

# Technical information

## Steel grade 2142M/520M

Hot rolled bars in accordance with EN 10025-1 and 10025-2, steel grade 2142M/520M with improved machinability. The bar is impact strength tested at -20°, min. 27 joule. Tolerances according to DIN 1013. Comparable standard SS 2142.

### Chemical analysis

	Si%	Mn%	P%	S%	V%	CEV%
Min.				.020		
Max.	0.55	1.6	0.035	.040	0.09	0.45

$$CEV = \frac{C}{6} + \frac{Mn}{5} + \frac{Cr + Mo + V}{15} + \frac{Ni + Cu}{15} \%$$

### Mechanical characteristics

Condition	Diam. mm	R <sub>eh</sub> N/mm <sup>2</sup>	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
Rolled	-70	380	490 - 630	22	27	-20	150-200
	70 - 200	350	490 - 630	20	27	-20	

## Steel grade S355J2

Hot rolled bars in accordance with EN 10025-1 and 10025-2, steel grade S355J2. The bars are impact strength tested at -20°, min. 27 joule. Tolerances according to DIN 1013. Comparable standard SS 2172.

### Chemical analysis

	C%	Si%	Mn%	P%	S%	CEV%
Min.					.020	
Max.	0.22	0.55	1.6	0.035	.040	0.49

$$CEV = \frac{C}{6} + \frac{Mn}{5} + \frac{Cr + Mo + V}{15} + \frac{Ni + Cu}{15} \%$$

### Mechanical characteristics

Condition	Diam mm	R <sub>eh</sub> N/mm <sup>2</sup>	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
Rolled / Normalised	200-250	300	470-630	21	27	-20	140-200
	251-290	290	470-630	20	27	-20	140-200

## Steel grade HYDAX 15

Hot rolled bars in accordance with EN 10025-1 and 10025-2, steel grade Hydax 15, that is Si/Ca treated and with increased sulphur content for improved machinability.

The steel grade is weldable. Tolerances according to DIN 1013. Mechanical characteristics as S355 (SS 2172).

### Chemical analysis

	C%	Si%	Mn%	P%	S%	V%	CEV%
Min.					0.08		
Max.	0.2	0.55	1.6	0.035	0.12	0.09	0.47

$$CEV = \frac{C}{6} + \frac{Mn}{5} + \frac{Cr + Mo + V}{15} + \frac{Ni + Cu}{15} \%$$

### Mechanical characteristics

Condition	Diam mm	REH N/mm <sup>2</sup> min	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
Rolled	40-80	355	490-630	20	27	-20	160-200
	81-90	345	490-630	20	27	-20	
	91-200	335	490-630	20	27	0	

## Steel grade 25CrMoS4 Q+T/SS 2225-03/05

Hot rolled toughened bars in accordance with EN 10083-1 and 10083-3, steel grade 25CrMoS4 Q+T with improved cutability, mechanical values in accordance with SS 2225-03/05. Tested ultrasonically, structure and grain tested for fineness, verification of non-metallic inclusions. Tolerances in accordance with DIN 1013.

Stocked both as hot rolled and peeled variants. Toughness tested -20°, min 27 joule. Hardness 190 - 325 HB. Comparable with Swedish standard SS 2225-03/05.

### Chemical analysis

%	C%	Si%	Mn%	P%	S%	Cr%	Mo%
Min.	0.22	0.10	0.60		.020	0.9	0.15
Max.	0.29	0.40	0.90	0.025	.040	1.2	0.30

### Mechanical characteristics

Condition	Diam mm	Rp 0.2 N/mm <sup>2</sup> min	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
+ QT	- 40	700	900 - 1050	13	27	-20	270-325
+ QT	41 - 100	500	700 - 850	17	27	-20	205-250
+ QT	101 - 160	410	650 - 820	16	27	-20	190-240

# Technical information

## Steel grade 42CrMoS4 Q+T/SS 2244-04/05

Hot rolled toughened bars in accordance with EN 10083-1 and 10083-3, steel grade 42CrMoS4 Q+T with improved machinability, mechanical values in accordance with SS 2244-04/05. Tested ultrasonically, structure and grain tested for fineness, verification of non-metallic inclusions. Tolerances in accordance with DIN 1013.

Stocked both as hot rolled and peeled variants. Toughness tested -20°, min. 27 joule. Hardness: 270 - 310 HB. Comparable with Swedish standard SS 2244-04/05.

### Chemical analysis

%	C%	Si%	Mn%	P%	S%	Cr%	Mo%
Min.	0.38	0.10	0.60		0.020	0.9	0.15
Max.	0.45	0.40	0.90	0.025	0.040	1.2	0.30

### Mechanical characteristics

Condition	Diam mm	Rp 0.2 N/mm <sup>2</sup> min	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
+ QT	-105	690	900-1050	12	27	-20	270-310
+ QT	106-160	600	800- 950	14	27	-20	235-285

## Steel grade 34CrNiMo6 Q+T/SS 2541-03

Hot rolled toughened bars in accordance with EN 10083-1 and 10083-3, steel grade 34CrNiMo6 Q+T with improved machinability, mechanical values in accordance with SS 2541-03. Tested ultrasonically, structure and grain tested for fineness, verification of non-metallic inclusions. Tolerances in accordance with DIN 1013.

Stocked both as hot rolled and peeled variants. Toughness tested -20°, min. 27 joule. Hardness: 270 - 325 HB. Comparable with Swedish standard SS 2541-03.

### Chemical analysis

%	C%	Si%	Mn%	P%	S%	Cr%	Ni%	Mo%
Min.	0.30	0.10	0.50		.020	1.30	1.30	0.15
Max.	0.38	0.40	0.80	0.025	.035	1.70	1.70	0.30

### Mechanical characteristics

Condition	Diam mm	Rp 0.2 N/mm <sup>2</sup> min	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	Impact strength tested min.	Temp	HB
+ QT	- 280	700	900-1050	12	27	-20	270-325

## Steel grade C45R / SS 1672-08

Hot rolled bars in accordance with EN 10083-1 and 10083-3, steel grade C45+H with improved machinability. Tested ultrasonically, structure and grain tested for fineness, verification of non-metallic inclusions.

Tolerances in accordance with DIN 1013. Hardenability demands (+H) on bar. Hardness: 165 - 220 HB. Comparable with Swedish standard SS 1672-08.

### Chemical analysis

%	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	CR+Mo+Ni%
Min.	0.42		0.5		0.02				
Max.	0.5	0.4	0.8	0.03	0.04	0.4	0.1	0.4	0.63

### Mechanical characteristics

Condition	Diam mm	Rp 0.2 N/mm <sup>2</sup> min	R <sub>m</sub> N/mm <sup>2</sup>	A <sub>5</sub> % min.	HB
Rolled. Untreated	(16)-40	310	590-740	14	165-220
	(40)-63	300	590-740	14	165-220
	> 63	280	590-740	14	165-220

## Steel grade 16NiCrS4 + HL/SS 2511-08

Hot rolled bars in accordance with EN 10084, steel grade 16NiCrS4+ HL with improved machinability. Ultrasonically tested, structure and grain tested for fineness, verification of non-metallic inclusions. Tolerances in accordance with DIN 1013. The bar is only available as peeled variant. Hardenability demands (+HL) on bar. Hardness: Max. 217 HB. Comparable with Swedish standard SS 2511-08.

### Chemical analysis

%	C%	Si%	Mn%	P%	S%	Cr%	Ni%	HB% max
Min.	0.13		0.7		0.02	0.6	0.8	
Max.	0.19	0.4	1	0.035	0.04	1	1.1	217