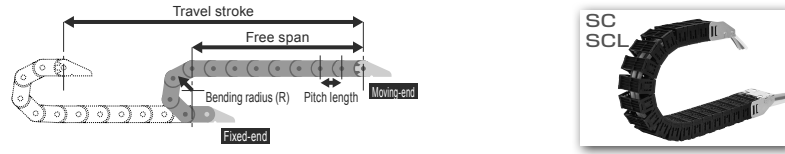
SD	2550	Bending radius (mm)	Pitch length (mm)	No. of links (/m)	Max. free span (m) ¹	Max. travel stroke (m)	Max. contents weight (kg/m)	Max. travel speed (m/s)	Chain weight (kg/m)	Divider	Rack	Open/close system
High resistance. Low abrasion.	2550	50, 70, 100	25	40	2.2	4.3	7	4	0.9	●	—	Snap open on either side along both the inner radius and the outer radius.
	2560								0.95	●	—	
	2580								1.07	●	—	

Size (Max. O.D. of cable/tube) (mm)	

*1. Max. free span is the maximum length that the upper runs in straight line with no sag.
 *2. Models available in Anti-static type.
 *3. Weights in () are for Anti-static type.
 *4. Weights in [] are for SPO.

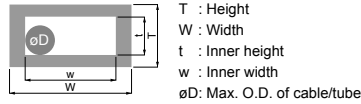
— indicates approximate positions where a divider and a rack can be installed.
 SP80□ requires a shelf divider to install a shelf.

Selection chart for Plarailchain series



Open-Close Flap, Hinge Connection Type	Bending radius (mm)	Pitch length (mm)	No. of links (m)	Max. free span (m)	Max. travel stroke (m)	Max. contents weight (kg/m)	Max. travel speed (m/s)	Chain weight (kg/m)	Divider	Rock	Open/close system				
SC Low noise, Low dust	1520	28, 34	18	56	1.1	2.15	1	4	0.34	—	Flap only opens on one side (either side)				
	2040	31, 38, 58	20	50	1.4	2.75			0.7	●					
	2540	60, 85	30	33	1.5	2.9			0.94	●					
	2580	60, 85							1.2	●					
	3560	75, 100	45	23	2	3.9			1.4	●					
	35100	75, 100, 115			1.8	3.5			2	●					
SCL Low noise, Low dust Space-saving type	2020	36	20	50	1.4	2.75	1	4	0.39	—	Flap only opens on one side (either side)				
	2050	31							0.58	●					
	2570	46, 64							30	33		1.5	2.9	0.96	●
	3050	46										1.6	3.13	1.2	●

*Max. free span is the maximum length that the upper runs in straight line with no sag.



	Size (Max. O.D. of cable/tube) (mm)			
SC Low noise, Low dust	1520	2040	2540	2580
	2540	2580	3560	35100
SCL Low noise, Low dust Space-saving type	2020	2050	2570	3050

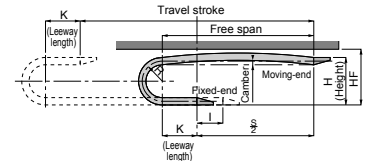
Plarailchain Number of Links Calculation

Number of links calculation

Number of links is to be calculated by the following formula.

$$n = \frac{S}{2P} + a + 1$$

- n: Number of links (Round up after the decimal point)
- S: Travel stroke
- a: $\pi R + 2K$ (R: Bending radius (mm), K: Leeway (mm))
- l: Distance from mid point (mm) when the fixed-end is not in the middle of travel stroke. (When the travel stroke is in the mid point: 0).
- P: Pitch length (mm)



(Note)

Placing the fixed-end in the center point of travel stroke minimizes the number of Plarailchains required.

*1. "HF" in the drawing above shows the installation height (clearance height) taking into account the camber (curve of upper run with no cables / hoses being accommodated)

*2. Please make inquiries for special travel conditions.

