

HELVETICIS GROUP STEEL GRADES

2019

HELVÉTICIS

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Stainless Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|----------------|-----------|--------------|-------------|----------------|----------------|--------------|----------------|--------------|--------------|---------------|---------------|--|
| HLVT-4021D | 1.4021 | 0.16 0.25 | Max 1.00 | Max 1.50 | 0.04 | 0.03 | 12.0 14.0 | | | | | | | |
| HLVT-4024D | 1.4024 | 0.12 0.17 | Max 1.00 | Max 1.00 | 0.045 | 0.03 | 12.0 14.0 | | | | | | | |
| HLVT-4028D | 1.4028 | 0.26 0.35 | Max 1.00 | Max 1.50 | 0.04 | 0.03 | 12.0 14.0 | | | | | | | |
| HLVT-4300S | 1.4300 | 0.06 0.12 | 0.50 0.8 | 1.0 1.20 | Max. 040 | Max. 0.025 | 17.5 18.5 | | 8.0 9.0 | | Max. 0.35 | | | |
| HLVT-4301A | 1.4301 | Max 0.08 | Max 1.00 | Max 2.00 | 0.045 | 0.03 | 18.0 20.0 | | 8.00 10.50 | | | | | |
| HLVT-4301S | 1.4301 | Max. 0.05 | 0.35 0.60 | 1.20 1.50 | Max. 040 | 0.018 0.028 | 18.0 19.0 | | 9.0 10.0 | | Max. 0.35 | | | |
| HLVT-4305S | 1.4305 | 0.06 0.09 | 0.40 0.60 | 1.60 2.0 | Max. 045 | 0.20 0.25 | 17.0 17.5 | | 8.0 8.5 | | Max. 0.35 | Max. 0.02 | | (C=0.12 / Cr=18 / Ni=9)acceptable |
| HLVT-4306A | 1.4306 | Max 0.03 | Max 1.00 | Max 2.00 | 0.045 | 0.03 | 18.0 20.0 | | 8.00 12.00 | | | | | |
| HLVT-4310S | 1.4310 | 0.080 0.12 | 0.70 1.0 | 0.40 0.60 | Max. 025 | Max. 0.030 | 17.0 18.0 | Max. 0.50 | 7.0 8.0 | | Max. 0.35 | | | |
| HLVT-4361S | 1.4361 | Max. 0.12 | 4.0 4.3 | 0.50 0.80 | Max. 018 | Max. 0.005 | 17.0 18.0 | Max. 0.20 | 14.5 15.5 | | Max. 0.35 | | | |
| HLVT-4401A | 1.4401 | Max 0.08 | Max 1.00 | Max 2.00 | 0.045 | 0.03 | 16.0 18.0 | 2.00 3.00 | 10.00 14.00 | | | | | |
| HLVT-4401S | 1.4401 | 0.040 0.060 | 0.30 0.6 | 1.20 1.80 | Max. 025 | Max. 0.001 | 17.0 17.0 | 2.0 2.20 | 10.5 10.9 | Max. 0.07 | Max. 0.25 | Max. 0.01 | Max. 0.010 | Pb<0.002 AND O<0.003 AND Sn<0.01 Nb<0.01 AND N<0.02 |
| HLVT-4404A | 1.4404 | Max 0.03 | Max 1.00 | Max 2.00 | 0.045 | 0.03 | 16.0 18.0 | 2.00 3.00 | 10.00 14.00 | | | | | |
| HLVT-4404S | 1.4404 | Max. 0.03 | 0.35 0.60 | 1.20 1.50 | Max. 040 | 0.018 0.028 | 16.50 17.50 | 2.0 2.3 | 11.0 12.0 | | Max. 0.35 | | | N:0.05 0.08 |
| HLVT-4429S | 1.4429 | Max. 0.03 | 0.50 0.80 | 1.40 1.80 | Max. 040 | Max. 0.015 | 17.0 18.0 | 2.5 2.8 | 13.0 14.0 | | Max. 0.35 | Max. 0.025 | | |
| HLVT-4435S | 1.4435 | Max. 0.03 | 0.35 0.60 | 1.20 1.50 | Max. 040 | 0.015 0.025 | 17.0 18.0 | 2.5 2.8 | 12.5 13.5 | | Max. 0.35 | | | |
| HLVT-4436S | 1.4436 | Max. 0.05 | 0.35 0.60 | 1.40 1.80 | Max. 040 | Max. 0.025 | 16.50 17.50 | 2.5 2.8 | 11.5 12.5 | | Max. 0.35 | | | N<=0.03 0.05 |
| HLVT-4439S | 1.4439 | Max. 0.03 | 0.40 0.60 | 1.20 1.50 | Max. 025 | Max. 0.015 | 16.50 17.50 | 4.0 4.5 | 13.0 14.0 | | Max. 0.35 | Max. 0.025 | | |
| HLVT-4466S | 1.4466 | Max. 0.02 | 0.20 0.40 | 1.50 2.00 | Max. 015 | Max. 0.010 | 24.5 25.5 | 2.0 2.3 | 21.5 22.5 | | Max. 0.20 | Max. 0.025 | | N:0.10 0.14P < 0.018 acceptable |
| HLVT-4539S | 1.4539 | Max. 0.02 | 0.30 0.60 | 0.50 1.00 | Max. 025 | Max. 0.002 | 19.5 21.0 | 4.3 4.7 | 24.2 25.8 | | 1.5 1.7 | Max. 0.025 | Max. 0.005 | N:0.04 0.07 AND Pb< 0.0015 |
| HLVT-4541S | 1.4541 | 0.025 0.035 | 0.35 0.60 | 1.50 1.80 | Max. 040 | Max. 0.025 | 17.0 18.0 | | 9.4 10.0 | | Max. 0.35 | | Max. 0.035 | C = 0.04 acceptable |
| HLVT-4550S | 1.4550 | Max. 0.06 | 0.35 0.60 | 1.20 1.50 | Max. 040 | Max. 0.025 | 17.0 18.0 | | 9.0 10.0 | | Max. 0.35 | | | |
| HLVT-4571S | 1.4571 | 0.025 0.035 | 0.35 0.60 | 1.50 1.80 | Max. 040 | Max. 0.025 | 16.50 17.50 | 2.0 2.3 | 10.9 11.5 | | Max. 0.35 | | 0.16 0.25 | (Ti>5*C)(C=0.04 acceptable) |
| HLVT-4580S | 1.4580 | Max. 0.04 | 0.35 0.60 | 1.20 1.50 | Max. 040 | Max. 0.025 | 16.50 17.50 | 2.0 2.3 | 10.5 11.5 | | Max. 0.35 | | | Nb (>10*C or <0.6) |
| HLVT-4586S | 1.4586 | Max 0.05 | 0.50 0.80 | 1.0 1.20 | Max. 025 | Max. 0.020 | 17.0 18.0 | 3.0 3.4 | 21.5 23.0 | | 1.6 2.0 | | | |
| HLVT-9032S | Alt-1.4306 | Max. 0.03 | 0.35 0.60 | 1.20 1.50 | Max. 040 | 0.018 0.028 | 18.0 19.0 | | 9.0 10.0 | | | | | |
| HLVT-9050S | | Max. 0.05 | 0.35 0.60 | 1.70 1.90 | Max. 045 | 0.17 0.22 | 17.0 18.5 | 2.5 2.8 | 11.5 12.5 | | Max. 0.35 | | | N:0.10 0.14 |
| HLVT-9052S | | 0.04 0.08 | 0.35 0.60 | 0.50 0.80 | Max. 040 | Max. 0.025 | 18.0 19.0 | | 8.0 9.0 | | Max. 0.35 | | | |
| HLVT-9054S | Alt-1.4460 | 0.050 0.080 | 0.50 0.80 | 0.70 1.00 | Max. 030 | Max. 0.015 | 25.8 27 | 1.4 1.6 | 5.0 5.5 | | Max. 0.35 | Max. 0.035 | | |
| HLVT-9055S | | Max. 0.04 | 0.50 0.80 | 0.50 0.80 | Max. 025 | Max. 0.015 | 22.5 24.0 | 2.5 3.0 | 26.5 28.0 | | 2.8 3.2 | | | |
| HLVT-9056S | | Max. 0.02 | Max. 0.20 | 1.0 1.50 | Max. 020 | Max. 0.015 | 16.50 17.50 | 6.0 6.5 | 15.5 16.5 | | 1.2 1.6 | Max. 0.025 | | N:0.13 0.18,Pb< 0.0015 |
| HLVT-9059S | Alt-1.4841 | Max. 0.08 | 1.20 1.35 | 1.10 1.30 | Max. 030 | Max. 0.025 | 24.5 26.0 | | 19.0 20.5 | | | | | |

