

EN 166 & EN 1731 eye and face protection standards were replaced by the new EN ISO 16321 standard.



Previous Standards



Since November 2024

THERE ARE SEVERAL UPDATES IN THE NEW STANDARD:

Expanded Head Forms: The new standard includes testing on six head forms (instead of two) to better represent 95% of the world's population, ensuring broader fit and safety coverage.

Greater Field of View Requirements: This has been expanded to at least 60° with at least 7° above the eye line, meaning users will experience fewer blind spots.

Enhanced Impact Testing: EN ISO 16321 includes increased basic and high-speed impact thresholds. There are new impact categories for low (C), medium (D), and high-speed (E) impacts, so customers will be getting even tougher, more reliable protection.

Improved Markings: Labels and markings are more user-friendly, clearly indicating protection levels and optical quality, making it easier for end users to understand them.

SUPERPLASMA



ZENITH X | PRIMERO | QUANTUM



2024

2025

Model	Previous Standard	New Standard
V2 PLUS VISOR	EN 166 EN 14458 ANSI Z87.1	EN ISO 16321 EN 14458 ANSI Z87.1
V2 FULL FACE VISOR	EN 166 ANSI Z87.1	EN ISO 16321 ANSI Z87.1
MESH VISOR	EN 1731 ANSI Z87.1	EN 1731 ANSI Z87.1
FACE SHIELD	Available while supplies last	EN 166 ANSI Z87.1
ZEN VISOR	EN 166 ANSI Z87.1	EN ISO 16321 ANSI Z87.1
ZEN FOAM VISOR	EN 166 ANSI Z87.1	EN ISO 16321 ANSI Z87.1
ZEN PLUS FF PLUS VISOR (NEW)	EN 166 EN 14458 ANSI Z87.1	EN ISO 16321 EN 14458 ANSI Z87.1
ZEN FULL FACE VISOR	EN 166 ANSI Z87.1	EN 166 ANSI Z87.1
ZEN METAL MESH VISOR	EN 1731 ANSI Z87.1	EN 1731 ANSI Z87.1
ARC VISOR CLASS 1	EN ISO 16321 GS-ET-29	EN ISO 16321 GS-ET-29 Class 1
ARC VISOR CLASS 2 ERGO	EN ISO 16321 GS-ET-29	EN ISO 16321 GS-ET-29 Class 2
ZEN FACE SHIELD	Available while supplies last	EN 166 ANSI Z87.1

EN ISO 16321 | EYE & FACE PROTECTION FOR OCCUPATIONAL USE

The new European safety standard required for eye and face protection for industrial use.

EN ISO 16321-1:2020 (Part 1)

General requirements

EN ISO 16321-2:2020 (Part 2)

Welding requirement

EN ISO 16321-3:2020 (Part 3)

Mesh visor requirements

MARKINGS

OPTICAL CLASS

1 – Enhanced optical performance (optional)

No marking – Pass

LIGHT PROTECTION CODE

W – Welding filter (scale of 1.2 to 10)

U – Ultraviolet filter (scale of 1.2 to 5)

R – Infrared filter (scale of 1.2 to 10)

G – Sun glare filter (scale of 0 to 4)

L – Lens does not affect color or light

HEADFORMS

1-S – European headform Small

1-M – European headform Medium

1-L – European headform Large

2-S – Asian headform Small

2-M – Asian headform Medium

2-L – Asian headform Large

M – Medium size only (no marking required)

MECHANICAL PROTECTION

C – Low Impact Resistance (45m/s) + OPZ*

D – Medium Impact Resistance (80m/s) + EOZ*

E – High Impact Resistance (120m/s) + FPZ*

CT – Low Impact at Extreme Temp (45m/s)

DT – Medium Impact at Extreme Temp (80m/s)

ET – High Impact at Extreme Temp (120m/s)

HM – High Mass (500g) Impact Resistance

FIELD OF USE

3 – Protection against liquid droplets

4 – Protection against large dust particles

5 – Protection against gas and fine dust particles

6 – Protection against streams of liquid

7 – Protection against radiant heat

9 – Protection against molten metal and hot solids

OPTIONAL REQUIREMENTS

K – Protection against fine dust particles

N – Resistance to lens fogging

CH – Chemical resistance