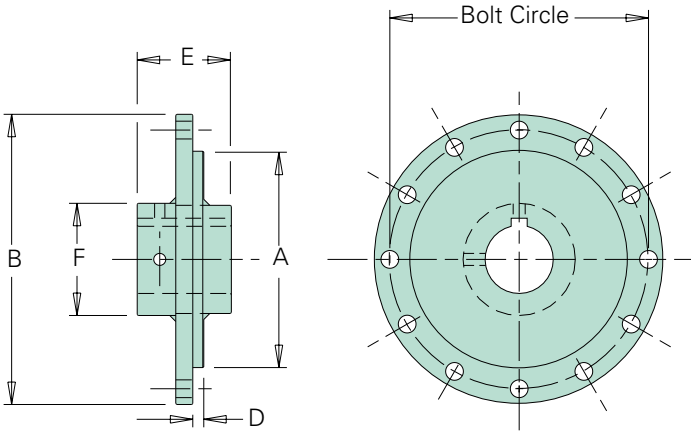
Segmental Rim Sprockets

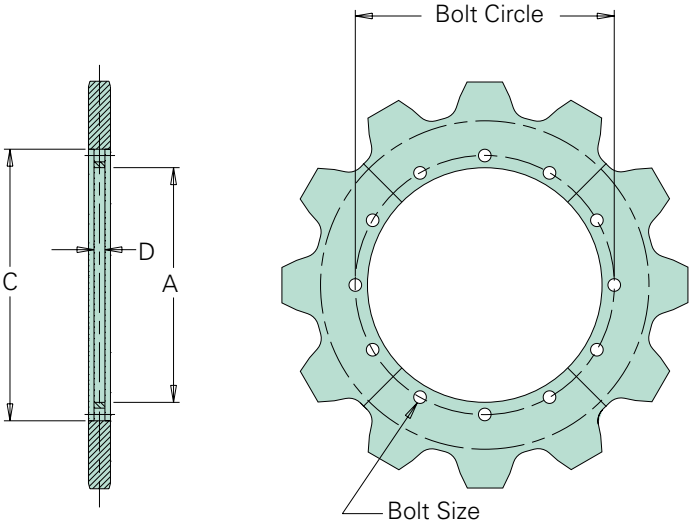
Segmental rim sprockets and traction wheels are split rings (two or more pieces) that generally fasten by bolting to a standard hub body. Segmental rims are usually applied when ease of replacement is desired because the chain, shaft, and bearings do not have to be disturbed during sprocket replacement. When downtime is critical in an operation, consider segmental rim sprockets and traction wheels.

Segmental rims are made of special steel plate material and heat treated to high hardness levels to achieve long service life. All elevator service segmental rim sprocket teeth are hardened to a 50 Rc minimum hardness level. This high hardness resists abrasive wear common in elevator operation. Consult the Union Engineering Department when material being conveyed is cement, ash, or other high MOH hardness material. Special sprocket tooth hardness is necessary to resist wear from such hard abradants.

Hub Body



Segmental Rim



Segmental Rim Sprocket Specifications

All dimensions are in inches unless otherwise specified.

Hub Body[1] Number	Bolt Circle Diameter	Bolt Size/ Quantity	Nom. A	B	C	D	Standard E	Standard F	Maximum Bore	Approx. Weight (lbs.)
10	10	.500/12	8.50	11.75	12.25	.625	6.00	7.00	4.44	78
12	12	.625/12	10.50	13.75	14.25	.750	6.25	8.00	5.44	115
16	16	.750/12	14.50	17.75	18.25	.750	6.50	9.00	5.94	175
20	20	.750/12	18.50	21.75	22.25	.875	7.75	11.00	7.00	325
25	25	1.000/12	23.00	27.75	28.25	1.000	9.00	13.00	9.00	570

[1]Hub body number indicates bolt circle diameter and does not ensure interchangability between manufacturers. Call Union for details.

Traction Wheel Rims[1, 2] (with nuts, bolts and washers)

All dimensions are in inches unless otherwise specified.

Traction wheels are generally used as drivers only. Traction wheels are generally not used at the tail shaft or boot.

