

## Stromag Vector® Couplings



# Stromag

Founded in 1932, Stromag has grown to become a globally recognized leader in the development and manufacture of innovative power transmission components for industrial drivetrain applications. Stromag engineers utilize the latest design technologies and materials to provide creative, energy-efficient solutions that meet their customer's most challenging requirements.

Stromag's extensive product range includes flexible couplings, disc brakes, limit switches, an array of hydraulically, pneumatically, and electrically actuated brakes, and a complete line of electric, hydraulic and pneumatic clutches.

Stromag engineered solutions improve drivetrain performance in a variety of key markets including energy, off-highway, metals, marine, transportation, printing, textiles, and material handling on applications such as wind turbines, conveyor systems, rolling mills, agriculture and construction machinery, municipal vehicles, forklifts, cranes, presses, deck winches, diesel engines, gensets and stage machinery.



VISIT US ON THE WEB AT [STROMAG.COM](http://STROMAG.COM)

# Altra Industrial Motion

Altra is a leading global designer and manufacturer of quality power transmission and motion control products utilized on a wide variety of industrial drivetrain applications. Altra clutches and brakes, couplings, gearing and PT component product lines are marketed under the industries most well known manufacturing brands. Each brand is committed to the guiding principles of operational excellence, continuous improvement and customer satisfaction. Highly-engineered Altra solutions are sold in over 70 countries and utilized in a variety of major industrial markets, including food processing, material handling, packaging machinery, mining, energy, automotive, primary metals, turf and garden and many others.

Altra's leading brands include **Ameridrives**, **Bauer** Gear Motor, **Bibby** Turboflex, **Boston** Gear, **Delroyd** Worm Gear, **Formsprag** Clutch, **Guardian** Couplings, **Huco**, **Industrial** Clutch, **Inertia** Dynamics, **Kilian**, **Lamiflex** Couplings, **Marland** Clutch, **Matrix**, **Nuttall** Gear, **Stieber** Clutch, **Stromag**, **Svendborg** Brakes, **TB Wood's**, **Twiflex**, **Warner** Electric, **Warner** Linear and **Wichita** Clutch.

VISIT US ON THE WEB AT [ALTRAMOTION.COM](http://ALTRAMOTION.COM)







## Evolution of the Established

- Easy installation
- Highly flexible, progressive characteristics
- Large shaft displacements in all directions

The new Stromag Vector® coupling represents the next logical and consistent step in the evolution of our tried and tested GE rubber fabric coupling – a flexible coupling that has become successfully established on the market.

The new Vector® coupling concept is based on the experience we have gained from the most diverse application fields.

The result is a coupling that connects two shafts free of backlash. The coupling features a radial arrangement of segments in a compact design. This facilitates installation

and removal without the need to displace the drive units.

The capability of the highly flexible Stromag Vector® coupling to displace in all directions makes it ideal for applications on engines mounted on both rigid and flexible bearings. The coupling also exhibits progressive characteristics for the optimal configuration of the drive unit's vibration behaviour.

Our Experts will support you by TVA torsional vibrations analysis for your drivetrain.

# Stromag Vector® Couplings

## What can the Stromag Vector® do for you?

### It is very compact

because its rubber-fabric elements exhibit a high power density

### It minimizes your

costs because the special rubber-fabric elements enhance the service life of the Vector® coupling

### It saves valuable working

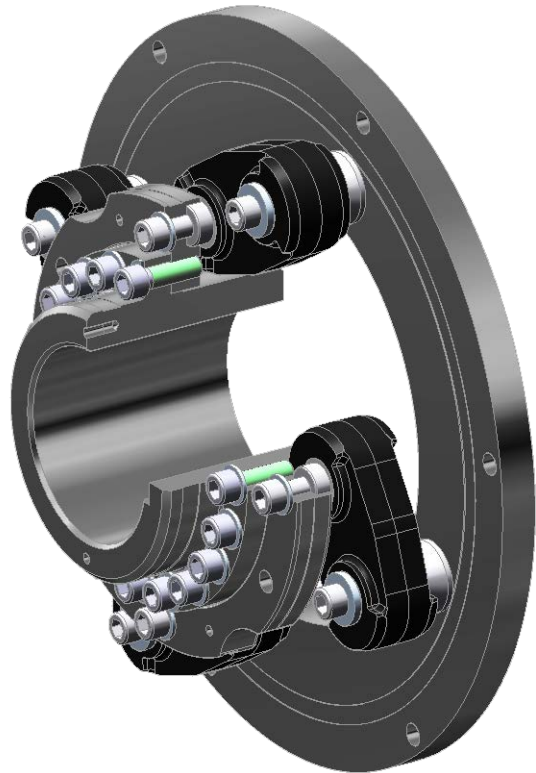
time because the elastomer elements radial mounting facilitates installation and removal without the need to displace the machine

### It adjusts to your needs

because it can displace in all directions and can be installed easily on engines mounted on both rigid and flexible bearings

### Add on features

compact design - outstanding ventilation - zero backlash - reduced installation times - low reactive forces



## Technical data

Vector coupling size	Nominal torque	Maximum torque		Adm. alternating torque	Adm. Speed	Adm. axial displacement	Axial stiffness	Adm. radial displacement
		$T_{KN}$ Nm	$T_{Kmax1}$ Nm 1)					
V...20	6600	13200	19800	3300	2300	8	0,56	4
V...30	9900	19800	29700	4950	2300	8	0,84	4
V...40	15000	30000	45000	7500	1800	9	0,85	5
V...50	22500	45000	67500	11300	1800	9	1,3	5

1) for transient repetitive vibrations during start / stop, clutching etc.

