

component	material		techn. delivery condition	mechanical properties (minimum values)			
	material or steel grade	material number		yield strength $R_{p0.2}$ [N/mm ²]	tensile strength R_m [N/mm ²]	elongation A_5 [%]	charpy impact value ISO-V ③ [K°C]
fork end connector	G20Mn5+QT ①	1.6220	EN 10293:2012-02	360	500	22	27 / -20
	G20Mn5+N	1.6220	DIN EN 10293:2012-02				
locking nut	S460N	1.8901	DIN EN 10025-3:2005-02				
	S355J2	1.0577	DIN EN 10025-2:2005-04				
	S355J0	1.0553	DIN EN 10025-2:2005-04				
	11SMn30	1.0715	DIN EN 10087:1999-01				
tension rod	S460N	1.8901	DIN EN 10025-3:2005-02	460	625	17	27 / -20
	21CrMoV5-7+QT	1.7709	DIN EN 10269:2014-02				
	S355J2	1.0577	DIN EN 10025-2:2005-04	360	490	17	27 / -20
	S355J0	1.0553	DIN EN 10025-2:2005-04	360	490	17	27 / -20
	quenched and tempered steel			360	490	17	27 / -20
	S460N ②	1.8901	DIN EN 10025-3:2005-02	560	725	17	27 / -20
coupler turnbuckle cross sleeve	G20Mn5+QT ①	1.6220	DIN EN 10293:2012-02				
	S460N	1.8901	DIN EN 10025-3:2005-02				
	S355J2	1.0577	DIN EN 10025-2:2005-04	360	500	22	27 / -20
	21CrMoV5-7+QT	1.7709	DIN EN 10269:2014-02				
pin	8.8	-	DIN EN ISO 898-1:2013-05				
	10.9	-	DIN EN ISO 898-1:2013-05				
	34CrNiMo6+QT	1.6582	DIN EN 10269:2014-02	640	800	12	acc. to techn. delivery condition
gusset plate	S355J2	1.0577	DIN EN 10025-2:2005-04	thickness			acc. to techn. delivery condition
				≤ 16 mm → 355	> 16 mm → 345	> 40 mm → 335	
circclip	-	-	DIN 471:2011-04				

① the alternative use of other steel types acc. to DIN EN 10293:2012-02 are allowed if the mechanical properties are equal to G20Mn5+QT

② with manufacturer-specific requirements (higher steel grade)

③ $KV_{min} \geq 27 \text{ J} / -20^\circ\text{C}$

Tension rod system 560

Material properties of steel / steel cast components