Case Hardening Steel

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|----------------|--------------|--------------|--------------|--------------|---------|----------------|--------------|--------------|
| HLVT-0050I | | Max 0.25 | 0.17 0.37 | 0.80 1.10 | 0.045 | 0.05 | | | Max 0.30 | | 0.3 | | | |
| HLVT-0416D | | 0.15 0.20 | Max 0.30 | 0.30 0.60 | 0.035 | 0.035 | Max 0.20 | Max 0.05 | Max 0.25 | | 0.3 | Max 0.010 | | |
| HLVT-0570D | 1.0570 | Max 0.20 | Max 0.55 | Max 1.60 | 0.035 | 0.035 | | | | | | | | |
| HLVT-1121D | 1.1121 | 0.07 0.13 | Max 0.40 | 0.30 0.60 | 0.035 | 0.035 | | | | | | | | |
| HLVT-1141D | 1.1141 | 0.12 0.18 | Max 0.40 | 0.30 0.60 | 0.035 | 0.035 | | | | | | | | |
| HLVT-1141S | 1.1141 | 0.12 0.18 | 0.15 0.35 | 0.30 0.50 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-1148B | | 0.12 0.18 | 0.10 0.40 | 0.60 1.00 | 0.05 | 0.025 0.050 | Max 0.30 | Max 0.15 | Max 0.40 | | | | | |
| HLVT-1149B | | 0.16 0.24 | 0.10 0.40 | 0.50 0.90 | 0.05 | 0.025 0.050 | Max 0.30 | Max 0.15 | Max 0.40 | | 0.25 | | | |
| HLVT-1149D | 1.1149 | 0.17 0.24 | Max 0.40 | 0.30 0.60 | 0.035 | 0.020 0.035 | | | | | | | | |
| HLVT-1149P | | 0.15 0.25 | 0.10 0.40 | 0.40 0.70 | 0.04 | 0.020 0.040 | | | | | 0.35 | 0.015 0.040 | Max 0.010 | |
| HLVT-1152D | 1.1152 | 0.18 0.24 | Max 0.40 | 0.30 0.60 | 0.035 | 0.035 | | | | | | | | |
| HLVT-5713C | | 0.14 0.18 | 0.20 0.35 | 0.80 1.00 | 0.035 | 0.020 0.035 | 0.90 1.10 | | 0.90 1.10 | | | 0.020 0.050 | | |
| HLVT-5714B | | 0.14 0.20 | 0.10 0.35 | 0.60 0.90 | 0.05 | 0.025 0.050 | 0.60 1.00 | | 0.85 1.25 | | | | | |
| HLVT-5715B | | 0.14 0.20 | 0.10 0.35 | 0.60 0.90 | 0.05 | 0.025 0.050 | 0.60 1.00 | | 0.85 1.25 | | | | | |
| HLVT-5752S | 1.5752 | 0.12 0.15 | 0.20 0.35 | 0.40 0.50 | 0.025 | 0.025 | 0.60 0.80 | | 3.25 3.70 | | 0.35 | | | |
| HLVT-5860S | 1.5860 | 0.10 0.15 | 0.20 0.28 | 0.40 0.60 | 0.025 | 0.035 | 0.90 1.20 | | 4.25 4.70 | | 0.35 | | | |
| HLVT-5919F | 1.5919 | 0.12 0.17 | 0.10 0.40 | 0.60 0.90 | 0.035 | 0.035 | 0.90 1.20 | | 1.20 1.50 | | | | | |
| HLVT-5919S | 1.5919 | 0.14 0.19 | 0.20 0.35 | 0.40 0.60 | 0.025 | 0.035 | 1.40 1.60 | | 1.40 1.70 | | 0.35 | | | |
| HLVT-5920S | 1.5920 | 0.15 0.20 | 0.20 0.35 | 0.40 0.60 | 0.025 | 0.035 | 1.80 2.10 | | 1.80 2.10 | | 0.35 | | | |
| HLVT-6526A | | 0.17 0.23 | 0.10 0.35 | 0.70 0.90 | 0.035 | 0.025 0.050 | 0.35 0.60 | 0.15 0.25 | 0.35 0.70 | | | | | |
| HLVT-6526B | | 0.19 0.25 | 0.10 0.35 | 0.60 0.95 | 0.035 | 0.025 0.050 | 0.35 0.65 | 0.15 0.25 | 0.35 0.75 | | | | | |
| HLVT-6587D | 1.6587 | 0.15 0.21 | Max 0.40 | 0.50 0.90 | 0.035 | 0.035 | 1.50 1.80 | 0.25 0.35 | 1.40 1.70 | | | | | |
| HLVT-6655D | 1.6655 | 0.29 0.36 | 0.15 0.40 | 0.25 0.50 | 0.025 | 0.025 | 1.20 1.50 | 0.30 0.40 | 2.80 3.00 | | | | | |
| HLVT-6657B | 1.6657 | 0.10 0.16 | 0.10 0.35 | 0.35 0.60 | 0.035 | 0.025 0.050 | 0.70 1.00 | 0.10 0.25 | 3.00 3.75 | | | | | |
| HLVT-6956D | 1.6956 | 0.28 0.38 | Max 0.40 | 0.15 0.40 | 0.035 | 0.035 | 1.00 1.70 | 0.30 0.60 | 2.90 3.80 | 0.08 0.25 | | | | |
| HLVT-7014I | Alt-1.7014 | 0.16 0.19 | Max 0.18 | 0.50 0.65 | 0.035 | 0.020 0.035 | 0.70 0.85 | Max 0.05 | Max 0.25 | | 0.25 | 0.020 0.050 | | Sn<=0.025 |
| HLVT-7015S | 1.7015 | 0.12 0.18 | 0.20 0.35 | 0.40 0.60 | 0.025 | 0.025 | 0.50 0.70 | | | | 0.35 | | | |

Case Hardening Steel (Cont.)

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|----------------|--------------|--------------|--------------|----|---------|----------------|--------------|--------------|
| HLVT-7027J | | 0.17 0.23 | 0.15 0.35 | 0.55 0.90 | 0.03 | 0.03 | 0.85 1.25 | Max 0.10 | Max 0.25 | | 0.3 | | | |
| HLVT-7131C | | 0.14 0.19 | 0.17 0.37 | 1.10 1.40 | 0.035 | 0.035 | 0.80 1.10 | | | | | | | |
| HLVT-7131S | 1.7131 | 0.14 0.19 | 0.20 0.35 | 1.00 1.30 | 0.025 | 0.035 | 0.80 1.10 | | | | 0.35 | | | |
| HLVT-7139S | 1.7139 | 0.14 0.19 | 0.15 0.35 | 1.00 1.30 | 0.035 | 0.02 0.035 | 0.80 1.10 | | | | 0.35 | | | |
| HLVT-7147D | 1.7147 | 0.17 0.22 | Max 0.40 | 1.10 1.40 | 0.035 | 0.035 | 1.00 1.30 | | | | | | | |
| HLVT-7149P | 1.7149 | 0.16 0.22 | Max0.40 | 1.00 1.40 | 0.02 | 0.025 0.040 | 1.10 1.40 | | | | 0.3 | 0.015 0.040 | Max 0.010 | |
| HLVT-7149S | 1.7149 | 0.17 0.22 | 0.15 0.35 | 1.10 1.40 | 0.035 | 0.02 0.035 | 1.00 1.30 | | | | 0.35 | | | |
| HLVT-7242P | | 0.14 0.19 | 0.10 0.40 | 0.60 0.90 | 0.025 | 0.025 0.040 | 090 1.20 | 0.20 0.30 | Max 0.30 | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-7262D | 1.7262 | 0.13 0.17 | 0.15 0.35 | 0.80 1.10 | 0.035 | 0.035 | 1.00 1.30 | 0.20 0.30 | | | | | | |
| HLVT-7262I | | 0.12 0.18 | 0.15 0.35 | 0.60 0.90 | 0.03 | 0.03 | 0.90 1.20 | 0.40 0.50 | Max 0.20 | | 0.2 | | | |
| HLVT-7262J | | 0.13 0.18 | 0.15 0.35 | 0.60 0.85 | 0.03 | 0.03 | 0.90 1.20 | 0.15 0.30 | Max 0.30 | | 0.3 | | | |
| HLVT-7264D | 1.7264 | 0.18 0.23 | 0.15 0.35 | 0.90 1.20 | 0.035 | 0.035 | 1.10 1.40 | 0.20 0.30 | | | | | | |
| HLVT-7264I | | 0.18 0.23 | 0.15 0.35 | 0.60 0.90 | 0.03 | 0.03 | 0.90 1.25 | 0.18 0.35 | Max 0.20 | | 0.25 | | | |
| HLVT-7264J | 1.7264 | 0.17 0.23 | 0.15 0.35 | 0.55 0.90 | 0.03 | 0.03 | 0.85 1.25 | 0.15 0.35 | Max 0.25 | | 0.3 | | | |
| HLVT-7321A | 1.7321 | 0.18 0.23 | 0.15 0.35 | 0.70 0.90 | 0.03 | 0.04 | 0.40 0.60 | 0.08 0.15 | Max 0.25 | | 0.35 | | | |
| HLVT-7321S | 1.7321 | 0.17 0.22 | 0.15 0.35 | 0.60 0.80 | 0.035 | 0.035 | 0.30 0.50 | 0.40 0.50 | | | 0.35 | | | |
| HLVT-7325D | 1.7325 | 0.23 0.29 | 0.15 0.40 | 0.6 0.9 | 0.035 | 0.035 | 0.40 0.60 | 0.40 0.50 | | | | Min 0.020 | | |
| HLVT-7333D | 1.7333 | 0.19 0.24 | Max 0.40 | 0.7 1.00 | 0.035 | 0.02 0.04 | 0.7 1.00 | 0.4 0.5 | | | | | | |
| HLVT-8599D | 1.8599 | 0.07 0.10 | 0.10 0.40 | 0.85 1.15 | 0.025 | 0.03 | 3.70 4.10 | 0.40 0.60 | | | 0.25 | | | |
| HLVT-9004S | Alt-1.6523 | 0.18 0.23 | 0.20 0.35 | 0.70 0.90 | 0.035 | 0.035 | 0.40 0.60 | 0.15 0.25 | 0.40 0.70 | | 0.35 | | | |
| HLVT-9026B | | 0.17 0.22 | 0.10 0.35 | 0.70 0.90 | 0.05 | 0.025 0.050 | 0.70 0.90 | Max 0.15 | Max 0.40 | | 0.25 | | | |
| HLVT-9027I | | 0.17 0.22 | 0.10 0.35 | 0.70 0.90 | 0.05 | 0.05 | 0.70 0.90 | Max 0.10 | Max 0.15 | | 0.25 | | | |
| HLVT-9031B | | 0.14 0.20 | 0.10 0.35 | 0.60 0.90 | 0.035 | 0.025 0.050 | 0.80 1.20 | 0.10 0.20 | 1.20 1.70 | | | | | |
| HLVT-9031C | | 0.18 0.22 | 0.20 0.35 | 0.70 0.90 | 0.018 | 0.018 | 0.85 1.00 | 0.18 0.25 | 1.35 1.50 | | | 0.020 0.050 | | |
| HLVT-9038B | | 0.20 0.26 | 0.10 0.35 | 0.35 0.75 | 0.03 | 0.025 0.035 | | 0.20 0.30 | 1.50 2.00 | | | | | |
| HLVT-9047B | | 0.12 0.18 | 0.10 0.40 | 1.10 1.50 | 0.05 | 0.020 0.050 | | | | | | | | |

