

## Capability List of Aoyama Automotive Fasteners Czech, s. r. o.

### Products Overview

Bolts and screws made from carbon or alloy steel with or without assembled washers. On top of our locally produced parts, we offer a full range of automotive fasteners (nuts, plastic parts, tapping screws, etc.) we purchase from our mother or sister plants.

### Sizes and Lengths (shank length; may differ for various head shapes)

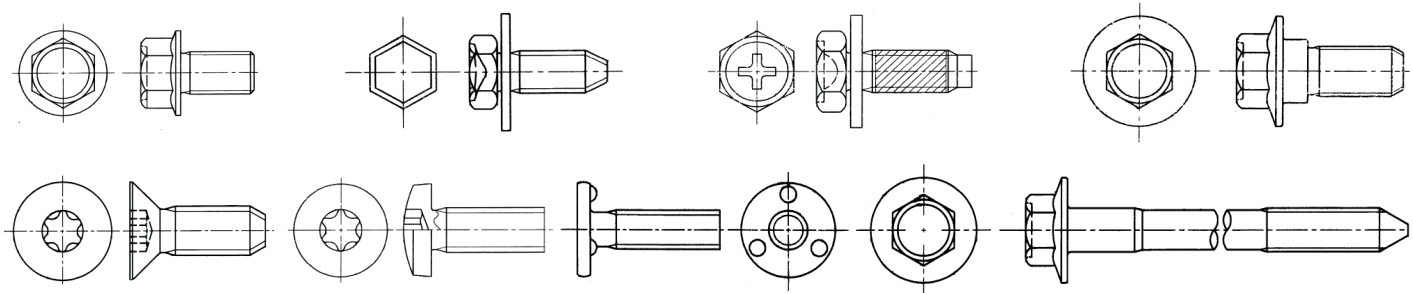
Size	M5	M6	M8	M10	M12	M14	M16	UNF7/16
Length (mm)	10–50	10–60	10–110	10–95	10–130	20–110	32–180	10–130

### Property Classes

4.8; 6.8; 8.8; 10.9; 11.9 (according to ISO 898-1)

### Head Shape Examples

Hexagon bolts with flange, standard external hexagon bolts with countersunk or pan / binding head, projection weld bolts, shouldered bolts, and other special shapes manufactured by using 4 dies & 4 blows cold-forging machines.



### Surface Treatments

Process	Surface Treatment	Color	Note
In-house	Zinc plating + chromate passivation (Cr6 free)	Silver	Thickness 5 μm and 8 μm (acc. To ISO 4042)
		Black	
	GEOMET® 720	Silver	—
	Friction coefficient stabilizer	Red	Target friction coefficient 0.09 ± 30 %
		Green	Target friction coefficient 0.17 ± 30 %
Friction coefficient stabilizer with increased corrosion resistance	Blue	Target friction coefficient 0.20 ± 30 %	
	Purple	Target friction coefficient 0.09 ± 30 %	
External	Base coats + top coats	Various	VW, BMW, Daimler, Ford, Volvo, Renault, Nissan, DIN, ISO and others
	Adhesive thread coatings	Various	Toyota, VW, BMW, Daimler, Ford, Volvo, Renault, Nissan, DIN, ISO and others

### Heat Treatments

- Quenching & tempering, including dephosphating process
- Stress-relief annealing

### Licensed Technologies

TORX®	TAPTITE® PRO™	Semi R NAVITITE®	SHORT NAVITITE®	μ-con™ L
TORX PLUS®	TAPTITE® PRO™ SP™	Semi R NAVITITE® SP	SHORT NAVITITE® SP	μ-con™
TAPTITE 2000®	GEOMET® 720	NAVITITE®	GS TITE®	DEEP RECESS™
TAPTITE 2000® SP™	R NAVITITE®	Fluted NAVITITE®	PROTRUST™ A20	FULL THREAD™
TAPTITE 2000® CA™	Fluted R NAVITITE®	S NAVITITE	PROTRUST™ A09	