Chain Number	Outside Diameter	Equivalent[3] Sprocket Size (Teeth)	Use Hub Body Number	Face Width	Bolt Diameter	Maximum Bolt Torque (lbs./ft.)	Approximate Weight per Set (lbs.)
110[4]	16.29	9	12	1.75	.63	180.0	46.0
	18.17	10	12	1.75	.63	180.0	77.0
	21.93	12	16	1.75	.75	320.0	93.0
	23.82	13	16	1.75	.75	320.0	134.0
	24.00	—	16	1.75	.75	320.0	137.0
	29.51	16	16	1.75	.75	320.0	212.0
4856[4] & 4857[4]	17.67	10	12	2.75	.63	180.0	97.0
	20.00	—	12	2.75	.63	180.0	149.0
	21.43	12	16	2.75	.75	320.0	116.0
	22.00	—	16	2.75	.75	320.0	124.0
	23.32	13	16	2.75	.75	320.0	178.0
	24.00	—	16	2.75	.75	320.0	186.0
	26.00	—	20	2.75	.75	320.0	155.0
	27.11	15	20	2.75	.75	320.0	209.0
	28.00	—	20	2.75	.75	320.0	228.0
	29.01	16	20	2.75	.75	320.0	287.0
4859[4]	20.81	12	16	3.25	.75	320.0	101.0
	22.70	13	16	3.25	.75	320.0	165.0
	24.00	—	16	3.25	.75	320.0	197.0
	26.00	—	20	3.25	.75	320.0	164.0
	26.48	15	20	3.25	.75	320.0	182.0
	28.38	16	20	3.25	.75	320.0	276.0
	30.28	17	20	3.25	.75	320.0	331.0
4864[4]	24.67	12	16	3.25	.75	320.0	238.0
	26.00	—	20	3.25	.75	320.0	164.0
	26.88	13	20	3.25	.75	320.0	196.0
	30.00	—	20	3.25	.75	320.0	325.0
	31.29	15	20	3.25	.75	320.0	413.0
	33.51	16	20	3.25	.75	320.0	525.0
	35.72	17	25	3.25	.75	320.0	540.0

Sprocket Rims (with nuts, bolts and washers)

Sprocket rims other than those listed are available upon request.

Chain Number	Number of Teeth	Pitch Diameter	Use Hub Body Number	Face Width	Bolt Diameter	Maximum Bolt Torque (lbs./ft.)	Approximate Weight per Set (lbs.)
110[4]	9	17.543	12	1.75	.63	180.0	56.0
	10	19.416	12	1.75	.63	180.0	83.0
	12	23.182	16	1.75	.75	320.0	100.0
	13	25.071	16	1.75	.75	320.0	136.0
	16	30.755	20	1.75	.75	320.0	206.0
4856[4] & 4857[4]	10	19.416	12	2.75	.63	180.0	132.0
	12	23.182	16	2.75	.75	320.0	157.0
	13	25.071	16	2.75	.75	320.0	218.0
	15	28.858	20	2.75	.75	320.0	256.0
	16	30.755	20	2.75	.75	320.0	332.0
4859[4]	12	23.182	16	3.25	.75	320.0	169.0
	13	25.071	16	3.25	.75	320.0	235.0
	15	28.858	20	3.25	.75	320.0	275.0
	16	30.755	20	3.25	.75	320.0	357.0
	17	32.653	20	3.25	.75	320.0	444.0
4864[4]	12	27.046	16	3.25	.75	320.0	309.0
	13	29.250	16	3.25	.75	320.0	399.0
	15	33.668	20	3.25	.75	320.0	493.0
	16	35.881	20	3.25	.75	320.0	604.0
	17	38.095	25	3.25	.75	320.0	534.0

[1]Caution: Do not use traction wheels where ambient conditions are potentially flammable.

[2]Avoid use of traction wheels where: A) heavy digging exists, B) conveyed material inhibits traction, C) conveyed material has heavy density.

[3]Many sizes listed above are equal to sprockets and would not affect elevator capacity when changing from sprocket to traction wheel.

[4]Furnished 50 Rc minimum tooth hardness standard.