Cold Work Tool Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|----------------|---------------|--------------|-------------|--------------|---------|-------|-----|--------------|
| HLVT-1274S | Alt-1.1274 | 0.9 1.05 | 0.15 0.30 | 0.30 0.50 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-1525S | 1.1525 | 0.75 0.85 | 0.15 0.25 | 0.15 0.25 | 0.02 | 0.02 | | | | | 0.25 | | | |
| HLVT-1545S | 1.1545 | 1.00 1.10 | 0.15 0.25 | 0.15 0.20 | 0.02 | 0.02 | | | | | 0.25 | | | |
| HLVT-1730S | 1.1730 | 0.45 0.50 | 0.15 0.40 | 0.60 0.80 | 0.035 | 0.035 | | | Max 0.40 | | 0.25 | | | |
| HLVT-1740S | 1.1740 | 0.56 0.64 | 0.15 0.40 | 0.60 0.80 | 0.035 | 0.035 | | | Max 0.40 | | 0.25 | | | |
| HLVT-1744D | 1.1744 | 0.64 0.72 | 0.15 0.40 | 0.60 0.80 | 0.035 | 0.035 | | | | | | | | |
| HLVT-1830S | 1.1830 | 0.82 0.90 | 0.25 0.35 | 0.55 0.70 | 0.025 | 0.02 | | | | | 0.35 | | | |
| HLVT-2063S | 1.2063 | 1.40 1.50 | 0.15 0.30 | 0.50 0.70 | 0.025 | 0.025 | 1.30 1.50 | | | 0.08 0.15 | 0.3 | | | |
| HLVT-2067S | 1.2067 | 0.95 1.05 | 0.20 0.35 | 0.25 0.40 | 0.025 | 0.025 | 1.40 1.60 | | | | 0.3 | | | |
| HLVT-2080S | 1.2080 | 1.90 2.10 | 0.10 0.40 | 0.15 0.45 | 0.03 | 0.03 | 11.0 12.0 | | | | 0.3 | | | |
| HLVT-2086S | 1.2086 | 2.80 3.00 | 0.15 0.25 | 0.20 0.40 | 0.02 | 0.02 | 11.0 12.50 | | | | 0.3 | | | |
| HLVT-2101S | 1.2101 | 0.60 0.66 | 0.90 1.20 | 0.90 1.20 | 0.025 | 0.025 | 0.50 0.70 | | | | 0.3 | | | |
| HLVT-2103D | | 0.55 0.63 | 1.70 2.00 | 0.60 0.90 | 0.035 | 0.035 | 0.35 0.45 | | | | | | | |
| HLVT-2108S | 1.2108 | 0.88 0.95 | 1.05 1.25 | 0.60 0.80 | 0.02 | 0.02 | 1.10 1.30 | | | | 0.3 | | | |
| HLVT-2208D | 1.2208 | 0.28 0.35 | 0.25 0.40 | 0.40 0.60 | 0.03 | 0.03 | 0.40 0.70 | | | 0.07 0.12 | | | | |
| HLVT-2210S | 1.2210 | 1.10 1.25 | 0.15 0.30 | 0.20 0.40 | 0.03 | 0.025 | 0.60 0.80 | | | 0.07 0.12 | 0.3 | | | |
| HLVT-2243D | 1.2243 | 0.57 0.65 | 0.70 1.00 | 0.60 0.90 | 0.035 | 0.035 | 1.00 1.30 | | | 0.07 0.12 | | | | |
| HLVT-2312D | 1.2312 | 0.35 0.45 | 0.30 0.50 | 1.40 1.60 | 0.03 | 0.050 0.100 | 1.80 2.00 | 0.15 0.25 | | | | | | |
| HLVT-2327S | 1.2327 | 0.84 0.90 | 0.20 0.35 | 0.30 0.45 | 0.01 | 0.01 | 1.70 1.90 | 0.20 0.35 | Max 0.20 | 0.10 0.15 | 0.25 | 0.02 | | |
| HLVT-2363S | 1.2363 | 0.95 1.05 | 0.20 0.40 | 0.40 0.70 | 0.03 | 0.015 | 4.80 5.50 | 0.90 1.20 | Max 0.30 | 0.15 0.30 | 0.3 | 0.045 | | W=Max 0.15 |
| HLVT-2379S | 1.2379 | 1.50 1.60 | 0.10 0.40 | 0.20 0.45 | 0.03 | 0.015 | 11.5 12.0 | 0.70 0.90 | Max 0.30 | 0.80 1.10 | 0.3 | 0.045 | | |
| HLVT-2419S | 1.2419 | 1.00 1.10 | 0.15 0.30 | 0.85 1.00 | 0.025 | 0.025 | 0.90 1.10 | | | | 0.3 | | | W=1.00 1.20 |
| HLVT-2436D | 1.2436 | 2.00 2.25 | 0.10 0.40 | 0.15 0.45 | 0.03 | 0.03 | 11.0 12.0 | | | | | | | W=0.60 0.80 |
| HLVT-2436S | 1.2436 | 2.00 2.10 | 0.10 0.25 | 0.15 0.30 | 0.03 | 0.025 | 11.0 12.0 | | | | 0.3 | | | W=0.60 0.80 |
| HLVT-2510S | 1.2510 | 0.90 1.00 | 0.15 0.35 | 1.00 1.20 | 0.03 | 0.02 | 0.50 0.60 | | Max 0.40 | 0.05 0.15 | 0.3 | 0.04 | | W=0.50 0.60 |
| HLVT-2516S | 1.2516 | 1.15 1.25 | 0.15 0.30 | 0.20 0.35 | 0.025 | 0.025 | 0.15 0.25 | | | 0.07 0.12 | 0.3 | | | W=0.90 1.10 |
| HLVT-2542S | 1.2542 | 0.45 0.50 | 0.80 1.00 | 0.20 0.35 | 0.025 | 0.025 | 0.90 1.10 | | | 0.15 0.20 | 0.3 | | | W=1.80 2.10 |

Helveticis Cold Work Tool Steel Grades (Cont.)

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|--------|--------------|--------------|--------------|--------------|---------|-------|-----|--------------|
| HLVT-2550S | 1.2550 | 0.60 0.50 | 0.50 0.70 | 0.20 0.40 | 0.025 | 0.025 | 0.90 1.20 | | | 0.15 0.20 | 0.3 | | | W=1.80 2.10 |
| HLVT-2601S | 1.2601 | 1.55 1.65 | 0.25 0.40 | 0.20 0.40 | 0.025 | 0.025 | 11.0 12.0 | 0.50 0.70 | | 0.15 0.45 | 0.3 | | | W=0.40 0.60 |
| HLVT-2631S | 1.2631 | 0.50 0.56 | 0.80 1.00 | 0.40 0.60 | 0.025 | 0.025 | 8.0 8.6 | 1.10 1.30 | | | 0.3 | | | W=1.10 1.30 |
| HLVT-2767S | 1.2767 | 0.42 0.48 | 0.15 0.30 | 0.30 0.50 | 0.025 | 0.025 | 1.20 1.40 | 0.20 0.30 | 3.80 4.20 | | 0.3 | | | |
| HLVT-2770S | 1.2770 | 0.82 0.87 | 0.15 0.30 | 0.25 0.40 | 0.025 | 0.025 | Max 0.15 | | 0.70 0.80 | 0.10 0.15 | 0.3 | | | |
| HLVT-2842S | 1.2842 | 0.85 0.95 | 0.10 0.40 | 1.90 2.10 | 0.03 | 0.025 | 0.20 0.50 | | | 0.05 0.15 | 0.3 | | | |
| HLVT-3401S | 1.3401 | 1.15 1.30 | 0.30 0.50 | 12.0 13.0 | 0.05 | 0.04 | Max 0.60 | | | | 0.3 | | | |
| HLVT-9006S | Alt-1.2345 | 0.48 0.53 | 0.80 1.10 | 0.20 0.40 | 0.025 | 0.02 | 4.80 5.20 | 1.25 1.45 | | 1.30 1.50 | 0.3 | | | |
| HLVT-9007S | | 0.75 0.85 | 0.20 0.40 | 0.25 0.40 | 0.02 | 0.02 | 0.60 0.80 | 0.35 0.50 | | 0.08 0.15 | 0.3 | | | W=2.40 2.70 |
| HLVT-9009S | Alt-1.2721 | 0.52 0.57 | 0.20 0.40 | 0.30 0.50 | 0.025 | 0.02 | 0.90 1.10 | 0.20 0.30 | 2.80 3.20 | | 0.3 | 0.025 | | |
| HLVT-9010S | | 0.65 0.70 | 0.20 0.35 | 0.35 0.50 | 0.035 | 0.035 | 0.45 0.60 | 0.15 0.25 | 0.55 0.75 | | 0.25 | 0.1 | | |
| HLVT-9011S | Alt-1.1730 | 0.48 0.54 | 0.20 0.30 | 0.55 0.70 | 0.035 | 0.035 | | | | | 0.3 | | | |

Construction Steel

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|--------|-----|-----|-----|----|---------|-----|-----|------------------------|
| HLVT-0038I | | Max 0.17 | Max 0.55 | Max 0.75 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0060A | | 0.35 0.42 | 0.30 0.60 | 0.90 1.20 | 0.06 | 0.045 | | | | | | | | |
| HLVT-0060I | | Max 0.37 | Max 0.60 | Max 1.60 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0060T | | 0.26 0.35 | Max 0.50 | 0.50 0.80 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0070I | | 0.32 0.40 | 0.50 0.90 | 1.20 1.80 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0528T | | 0.25 0.32 | Max 0.50 | 0.60 0.80 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0533D | 1.0533 | 0.25 0.35 | 0.15 0.30 | 0.50 0.80 | 0.045 | 0.045 | | | | | | | | N<=0.012 AND Ceq<=0.48 |
| HLVT-0533I | | Max 0.32 | Max 0.60 | Max 1.30 | 0.045 | 0.045 | | | | | | | | Ceq<=0.50 |

