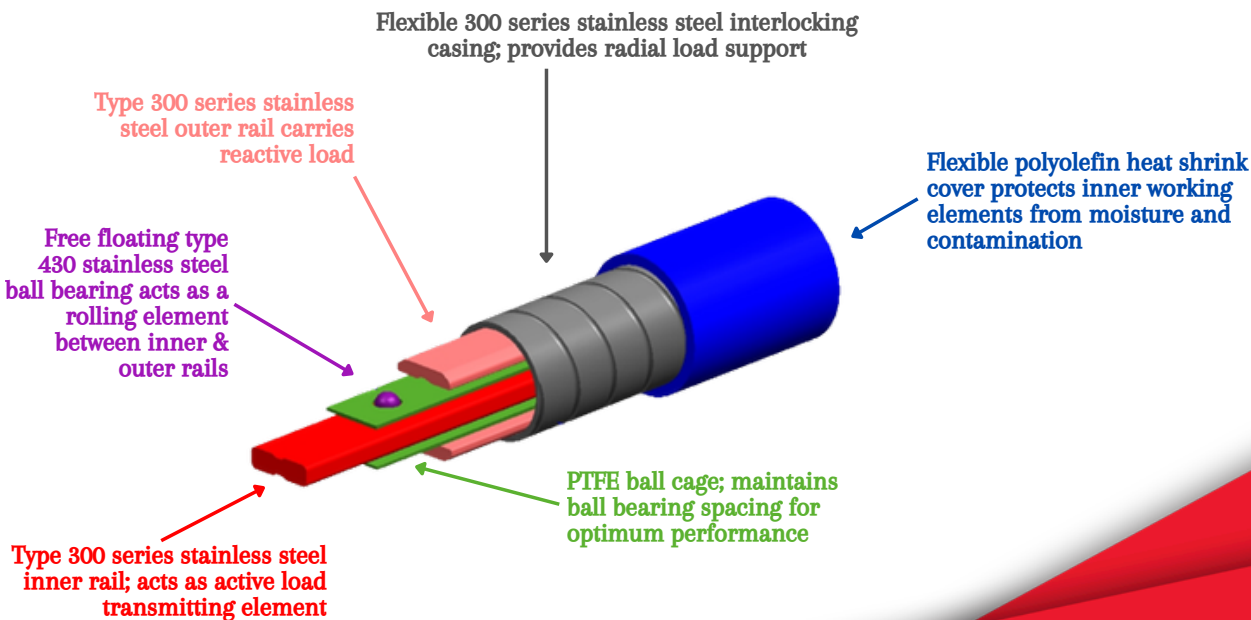


BALL-BEARING CABLES

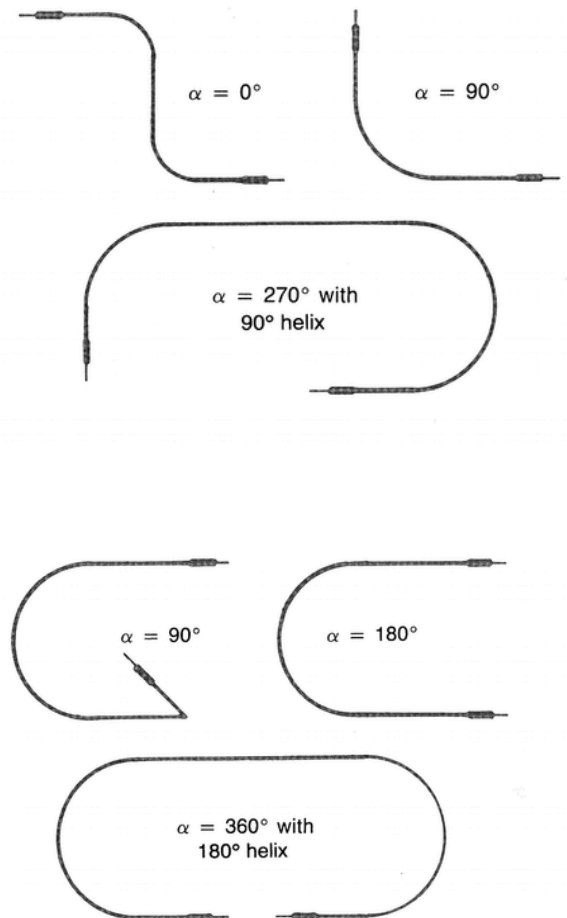
Orscheln provide push-pull ball-bearing control cables. It is essentially a flexible linear ball bearing which transfers push-pull motion from one point to another. Its unique design allows for the transmission of movement with maximum efficiency and minimal lost motion.



Installation

Due to Ball-Bearing Cables' unique nature when it is bent, the three internal rails will form concentric arcs. Therefore, either the outside outer-rail must increase in length or the inside outer-rail must shorten in length to compensate for the different radii of each rail's arc. An internal anchoring system meets this requirement. The cable can bend slightly more than 180 degrees in either direction, and multiple bends are acceptable during installation as long as the difference between opposing bends does not exceed 180 degrees. If routing requires more than 180 degrees of bend in one direction, it can be achieved by helixing the rails. (See below)

	Type 58	Type 78	Type 98
Maximum Recommended Input Loads Compression			
Stroke 1" – 4"	50 lbs.	200 lbs.	400 lbs.
Stroke 5" – 6"		100 lbs.	250 lbs.
Stroke 7" – 8"		40 lbs.	100 lbs.
Tension			
Stroke 1" – 8"	100 lbs.	300 lbs.	500 lbs.
Minimum Recommended Bend Radius			
Occasional Cycling	3.50 in.	4.00 in.	5.00 in.
Continuous Cycling	7.00 in.	12.00 in.	15.00 in.
Elastic Stretch Push or PULL, Per Foot by 20 lbs. of Input Load			
	0.0035 in.	0.0020 in.	0.0012 in.
Temperature Range with Plastic Cover*	-55°C to +105°C		
Temperature Range without Plastic Cover	-55°C to +315°C		
Maximum Overall Length**	30 ft.	65 ft.	65 ft.



*High temperature covers (+205°C) available upon request.
 **When Longer lengths are required, individual cables can be coupled together.

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