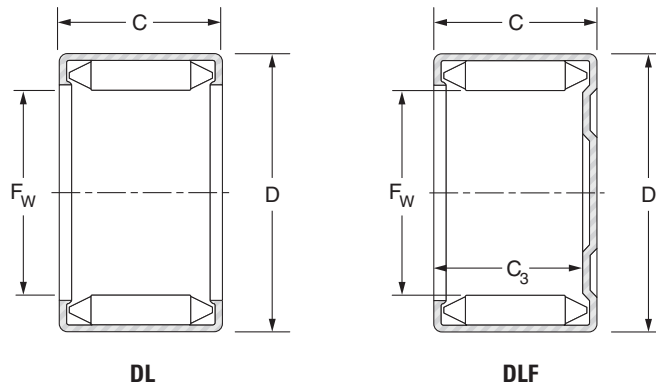


Needle bushes, full complement, retained

open series DL

closed end series DLF

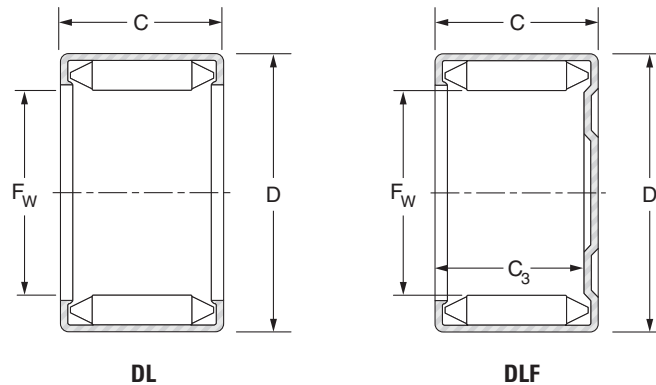


Shaft Ø mm	Designation	Fw mm	D mm	C mm	C ₃ min. mm	Load Ratings kN		Speed limit min ⁻¹		Weight kg	Internal ring
						Dynamic	Static				
						C	C ₀	Grease	Oil		
6	DL 6 10	6	12	10	—	2.90	3.80	33000	50000	0.004	
	DLF 6 10	6	12	10	7.7	2.90	3.80	33000	50000	0.004	
8	DL 8 10	8	14	10	—	4.50	6.50	24000	37500	0.005	
	DLF 8 10	8	14	10	7.7	4.50	6.50	24000	37500	0.006	
10	DL 10 12	10	16	12	—	7.00	10.9	20000	30000	0.008	
	DLF 10 12	10	16	12	9.7	7.00	10.9	20000	30000	0.009	
12	DL 12 10	12	18	10	—	6.00	9.7	16000	25000	0.008	JR8x12x10.5
	DLF 12 10	12	18	10	7.7	6.00	9.7	16000	25000	0.008	JR8x12x12.5
	DL 12 12	12	18	12	—	7.00	11.5	16000	25000	0.009	JR8x12x12.5
	DLF 12 12	12	18	12	9.7	7.00	11.5	16000	25000	0.010	JR8x12x12.5
13	DL 13 12	13	19	12	—	8.50	14.2	15000	23000	0.010	JR10x13x12.5
	DLF 13 12	13	19	12	9.7	8.50	14.2	15000	23000	0.011	JR10x13x12.5
14	DL 14 12	14	20	12	—	7.90	13.5	14000	21500	0.011	JR10x14x12.5
	DLF 14 12	14	20	12	9.7	7.90	13.5	14000	21500	0.012	JR10x14x12.5
15	DL 15 12	15	21	12	—	9.40	16.4	13000	20000	0.011	JR12x15x12.5
	DLF 15 12	15	21	12	9.7	9.40	16.4	13000	20000	0.012	JR12x15x12.5
16	DL 16 12	16	22	12	—	8.70	15.5	12000	18500	0.012	JR12x16x12.5
	DLF 16 12	16	22	12	9.7	8.70	15.5	12000	18500	0.013	JR12x16x12.5
17	DL 17 12	17	23	12	—	9.00	16.2	11000	17500	0.013	JR13x17x12.5
	DLF 17 12	17	23	12	9.7	9.00	16.2	11000	17500	0.014	JR13x17x12.5
18	DL 18 12	18	24	12	—	10.7	19.5	11000	16500	0.014	JR13x18x12.5
	DLF 18 12	18	24	12	9.7	10.7	19.5	11000	16500	0.016	JR13x18x12.5
	DL 18 16	18	24	16	—	16.0	29.5	11000	16500	0.019	JR15x18x16.5
	DLF 18 16	18	24	16	13.7	16.0	29.5	11000	16500	0.021	JR15x18x16.5