Free-Cutting Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|----|---------|----------------|--------------|---------------|
| HLVT-0715D | 1.0715 | Max 0.14 | Max 0.05 | 0.90 1.30 | 0.1 | 0.270 0.330 | | | | | | | | |
| HLVT-0718D | 1.0718 | Max 0.14 | Max 0.05 | 0.90 1.30 | 0.11 | 0.270 0.330 | | | | | | | | Pb:0.20 0.035 |
| HLVT-0721D | 1.0721 | 0.07 0.13 | Max 0.40 | 0.70 1.10 | 0.06 | 0.150 0.250 | | | | | | | | |
| HLVT-0723B | | 0.12 0.18 | 0.10 0.40 | 1.10 1.40 | 0.05 | 0.100 0.180 | | | | | | | | |
| HLVT-0726D | 1.0726 | 0.32 0.39 | 0.10 0.30 | 0.70 1.10 | 0.06 | 0.180 0.250 | | | | | | | | |
| HLVT-0727F | | 0.41 0.48 | 0.10 0.40 | 1.30 1.70 | 0.04 | 0.240 0.320 | | | | | | | | |
| HLVT-0727S | 1.0727 | 0.42 0.50 | 0.1 0.3 | 0.70 1.10 | 0.06 | 0.18 0.25 | | | | | | | | |
| HLVT-0736D | 1.0736 | Max 0.15 | Max 0.05 | 1.10 1.50 | 0.1 | 0.340 0.400 | | | | | | | | |
| HLVT-0736S | 1.0736 | 0.060.1 0 | Max. 0.02 | 1.20 1.40 | 0.07 0.09 | 0.32 0.37 | Max. 0.10 | | Max. 0.10 | | 0.15 | | | |
| HLVT-0737S | 1.0737 | 0.06 0.10 | Max. 0.02 | 1.20 1.40 | 0.07 0.09 | 0.32 0.37 | Max. 0.10 | | Max. 0.10 | | 0.15 | | | Pb: 0.15 0.30 |
| HLVT-1128P | 1.1128 | 0.42 0.50 | Max0.4 0 | 1.10 1.40 | 0.035 | 0.025 0.045 | Max0.3 0 | Max0.1 0 | Max0.3 0 | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-1180P | | 0.30 0.40 | 0.10 0.40 | 0.50 0.80 | 0.04 | 0.020 0.040 | | | | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-9023S | | 0.34 0.38 | 0.1 0.3 | 1.45 1.65 | 0.05 | 0.12 0.17 | 0.15 0.25 | | | | | | | |
| HLVT-9030B | | 0.12 0.18 | 0.10 0.40 | 1.20 1.60 | 0.05 | 0.100 0.180 | | | | | | | | |
| HLVT-9034B | | 0.32 0.40 | Max 0.25 | 1.00 1.40 | 0.06 | 0.120 0.200 | | | | | | | | |
| HLVT-9041B | | 0.32 0.40 | 0.10 0.40 | 1.30 1.70 | 0.035 | 0.150 0.250 | | 0.22 0.32 | | | | | | |

Heat Resistant Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|----------------|--------------|--------------|----------|------------|--------------|--------------|---------------|--------------|-----------|--------------|--------------|--------------|
| HLVT-4713S | 1.4713 | Max. 0.12 | 0.60 0.90 | 0.30 0.50 | Max. 030 | Max. 0.025 | 6.50 7.0 | | Max. 0.50 | | | 0.60 0.90 | | |
| HLVT-4724S | 1.4724 | Max. 0.12 | 0.90 1.20 | 0.40 0.60 | Max. 030 | Max. 0.025 | 12.0 13.0 | | Max. 0.50 | | | 0.80 1.10 | | |
| HLVT-4742S | 1.4742 | Max. 0.12 | 1.0 1.30 | 0.40 0.60 | Max. 030 | Max. 0.025 | 17.5 18.5 | | Max. 0.50 | | | 0.90 1.20 | | |
| HLVT-4749S | 1.4749 | 0.040 0.070 | 0.40 0.60 | 0.70 0.90 | Max. 030 | Max. 0.025 | 26.0 27.5 | | Max. 0.50 | | | Max. 0.025 | | |
| HLVT-4762S | 1.4762 | Max. 0.10 | 1.0 1.30 | 0.40 0.60 | Max. 030 | Max. 0.025 | 23.0 24.5 | | Max. 0.50 | | | 1.30 1.60 | | |
| HLVT-4821S | 1.4821 | 0.10 0.15 | 0.80 1.20 | 1.0 1.30 | Max. 030 | Max. 0.025 | 24.0 25.5 | | 3.7 4.2 | | | | | |
| HLVT-4828S | 1.4828 | 0.06 0.12 | 1.60 1.80 | 1.0 1.30 | Max. 030 | Max. 0.025 | 19.0 20.0 | | 11.0 120 | | | | | |
| HLVT-4841S | 1.4841 | 0.06 0.1 | 1.60 1.80 | 1.0 1.30 | Max. 030 | Max. 0.025 | 24.0 25.5 | | 19.0 20.5 | | | | | |
| HLVT-4842S | 1.4842 | Max. 0.08 | 0.40 0.60 | 1.0 1.30 | Max. 030 | Max. 0.025 | 24.0 25.5 | Max. 0.75 | 19.0 20.5 | | Max. 0.75 | | | |
| HLVT-4864S | 1.4864 | 0.08 0.12 | 1.60 1.90 | 0.60 0.90 | Max. 030 | Max. 0.020 | 18.5 19.5 | | 34.0 36.0 | | | | | |
| HLVT-4873D | 1.4873 | 0.40 0.50 | 2.00 3.00 | 0.80 1.50 | 0.045 | 0.03 | 17.0 19.0 | | 8.00 10.00 | | | | | W= 0.80 1.20 |
| HLVT-4876S | 1.4876 | 0.05 0.08 | 0.20 0.50 | 0.60 0.90 | Max. 030 | Max. 0.015 | 20.0 21.5 | | 31.0 33.0 | | Max. 0.5 | 0.20 0.40 | 0.20 0.40 | Co < 1.00 |
| HLVT-4923D | | 0.18 0.24 | Max 0.50 | 0.40 0.90 | 0.025 | 0.015 | 11.0 12.5 | 0.80 1.20 | 0.30 0.80 | 0.25 0.35 | | | | |
| HLVT-9057S | Alt-1.4821 | 0.15 0.25 | 0.20 0.50 | 1.15 1.30 | Max. 030 | Max. 0.025 | 24.0 26.0 | | 3.5 4.5 | | | Max. 0.025 | | |
| HLVT-9058S | | 0.35 0.45 | 0.20 0.40 | 0.50 0.70 | Max. 020 | Max. 0.015 | 19.0 22.0 | | 31.0 34.0 | | Max. 0.75 | 0.40 0.60 | 0.50 0.70 | |

Heat Treatment Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|-----------|-----------|--------------|--------|----------------|-----------|-----------|----------|----------|---------|----------------|-----------|-----------------------------------|
| HLVT-0402I | | 0.20 0.25 | 0.05 0.35 | 0.40 0.90 | 0.06 | 0.06 | 0.20 0.30 | Max 0.10 | Max 0.15 | | 0.2 | | | |
| HLVT-0432A | 1.0432 | Max 0.35 | 0.10 0.35 | 0.60 1.05 | 0.035 | 0.04 | Max 0.30 | Max 0.12 | Max 0.40 | Max 0.08 | 0.4 | | | Cu+Ni+Cr+Mo+V≤1.00 AND Cr+Mo≤0.32 |
| HLVT-0432D | 1.0432 | 0.18 0.23 | 0.15 0.35 | 0.60 1.05 | 0.04 | 0.05 | | | | | | | | |
| HLVT-0511B | | 0.38 0.43 | 0.05 0.35 | 0.70 0.90 | 0.05 | 0.025 0.040 | Max 0.40 | Max0.10 | Max0.40 | | | | | |
| HLVT-0535D | 1.0535 | 0.52 0.60 | Max 0.40 | 0.60 0.90 | 0.045 | 0.045 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-0540D | 1.054 | 0.47 0.55 | Max 0.40 | 0.60 0.90 | 0.045 | 0.045 | | | | | | | | |
| HLVT-0543I | | 0.35 0.45 | 0.15 0.30 | 0.50 0.80 | 0.045 | 0.045 | | | | | | | | N≤0.012 |
| HLVT-1151D | 1.1151 | 0.17 0.24 | Max 0.40 | 0.40 0.70 | 0.035 | 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | | Max 0.050 | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-1157I | | 0.41 0.45 | 0.10 0.40 | 0.95 1.30 | 0.025 | 0.060 0.090 | Max 0.25 | Max 0.05 | Max 0.25 | | 0.4 | 0.015 0.040 | Max 0.010 | 1.5≤Mneq≤1.63 |
| HLVT-1165S | 1.1165 | 0.27 0.34 | 0.20 0.35 | 1.20 1.50 | 0.025 | 0.025 | | | | | 0.35 | | | Cr+Mo+Ni<0.63 |
| HLVT-1167B | | 0.30 0.40 | 0.10 0.35 | 1.30 1.70 | 0.05 | 0.030 0.050 | | | | | | | | |
| HLVT-1167D | 1.1167 | 0.32 0.40 | 0.15 0.35 | 1.20 1.50 | 0.035 | 0.035 | | | | | | | | |
| HLVT-1167I | | 0.28 0.39 | Max 0.60 | 0.70 1.60 | 0.045 | 0.045 | | | | | | | | |
| HLVT-1169P | | 0.17 0.23 | 0.10 0.40 | 1.10 1.40 | 0.035 | 0.020 0.040 | 0.15 0.30 | Max 0.10 | Max 0.30 | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-1170D | 1.1170 | 0.25 0.32 | Max 0.40 | 1.30 1.65 | 0.035 | 0.03 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-1175P | 1.1175 | 0.40 0.46 | 0.10 0.40 | 0.50 1.00 | 0.025 | 0.015 | | | | | 0.4 | 0.008 0.030 | Max 0.010 | 1.15≤Mneq≤1.25 |
| HLVT-1176A | 1.1176 | 0.35 0.42 | 0.10 0.30 | 0.60 0.90 | 0.03 | 0.05 | | | | | | | | |
| HLVT-1178B | 1.1178 | 0.26 0.34 | 0.10 0.40 | 0.60 1.00 | 0.05 | 0.025 0.050 | Max 0.30 | Max 0.15 | Max 0.40 | | | | | |
| HLVT-1178D | 1.1178 | 0.27 0.34 | Max 0.40 | 0.50 0.80 | 0.035 | 0.035 | Max0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-1180B | | 0.30 0.35 | 0.10 0.40 | 0.70 0.90 | 0.05 | 0.025 0.050 | Max 0.30 | Max 0.15 | Max 0.40 | | | | | |
| HLVT-1181S | 1.1181 | 0.32 0.39 | 0.15 0.35 | 0.50 0.80 | 0.03 | 0.03 | Max 0.40 | Max 0.100 | Max 0.40 | | 0.35 | | | Cr+Mo+Ni<0.63 |
| HLVT-1186B | | 0.36 0.44 | 0.10 0.40 | 0.60 1.00 | 0.05 | 0.025 0.050 | | | | | | | | |
| HLVT-1186D | 1.1186 | 0.37 0.44 | Max 0.40 | 0.50 0.80 | 0.035 | 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-1186P | | 0.34 0.42 | 0.10 0.40 | 0.50 0.80 | 0.03 | 0.020 0.040 | Max 0.40 | Max 0.10 | Max 0.40 | | 0.4 | 0.015 0.040 | Max 0.010 | B ≤ 0.0005 |
| HLVT-1191D | 1.1191 | 0.42 0.50 | Max 0.40 | 0.50 0.80 | 0.035 | 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni ≤ 0.63 |
| HLVT-1191P | | 0.44 0.51 | 0.10 0.40 | 0.50 0.80 | 0.035 | 0.04 | | | | | 0.3 | 0.020 0.050 | Max 0.010 | |
| HLVT-1191S | 1.1191 | 0.42 0.48 | 0.15 0.35 | 0.50 0.80 | 0.035 | 0.03 | Max 0.40 | Max 0.100 | Max 0.40 | | 0.35 | | | |

