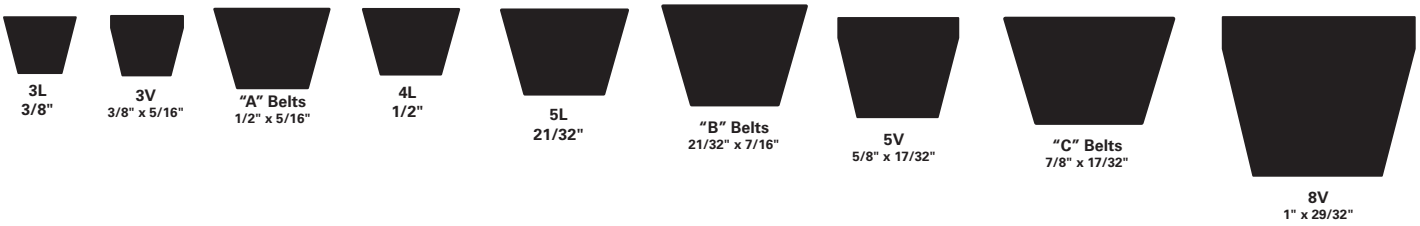
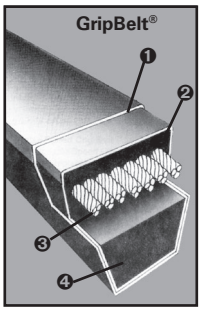
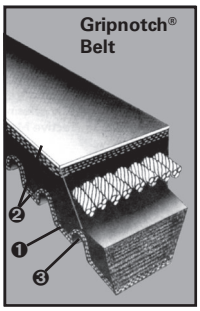


BROWNING BELTS ARE DESIGNED TO ENHANCE PERFORMANCE AND INCREASE HP CAPACITY IN SHORTER CENTER DRIVES





Before we talk about "Avoiding Problems" and "Solving Problems", let's take a brief look at how V-belts are constructed.

There are basically two types of construction. One has a fabric wrapper (or jacket) surrounding it; the other – usually rated higher in horsepower – is made in a raw edged, cogged construction.

GripBelt® V-Belts

1. More flexible than V-Belts with multi-layer fabric designs for better belt wrap around sheaves, especially with sub-minimal pitch diameters.
2. Improved Cord Adhesion
3. Improved Flexibility Cords
4. Improved SBR Compounds

Gripnotch® V-Belts

1. EPDM Material
   - Operating Temperatures: -60F to +250F
2. Ground Form
   - Reduced vibration increases belt and bearing life.
3. Fabric Top and Bottom
   - Competitors typically offer fabric on the top only
4. Wider Notch Spacing
   - Increases rigidity and stability. Reduces stress on the cord line and increases belt life.

— Contractor Preferred

PART NUMBER EXPLANATION

V-Belts

5L 500
- 50.0" outside length
- Belt section

B - 148
- Belt reference number
- Belt section

5V X 1180
- 118.0" outside length
- Gripnotch® profile
- 5V belt section

Bearings

RUB R S 1 08
- Bore size (1/16 inch)
- Series 100
- Setscrew
- Insert
- Rubber Grommet

V P S - 2 23 AH
- Air handling
- Bore size (1/16 inch)
- 200 series
- Setscrew
- Pillow block
- Value and quality

Sheaves

2 VP 71 x 1 5/8
- Finished Bore
- 7.1" outside diameter
- Variable pitch
- 2 grooves

AK 89 H
- "H" bushed bore
- Nominal diameter reference
- Single groove, cast iron, "A" section belt

6 B5V 154
- 15.4" diameter for "B" section belt
- Combination B and 5V groove
- Number of grooves

A K 64 x 1
- Finished Bore
- Pitch Diameter
- Cast Iron
- "A" Groove

8 C 70 Q
- "Q" Bushing
- 7.0 Diameter
- "C" Groove
- Number of Grooves

2L120 - 5L1000

FHP BELTS

- **Wrapped construction provides smooth, quiet operation.**
- **Oil and heat resistant - static conducting.**