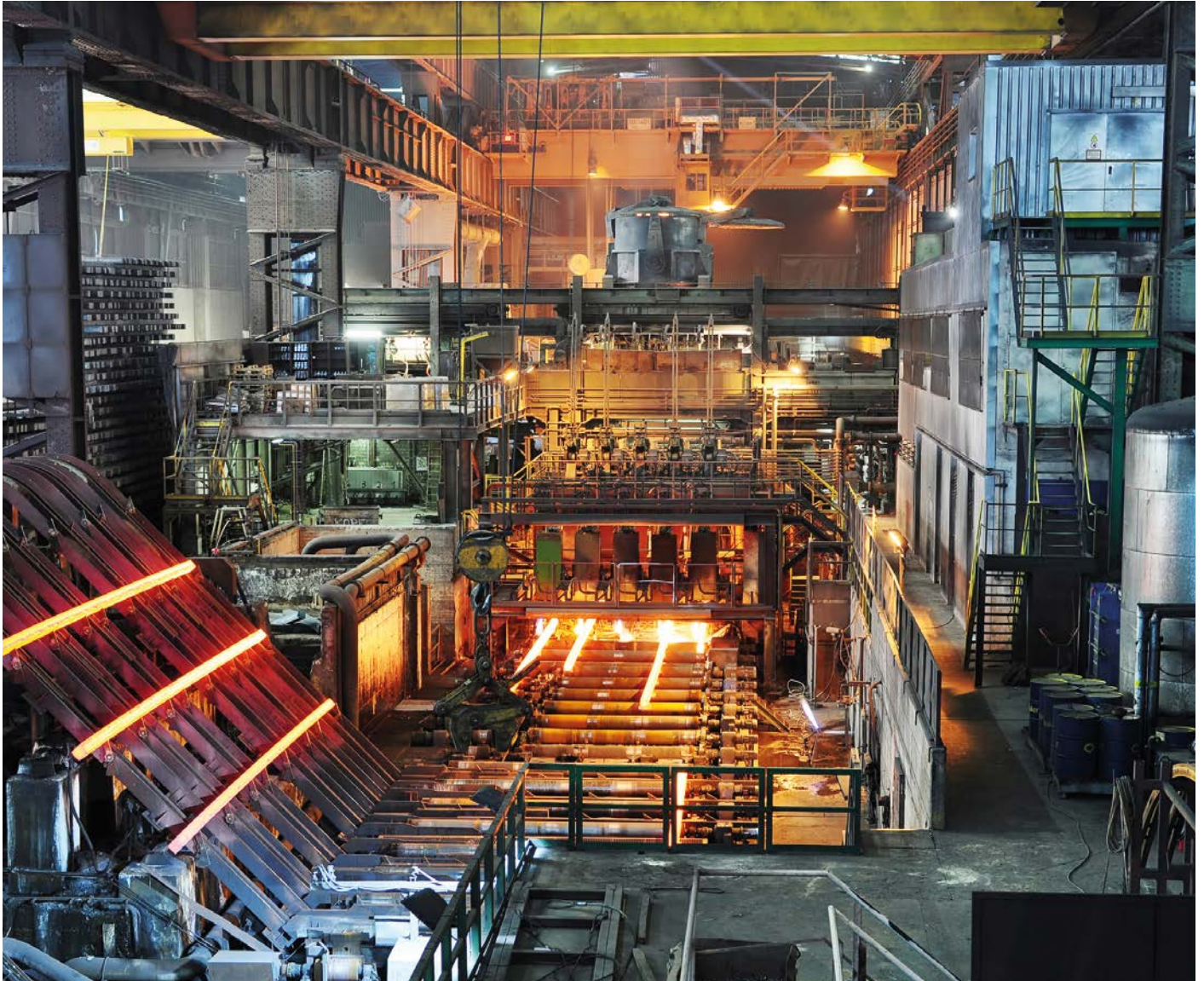
2) for rare occasional peak loads, e. g. short circuits in generators

3) Tolerances until  $\pm 15\%$  related to the material are possible.

4) At torque  $T_{KN}$

5) For:  $T_w = 0.2 \cdot T_{KN}$ ;  $f = 10 \text{ Hz}$ ;  $\theta = 30^\circ\text{C}$





Adm. radial displacement	Radial stiffness	Torsional stiffness, depending on the preload					Relative damping	Adm. dumping power
$\Delta K_r$ mm	$C_r$ kN/mm 3) 4)	$C_{t \text{ dyn}}$ kNm/rad 3) 5)					$\psi$ 3) 5)	$P_{KV 60}$ 8)
		$T_{KN} \leq 0$ 6)	$0,2 \times T_{KN}$	$0,4 \times T_{KN}$	$0,8 \times T_{KN}$	$1,0 \times T_{KN}$		
8	1,6	24	62	144	206	234	0,8	840
8	2,4	36	93	216	310	352	0,8	1260
10	2,6	48	138	364	527	610	0,8	1000
10	3,9	72	207	546	790	915	0,8	1500

