

OPERATIONAL STEELS

DESCRIPTION	MATERIAL NO.	NORM	USUAL HEAT TREATMENT CONDITION	MECHANICAL-TECHNOLOGICAL CHARACTERISTICS			ANNEALING HARDNESS	USAGE/ SPECIAL APPLICATION EXAMPLES
				0,2-YIELD STRENGTH RP _{0.2}	TENSILE STRENGTH RM (MPA)	FRACTURE STRAIN A ₅ (%)	(HB)	
C 15	1.0401	DIN 17210 EN 10084	casehardened	≥ 430	700-900	≈12	143	Parts for general engineering with low core strength; lever
14 NiCr 14	1.5752	WL 1.5752	casehardened	≥ 835	930-1230	≈10	190	Components are not sensitive against sudden stress, cold-resistant; high core strength even with thick cross sections; Pinion shafts, pins
GS 15 CrNi 6	1.5919 1.5924	DIN 17210 WL 1.5924	casehardened	≥ 680	1000-1300	≈8		Highly stressed parts with smaller wall thicknesses, poorer through hardening 1.5924 WL 1.5924 compared to 14 NiCr 14
18 CrNi 8	1.5920 1.5934	WL 1.5934	casehardened	≥ 785	1180-1420	≈7	190	Highly stressed machine components, better hardening compared to 17 CrNiMo 6, therefore particularly suitable for larger parts
17 CrNiMo 6	1.6587	DIN 17210 EN 10084	casehardened	≥ 785	1050-1350	≈8	183	Highly stressed machine components, very good wear resistance
15 Cr 3	1.7015	DIN 17210 EN 10084	casehardened	≥ 440	690-880	≈11	174	Machine components of medium load, higher core strength compared to C 15; Roller bearing, measuring tool
17 Cr 3	1.7016	DIN 17210 EN 10084	casehardened	≥ 450	750-1050	≈11	174	Similar to 15 Cr 3 but slightly higher core strength; Parts in vehicle construction
GS 16 MnCr 5	1.7131	DIN 17210 EN 10084	casehardened	≥ 600	800-1100	≈10	164	Standard quality for medium and higher stressed components with DIN EN 10084 cross-sections not too large; Gears, control parts
16 MnCrS 5	1.7139	DIN 17210 EN 10084	casehardened	≥ 600	800-110	≈10	164	Similar to 16 MnCr 5; better and more uniform machining possible due to the adjusted sulfur content
GS 20 MnCr 5	1.7147	DIN 17210 EN 10084	casehardened	≥ 680	1000-1300	≈8	178	Like 16 MnCr 5, but suitable for larger cross sections or higher core strengths