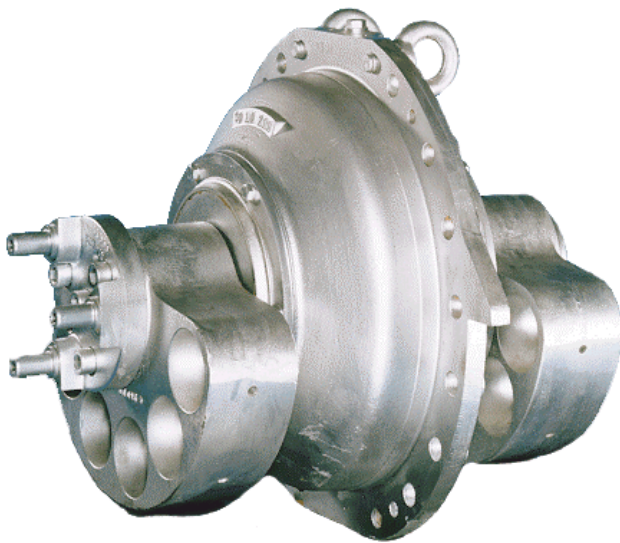


Rotary Force Exciter Cell VZ



- Long life of bearings
- Easy repair
- Low operating costs
- Very easy and quick exchange of the exciter cell
- Easy maintenance thanks to oil-lubrication

Application

Schenck Process VZ Rotary Force Exciter Cells are primarily used to drive circular-motion vibro screens. If the driveline is arranged in pairs, linear-motion vibro screens or shake-out systems in foundries can also be driven.

The generated exciter forces range between 71 and 493 kN for every driveline.

The exciter cells are designed for 3-shift operation. The shortest maintenance interval is 1000 operating hours.

The cells are specially suitable for use as vibrators whenever the concern is high availability and minimal maintenance and repair effort.

Construction

The oil-lubricated exciter cell consists of:

- bearing box
- two roller bearings
- one shaft
- two unbalance masses
- cell sealing.

Due to their rugged construction, the cells can easily be replaced, with no need to exchange bearings in the field. In contrast to the shaft drives mounted in webs, long downtimes are avoided.

If required, frequency converters for infinite variation of the centrifugal force can be provided for.

Slow-down oscillations of the vibratory machine can be reduced to a minimum through the use of braking systems.

Function

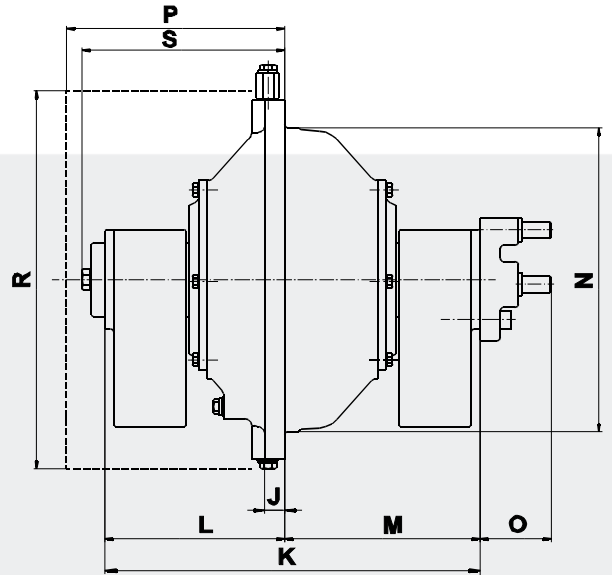
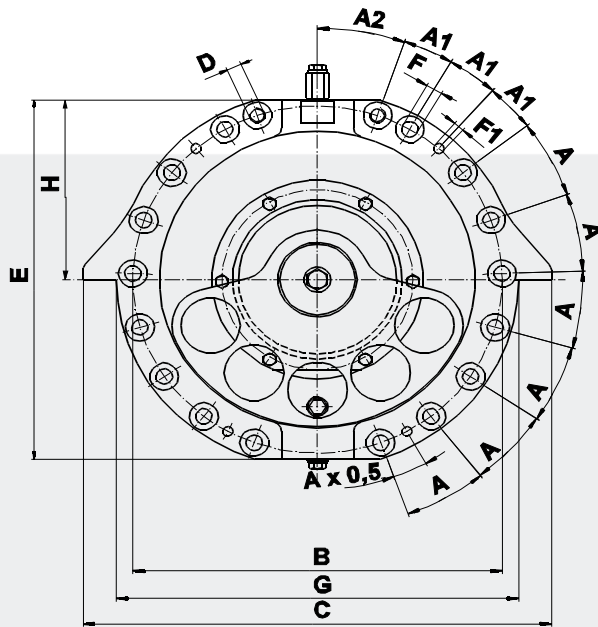
The unbalance masses of the exciter cells revolve around the cell axis, generating centrifugal forces with vectors rotating at operating frequency.

In no-motion state, the centrifugal force can be varied by application of additional masses.

For driving the circular-motion vibro screen, one exciter cell is flange-mounted to either side web. The two exciter cells are interconnected with the use of an intermediate joint shaft.