6) This value is constant for the torque range from 0 to  $-0,3 \cdot T_{KN}$

7) At  $n_{max} = 600$  rpm, for higher speed ratings:

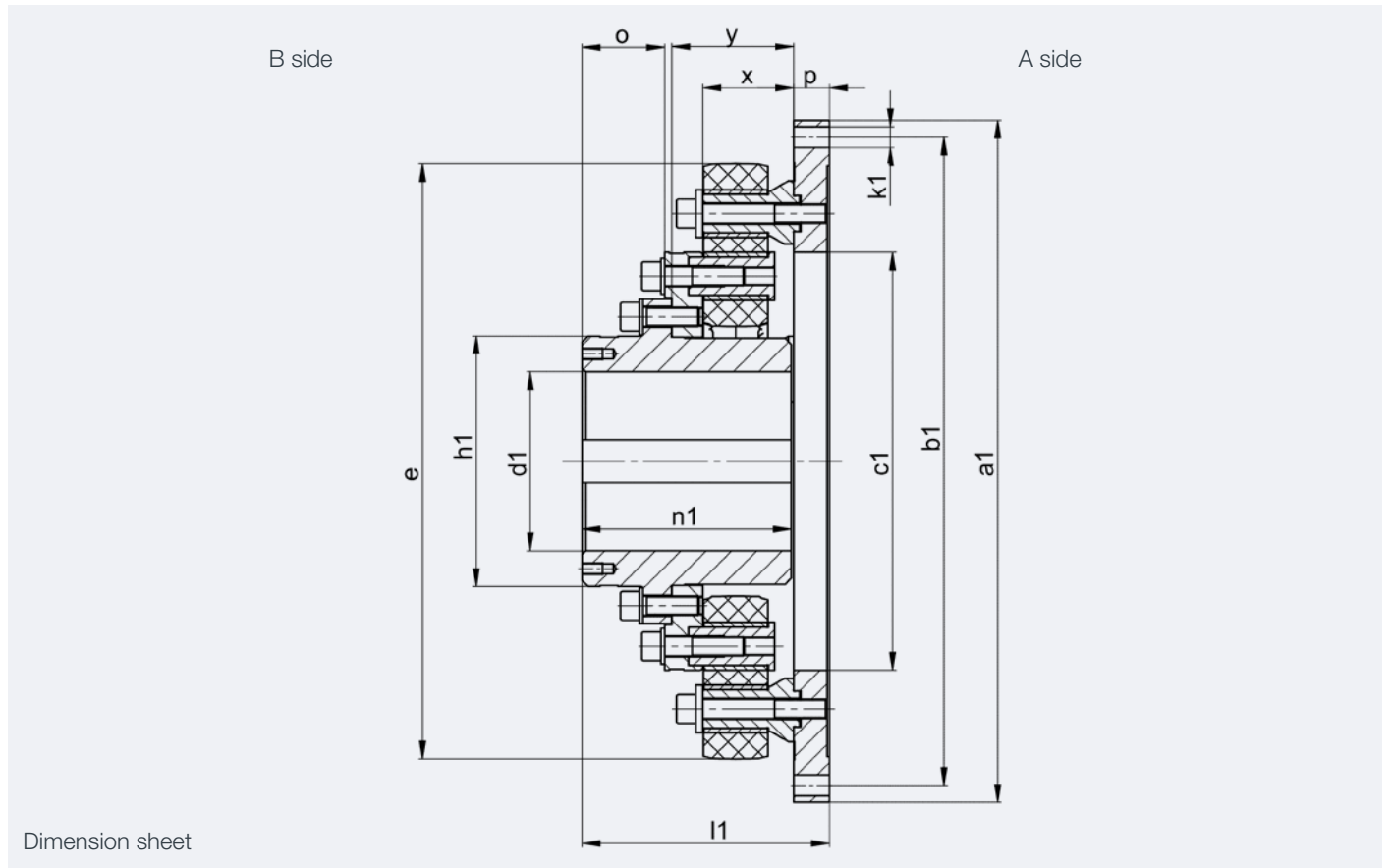
$$\Delta K_r(n) = \sqrt{\frac{600 \text{ min}^{-1}}{n}} \cdot \Delta K_r$$

8) The value  $P_{KV 60}$  describes the damping power to be absorbed over 60 minutes. Permanently absorbed damping power