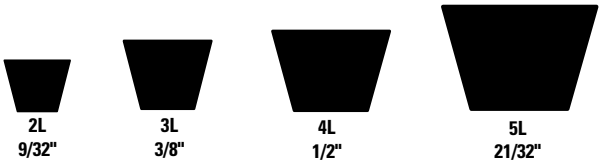


Table No.1

Stock Sizes

Belt No.	Length		Wt. Lbs.	Belt No.	Length		Wt. Lbs.	Belt No.	Length		Wt. Lbs.	Belt No.	Length		Wt. Lbs.
	Outside	Pitch			Outside	Pitch			Outside	Pitch			Outside	Pitch	
2L150	15	14.6	.04	**3L600**	60	59.3	.19	**4L670**	67	66.0	.38	**5L450**	45"	43.8"	.38
2L160	16	15.6	.04	**3L610**	61	60.3	.19	**4L680**	68	67.0	.38	**5L460**	46	44.8	.44
2L200	20	19.6	.06	**3L620**	62	61.3	.19	**4L690**	69	68.0	.38	**5L470**	47	45.8	.44
2L220	22	21.6	.06	**3L630**	63	62.3	.20	**4L700**	70	69.0	.38	**5L480**	48	46.8	.44
2L240	24	23.6	.07	**4L170**	17	16.0	.10	**4L710**	71	70.0	.38	**5L490**	49	47.8	.50
2L300	30	29.6	.08	**4L180**	18	17.0	.10	**4L720**	72	71.0	.38	**5L500**	50	48.8	.50
2L310	31	30.6	.08	**4L190**	19	18.0	.11	**4L730**	73	72.0	.38	**5L510**	51	49.8	.50
2L320	32	31.6	.09	**4L200**	20	19.0	.11	**4L740**	74	73.0	.38	**5L520**	52	50.8	.50
2L325	32 1/2	32.1	.09	**4L210**	21	20.0	.12	**4L750**	75	74.0	.44	**5L530**	53	51.8	.50
3L120	12	11.3	.04	**4L220**	22	21.0	.12	**4L760**	76	75.0	.44	**5L540**	54	52.8	.50
3L130	13	12.3	.04	**4L225**	22 1/2	21.5	.13	**4L770**	77	76.0	.44	**5L550**	55	53.8	.50
3L150	15	14.3	.05	**4L230**	23	22.0	.13	**4L780**	78	77.0	.44	**5L560**	56	54.8	.50
3L160	16	15.3	.05	**4L240**	24	23.0	.13	**4L790**	79	78.0	.44	**5L570**	57	55.8	.50
3L170	17	16.3	.05	**4L250**	25	24.0	.13	**4L800**	80	79.0	.44	**5L580**	58	56.8	.50
3L180	18	17.3	.06	**4L260**	26	25.0	.13	**4L810**	81	80.0	.44	**5L590**	59	57.8	.50
3L190	19	18.3	.06	**4L270**	27	26.0	.13	**4L820**	82	81.0	.44	**5L600**	60	58.8	.56
3L200	20	19.3	.06	**4L280**	28	27.0	.13	**4L830**	83	82.0	.44	**5L610**	61	59.8	.56
3L210	21	20.3	.07	**4L290**	29	28.0	.13	**4L840**	84	83.0	.44	**5L620**	62	60.8	.56
3L220	22	21.3	.07	**4L300**	30	29.0	.13	**4L850**	85	84.0	.50	**5L630**	63	61.8	.56
3L230	23	22.3	.07	**4L310**	31	30.0	.19	**4L860**	86	85.0	.50	**5L640**	64	62.8	.63
3L240	24	23.3	.08	**4L320**	32	31.0	.19	**4L870**	87	86.0	.50	**5L650**	65	63.8	.63
3L250	25	24.3	.08	**4L330**	33	32.0	.19	**4L880**	88	87.0	.50	**5L660**	66	64.8	.63
3L260	26	25.3	.08	**4L340**	34	33.0	.19	**4L890**	89	88.0	.50	**5L670**	67	65.8	.63
3L270	27	26.3	.08	**4L350**	35	34.0	.19	**4L900**	90	89.0	.50	**5L680**	68	66.8	.63
3L280	28	27.3	.09	**4L360**	36	35.0	.19	**4L910**	91	90.0	.50	**5L690**	69	67.8	.63
3L290	29	28.3	.09	**4L370**	37	36.0	.19	**4L920**	92	91.0	.50	**5L700**	70	68.8	.69
3L300	30	29.3	.09	**4L380**	38	37.0	.19	**4L930**	93	92.0	.50	**5L710**	71	69.8	.69