Heat Treatment Steel Grades (Cont.)

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|-------------|-----------------|-----------|-----------|-----------|--------|-------------|-----------|-----------|-----------|-----------|---------|-------------|-----------|----------------------------|
| HLVT-1201B | | 0.45 0.50 | 0.10 0.40 | 0.70 0.90 | 0.05 | 0.025 0.050 | Max 0.30 | Max 0.15 | Max 0.40 | | 0.25 | | | |
| HLVT-1201D | 1.1201 | 0.42 0.50 | Max 0.40 | 0.50 0.80 | 0.035 | 0.020 0.040 | Max0.40 | Max0.10 | Max0.40 | | | | | Cr+Mo+Ni <= 0.63 |
| HLVT-1201I | 1.1201 | 0.40 0.46 | 0.15 0.35 | 0.60 0.80 | 0.04 | 0.030 0.050 | 0.15 0.25 | Max 0.03 | Max 0.10 | | 0.25 | Max 0.050 | | N<=0.014 |
| HLVT-1203D | 1.1203 | 0.52 0.60 | Max 0.40 | 0.60 0.90 | 0.035 | 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni < =0.63 |
| HLVT-1205B | | 0.50 0.55 | 0.10 0.40 | 0.70 0.90 | 0.05 | 0.025 0.050 | | | | | | | | |
| HLVT-1206D | 1.1206 | 0.47 0.55 | Max 0.40 | 0.60 0.90 | 0.035 | 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | | | | Cr+Mo+Ni < =0.63 |
| HLVT-1209P | | 0.50 0.58 | 0.10 0.40 | 0.50 0.80 | 0.04 | 0.020 0.040 | Max 0.30 | Max 0.10 | Max 0.30 | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-1213S | 1.1213 | 0.50 0.55 | 0.20 0.30 | 0.50 0.70 | 0.025 | 0.025 | | | | | 0.35 | | | |
| HLVT-1221S | 1.1221 | 0.57 0.65 | 0.15 0.35 | 0.60 0.90 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-1260D | 1.1260 | 0.60 0.71 | 0.15 0.30 | 0.85 1.15 | 0.035 | 0.035 | | | | | | | | |
| HLVT-5122S | 1.5122 | 0.34 0.40 | 1.10 1.40 | 1.10 1.40 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-5755S | 1.5755 | 0.28 0.33 | 0.20 0.35 | 0.50 0.70 | 0.025 | 0.035 | 0.60 0.90 | | 3.25 3.70 | | 0.35 | | | |
| HLVT-6511S | 1.6511 | 0.32 0.40 | 0.20 0.35 | 0.50 0.80 | 0.025 | 0.03 | 0.90 1.20 | 0.15 0.25 | 0.90 1.20 | | 0.35 | | | |
| HLVT-6528A | | 0.56 0.64 | 0.15 0.35 | 0.75 1.00 | 0.035 | 0.04 | 0.40 0.60 | 0.15 0.25 | 0.40 0.70 | | 0.35 | | | |
| HLVT-6540D | 1.6540 | 0.20 0.26 | Max 0.25 | 1.10 1.40 | 0.02 | 0.02 | 0.40 0.60 | 0.20 0.30 | 0.70 0.90 | | 0.25 | 0.020 0.050 | | N<= 0.012 |
| HLVT-6541D | 1.6541 | 0.20 0.26 | Max 0.25 | 1.10 1.40 | 0.02 | 0.02 | 0.40 0.60 | 0.20 0.30 | 0.40 0.70 | | 0.25 | 0.020 0.050 | | N:Max 0.012, P+S:Max 0.035 |
| HLVT-6580D | 1.6580 | 0.26 0.34 | Max 0.40 | 0.30 0.60 | 0.025 | 0.035 | 1.80 2.20 | 0.30 0.50 | 1.80 2.20 | | | | | |
| HLVT-6580S | 1.6580 | 0.26 0.33 | 0.20 0.35 | 0.40 0.60 | 0.025 | 0.025 | 1.80 2.10 | 0.30 0.40 | 1.80 2.10 | | 0.35 | | | |
| HLVT-6582A* | 1.6582 | 0.38 0.43 | 0.15 0.35 | 0.60 0.80 | 0.035 | 0.04 | 0.70 0.90 | 0.20 0.30 | 1.65 2.00 | | 0.35 | | | |
| HLVT-6582D | 1.6582 | 0.30 0.38 | Max 0.40 | 0.50 0.80 | 0.025 | 0.035 | 1.30 1.70 | 0.15 0.30 | 1.30 1.70 | | | | | |
| HLVT-6582S | 1.6582 | 0.31 0.37 | 0.20 0.35 | 0.50 0.70 | 0.025 | 0.03 | 1.40 1.60 | 0.15 0.25 | 1.40 1.60 | | 0.35 | | | |
| HLVT-6659S | 1.6659 | 0.28 0.35 | 0.15 0.35 | 0.40 0.70 | 0.025 | 0.025 | 0.90 1.20 | 0.20 0.30 | 3.00 3.50 | | 0.35 | | | |
| HLVT-6926S | 1.6926 | 0.35 0.38 | 0.15 0.35 | 0.50 0.80 | 0.015 | 0.01 | 0.70 0.90 | 0.30 0.40 | 1.65 2.00 | 0.08 0.15 | 0.35 | | | |
| HLVT-6959D | 1.6959 | 0.30 0.40 | 0.15 0.35 | 0.40 0.70 | 0.015 | 0.015 | 1.00 1.40 | 0.35 0.60 | 2.50 3.50 | 0.08 0.20 | | Max 0.015 | | |
| HLVT-7001D | 1.7001 | 0.34 0.41 | 0.15 0.40 | 0.50 0.80 | 0.035 | 0.035 | 0.30 0.40 | | | | | | | |
| HLVT-7002P | | 0.43 0.48 | 0.15 0.35 | 0.70 1.00 | 0.025 | 0.015 | 0.15 0.25 | | | | 0.4 | 0.015 0.040 | Max 0.010 | B<= 0.0005 |
| HLVT-7003P | 1.7003 | 0.34 0.40 | 0.10 0.40 | 0.60 0.80 | 0.03 | 0.020 0.040 | 0.30 0.60 | | | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-7033D | 1.7033 | 0.30 0.37 | Max 0.40 | 0.60 0.90 | 0.025 | 0.035 | 0.90 1.20 | | | | | | | |

Heat Treatment Steel Grades (Cont.)