$$P_{KV \infty} = 0,5 \cdot P_{KV 60}$$

# Stromag Vector® Couplings

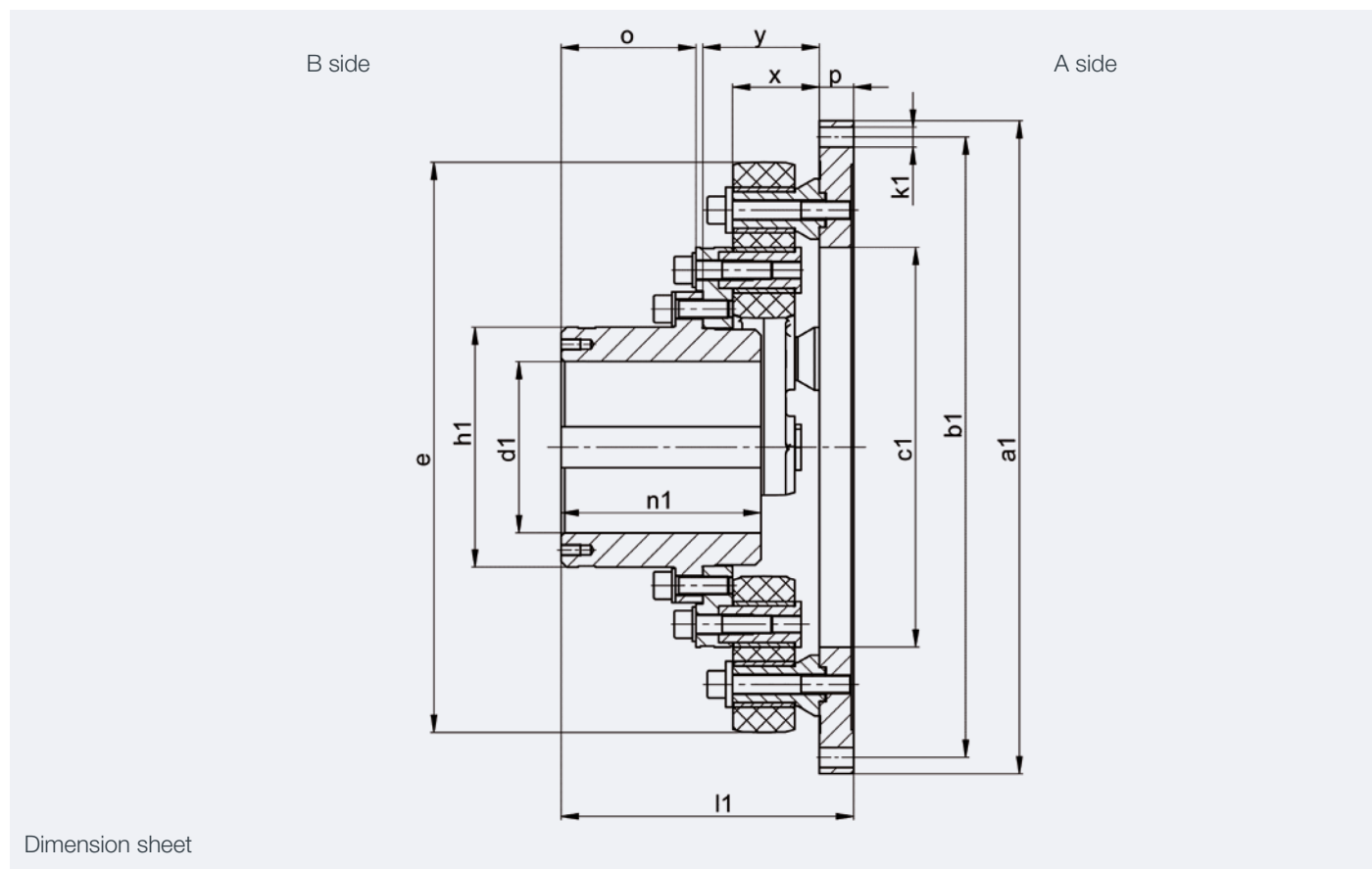
Series: VMF...W-K



Coupling size	VMF 20 W 14"-K	VMF 20 W 18"-K	VMF 30 W 14"-K	VMF 30 W 18"-K	VMF 40 W 21"-K	VMF 40 W 24"-K	VMF 50 W 21"-K	VMF 50 W 24"-K
Diameter								
a1	466,7	571,5	466,7	571,5	673,1	733,4	673,1	733,4
b1	438,2	542,9	438,2	542,9	641,4	692,2	641,4	692,2
c1	350	350	350	350	480	480	480	480
e	499	499	499	499	660	660	660	660
h1	210	210	210	210	270	270	270	270
d1 <sub>max</sub>	150	150	150	150	190	190	190	190
k1	8x 13,5	6x 17,5	8x 13,5	6x 17,5	12x 17,5	12x 20	12x 17,5	12x 20
Lengths: mm								
l1	207	207	207	207	262	262	262	262
n1	175	175	175	175	220	220	220	220
o	69	69	69	69	88	88	88	88
p	30	30	30	30	42	42	42	42
x	76	76	76	76	94	94	94	94
y	102	102	102	102	126	126	126	126
Mass: kg								
m *	67,4	84,8	71,9	89,3	160	172	168	180
Mass mom.of inertia: kgm <sup>2</sup>								
JA side	1,001	2,225	1,109	2,333	5,133	6,683	5,497	7,047
JB side*	0,627	0,627	0,677	0,677	2,550	2,550	2,712	2,712