The two exciter cells are driven through a stationary standard motor via a universal-joint drive shaft.

In the case of circular-motion vibro screens, the material to be screened is handled by corresponding screen slope.



Dimensions in [mm]	VZ 401L	VZ 401S	VZ 401SK	VZ 401V	VZ 501L	VZ 501S	VZ 501SK	VZ 501V	VZ 601S	VZ 601V
A	18°	18°	18°	18°	18°	18°	18°	18°	15°	15°
A1	11°	11°	11°	11°	11°	11°	11°	11°	11°	11°
A2	19°	19°	19°	19°	19°	19°	19°	19°	19°	19°
B	∅ 560	∅ 560	∅ 560	∅ 560	∅ 560	∅ 560	∅ 560	∅ 560	∅ 720	∅ 720
C	710	710	710	710	710	710	710	710	890	890
D	M24	M24	M24	M24	M24	M24	M24	M24	M30	M30
E	580	580	580	580	580	580	580	580	750	750
F	∅ 25	∅ 25	∅ 25	∅ 25	∅ 25	∅ 25	∅ 25	∅ 25	∅ 31	∅ 31
F1	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16	∅ 16
G	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 790	∅ 790
H	290	290	290	290	290	290	290	290	375	375
J	30	30	30	30	30	30	30	30	30	30
K	422	422	422	486	569	569	569	569	678	708
L	199	199	199	231	272,5	272,5	272,5	272,5	323	338
M	223	223	223	255	296,5	296,5	296,5	296,5	355	370
N	∅ 490	∅ 490	∅ 490	∅ 490	∅ 490	∅ 490	∅ 490	∅ 490	∅ 630	∅ 630
O	60	60	60	60	108	108	108	108	125	125
P	274	274	274	304	320	320	320	320	380	380
R	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 610	∅ 790	∅ 790
S	226	226	226	258	308	308	308	308	358	373

Exciter Cell Type	Speed	Static Moment min. ¹⁾ ³⁾	Static Moment ¹⁾ max. ³⁾	Max. Exciter Force in [kN] ³⁾	Rated Power of Drive Motor	Weight with Unbalance Weights and Protective Box in [kg] ^{2), 3)}	Unbalances Number and Material	Ordering No
	in [rpm]				in [kW] ^{2), 3)}			
VZ401L	1500	424	824	203	7,5	460	5 (Stahl)	V005999.B01
VZ401S	1000	840	1624	178	7,5	520	5 (Stahl)	V006000.B01
VZ401SK	1000	840	1970	216	11	540	5 (Stahl)	V005998.B01
VZ401V	750	1200	2316	143	7,5	590	5 (Stahl)	V005997.B01
VZ501L	1500	576	1128	278	15	640	5 (Stahl)	S012378.06
VZ501S	1000	1408	2800	307	15	780	5 (Stahl)	S011140.06
VZ501SK	1000	1408	3456	379	15	840	5 (Stahl)	S012380.06
VZ501V	750	1160	3840	237	15	890	3 (Blei)	S012379.04
VZ601S	1000	2296	4500	493	22	1400	5 (Stahl)	V008195.B01
VZ601V	750	3592	7600	469	30	1600	5 (Stahl)	V008194.B01

1) Indicated in kg cm, the “static moment” of an exciter refers to the weight of the unbalance mass multiplied by its centre-of-gravity radius. The static moment and thus the centrifugal force generated by the exciter can be adjusted during shut-down by removing or adding unbalance weights in steps. Instead of the static moment, the “working moment” is frequently indicated. The working moment is twice the static moment.

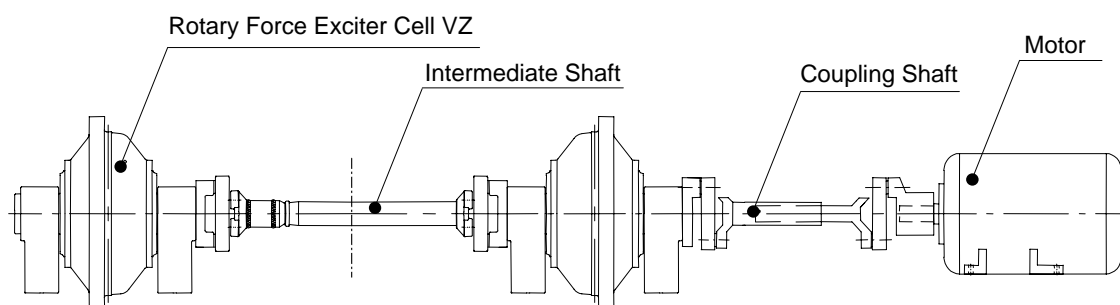
2) Standard values at operating voltage: the torque in the 0-300 rpm speed range must be at least double but not more than 2.5 times the nominal moment.

3) At maximum speed, all data apply to one drive system consisting of two rotary force exciter cells.

Accessories

- Protective box
- Joint shafts
- Oil overflow pipe
- Flexible shaft couplings
- Oil lubrication and cooling system

Drive Assembly with Rotary Force Exciter Cell



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