

6.3 | Hydra stainless steel bellows

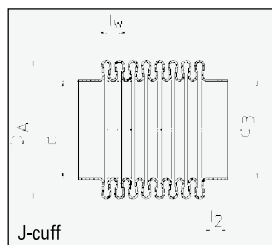
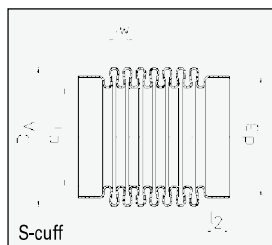
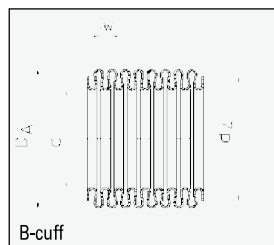
Preferred dimensions

HYDRA

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Reference diameter	Nominal pressure P _N *	Bellows profile				Material	Corrugation length l _w	Max. number of corrugations	Ø Tolerances		B-cuff Ø d ₄	S-cuff		J-cuff		Nominal deflection per corrugation (for 10,000 load cycles)			Spring rate per corrugation (± 30%)			Effective cross-section A	Weight per corrugation
		d _i	D _A	n _L	s				d _i	D _A		Ø inside d ₃	Length l ₂	Ø inside d ₃	Length l ₂	axial 2δ _{n,0}	angular 2α _{n,0}	lateral 2λ _{n,0}	axial c _δ	angular c _α	lateral c _λ		
mm	bar	mm	mm	–	mm	–	mm	–	mm	mm	mm	mm	mm	mm	mm	mm	Degree	mm	N/mm	Nm/degree	N/mm	cm ²	g
56	50	56.1 x 77.0	3 x 0.30	1.4571	6.20	56	–0.6/+0.2	±0.8	68/73			–	–	56.2	10	±0.65	±1.10	±0.020	880	8.50	152300	34.7	30.5
	65	56.1 x 77.0	4 x 0.30	1.4571	6.70	58	–0.6/+0.2	±0.8	73.0			–	–	56.2	10	±0.62	±1.00	±0.015	1200	11.50	178000	34.7	40.6
	83	56.1 x 77.0	5 x 0.30	1.4571	7.20	41	–0.6/+0.2	±1.0	73.0			–	–	56.2	10	±0.57	±0.90	±0.013	1600	15.50	205000	34.7	51.5
60	8	60.0 x 82.0	1 x 0.25	1.4571	5.20	52	–0.6/+0.2	±0.8	78.0			77.3	5.0	60.0	10	±1.10	±1.50	±0.025	125	1.40	35000	39.6	9.1
	18	60.0 x 82.0	2 x 0.25	1.4571	5.90	52	–0.6/+0.2	±0.8	78.0			77.3	5.0	60.0	10	±1.00	±1.40	±0.025	250	2.80	54300	39.6	18.2
	22	60.0 x 82.0	2 x 0.30	1.4571	6.00	52	–0.6/+0.2	±0.8	78.0			77.3	5.0	60.0	10	±0.80	±1.10	±0.022	440	4.70	92400	39.6	22.0
	42	60.0 x 82.0	3 x 0.30	1.4571	6.00	54	–0.6/+0.2	±0.8	78.0			–	–	60.0	10	±0.65	±0.90	±0.018	700	7.60	147000	39.6	33.0
	65	60.0 x 82.0	4 x 0.30	1.4571	6.70	59	–0.6/+0.2	±0.8	78.0			–	–	60.0	10	±0.60	±0.80	±0.016	1100	12.10	185300	39.6	44.0
	110	60.0 x 82.0	6 x 0.30	1.4571	7.70	38	–0.6/+0.2	±0.8	76.0			–	–	60.0	10	±0.50	±0.65	±0.014	1800	19.80	229600	39.6	44.0
	220	60.8 x 79.0	7 x 0.30	1.4571	7.20	41	–0.6/+0.2	±0.8	73.0			–	–	60.8	10	±0.35	±0.60	±0.012	4000	42.50	565500	38.4	64.0
66	6	65.5 x 90.0	1 x 0.25	1.4571	5.30	47	–0.6/+0.2	±0.8	85.0			84.3	5.0	65.5	10	±1.10	±1.40	±0.024	90	1.20	29100	47.5	11.2
	15	65.5 x 90.0	2 x 0.25	1.4571	6.00	48	–0.6/+0.2	±0.8	85.0			84.3	5.0	65.5	10	±1.00	±1.35	±0.024	190	2.50	47900	47.5	22.4
	20	65.4 x 90.0	2 x 0.30	1.4571	6.10	51	–0.6/+0.2	±0.8	85.0			84.3	5.0	65.4	10	±0.95	±1.20	±0.024	330	4.50	80300	47.4	26.9
	32	65.4 x 90.0	3 x 0.30	1.4571	6.60	60	–0.6/+0.2	±0.8	82.0			–	–	65.4	10	±0.85	±1.10	±0.023	540	7.20	112300	47.4	40.4
	55	65.4 x 86.0	3 x 0.30	1.4571	6.40	63	–0.6/+0.2	±0.8	78.0			–	–	65.4	10	±0.60	±0.85	±0.016	1075	13.40	225300	44.9	35.8
	90	65.4 x 90.0	6 x 0.30	1.4571	8.20	36	–0.6/+0.2	±1.0	82.0			–	–	65.4	10	±0.65	±0.80	±0.018	1400	18.00	188500	47.4	81.0
	165	65.4 x 85.0	6 x 0.30	1.4571	7.10	36	–0.6/+0.2	±1.0	78.0			–	–	65.4	10	±0.40	±0.60	±0.012	3300	41.00	554500	44.4	65.2
70	7	72.0 x 95.0	1 x 0.25	1.4571	4.50	52	–0.6/+0.1	±1.0	85.0			84.3	5.0	72.0	10	±1.00	±1.35	±0.017	150	2.30	77500	54.8	19
	18	70.5 x 95.0	2 x 0.30	1.4571	5.90	46	–0.6/+0.2	±1.0	85.0			84.3	5.0	70.5	10	±1.00	±1.35	±0.023	360	5.40	106000	53.8	28
	45	70.5 x 92.0	3 x 0.30	1.4571	6.10	55	–0.5/+0.3	±1.0	85.0			–	–	70.5	10	±0.70	±0.90	±0.017	900	12.80	239500	51.8	37
	60	70.5 x 92.0	4 x 0.30	1.4571	7.00	53	–0.5/+0.3	±1.0	85.0			–	–	70.5	10	±0.67	±0.80	±0.012	1800	26.00	363000	51.8	50
77	7	77.5 x 101.0	1 x 0.25	1.4571	5.50	48	–0.6/+0.2	±1.0	95.0			95.3	5.0	77.5	10	±1.20	±1.30	±0.024	120	2.10	47400	62.5	13

* outside pressure; in the event of inside pressure loads, column stability must also be guaranteed (buckle resistance)