3L310	31	30.3	.10	**4L390**	39	38.0	.25	**4L940**	94	93.0	.50	**5L720**	72	70.8	.69
3L320	32	31.3	.10	**4L400**	40	39.0	.25	**4L950**	95	94.0	.50	**5L730**	73	71.8	.69
3L330	33	32.3	.10	**4L410**	41	40.0	.25	**4L960**	96	95.0	.50	**5L740**	74	72.8	.69
3L340	34	33.3	.11	**4L415**	41 1/2	40.5	.25	**4L970**	97	96.0	.50	**5L750**	75	73.8	.69
3L350	35	34.3	.11	**4L420**	42	41.0	.25	**4L980**	98	97.0	.56	**5L760**	76	74.8	.69
3L360	36	35.3	.11	**4L430**	43	42.0	.25	**4L990**	99	98.0	.56	**5L770**	77	75.8	.69
3L370	37	36.3	.12	**4L440**	44	43.0	.25	**4L1000**	100	99.0	.56	**5L780**	78	76.8	.75
3L380	38	37.3	.12	**4L450**	45	44.0	.25	**5L230**	23	21.8	.19	**5L790**	79	77.8	.75
3L390	39	38.3	.12	**4L460**	46	45.0	.25	**5L240**	24	22.8	.19	**5L800**	80	78.8	.75
3L400	40	39.3	.13	**4L470**	47	46.0	.25	**5L250**	25	23.8	.19	**5L810**	81	79.8	.75
3L410	41	40.3	.13	**4L480**	48	47.0	.25	**5L260**	26	24.8	.19	**5L820**	82	80.8	.75
3L420	42	41.3	.13	**4L490**	49	48.0	.31	**5L270**	27	25.8	.19	**5L830**	83	81.8	.75
3L430	43	42.3	.13	**4L500**	50	49.0	.31	**5L280**	28	26.8	.19	**5L840**	84	82.8	.75
3L440	44	43.3	.14	**4L510**	51	50.0	.31	**5L290**	29	27.8	.19	**5L850**	85	83.8	.81
3L450	45	44.3	.14	**4L520**	52	51.0	.31	**5L300**	30	28.8	.29	**5L860**	86	84.8	.81
3L460	46	45.3	.14	**4L530**	53	52.0	.31	**5L310**	31	29.8	.25	**5L870**	87	85.8	.81
3L470	47	46.3	.15	**4L540**	54	53.0	.31	**5L320**	32	30.8	.25	**5L880**	88	86.8	.81
3L480	48	47.3	.15	**4L550**	55	54.0	.31	**5L330**	33	31.8	.25	**5L890**	89	87.8	.81
3L490	49	48.3	.15	**4L560**	56	55.0	.31	**5L340**	34	32.8	.25	**5L900**	90	88.8	.81
3L500	50	49.3	.16	**4L570**	57	56.0	.31	**5L350**	35	33.8	.31	**5L910**	91	89.8	.88
3L510	51	50.3	.16	**4L580**	58	57.0	.31	**5L360**	36	34.8	.31	**5L920**	92	90.8	.88
3L520	52	51.3	.16	**4L590**	59	58.0	.31	**5L370**	37	35.8	.31	**5L930**	93	91.8	.88
3L530	53	52.3	.17	**4L600**	60	59.0	.31	**5L380**	38	36.8	.31	**5L940**	94	92.8	.88
3L540	54	53.3	.17	**4L610**	61	60.0	.31	**5L390**	39	37.8	.31	**5L950**	95	93.8	.88
3L550	55	54.3	.18	**4L620**	62	61.0	.31	**5L400**	40	38.8	.31	**5L960**	96	94.8	.88
3L560	56"	55.3	.18	**4L630**	63	62.0	.31	**5L410**	41	39.8	.38	**5L970**	97	95.8	.88
3L570	57	56.3	.18	**4L640**	64	63.0	.38	**5L420**	42	40.8	.38	**5L980**	98	96.8	.94
3L580	58	57.3	.18	**4L650**	.65"	64.0"	.38	**5L430**	43	41.8	.38	**5L990**	99	97.8	.94
3L590	59	58.3	.19	**4L660**	66	65.0	.38	**5L440**	44	42.8	.38	**5L1000**	100	98.8	.94

