



STEEL BARS FOR MEDIUM CALIBER GUNS

Aubert & Duval is a leading supplier of high performance steels for defense applications, including medium caliber guns with over 70 years of experience supplying rolled and forged solutions to weapon manufacturers worldwide.



Customer benefits

- + Combat proven
- + High endurance
- + Excellent behavior in any environmental conditions
- + Resistance to intensive fire rates
- + Extended munitions range
- + Long cycle life maintaining high accuracy
- + Optimized properties of dedicated alloys grades
- + Dedicated Technical Support and R&D Team

Product range

Forged and rolled bars for diameters 20 - 25 - 30 - 35 - 40 mm

Provided for guns on:

- + Land armored vehicles
- + Battleships
- + Aircraft
- + Helicopters



MEDIUM CALIBERS



Choose the best grade for you application

Medium caliber guns can fire different types of ammunitions up to 3 km at a high firing rate (from 500 rounds/min up to 2500 rounds/min). Failure mode is usually wear due to high velocity ammunition and thermal fatigue.

The grades used for most of the barrels are chosen from the Cr-Mo-V family (high temperature strength, resistance to thermal fatigue) or the Ni-Cr-Mo-V family (when ductility and toughness at low temperature is required).

Material is mainly supplied in the form of rolled or forged bars manufactured from air melt ingot or VAR remelted ingots for the most stringent requirements.

Increasing system life

- + High temperature strength
- + Resistance to thermal fatigue
- + Ductility and toughness at low temperature



Courtesy CTA International

Supplied grades



	GKH®	ARMAD®	NC35M	CLARM®HB3W	GH4W	NC35MIW
C	0.28/0.34	0.30/0.35	0.35/0.40	0.30/0.35	0.35/0.42	0.37/0.42
Cr	2.8/3.2	2.8/3.2	0.9/1.3	1.2/1.7	3.0/3.5	1.2/1.7
Mo	0.8/1.2	0.7/1.2	0.3/0.6	0.3/0.6	0.8/1.2	0.7/1.2
Ni	-	≤ 0.30	3.0/3.6	3.0/4.0	-	3.3/3.9
V	0.25/0.35	0.15/0.35	0.15/0.25	0.15/0.25	0.15/0.25	0.2/0.3

MECHANICAL PROPERTIES:

	GKH®	ARMAD®	NC35M	CLARM®HB3W	GH4W	NC35MIW
Hardness (HRC)	32/39	35/41	38	38/42	39/44	44.5/47.5
UTS (MPa)	1000/1200	1100/1300	1200	1200/1350	1250/1400	1420/1550
YS (MPa)	≥ 800	≥ 900	≥ 1100	≥ 1180	≥ 1000	≥ 1300
EL (%)	≥ 10	≥ 16	≥ 16	≥ 14	≥ 12	≥ 12
KV J (RT)	≥ 130	≥ 140	-	≥ 60	≥ 50	≥ 45
KV J (-40°C)	≥ 110	≥ 120	≥ 70	≥ 35	≥ 30	≥ 28