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|-----------|-----------|--------------|--------|----------------|-----------|-----------|--------------|--------------|---------|----------------|-----------|--------------|
| HLVT-7034D | 1.7034 | 0.34 0.41 | Max 0.40 | 0.60 0.90 | 0.025 | 0.035 | 0.90 1.20 | | | | | | | |
| HLVT-7034I | | 0.35 0.38 | 0.10 0.35 | 0.65 0.80 | 0.03 | 0.020 0.030 | 0.85 1.00 | Max 0.10 | Max 0.15 | | 0.2 | | | |
| HLVT-7035S | 1.7035 | 0.38 0.44 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.03 | 0.90 1.20 | | | | 0.35 | | | |
| HLVT-7037D | 1.7037 | 0.30 0.37 | Max 0.40 | 0.60 0.90 | 0.025 | 0.020 0.040 | 0.90 1.20 | | | | | | | |
| HLVT-7038B | | 0.34 0.39 | 0.10 0.40 | 0.60 0.80 | 0.035 | 0.025 0.050 | 0.90 1.20 | Max 0.15 | Max 0.40 | | 0.25 | | | |
| HLVT-7038D | 1.7038 | 0.34 0.41 | Max 0.40 | 0.60 0.90 | 0.025 | 0.020 0.040 | 0.90 1.20 | | | | | | | |
| HLVT-7039B | 1.7039 | 0.36 0.44 | 0.10 0.35 | 0.60 0.90 | 0.05 | 0.025 0.050 | 0.90 1.20 | | | | | | | |
| HLVT-7039D | 1.7039 | 0.38 0.45 | Max 0.40 | 0.60 0.90 | 0.025 | 0.020 0.040 | 0.90 1.20 | | | | | | | |
| HLVT-7039I | | 0.38 0.44 | 0.15 0.40 | 0.50 0.80 | 0.035 | 0.020 0.040 | 0.80 1.00 | | | | | 0.020 0.050 | Max 0.030 | |
| HLVT-7218P | | 0.23 0.31 | 0.10 0.40 | 0.60 0.90 | 0.025 | 0.025 0.040 | 0.90 1.20 | 0.20 0.30 | Max 0.30 | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-7218S | 1.7218 | 0.24 0.28 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.03 | 1.00 1.20 | 0.20 0.30 | | | 0.35 | | | |
| HLVT-7220D | 1.7220D | 0.30 0.37 | Max 0.40 | 0.60 0.90 | 0.025 | 0.035 | 0.90 1.20 | 0.15 0.30 | | | | | | |
| HLVT-7220S | 1.7220S | 0.30 0.37 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.03 | 0.90 1.20 | 0.15 0.25 | | | 0.35 | | | |
| HLVT-7223S | 1.7223 | 0.38 0.44 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.03 | 0.90 1.20 | 0.15 0.25 | | | 0.35 | | | |
| HLVT-7225D | 1.7225 | 0.38 0.45 | Max 0.40 | 0.60 0.90 | 0.035 | 0.035 | 0.90 1.20 | 0.15 0.20 | | | | | | |
| HLVT-7226D | 1.7226 | 0.30 0.37 | Max 0.40 | 0.60 0.90 | 0.025 | 0.020 0.040 | 0.90 1.20 | 0.15 0.30 | | | | | | |
| HLVT-7227B | | 0.40 0.45 | 0.10 0.35 | 0.75 1.00 | 0.05 | 0.025 0.050 | 0.90 1.20 | 0.15 0.25 | | | | | | |
| HLVT-7227D | 1.7227 | 0.38 0.45 | Max 0.40 | 0.60 0.90 | 0.025 | 0.020 0.040 | 0.90 1.20 | 0.15 0.30 | | | | | | |
| HLVT-7228S | 1.7228 | 0.47 0.53 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.025 | 0.90 1.20 | 0.15 0.25 | | | 0.35 | | | |
| HLVT-7734S | 1.7734 | 0.15 0.18 | 0.10 0.20 | 0.80 1.10 | 0.02 | 0.015 | 1.25 1.50 | 0.80 1.00 | | 0.20 0.30 | 0.35 | | | |
| HLVT-9016S | Alt-1.6959 | 0.28 0.35 | 0.10 0.30 | 0.50 0.70 | 0.025 | 0.025 | 1.10 1.40 | 0.50 0.60 | 2.50 2.80 | 0.10 0.15 | 0.35 | Max 0.015 | | |
| HLVT-9017S | Alt-1.6565 | 0.36 0.42 | 0.20 0.35 | 0.50 0.70 | 0.025 | 0.025 | 0.60 0.90 | 0.30 0.45 | 1.20 1.50 | | 0.35 | | | |
| HLVT-9018S | | 0.23 0.28 | 0.15 0.35 | 2.35 2.60 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-9025B | | 0.32 0.40 | 0.10 0.35 | 1.30 1.80 | 0.05 | 0.025 0.050 | | 0.22 0.35 | | | | | | |
| HLVT-9025I | | 0.32 0.40 | 0.10 0.35 | 1.30 1.70 | 0.05 | 0.025 0.050 | | 0.22 0.32 | | | | | | |
| HLVT-9044I | | 0.45 0.55 | 0.20 0.30 | 0.75 0.90 | 0.02 | 0.02 | 0.55 0.70 | | | | | | | |
| HLVT-9046P | | 0.23 31 | 0.10 0.40 | 1.10 1.40 | 0.03 | 0.025 0.040 | 1.00 1.30 | | | | 0.4 | 0.015 0.040 | Max 0.010 | |
| HLVT-9095I | | 0.43 50 | 0.15 0.35 | 0.55 0.80 | 0.03 | 0.010 0.035 | Max 0.40 | Max 0.10 | Max 0.40 | | 0.35 | | | |

High-Temperature Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|--------|--------|--------------|--------------|-------------|--------------|---------|--------------|-----|--------------|
| HLVT-7242D | 1.7242 | 0.13 0.20 | 0.15 0.35 | 0.50 0.80 | 0.035 | 0.035 | 0.90 1.20 | 0.20 0.30 | Max 0.40 | | | | | |
| HLVT-7258D | 1.7258 | 0.20 0.28 | 0.15 0.35 | 0.50 0.80 | 0.03 | 0.035 | 0.90 1.20 | 0.20 0.35 | Max 0.60 | | | | | |
| HLVT-7258I | | 0.19 0.25 | 0.15 0.35 | 0.60 0.90 | 0.03 | 0.03 | 0.90 1.20 | 0.40 0.50 | Max 0.20 | | 0.2 | | | |
| HLVT-7258S | 1.7258 | 0.20 0.28 | 0.2 0.35 | 0.50 0.70 | 0.025 | 0.025 | 0.90 1.10 | 0.20 0.35 | Max 0.60 | | 0.3 | | | |
| HLVT-7335S | 1.7335 | 0.10 0.18 | 0.20 0.35 | 0.40 0.70 | 0.025 | 0.025 | 0.80 1.10 | 0.50 0.60 | | | 0.3 | | | |
| HLVT-7380S | 1.7380 | 0.08 0.12 | 0.20 0.35 | 0.40 0.60 | 0.03 | 0.025 | 2.20 2.50 | 0.90 1.10 | | | 0.3 | | | |
| HLVT-7709S | 1.7709 | 0.17 0.25 | 0.15 0.35 | 0.35 0.85 | 0.03 | 0.035 | 1.20 1.50 | 0.65 0.80 | | 0.25 0.35 | | | | |
| HLVT-7711I | 1.7711 | 0.36 0.44 | 0.15 0.35 | 0.45 0.70 | 0.03 | 0.035 | 0.90 1.15 | 0.60 0.65 | | 0.25 0.35 | | Max 0.015 | | |
| HLVT-7733D | 1.7733 | 0.20 0.28 | 0.15 0.35 | 0.30 0.60 | 0.035 | 0.035 | 1.20 1.50 | 0.50 0.60 | Max 0.60 | 0.15 0.25 | | | | |

Hot Working Tool Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|-----------|---------------|--------------|----------------|--------------|------------|--------------|--------------|----------------------|
| HLVT-2323S | 1.2323 | 0.40 0.50 | 0.20 0.35 | 0.60 0.80 | 0.025 | 0.025 | 1.30 1.50 | 0.65 0.80 | | 0.25 0.35 | 0.3 | | | |
| HLVT-2344D | 1.2344 | 0.37 0.43 | 0.90 1.20 | 0.30 0.50 | 0.03 | 0.03 | 4.80 5.50 | 1.20 1.50 | | 0.90 1.10 | | | | |
| HLVT-2344S | 1.2344 | 0.37 0.41 | 0.90 1.20 | 0.30 0.50 | 0.025 | 0.005 | 5.0 5.30 | 1.25 1.50 | | 0.90 1.00 | 0.35 | 0.1 | | W=Max 0.30 |
| HLVT-2365S | 1.2365 | 0.28 0.33 | 0.20 0.35 | 0.25 0.40 | 0.025 | 0.005 | 2.70 3.00 | 2.70 2.90 | Max 0.40 | 0.45 0.55 | 0.3 | | | |
| HLVT-2567S | 1.2567 | 0.29 0.32 | 0.15 0.30 | 0.20 0.40 | 0.025 | 0.025 | 2.20 2.50 | | | 0.50 0.70 | 0.3 | | | W=4.00 4.50 |
| HLVT-2581S | 1.2581 | 0.25 0.32 | 0.15 0.30 | 0.20 0.40 | 0.025 | 0.025 | 2.50 2.80 | | | 0.30 0.40 | 0.3 | | | W=8.00 9.00 |
| HLVT-2713S | 1.2713 | 0.50 0.60 | 0.15 0.30 | 0.65 0.85 | 0.025 | 0.025 | 0.60 0.80 | 0.25 0.35 | 1.50 1.80 | 0.07 0.12 | 0.03 | | | |
| HLVT-2714S | 1.2714 | 0.50 0.60 | 0.15 0.35 | 0.65 0.85 | 0.03 | 0.025 | 1.00 1.20 | 0.45 0.55 | 1.50 1.80 | 0.07 0.12 | 0.3 | 0.1 | | |
| HLVT-2740D | 1.2740 | 0.24 0.32 | 0.30 0.50 | 0.20 0.40 | 0.03 | 0.03 | 0.60 0.90 | 0.50 0.70 | 2.30 2.60 | 0.25 0.32 | | | | |
| HLVT-2886S | 1.2886 | 0.13 0.18 | 0.15 0.25 | 0.15 0.25 | 0.02 | 0.01 | 9.50 10.50 | 4.90 5.20 | | 0.45 0.55 | 0.3 | | | Co:9.50 10.50 |
| HLVT-5437D | 1.5437 | 0.63 0.77 | 0.20 0.35 | 0.70 1.05 | 0.04 | 0.04 | Max 0.28 | 0.80 1.10 | Max 0.20 | Max 0.06 | 0.2 | Min 0.020 | | |
| HLVT-6356S | 1.6356 | Max 0.030 | Max 0.10 | Max 0.10 | 0.01 | 0.01 | | 3.80 4.50 | 17.50 18.50 | | 0.3 | 0.10 0.20 | 1.50 1.80 | Co:12.00 12.50 |
| HLVT-6358S | 1.6358 | Max 0.030 | Max 0.10 | Max 0.10 | 0.01 | 0.01 | | 5.00 5.50 | 18.0 19.0 | | 0.3 | 0.05 0.15 | 0.50 0.70 | Co:8.50 9.50 |
| HLVT-6359S | 1.6359 | Max 0.030 | Max 0.10 | Max 0.10 | 0.01 | 0.01 | | 4.60 5.10 | 17.50 18.50 | | 0.3 | 0.10 0.15 | 0.50 0.60 | Co:7.50 8.50 |
| HLVT-7783S | 1.7783 | 0.38 0.42 | 0.80 1.00 | 0.20 0.40 | 0.015 | 0.01 | 4.80 5.20 | 1.20 1.40 | Max 0.20 | 0.40 0.50 | 0.2 | | | Co<0.20/W=Max0.20 |
| HLVT-9019S | Alt-1.2678 | 0.38 0.43 | 0.20 0.35 | 0.20 0.35 | 0.025 | 0.025 | 4.00 4.50 | 0.30 0.50 | | 1.80 2.00 | 0.3 | | | Co:4.00 4.50/W=4 4.5 |
| HLVT-9020S | Alt-1.2343 | 0.33 0.39 | 0.90 1.20 | 0.30 0.50 | 0.025 | 0.025 | 4.80 5.20 | 1.20 1.40 | Max 0.40 | 0.30 0.50 | 0.3 | | | |
| HLVT-9022S | Alt-1.2885 | 0.36 0.42 | 0.20 0.35 | 0.25 0.40 | 0.025 | 0.005 | 2.70 3.00 | 2.70 2.90 | Max 0.40 | 0.60 0.70 | 0.3 | | | Co:2.70 3.00 |
| HLVT-9045I | | 0.42 50 | 0.17 0.32 | 0.50 0.80 | 0.02 | 0.01 | 0.80 1.10 | 0.20 0.30 | 1.3 1.8 | 0.10 0.18 | | | | |