OVERLOAD SERVICE FACTORS

Load and operating characteristics of both the driving and driven units must be considered thoroughly in the selection of Browning® Gripbelt® Drives. It is essential that all drives be designed for maximum load conditions to be encountered.

Most drives will at some time be overloaded, perhaps only momentarily. It is good practice to have predetermined drive capacity to handle this overload. This predetermined drive capacity helps protect against breakdowns due to premature belt failure. The use of an extra belt will pay for itself many times over by increasing the life of all the belts more than the proportionate cost of the extra belt.

For good design and satisfactory drive life all drives must be selected giving careful consideration to two fundamental conditions:

1. The motor must have greater capacity than the driven unit.

2. The drive must have greater capacity than the motor.

Careful consideration of Overload Service Factors for various types of driven units, drivers, type of starting, frequency of maintenance and other drive conditions is extremely important for satisfactory performance and life.

The following are suggested Overload Service Factors for various typical driven units:

Table No.1 Suggested Overload Service Factors for Typical Applications

TYPES OF DRIVEN MACHINES	TYPES OF DRIVING UNITS					
	AC Motors; Normal Torque, Squirrel Cage, Synchronous and Split Phase. DC Motors; Shunt Wound. Multiple Cylinder Internal Combustion Engines.			AC Motors; High Torque, High Slip, Repulsion-Induction, Single Phase, Series Wound and Slip Ring. DC Motors; Series Wound and Compound Wound. Single Cylinder Internal Combustion Engines. Clutches. Line Shafts.		
	Intermittent Service (3-5 Hours Daily or Seasonal)	Normal Service (8-10 Hours Daily)	Continuous Service (16-24 Hours Daily)	Intermittent Service (3-5 Hours Daily or Seasonal)	Normal Service (8-10 Hours Daily)	Continuous Service (16-24 Hours Daily)
Agitators for Liquids Blowers and Exhausters Centrifugal Pumps and Compressors Fans up to 10 hp Light Duty Conveyors	1	1.1	1.2	1.1	1.2	1.3
Belt Conveyors for Sand, Grain, etc. Dough Mixers Fans Over 10 hp Generators Line Shafts Laundry Machinery Machine Tools Punches-Presses-Shears Printing Machinery Positive Displacement Rotary Pumps Revolving and Vibrating Screens Speed Reducers, All Types	1.1	1.2	1.3	1.2	1.3	1.4
Brick Machinery Bucket Elevators Exciters Piston Compressors Conveyors (Drag-Pan-Screw) Hammer Mills Paper Mill Beaters Piston Pumps Positive Displacement Blowers Pulverizers Saw Mill and Woodworking Machinery Textile Machinery	1.2	1.3	1.4	1.4	1.5	1.6
Crushers (Gyratory-Jaw-Roll) Mills (Ball-Rod-Tube) Hoists Rubber Calenders-Extruders-Mills	1.3	1.4	1.5	1.5	1.6	1.8

A minimum Service Factor of 2.0 is suggested for equipment subject to choking.

Service factor should be increased by 0.2 on drive units with an increaser drive speed of 2200 rpm or lower when using a 1750 rpm motor. This is a speed-up ratio of 1.25 or less. For speed increaser drives or speed-up drives greater than 2200 rpm, the recommendation is to use a 2.0 service factor.

CAUTION: Drives requiring high Overload Service Factors, such as crushing machinery, certain reciprocating compressors, etc. subjected to heavy shock load without suitable fly wheels, may need heavy duty web type sheaves rather than standard arm type. For any such application, consult Application Engineering.