Series	R	P	H	HF	K	a
102	19	20	50	65	20	99.7
202	25	25	70	85	25	128.5
	30		80	95		144.2
	45		110	125		191.3
203	30	25	80	95	25	144.2
	45		110	125		191.3
204,206	50	32	98	118	30	179.3
	122		142	217.0		
306	50	45	134	160	50	257.0
	100		234	260		414.0
	150		334	360		571.0
408,412	50	45	140	170	50	257.0
	75		190	220		335.5
	100		240	270		414.0
	150		340	370		571.0
	200		440	470		728.0
615	75	70	214	275	70	375.5
	100		264	325		454.0
	150		364	425		611.0
	200		464	525		768.0
202,203	30	20	80	95	25	144.2
	45		110	125		191.3
	38		26	98		118
50	122	142		217.0		
408,412	70	45	180	210	50	319.8
	100		240	270		414.0
	150		340	370		571.0
	200		440	470		728.0
512	100	60	260	320	60	434.0
	150		384	445		651.0
819	200	90	484	545	90	808.0
	250		584	645		965.0
	300		684	745		1,122.0
	400		884	945		1,436.0
	50		45	140		180
75	190	230		335.5		
100	240	280		414.0		
150	340	380		571.0		
101	19	20	50	62	25	109.7
	30		80	95		144.2
	45		110	125		191.3
	38		32	98		118
50	122	142		217.0		
204,205	28	15	79	100	15	117.9
	30		80	95		144.2
206	45	22	110	125	25	191.3
	30		98	120		144.2
203	45	25	128	150	25	191.3
	60		158	180		238.4
	50		146	165		271.0
204	90	32	226	245	30	342.6
	150		346	365		531.0
	50		160	177		257.0
306	100	45	260	277	50	414.0
	150		360	377		571.0
	50		25	152		206
100	227	257		90	462.6	
200	105	25	260	295	90	509.7

Series	R	P	H	HF	K	a		
1520	30	25	81	100	30	154.2		
	50		121	140		217.0		
	75		171	190		295.5		
2035	45	32	116	140	35	211.3		
	50		135	160		257.0		
2550, 2560	75	36	185	210	50	335.5		
	100		235	260		414.0		
	150		335	360		571.0		
	60		43.5	155		180	50	288.4
75	185	210		335.5				
100	235	260		414.0				
2585	150	45	335	360	50	571.0		
	60		155	180		288.4		
	75		185	210		335.5		
	100		235	260		414.0		
	150		335	360		571.0		
35 □	100	62.5	250	280	63	440.0		
	125		300	330		518.5		
	150		350	380		597.0		
	175		400	430		675.5		
	200		450	480		754.0		
45 □	75	67	214	275	70	375.5		
	100		264	325		454.0		
	125		314	375		532.5		
	150		364	425		611.0		
	175		414	475		689.5		
55 □	150	91	464	525	100	754.0		
	200		564	625		925.0		
	135		350	400		623.9		
	150		380	430		671.0		
	200		480	530		828.0		
80 □	250	100	580	630	106	985.0		
	150		406	495		683.0		
	200		506	595		840.0		
	250		606	695		997.0		
	300		706	795		1,154.0		
45 □	350	90	806	895	106	1,311.0		
	400		906	995		1,468.0		
	125		67	314		375	70	532.5
	150			364		425		597.0
	175			414		475		675.5
200	464	525		754.0				
55 □	250	91	564	625	100	925.0		
	150		380	430		671.0		
	200		480	530		828.0		
	250		580	630		985.0		
25 □	70	25	173	190	28	275.8		
	100		233	250		370.0		
	28[26.3]		18	95		115	23	126.6
34[31.3]	105	125		144.3				
L2020	20	120	120	150	25	156.8		
	31[28.6]		115	145		150.4		
	38[36.3]		20	130		160	30	174.0
L2050	58[56.3]	20	170	200	25	236.8		
	31[29]		110	140		141.1		
	60[57.8]		30	185		215	35	251.5
2540	85[82.8]	30	235	265	35	330.0		
	60[57.8]		30	185		215	35	251.5
L2570	46[44]	30	150	180	35	208.2		
	64[61.3]		30	185		215	35	262.5
2580	60[57.8]	30	185	215	35	251.5		
	85[82.8]		30	235		265	35	330.0
L3050	46[44]	30	160	190	35	208.2		
	75[71.3]		240	270		50	323.9	
3560, 35100	100[98.8]	45	295	325	50	410.2		
	115[113.8]		45	325		35	457.3	



You might find this helpful

The auto-calculator to help figure out the number of links is available on our website.

*As for SC Series, "R" value used for the calculation is inside [], which is different from "R" indication in the model code.