\*) At max. bore dia.  
Other coupling sizes on request

## Series: VMF...W-L



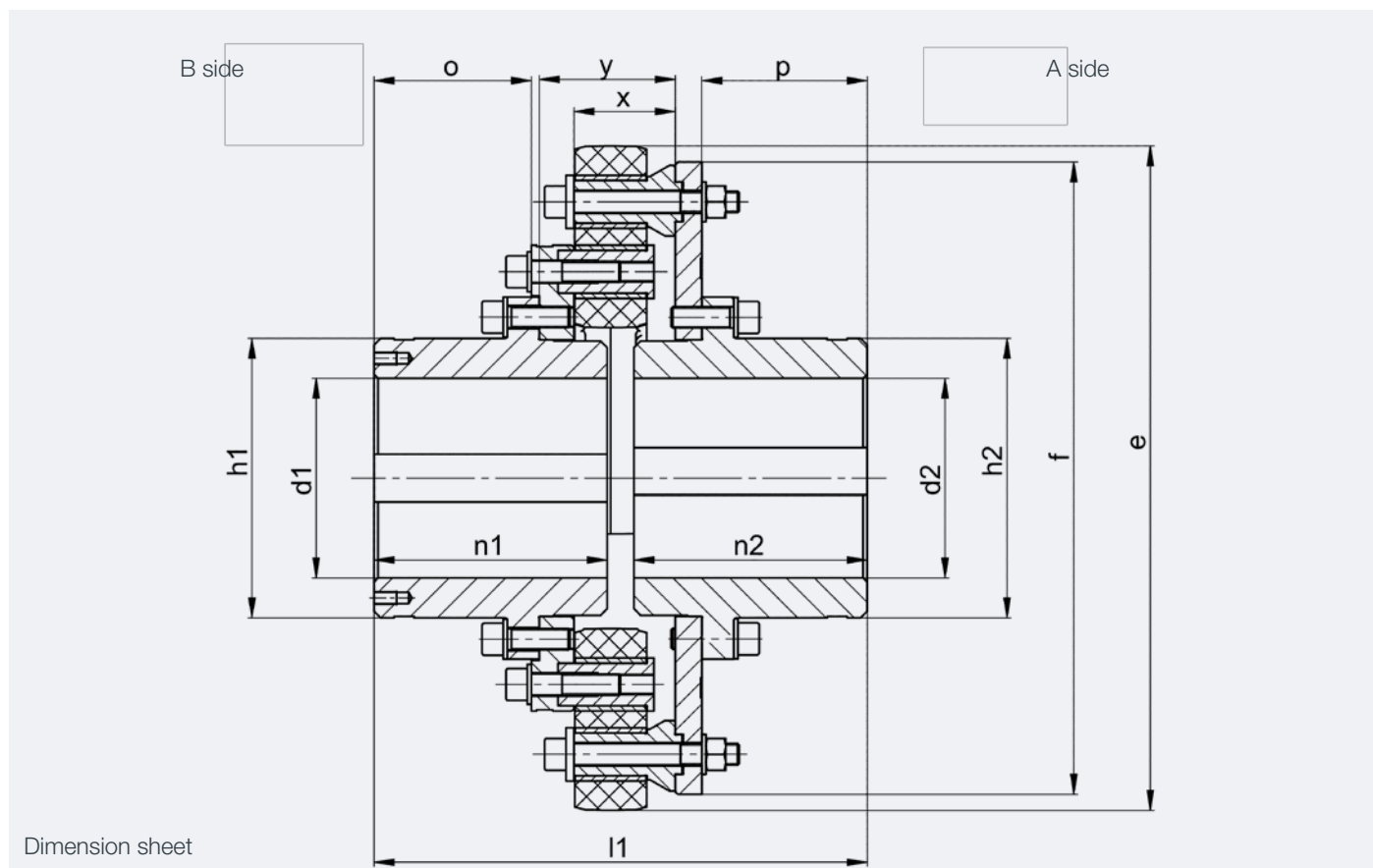
Coupling size	VMF 20 W 14"-L	VMF 20 W 18"-L	VMF 30 W 14"-L	VMF 30 W 18"-L	VMF 40 W 21"-L	VMF 40 W 24"-L	VMF 50 W 21"-L	VMF 50 W 24"-L
Diameter: mm								
a1	466,7	571,5	466,7	571,5	673,1	733,4	673,1	733,4
b1	438,2	542,9	438,2	542,9	641,4	692,2	641,4	692,2
c1	350	350	350	350	480	480	480	480
e	499	499	499	499	660	660	660	660
h1	210	210	210	210	270	270	270	270
d1 <sub>max</sub>	150	150	150	150	190	190	190	190
k1	8x 13,5	6x 17,5	8x 13,5	6x 17,5	12x 17,5	12x 20	12x 17,5	12x 20
Lengths: mm								
l1	256	256	256	256	324	324	324	324
n1	175	175	175	175	220	220	220	220
o	118	118	118	118	150	150	150	150
p	30	30	30	30	42	42	42	42
x	76	76	76	76	94	94	94	94
y	102	102	102	102	126	126	126	126
Mass: kg								
m *	67,9	85,3	72,4	89,8	161	173	169	181
Mass mom.of inertia: kgm <sup>2</sup>								
JA side	1,001	2,225	1,109	2,333	5,133	6,683	5,497	7,047
JB side *	0,632	0,632	0,682	0,682	2,565	2,565	2,727	2,727

\*) at max. bore dia.