Micro-Alloy Steel

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|-------------|-----------------|--------------|--------------|--------------|-----------|----------------|--------------|--------------|--------------|--------------|------------|----------------|----------------|--|
| HLVT-1249I | 1.1249 | 0.67 0.73 | 0.15 0.25 | 0.53 0.60 | 0.045 | 0.055 0.075 | 0.10 0.15 | Max 0.03 | 0.04 0.08 | 0.03 0.04 | | Max 0.01 | | 0.010<=N<= 0.017 |
| HLVT-1249P | 1.1249 | 0.67 0.73 | 0.15 0.40 | 0.52 0.72 | 0.045 | 0.060 0.080 | Max 0.20 | Max 0.050 | Max 0.20 | | 0.4 | Max 0.01 | | 2.90<=Mneq+3.33%C<=3.35 |
| HLVT-1302P | | 0.30 0.33 | 0.50 0.70 | 1.40 1.60 | 0.025 | 0.065 0.090 | Max 0.25 | Max 0.06 | Max 0.17 | 0.08 0.14 | 0.4 | Max 0.040 | 0.015 0.025 | 1.88<=Mneq<=1.98 , N>=0.012 |
| HLVT-5231D | 1.5231 | 0.35 0.40 | 0.50 0.80 | 1.20 1.50 | 0.035 | 0.030 0.065 | | | | 0.08 0.13 | | | | N>=0.01 |
| HLVT-5232R | 1.5232 | 0.21 0.26 | Max 0.40 | 1.30 1.60 | 0.03 | 0.020 0.040 | Max 0.30 | Max 0.10 | Max 0.30 | | 0.4 | Max 0.050 | Max 0.010 | 0.010<=N<=0.02 AND V+Nb=0.10 0.20 |
| HLVT-5510D | 1.5510 | 0.25 0.30 | Max 0.30 | 0.60 0.90 | 0.025 | 0.025 | Max 0.30 | | | | 0.25 | | | B:0.0008 0.005 |
| HLVT-5515A | 1.5515 | 0.35 0.42 | 0.10 0.20 | 0.60 0.90 | 0.04 | 0.05 | | | | | | | | B:0.0005 0.003 |
| HLVT-5515D* | 1.5515 | 0.35 0.40 | 0.15 0.30 | 0.60 0.90 | 0.025 | 0.025 | Max 0.30 | | | | 0.25 | | | B: 0.0008 0.005 |
| HLVT-5523I | | 0.18 0.23 | Max0.10 | 0.80 1.10 | 0.03 | 0.03 | Max 0.20 | | | | | | | B:0.0005 0.005 |
| HLVT-5526I | Alt-1.5526 | 0.28 0.32 | 0.15 0.30 | 0.80 1.00 | 0.025 | 0.025 | 0.10 0.20 | | | | | | | B:0.0005 0.003 |
| HLVT-5529D | 1.5529 | 0.25 0.30 | Max0.40 | 1.10 1.30 | 0.025 | 0.025 | 0.5 | | | | | Min 0.020 | 0.02 0.05 | B:0.0008 0.0050 |
| HLVT-5530D | 1.5530 | 0.17 0.23 | Max0.40 | 1.1 1.4 | 0.025 | 0.035 | | | | | | | | B:0.0008 0.0050 |
| HLVT-5532P | | 0.33 0.38 | 0.10 0.40 | 1.10 1.40 | 0.035 | 0.020 0.040 | | | | | 0.4 | 0.020 0.060 | 0.020 0.055 | B:0.0015 0.0050 |
| HLVT-7007D | 1.7007 | 0.35 0.40 | Max 0.40 | 0.50 0.80 | 0.035 | 0.035 | 0.30 0.40 | | | | | | | B:Min 0.0008 |
| HLVT-7077D | 1.7077 | 0.34 0.38 | Max0.30 | 0.70 1.00 | 0.025 | 0.025 | 0.90 1.20 | | | | 0.25 | | | B:0.0008 0.0050 |
| HLVT-7147C | | 0.15 0.20 | Max 0.40 | 1.00 1.30 | 0.025 | 0.020 0.035 | 1.00 1.30 | Max 0.12 | Max 0.30 | Max 0.10 | 0.3 | 0.020 0.050 | Max 0.005 | B: 0.001 0.003 ; Sn<= 0.03 Ca<=0.003;Sb<=0.005;O<= 0.0025 Co<=0.10 N AND Nb Was reported W <=0.10 |
| HLVT-7182D | 1.7182 | 0.24 0.30 | Max 0.40 | 1.10 1.40 | 0.025 | 0.035 | 0.30 0.60 | | | | | | | B:0.0008 0.0050 |
| HLVT-7271D | 1.7271 | 0.20 0.25 | 0.15 0.35 | 0.70 0.90 | 0.035 | 0.035 | 0.70 0.90 | 0.30 0.40 | | | | | | B: 0.0008 0.005 |
| HLVT-7765D | 1.7765 | 0.30 0.35 | Max 0.35 | Max 0.60 | 0.025 | 0.01 | 2.80 3.20 | 0.80 1.20 | | 0.25 0.35 | | | | |
| HLVT-9028X | | 0.18 0.24 | Max 0.15 | 0.60 1.00 | 0.035 | 0.035 | 0.10 0.30 | | | | 0.25 | 0.025 0.040 | 0.025 0.055 | B: 0.001 0.005 |
| HLVT-9029I | | 0.37 0.44 | 0.15 0.35 | 0.80 1.20 | 0.03 | 0.03 | 0.30 0.70 | | Max 0.25 | | 0.3 | | | B: 0.001 0.003 |
| HLVT-9033I | | 0.36 0.40 | 0.50 0.65 | 1.35 1.45 | 0.015 | 0.045 0.065 | 0.10 0.20 | Max 0.10 | Max 0.20 | 0.08 0.12 | 0.25 | 0.010 0.030 | | N<=0.030 |
| HLVT-9035I | | 0.36 0.40 | 0.50 0.65 | 1.35 1.45 | 0.015 | 0.030 0.045 | 0.10 0.20 | Max 0.10 | Max 0.20 | 0.08 0.12 | 0.25 | 0.010 0.030 | | N<=0.030 |
| HLVT-9039P | | 0.30 0.33 | 0.50 0.70 | 1.40 1.60 | 0.025 | 0.065 0.090 | Max 0.25 | Max 0.06 | Max 0.17 | 0.08 0.14 | 0.4 | 0.010 0.040 | 0.015 0.025 | N>= 0.010 ; 1.88<=Mneq<=1.98 |
| HLVT-9040I | | 0.35 0.42 | 0.15 0.35 | 0.50 0.80 | 0.03 | 0.03 | 0.70 1.10 | Max 0.10 | Max 0.40 | 0.10 0.20 | 0.15 | | | |

Mold Plastic Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|--------------|---------------|--------------|--------------|--------------|------------|------|-----|--------------|
| HLVT-2162S | 1.2162 | 0.18 0.22 | 0.20 0.35 | 1.10 1.30 | 0.025 | 0.03 | 1.0 1.20 | | | | 0.3 | | | |
| HLVT-2312S | 1.2312 | 0.37 0.43 | 0.30 0.50 | 1.40 1.60 | 0.03 | 0.05 0.1 | 1.80 2.0 | 0.15 0.25 | Max 0.40 | | 0.3 | 0.04 | | |
| HLVT-2764S | 1.2764 | 0.16 0.22 | 0.15 0.30 | 0.15 0.45 | 0.025 | 0.025 | 1.10 1.40 | 0.15 0.25 | 3.80 4.30 | | 0.3 | | | |
| HLVT-9012S | Alt-1.2735 | 0.12 0.15 | 0.20 0.35 | 0.40 0.50 | 0.025 | 0.025 | 0.60 0.80 | | 3.25 3.70 | | 0.3 | | | |
| HLVT-9013S | Alt-1.2312 | 0.30 0.36 | 0.50 0.70 | 0.65 0.85 | 0.025 | 0.06 0.09 | 1.50 1.75 | 0.35 0.50 | | | 0.3 | | | |
| HLVT-9014S | Alt-1.2316 | 0.35 0.40 | 0.30 0.50 | 0.50 0.80 | 0.03 | 0.015 | 15.50 16.5 | 0.90 1.10 | 0.70 0.90 | | 0.3 | | | Nb<0.08 |
| HLVT-9015S | Alt-1.2083 | 0.38 0.43 | 0.60 0.80 | 0.25 0.60 | 0.025 | 0.005 | 14.0 14.5 | 0.50 0.70 | Max 0.50 | 0.15 0.25 | 0.3 | 0.01 | | |