Needle bushes, full complement, retained

open series DL

closed end series DLF

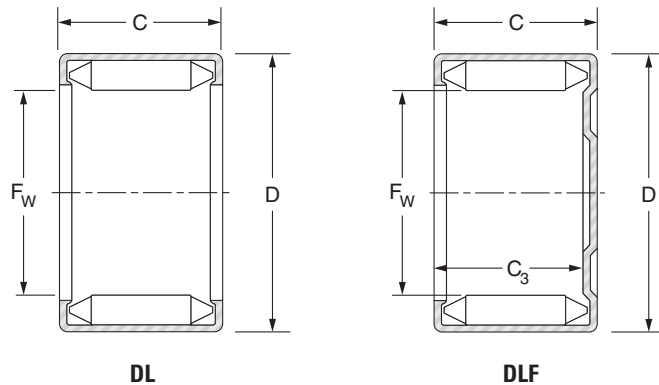


Shaft Ø mm	Designation	Fw mm	D mm	C mm	C ₃ min. mm	Load Ratings kN		Speed limit min ⁻¹		Weight kg	Internal ring
						Dynamic	Static				
						C	C ₀	Grease	Oil		
20	DL 20 12	20	26	12	–	10.2	19.5	10000	15000	0.015	JR15x20x12
	DLF 20 12	20	26	12	9.7	10.2	19.5	10000	15000	0.017	JR15x20x12
	DL 20 16	20	26	16	–	16.0	30.5	10000	15000	0.020	JR17x20x16
	DLF 20 16	20	26	16	13.7	16.0	30.5	10000	15000	0.022	JR17x20x16
22	DL 22 16	22	28	16	–	17.0	33.0	8800	13500	0.022	JR17x22x16
	DLF 22 16	22	28	16	13.7	17.0	33.0	8800	13500	0.025	JR17x22x16
25	DL 25 16	25	33	16	–	16.0	32.5	7800	12000	0.035	JR20x25x17
	DLF 25 16	25	33	16	13.7	16.0	32.5	7800	12000	0.039	JR20x25x17
	DL 25 20	25	33	20	–	22.8	46.0	7800	12000	0.043	JR20x25x20.5
	DLF 25 20	25	33	20	17.7	22.8	46.0	7800	12000	0.047	JR20x25x20.5
28	DL 28 20	28	36	20	–	24.5	52.0	7200	11000	0.047	JR22x28x20.5
	DLF 28 20	28	36	20	17.7	24.5	52.0	7200	11000	0.051	JR22x28x20.5
30	DL 30 16	30	38	16	–	21.7	46.5	6500	10000	0.040	JR25x30x17
	DLF 30 16	30	38	16	13.7	21.7	46.5	6500	10000	0.045	JR25x30x17
	DL 30 20	30	38	20	–	26.0	56.0	6500	10000	0.050	JR25x30x20.5
	DLF 30 20	30	38	20	17.7	26.0	56.0	6500	10000	0.055	JR25x30x20.5
	DL 30 25	30	38	25	–	35.5	76.0	6500	10000	0.063	JR25x30x26
	DLF 30 25	30	38	25	22.7	35.5	76.0	6500	10000	0.068	JR25x30x26
35	DL 35 16	35	43	16	–	24.0	54.0	5500	8500	0.046	JR30x35x17
	DLF 35 16	35	43	16	13.7	24.0	54.0	5500	8500	0.053	JR30x35x17
	DL 35 20	35	43	20	–	29.0	65.0	5500	8500	0.057	JR30x35x20.5
	DLF 35 20	35	43	20	17.7	29.0	65.0	5500	8500	0.064	JR30x35x20.5
40	DL 40 16	40	48	16	–	26.5	62.0	4900	7500	0.051	JR35x40x17
	DLF 40 16	40	48	16	13.7	26.50	62.0	4900	7500	0.061	JR35x40x17
	DL 40 20	40	48	20	–	36.0	84.0	4900	7500	0.064	JR35x40x20.5
	DLF 40 20	40	48	20	17.7	36.0	84.0	4900	7500	0.074	JR35x40x20.5

Needle bushes, full complement, retained

open series DL

closed end series DLF



Shaft Ø mm	Designation	Fw mm	D mm	C mm	C ₃ min. mm	Load Ratings kN		Speed limit min ⁻¹		Weight kg	Internal ring
						Dynamic	Static				
						C	C ₀	Grease	Oil		
44	DL 44 16	44	52	16	–	23.80	57.00	4400	6800	0.056	
	DLF 44 16	44	52	16	13.7	23.80	57.00	4400	6800	0.066	
47	DL 47 16	47	55	16	–	25.00	61.00	4200	6400	0.060	
	DLF 47 16	47	55	16	13.7	25.00	61.00	4200	6400	0.071	
50	DL 50 12	50	58	12	–	20.00	50.00	3900	6000	0.047	
	DLF 50 12	50	58	12	9.7	20.00	50.00	3900	6000	0.061	
	DL 50 18	50	58	18	–	36.50	92.00	3900	6000	0.071	
	DLF 50 18	50	58	18	15.7	36.50	92.00	3900	6000	0.085	
	DL 50 20	50	58	20	–	37.00	93.00	3900	6000	0.077	JR45x50x20
	DLF 50 20	50	58	20	17.7	37.00	93.00	3900	6000	0.091	JR45x50x20
55	DL 55 20	55	63	20	–	39.5	102.0	3600	5500	0.086	JR50x55x20
	DLF 55 20	55	63	20	17.7	39.5	102.0	3600	5500	0.102	JR50x55x20