Other coupling sizes on request

# Stromag Vector® Couplings

Series: VMW...W



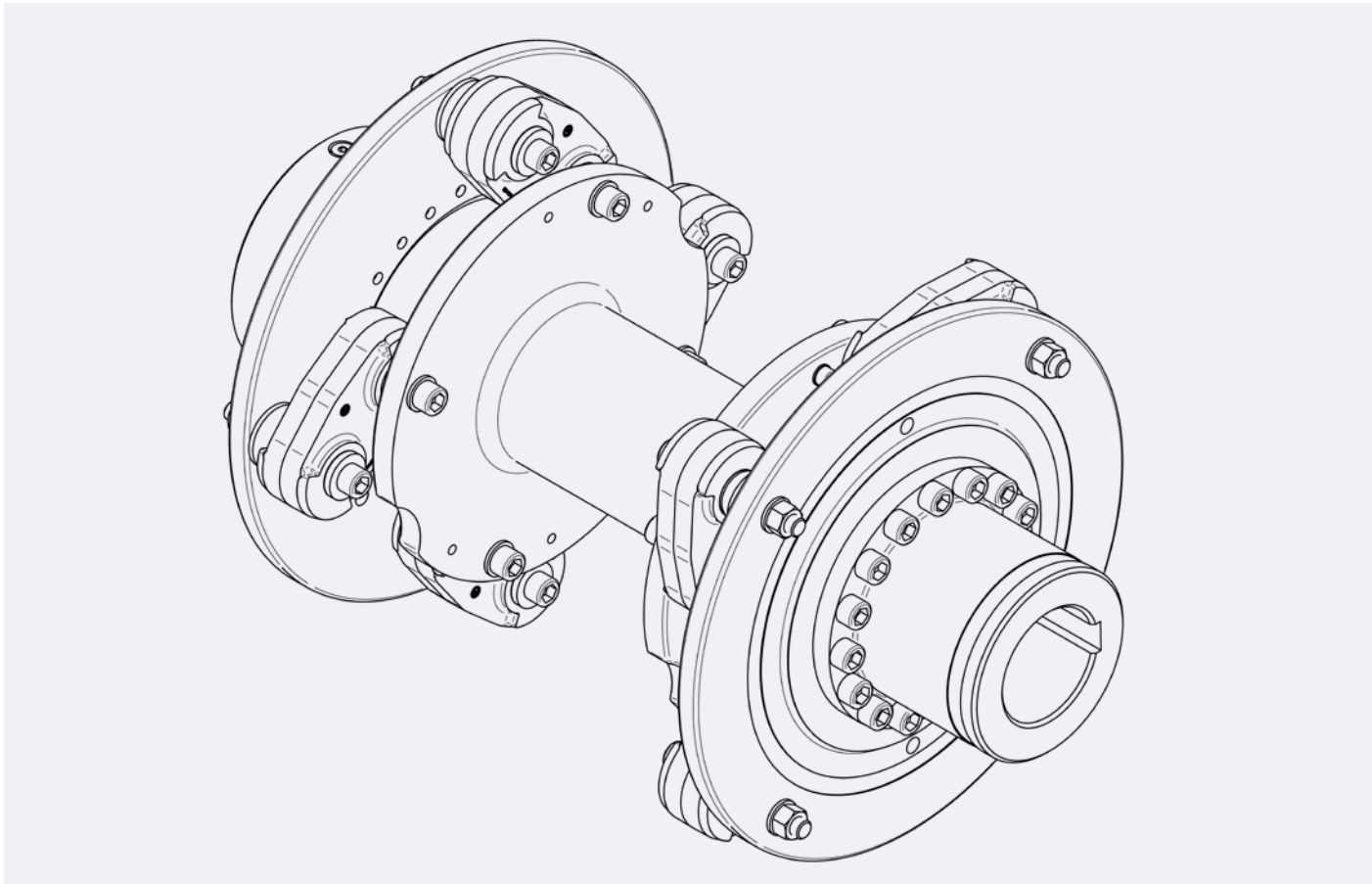
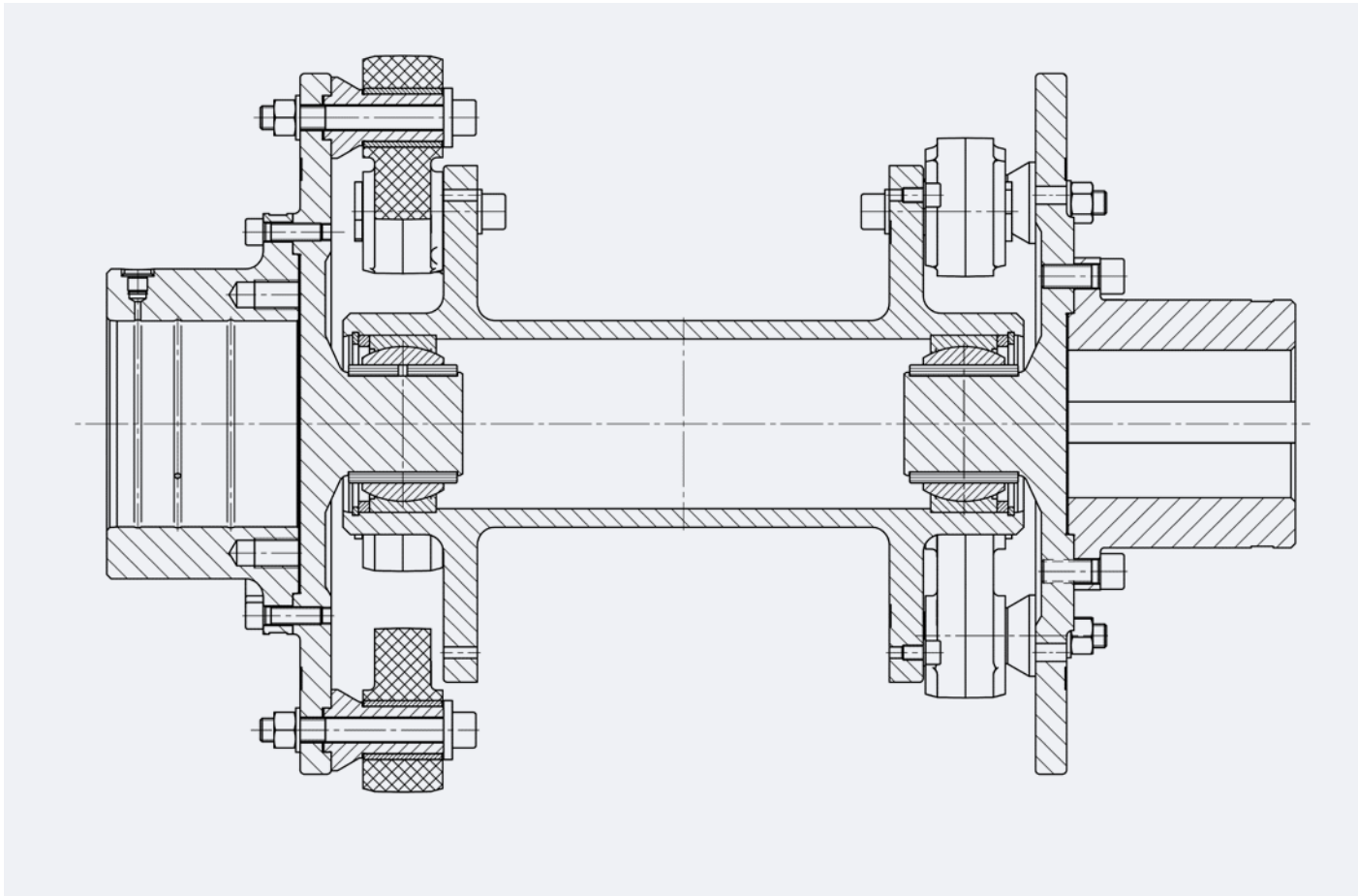
Dimension sheet