Nitriding Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|-------------|-----------------|--------------|--------------|--------------|-----------|-----------|--------------|--------------|--------------|--------------|------------|--------------|-----|--------------|
| HLVT-8507S | 1.8507 | 0.30 0.34 | 0.20 0.28 | 0.50 0.70 | 0.025 | 0.025 | 1.00 1.30 | 0.15 0.25 | | 0.10 0.20 | 0.35 | 0.90 1.10 | | |
| HLVT-8509D* | 1.8509 | 0.38 0.45 | Max 0.40 | 0.40 0.70 | 0.025 | 0.035 | 1.50 1.80 | 0.20 0.35 | | | | 0.80 1.20 | | |
| HLVT-8515S | 1.8515 | 0.28 0.35 | 0.20 0.35 | 0.50 0.70 | 0.025 | 0.025 | 2.80 3.30 | 0.30 0.50 | Max. 0.30 | | 0.35 | | | |
| HLVT-8519S | 1.8519 | 0.27 0.30 | 0.20 0.28 | 0.50 0.60 | 0.025 | 0.025 | 2.30 2.70 | 0.15 0.25 | | 0.10 0.20 | 0.35 | | | |
| HLVT-8550S | 1.8550 | 0.34 0.37 | 0.20 0.35 | 0.50 0.60 | 0.025 | 0.025 | 1.50 1.80 | 0.15 0.25 | 0.90 1.10 | | 0.35 | 0.80 1.10 | | |

Saw Steel Grades

| Item Code | Werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|-----------|--------------|-----|--------------|--------------|------------|-----|-----|--------------|
| HLVT-2235S | 1.2235 | 0.75 0.85 | 0.25 0.40 | 0.30 0.50 | 0.025 | 0.025 | 0.45 0.60 | | | 0.15 0.25 | 0.15 | | | |
| HLVT-2703S | 1.2703 | 0.65 0.72 | 0.20 0.30 | 0.30 0.45 | 0.025 | 0.025 | 0.20 0.30 | | 0.35 0.50 | | 0.3 | | | |
| HLVT-9000S | Alt-1.2235 | 0.80 0.90 | 0.20 0.35 | 0.20 0.40 | 0.025 | 0.025 | 0.30 0.70 | | 0.20 0.50 | 0.15 0.30 | 0.3 | | | |
| HLVT-9001S | | 0.70 0.80 | 0.15 0.30 | 0.40 0.50 | 0.025 | 0.025 | 0.20 0.35 | | 2.25 2.45 | | 0.3 | | | |
| HLVT-9002S | Alt-1.1840 | 0.80 0.90 | 0.30 0.40 | 0.50 0.65 | 0.025 | 0.02 | 0.15 0.25 | | | | 0.3 | | | |
| HLVT-9003S | Alt-1.1750 | 0.70 0.80 | 0.30 0.40 | 0.45 0.60 | 0.025 | 0.025 | 0.15 0.25 | | | | 0.35 | | | |

Spring Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|---------------|--------------|--------------|-----------|---------------|--------------|--------------|-------------|--------------|------------|-----|-------------|-----------------------------|
| HLVT-0913S | 1.0913 | 0.45 0.55 | 0.2 0.40 | 1.60 2.00 | 0.035 | 0.03 0.045 | | | | | 0.35 | | | |
| HLVT-5023D | 1.5023 | 0.35 0.42 | 1.50 1.80 | 0.50 0.80 | 0.03 | 0.03 | | | | | | | | |
| HLVT-5024S | 1.5024 | 0.45 0.50 | 1.5 1.80 | 0.60.80 | 0.035 | 0.035 | | | | | 0.25 | | | |
| HLVT-5025S | 1.5025 | 0.48 0.55 | 1.5 1.80 | 0.5 0.80 | 0.035 | 0.035 | | | | | 0.25 | | | |
| HLVT-5025U | 1.5025 | 0.42 0.52 | 1.50 2.00 | 0.50 0.80 | 0.035 | 0.035 | | | | | | | | |
| HLVT-5026S | 1.5026 | 0.52 0.60 | 1.5 1.80 | 0.80 1.00 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-5027S | 1.5027 | 0.55 0.64 | 1.8 2.20 | 0.80 1.00 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-5028S | 1.5028 | 0.60 0.68 | 1.5 1.80 | 0.80 1.00 | 0.035 | 0.035 | | | | | 0.35 | | | |
| HLVT-7103S | 1.7103 | 0.62 0.720 | 1.2 1.40 | 0.40 0.60 | 0.035 | 0.035 | 0.40 0.60 | | | | 0.35 | | | |
| HLVT-7108S | 1.7108 | 0.55 0.650 | 1.5 1.80 | 0.70 1.00 | 0.035 | 0.035 | 0.20 0.40 | | | | 0.35 | | | |
| HLVT-7176A | | 0.56 0.64 | 0.15 0.35 | 0.75 1.00 | 0.03 | 0.04 | 0.70 0.90 | Max 0.06 | Max 0.20 | | 0.3 | | | |
| HLVT-7176D | 1.7176 | 0.52 0.59 | 0.25 0.50 | 0.70 1.00 | 0.025 | 0.025 | 0.70 1.00 | | | | | | | CU+10Sn<=0.6 |
| HLVT-7176J | | 0.52 0.60 | 0.15 0.35 | 0.65 0.95 | 0.035 | 0.035 | 0.65 0.95 | | | | 0.3 | | | |
| HLVT-7176S | 1.7176 | 0.52 0.59 | 0.15 0.40 | 0.70 1.00 | 0.03 | 0.03 | 0.60 0.90 | | | | 0.35 | | | |
| HLVT-7701S | 1.7701 | 0.48 0.56 | 0.15 0.35 | 0.80 1.10 | 0.03 | 0.03 | 0.90 1.20 | 0.15 0.25 | | 0.07 0.12 | 0.35 | | | |
| HLVT-8159S | 1.8159 | 0.48 0.54 | 0.15 0.35 | 0.70 1.10 | 0.035 | 0.035 | 0.90 1.20 | | | 0.10 0.15 | 0.35 | | | |
| HLVT-8161D | 1.8161 | 0.55 0.62 | 0.15 0.40 | 0.70 1.10 | 0.035 | 0.035 | 0.90 1.20 | | | 0.10 0.20 | | | | |
| HLVT-9036I | | 0.46 0.54 | 0.17 0.37 | 0.70 1.00 | 0.035 | 0.035 | 0.90 1.20 | | | | | | | |
| HLVT-9037I | | 0.52 0.57 | 1.70 2.10 | 0.80 1.00 | 0.035 | 0.035 | 0.20 0.30 | 0.01 0.06 | | | 0.35 | | | Sn<=0.035 AND Cu+10Sn<=0.60 |
| HLVT-9042J | | 0.51 0.59 | 1.20 1.60 | 0.60 0.90 | 0.035 | 0.035 | 0.60 0.90 | | | | 0.3 | | | |
| HLVT-9043G | | 0.32 0.39 | 1.10 1.40 | 0.80 1.10 | 0.025 | 0.025 | 1.10 1.40 | Max 0.15 | Max 0.30 | Max 0.05 | 0.3 | | Max 0.03 | W <=0.20 |

Valve Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-------------|---------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|---|
| HLVT-4718S | 1.4718 | 0.43 0.48 | 2.90 3.10 | 0.20 0.40 | Max. 030 | Max. 0.010 | 8.70 9.50 | Max. 0.15 | Max. 0.30 | | Max. 0.30 | Max. 0.10 | | Mo+W+Cu+Al<0.60 W=Max. 0.10 |
| HLVT-4871S | 1.4871 | 0.50 0.55 | 0.05 0.20 | 8.0 9.5 | Max. 040 | Max. 0.010 | 20.0 21.5 | Max. 0.25 | 3.25 4.0 | 0.15 0.20 | Max. 0.35 | Max. 0.025 | Max. 0.02 | Nb=0.02 0.06 AND Sn<0.03 AND (C+N)>0.90/W=Max. 0.15 |
| HLVT-4873S | 1.4873 | 0.40 0.46 | 2.30 2.60 | 1.0 1.30 | Max. 030 | 0.015 0.03 | 17.5 18.5 | Max. 0.40 | 8.5 9.5 | | Max. 0.35 | Max. 0.10 | | Mo+Cu+Al<0.75 W=0.80 1.20 |

Welding Filler metal steel grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|-----------|-------------|--------------|-------------|----|------------|--------------|--------------|--------------|
| HLVT-0323I | | 0.05 0.09 | Max 0.03 | 0.40 0.60 | 0.025 | 0.025 | Max 0.15 | | Max 0.15 | | 0.15 | Max 0.003 | Max 0.003 | |
| HLVT-5425I | | 0.08 0.15 | 0.05 0.25 | 0.90 1.20 | 0.025 | 0.025 | Max 0.12 | 0.45 0.55 | Max 0.12 | | 0.17 | Max 0.030 | | |

Bearing Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|-----------|--------------|-------------|-------------|----|------------|----------------|--------------|---|
| HLVT-2007D | 1.2007 | 0.65 0.70 | 0.20 0.30 | 0.75 0.90 | 0.03 | 0.03 | 0.55 0.70 | | | | | | | |
| HLVT-3505C | | 0.95 1.10 | 0.15 0.35 | 0.25 0.45 | 0.025 | 0.015 | 1.35 1.65 | Max 1.00 | Max 0.25 | | 0.3 | 0.010 1.060 | Max 0.003 | O<= 0.0015 ; Sn<= 0.03 , Pb<= 0.002 ; As<= 0.04 |
| HLVT-3505S | 1.3505 | 0.95 1.05 | 0.25 0.35 | 0.250.40 | 0.025 | 0.02 | 1.40 1.65 | | | | 0.3 | | | P+S<0.04 |

Cold Extrusion Steel Grades

| Item Code | werk stuff. No. | %C | %Si | %Mn | %P Max | %S Max | %Cr | %Mo | %Ni | %V | %Cu Max | %Al | %Ti | Others/Notes |
|------------|-----------------|--------------|--------------|--------------|-----------|----------------|-------------|-------------|-------------|----|------------|----------------|-----|--------------|
| HLVT-0214I | | 0.10 0.13 | 0.03 0.09 | 0.21 0.40 | 0.02 | 0.010 0.030 | Max 0.05 | Max 0.05 | Max 0.05 | | 0.05 | 0.020 0.060 | | N <= 0.007 |
| HLVT-0335D | 1.0335 | Max 0.08 | Max 0.10 | Max 0.40 | 0.03 | 0.010 0.030 | Max 0.10 | Max 0.05 | Max 0.1 | | 0.15 | 0.020 0.060 | | |