



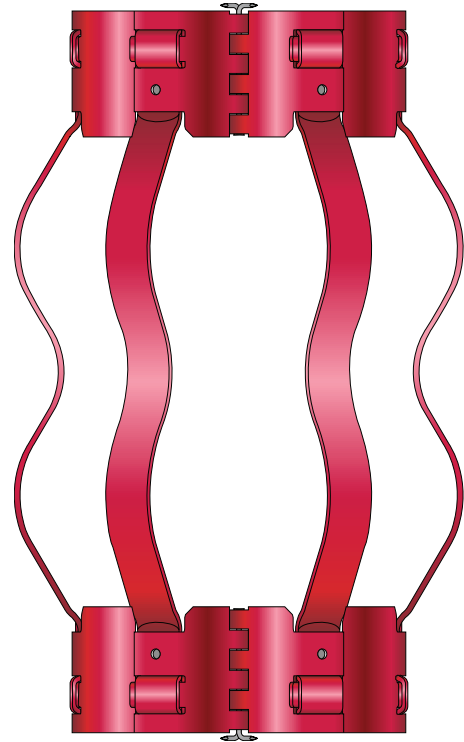
Tandem Rise™ Bow Centralizer

Weatherford's *Tandem Rise* bow centralizers are specifically designed to increase restoring forces and reduce drag during running and cementing operations. The centralizer features special *Tandem Rise* bows that provide superior standoff with reduced running forces when compared to conventional bow-spring centralizers. The bows are held in place with locking tabs on integrated slip-on end collars, providing a nonweld design that is capable of withstanding high lateral loads usually associated with horizontal wellbores.

During the planning phase, Weatherford's CentraPro Plus® software is recommended to ensure optimum centralizer quantity and placement with minimized friction forces.

Applications

- Tubing or casing applications
- Primarily suited for horizontal and directional wellbores
- Vertical wellbores



Features, Advantages and Benefits

- *Tandem Rise* bows provide superior standoff for greater mud removal compared to conventional bow-spring centralizers, enhancing the primary cement job and achieving zonal isolation.
- Locking tabs hold the bows in place, enabling the centralizer to withstand compressive loads during run-in.
- The centralizer should be placed over a stop collar to prevent axial movement during run-in.
- The field-proven, nonwelded design can withstand high lateral loads, ensuring reliable performance in horizontal wellbores.
- The centralizer achieves the highest restoring-force-to-drag ratio when running in-hole, increasing operational efficiency.



Tandem Rise™ Bow Centralizer

Specifications

Bow Spring Number	Bow Thickness (in./mm)	Bow Height (in./mm)	Maximum Coupling Length
TR1	0.171 4.35	0.800 20.32	14 1/8
TR2	0.171 4.35	1.171 29.74	14 1/8
TR3	0.171 4.35	1.421 36.09	14 1/8
TR4	0.171 4.35	2.171 55.14	14 1/8

Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)	Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)
4	TR1	5.85 148.8	5.201 132.1	10-3/4	TR1	12.681 322.1	12.028 305.5
	TR2	6.598 167.6			TR2	13.421 340.9	
	TR3	7.098 180.3			TR3	13.921 353.6	
	TR4	8.638 219.4			TR4	15.461 392.7	
4-1/2	TR1	6.362 161.6	5.705 144.9	11-3/4	TR1	13.496 342.8	13.039 331.2
	TR2	7.122 180.9			TR2	14.437 366.7	
	TR3	7.602 193.1			TR3	14.937 379.4	
	TR4	9.142 232.2			TR4	16.476 418.5	
5	TR1	6.870 174.5	6.213 157.8	13-3/8	TR1	15.339 389.6	14.685 373.0
	TR2	7.610 193.3			TR2	16.083 408.5	
	TR3	8.110 206.0			TR3	16.581 421.2	
	TR4	9.646 245.0			TR4	18.120 460.3	

*Tandem Rise™ Bow Centralizer**Specifications (continued)*

Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)	Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)
5-1/2	TR1	7.374 187.3	6.717 170.6	16	TR1	17.996 457.1	17.343 440.5
	TR2	8.114 206.1			TR2	18.740 476.0	
	TR3	8.614 218.8			TR3	19.240 488.7	
	TR4	10.154 257.9			TR4	20.780 527.8	
6-5/8	TR1	8.512 216.2	7.854 199.5	18-5/8	TR1	20.654 524.6	20.000 508.0
	TR2	9.252 235.0			TR2	21.398 543.5	20.000 508.0
	TR3	9.756 247.8			TR3	21.898 556.2	
	TR4	11.291 286.8			TR4	23.437 595.3	
7	TR1	8.886 225.7	8.232 209.1	20	TR1	22.047 560.0	21.394 543.4
	TR2	9.630 244.6			TR2	22.795 579.0	
	TR3	10.130 257.3			TR3	23.287 591.5	
	TR4	11.669 296.4			TR4	24.827 630.6	
7-5/8	TR1	9.520 241.8	8.862 225.1	24	TR1	26.098 662.9	25.441 646.2
	TR2	10.260 260.6			TR2	26.839 681.7	
	TR3	10.760 273.3			TR3	27.339 694.4	
	TR4	12.299 312.4			TR4	28.874 733.4	



Tandem Rise™ Bow Centralizer

Specifications (continued)

Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)	Casing Size (in.)	Bow Type	Maximum OD (in./mm)	Minimum Compressed OD (in./mm)
8-5/8	TR1	10.531 267.5	9.874 250.8	26	TR1	28.122 714.3	27.469 697.7
	TR2	11.272 286.3			TR2	28.870 733.3	
	TR3	11.772 299.0			TR3	29.362 745.8	
	TR4	13.311 338.1			TR4	30.902 784.9	
9-5/8	TR1	11.539 293.1	10.882 276.4	30	TR1	32.169 817.1	31.516 800.5
	TR2	12.280 311.9			TR2	32.917 836.1	
	TR3	12.780 324.6			TR3	33.409 848.6	
	TR4	14.319 363.7			TR4	34.949 887.7	

Options

- Welded configuration is also available. Contact a Weatherford representative for further information.