Kupplungsgröße	VMF 20 W	VMF 30 W	VMF 40 W	VMF 50 W
Diameter: mm				
e	499	499	660	660
f	475	475	654	654
h1	210	210	270	270
h2	210	210	270	270
d1 max	150	150	190	190
d2 max	150	150	190	190
Lengths: mm				
l1	370	370	464	464
n1	175	175	220	220
n2	175	175	220	220
o	118	118	158	150
p	124	124	172	156
x	76	76	94	94
y	102	102	126	126
Mass: kg				
m*	100	105	226	234
Mass mom. of inertia: kgm <sup>2</sup>				
JA side*	1,245	1,359	5,240	5,626
JB side*	0,632	0,682	2,565	2,727

\*) at max. bore dia.

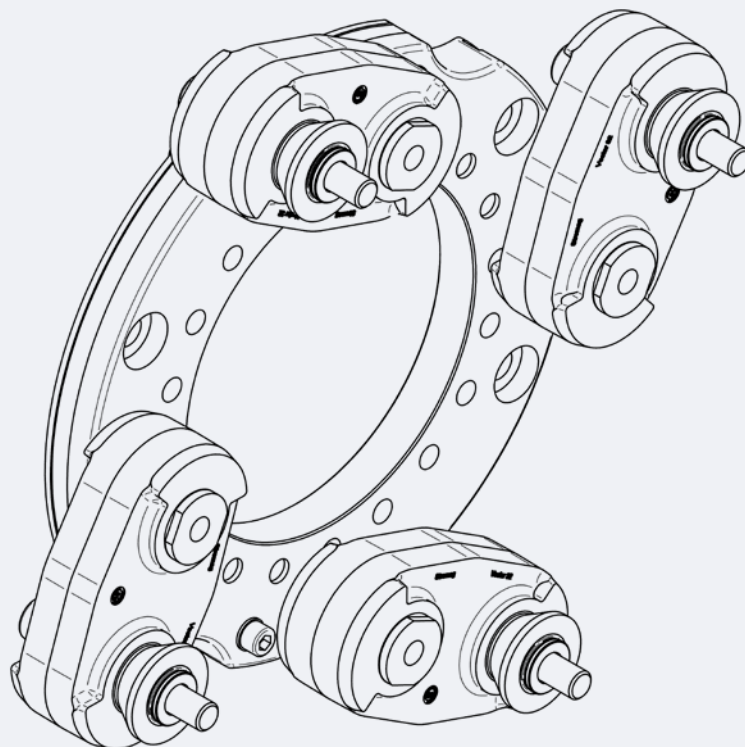
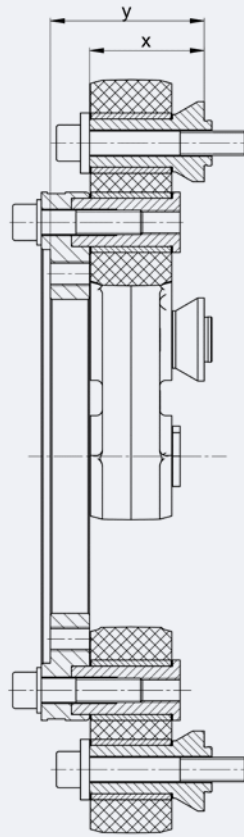


custom-built model



# Stromag Vector® Couplings

## custom-built model



# The Power Of One, The Strength Of Many.

OTHER PRODUCT SOLUTIONS FROM  
**ALTRA INDUSTRIAL MOTION**

**WWW.ALTRAMOTION.COM**

Our comprehensive product offerings include various types of clutches and brakes, overrunning clutches, engineered bearing assemblies, gearing and gear motors along with linear products, belted drives, couplings and geared cam limit switches. With thousands of product solutions available, Altra provides true single source convenience while meeting specific customer requirements. Many major OEMs and end users prefer Altra products as their No. 1 choice for performance and reliability.



