Elastomer couplings

Temperature factor S_υ	A	B	C	E
Temperature (υ)	Sh 98 A	Sh 64 D	Sh 80 A	Sh 64 D
> −30°C to −10°C	1.5	1.3	1.4	1.2
> −10°C to +30°C	1.0	1.0	1.0	1.0
> +30°C to +40°C	1.2	1.1	1.3	1.0
> +40°C to +60°C	1.4	1.3	1.5	1.2
> +60°C to +80°C	1.7	1.5	1.8	1.3
> +80°C to +100°C	2.0	1.8	2.1	1.6
> +100°C to +120°C	–	2.4	–	2.0
> +120°C to +150°C	–	–	–	2.8

Start factor S_Z			
Z_h	to 120	120 to 240	over 240
S_Z	1.0	1.3	contact us

Shock or Load Factor S_A		
uniform load	non-uniform load	highly dynamic load
1	1.8	2.5

Coupling selection for operation without shock or reversal

The rated torque of coupling (T_{KN}) must be greater than the rated torque of the load (T_{LN}) taking into account the temperature at the coupling (Temperature factor Sυ). Should T_{LN} be unknown, T_{AN} can be used as a substitute in the formula.

Calculation

$$T_{KN} > T_{AN} \cdot S_\upsilon$$

Supplemental Calculation

$$T_{AN} = \frac{9{,}550 \cdot P}{n}$$

Coupling selection for operation with shock loads

Same basic conditions as above. In addition, the maximum torque rating of the coupling (T_{Kmax}) is dictated by peak torque (T_S) due to shock loads.

Calculation

$$T_{KN} > T_{AN} \cdot S_\upsilon$$

Supplemental Calculation

$$T_{AN} = \frac{9{,}550 \cdot P}{n}$$

Calculation

$$T_{Kmax} > T_S \cdot S_Z \cdot S_\upsilon$$

Supplemental Calculation

$$T_S = \frac{T_{AS} \cdot S_A}{m + 1}$$

$$m = \frac{J_A + J_1}{J_L + J_2}$$