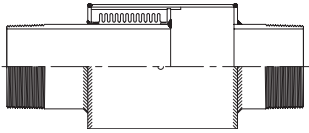
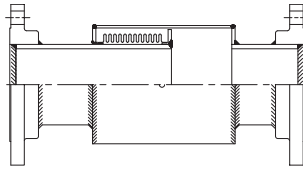


Steel Pipe Applications

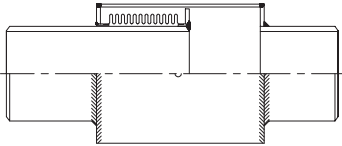
8503 Male Pipe Threads



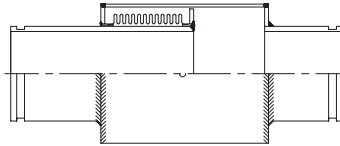
8505 Fixed Flange



8504 Weld End



8506 Grooved Ends

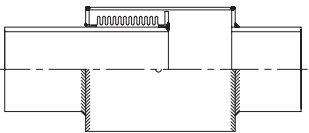


Bellows: Laminated (multiply) ASTM A240 Type 321 stainless steel
Pipe: Schedule 40 ASTM A53 Grade B Type 8503 threads per ASME B1.20.1 Type 8504 weld prep 37.5° per ASME B16.25 Type 8506 grooved per ANSI/AWWA C606-87
Flanges: ASME A105 raised face dimensioned per ASME B16.5, 150 LB
Housing, Guides & Stops: Carbon steel sheet & tube

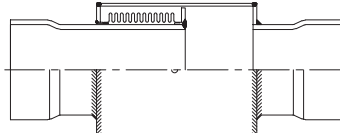
Note: Type 8503 includes an anti-torque stop

Copper Tube End Applications

8509 Male Tube ends



8510 Female Tube Ends



Bellows: Laminated (multiply) ASTM A240 Type 321 stainless steel
Copper Tube: ASTM B88
Housing & Guides: ASTM A240 Type 304 stainless steel

Note: Designed for sweat connection per ASME B16.22

Table 3 Pressure & Force Data
Types 8503, 8504, 8505 & 8506

Part Number 8503,8504 8505,8506	Nominal Size (NPS)	Effective Area (in ²)	Tabulated Pressure Thrust (pounds)			
			100 (psig)	150 (psig)	200 (psig)	300 (psig)
-214	3/4	1.5	150	225	300	450
-219	1	2.1	210	315	420	630
-224	1-1/4	3.3	330	495	660	990
-227	1-1/2	4.3	430	645	860	1290
-231	2	6.3	630	945	1260	1890
-235	2-1/2	8.8	880	1320	1760	2640
-240	3	13.1	1310	1965	2620	3930
-248	4	20.8	2080	3120	4160	6240
1	2	3	4	5	6	7

Table 4 Pressure & Force Data
Types 8509 & 8510

Part Number 8509 8510	Copper Tube Size	Effective Area (in ²)	Tabulated Pressure Thrust (pounds)			
			100 (psig)	150 (psig)	200 (psig)	300 (psig)
-212	3/4	1.1	110	165	220	330
-216	1	1.7	170	255	340	510
-220	1-1/4	2.4	240	360	480	720
-223	1-1/2	3.2	320	480	640	960
-229	2	5.1	510	765	1020	1530
-233	2-1/2	7.6	760	1140	1520	2280
-237	3	10.6	1060	1590	2120	3180
-245	4	17.9	1790	2685	3580	5370
1	2	3	4	5	6	7

Note: Tabulated data in Tables 3 & 4 is the force produced by pressure only. Refer to the Axial Spring rate tabulated in Tables 5 & 6 for the force resulting from the bellows stiffness.