AUBERT&DUVAL

AHEAD IN THE RACE!

MATERIAL INNOVATION DRIVEN BY PERFORMANCE

Aubert & Duval offers the widest range of high performance materials to meet the most extreme and exacting requirements for every demanding motorsport, including Formula 1, WRC, INDYCar and MotoGP.

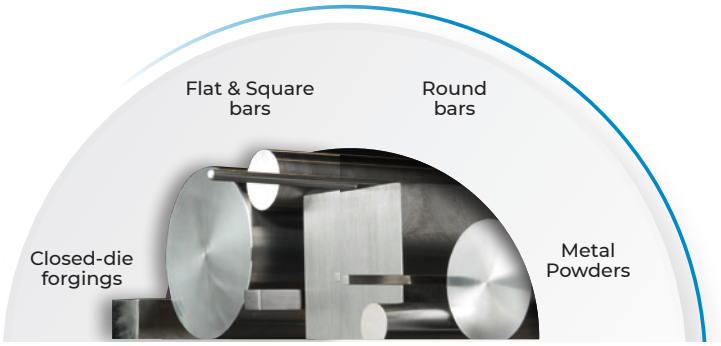
Thanks to its long experience in aerospace applications, Aubert & Duval can supply innovative, reliable solutions for highly demanding parts in critical powertrain and engine applications.

Customer benefits

+ High resistance
+ Corrosion resistance
+ Excellent fatigue performance
+ Customized alloys grades
+ A global supplier
+ Technical support team
+ Dedicated R&D Team

Material innovation

In collaboration with the main racing teams, Aubert & Duval constantly develops new metallurgical solutions to meet their current requirements more closely and anticipate their future challenges. For decades, we have designed a great many high performance steels, providing better mechanical properties:



PARTS	REQUEST	AD best-in-class materials
CRANKSHAFTS	Fatigue mainly	GKP® deep nitrided
	Stiffness	NC310YW carburized
	Wear	ML340
DRIVE SHAFTS	Mandatory: High yield strength	NC310YW carburized
TRANSMISSION SHAFTS	Fatigue, toughness	ML340
TORSION BARS	Corrosion if requested	MLX®19
HOT PARTS	Yield strength at temperature Fatigue at temperature Creep resistance	AD730®
FASTENERS BOLTS	High Strength, Fatigue, corrosion	MLX®17, MLX®19

MOTORSPORT

Special steels and superalloys

AD GRADES	AFNOR	WL	AISI - UNS - JIS - OTHERS	AMS	Melting route: AIR MELT	Melting route: SPECIAL MELT**	Main applications: CAMSHAFTS	CRANKSHAFTS	GEARS	DRIVE SHAFTS	CONRODS	FASTENERS	OTHERS
ENGINEERING STEELS													
Nitriding													
GKH	33CrMoV12-9		K24340	6481	◆	◆	■	■	■				
GKP	32CrMoV5		K23280	6496 / 6497 / 6498	◆	◆	■	■	■				
Carburizing													
FADH	14NiCrMo13-4	1.6657			◆	◆	■		■		■		
FDG	20NiCrMo13	1.6660*	K41910	6492 / 6493	◆	◆	■		■		■		
FND	15NiMoSiCr10		K51570	6494		◆	■		■				
CX13VDW	X12CrNiMoV12-3	1.4933		5719	◆	◆	■		■		■		
Through hardening													
BMV4	40CrMo20				◆	◆	■						
FDMA	30NiCrMo16				◆				■			■	
819B	36NiCrMo16	1.3773*			◆				■			■	
819AW	35NiCrMo16					◆			■	■	■		
NC40SW	40NiSiCrMo7		K44220	6417 / 6419		◆				■	■		
V300	45SiCrMo6				◆								Springs
NC310YW	40NiSiCrMoV10		K54015	6499					■	■	■		
ML340	X23NiCoCrMoAl13-6-3					◆		■	■	■	■		
MARVAL®18	X2NiCoMo18-8-5	1.6359	K92890 - Maraging 250	6212		◆							Tappets
MY19	X2NiCoMo18-9-5	1.6354	K93120 - Maraging 300	6514		◆							Axles - Torsion bars
RA50YW	80MoCrV42-16	1.3551	T11350 - M50	6491		◆	■						Bearings
STAINLESS STEELS													
Martensitic													
X15TN	X40CrMoVN16-2	1.4123*	S42025	5925		◆							Wear parts
Austenitic													
XN26TW	X6NiCrTiMoVB25-15-2	1.4944	S66286 - A286	5731 / 5732		◆						■	Connecting components
Precipitation hardening													
MARVAL®X12H	X1CrNiMoAlTi12-10-2	1.4596*		5935		◆						■	Connecting components
MLX®17	X1CrNiMoAlTi12-11-2	1.4612	S11100	5937		◆						■	Connecting components
MLX®19	X1CrNiMoAlTi11-12-2		S11902	5938		◆						■	Connecting components
X15U5W	X5CrNiCu15-5	1.4545	S15500	5659		◆						■	Connecting components
MARVAL®13X	X3CrNiMoAl13-8-2	1.4534	S13800	1.4534		◆						■	Connecting components
SUPERALLOYS													
AD730®	NiCr16Co9Fe-4Mo3-W3Ti3Al2					◆						■	
PER625	NiCr22Mo9Nb	2.4856*	N06625 - INCO625	5666		◆							Exhaust line
PER718	NiCr19Fe19Nb5Mo3	2.4668*	N07718 - INCO718			◆						■	

SUPERALLOY POWDERS FOR ADDITIVE MANUFACTURING	
ABD®-900AM	· For high temperatures up to 900°C/1650°F · Good strength and creep properties · Good oxidation and corrosion resistance
AD730®	· For temperatures up to 750°C/1382°F · High strength, creep and fatigue properties
Ni625	· Excellent mechanical properties at high temperatures up to 980°C · Excellent corrosion resistance · Good low temperature toughness
Ni718	· Excellent mechanical properties up to temperatures around 650°C · Good resistance to high temperature oxidation

STELLAR 3D PRINT YOUR FUTURE

*Corresponds to an AFNOR numerical designation
**SPECIAL MELT: Air melt or VIM + ESR or VAR
VIM: Vacuum Induction Melting
ESR: Electro-Slag Remelting
VAR: Vacuum Arc Remelting

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