## **ELECTRIC CLUTCHES AND BRAKES**

Inertia Dynamics  
Matrix  
Stromag  
Warner Electric



## **HEAVY DUTY CLUTCHES AND BRAKES**

Industrial Clutch  
Stromag  
Svendborg Brakes  
Twiflex Limited  
Wichita Clutch



## **OVERRUNNING CLUTCHES**

Formsprag Clutch  
Marland Clutch  
Stieber Clutch



## **ENGINEERED COUPLINGS AND UNIVERSAL JOINTS**

Ameridrives  
Bibby Turboflex  
Guardian Couplings  
Huco  
Lamiflex Couplings  
Stromag  
TB Wood's



## **GEAR DRIVES**

Bauer Gear Motor  
Boston Gear  
Delroyd Worm Gear  
Nuttall Gear



## **GEAR MOTORS**

Bauer Gear Motor



## **POWER TRANSMISSION COMPONENTS**

### **LINEAR ACTUATORS AND CONTROLS**

Warner Linear



### **ENGINEERED BEARING ASSEMBLIES**

Kilian



### **AIR MOTORS**

Huco



### **BELTED DRIVES AND SHEAVES**

TB Wood's



### **GEARED CAM LIMIT SWITCHES**

Stromag



## Europe

### Germany

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59425 Unna - Germany  
+49 (0) 23 03 102 0

*Clutches & Brakes, Couplings,  
Geared Cam Limit Switches, Discs,  
Wind Brakes*

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+49 (0) 340 2190 0

*Electromagnetic Clutches & Brakes*

### France

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18150 La Guerche sur L'Aubois - France  
+33 (0)2 48 80 72 72

*Industrial Caliper & Drum Brakes*

### Great Britain

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Park Farm Industrial Estate  
Wellingborough NN8 6UF  
+44 (0)1933 675494

*Electromagnetic Clutches & Brakes,  
Industrial Caliper Brakes*

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New Hartford, CT 06057 - USA  
860-238-4783

*Electromagnetic Clutches & Brakes*

300 Indiana Highway 212  
Michigan City, IN 46360 – USA  
219-874-5248

*Couplings*

2800 Fisher Rd.  
Wichita Falls, TX  
940-723-3400

*Geared Cam Limit Switches,  
Industrial Caliper & Drum Brakes*

## Asia Pacific

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Pudong 201206, Shanghai - China  
Tel +86 21-60580600

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Cam Limit Switches, Wind Brakes*

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+91 2135 622100

*Clutches & Brakes, Electromagnetic  
Clutches & Brakes, Couplings, Industrial  
Caliper & Drum Brakes, Discs, Geared  
Cam Limit Switches, Wind Brakes*

## The Brands of Altra Industrial Motion

### Couplings

**Ameridrives**  
[www.ameridrives.com](http://www.ameridrives.com)

**Bibby Turboflex**  
[www.bibbyturboflex.com](http://www.bibbyturboflex.com)

**Guardian Couplings**  
[www.guardiancouplings.com](http://www.guardiancouplings.com)

**Huco**  
[www.huco.com](http://www.huco.com)

**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Geared Cam Limit Switches

**Stromag**  
[www.stromag.com](http://www.stromag.com)

### Electric Clutches & Brakes

**Inertia Dynamics**  
[www.idicb.com](http://www.idicb.com)

**Matrix**  
[www.matrix-international.com](http://www.matrix-international.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Warner Electric**  
[www.warnerelectric.com](http://www.warnerelectric.com)

### Linear Products

**Warner Linear**  
[www.warnerlinear.com](http://www.warnerlinear.com)

### Engineered Bearing Assemblies

**Kilian**  
[www.kilianbearings.com](http://www.kilianbearings.com)

### Heavy Duty Clutches & Brakes

**Industrial Clutch**  
[www.indclutch.com](http://www.indclutch.com)

**Twiflex**  
[www.twiflex.com](http://www.twiflex.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Belted Drives

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Gearing

**Bauer Gear Motor**  
[www.bauergears.com](http://www.bauergears.com)

**Boston Gear**  
[www.bostongear.com](http://www.bostongear.com)

**Delroyd Worm Gear**  
[www.delroyd.com](http://www.delroyd.com)

**Nuttall Gear**  
[www.nuttallgear.com](http://www.nuttallgear.com)

### Overrunning Clutches

**Formsprag Clutch**  
[www.formsprag.com](http://www.formsprag.com)

**Marland Clutch**  
[www.marland.com](http://www.marland.com)

**Stieber Clutch**  
[www.stieberclutch.com](http://www.stieberclutch.com)



[www.stromag.com](http://www.stromag.com)

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