

Sample document - numeric values are only included in the purchased Pro export.

Overall assessment: PASS

Power P	?? ? kW
Speed n	?? ? min ⁻¹
Drive characteristic	?? ?
Load characteristic	?? ?
Starts per hour	?? ?
Ambient temperature	?? ?
Coupling nominal torque M _N	?? ? Nm

Nominal torque M_{nenn}	???	Nm
Application factor S_A	???	
Starting factor S_Z	???	
Temperature factor S_T	???	
Overall factor $S_A \cdot S_Z \cdot S_T$	???	
Required coupling torque M_{erf}	???	Nm

Criterion	Value	Limit	Status
Utilization M erf/M KN (<= 0.8 pass, <= 1.0 warning)	???	???	● PASS

Selection recommendation: choose the next larger catalogue coupling with $M_{KN} \geq M_{erf}$.

Shaft coupling sizing from nominal torque and service factor (Rolloff/Matek approach). Calculation path: nominal torque $M_{\text{nenn}} = 9550 \cdot P/n$ (for power/speed input) or direct entry, application factor S_A from the drive and load characteristics, starting factor S_Z from the number of starts per hour, and temperature factor S_T from the ambient temperature (applies to elastomer couplings; $S_T = ???$ for all-metal couplings). Required coupling torque $M_{\text{erf}} = M_{\text{nenn}} \cdot S_A \cdot S_Z \cdot S_T$. In addition to the nominal torque, misalignment values (radial, axial, angular) and the permissible speed limit must be checked against the catalogue - they are not part of this calculation. The peak torque M_{spitze} (e.g. from the drive sizing calculator) must be checked against the coupling's maximum torque M_{Kmax} , especially for servo drives with high acceleration torque.

Note: The results are design and orientation aids. They do not replace independent verification, calculation and approval by a qualified person. The terms of use at maschinenbaurechner.de apply.