VANGUARD™

Machine Guarding

Restrict access to dangerous areas while maintaining visibility and compliance



TROAX Machine Guarding



TROAX Machine Guarding is a globally trusted, modular fencing solution crafted to protect people, property, and processes. Lightweight yet incredibly strong steel mesh panels are impact-tested for maximum performance, durability, and fast installation — ideal for dynamic, high-traffic industrial production environments of any scale.

VIEW ONLINE

Safety Compliance

Designed to meet AS/NZ 4024 standards, ensuring your machinery guarding aligns with industrial safety regulations and legal obligations.

Modular System

Adaptable panels and posts allow easy installation and reconfiguration to suit changing layouts and production needs.

Panel Options

Choose from mesh, solid steel, or polycarbonate panels — tailored for visibility, durability, or hygiene in diverse industrial settings.

Impact Resistance

TÜV-certified to withstand impacts up to 2,500 joules, protecting personnel and equipment from accidental collisions.

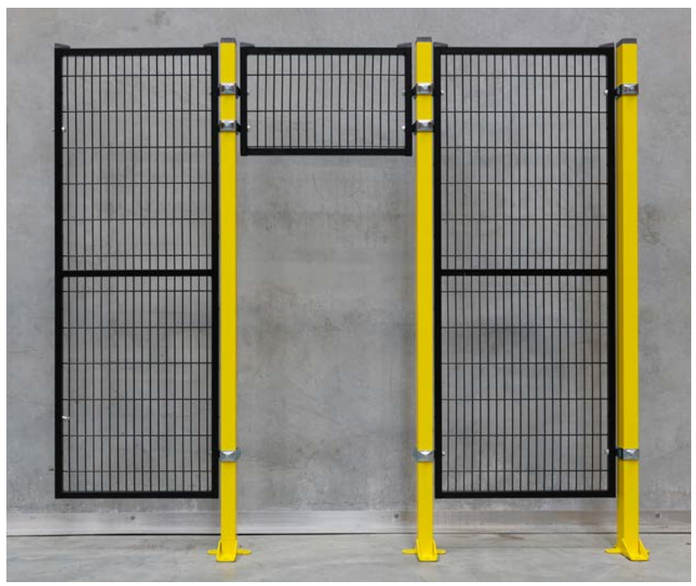
Flexible Access

Hinged, sliding and telescopic doors available — ensuring convenient, secure access tailored to your workflow.

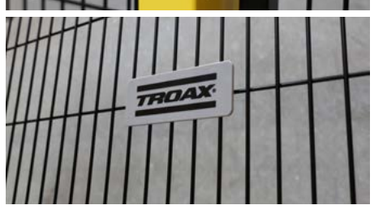
Full Integration

Includes locks, accessories, CAD drawings, 3D plans, and fixed-price quotes for a fully supported turnkey solution.

The TROAX Machine Guarding System



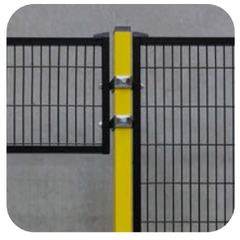






TÜV Certified for Proven Safety and Compliance

TÜV certification confirms our Machine Guarding meets rigorous international safety standards. Independently tested for strength, durability, and compliance, it ensures reliable operator protection and peace of mind in demanding industrial environments.



Modular Design for Easy Customisation

Our Machine Guarding features a fully modular system, allowing panels, posts, and doors to be configured or reconfigured with ease. This flexibility ensures tailored safety solutions that adapt to changing machinery layouts and operational needs.

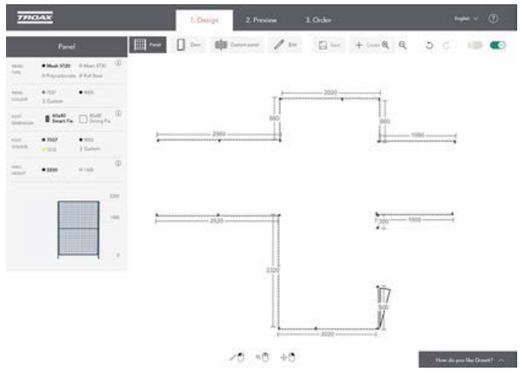


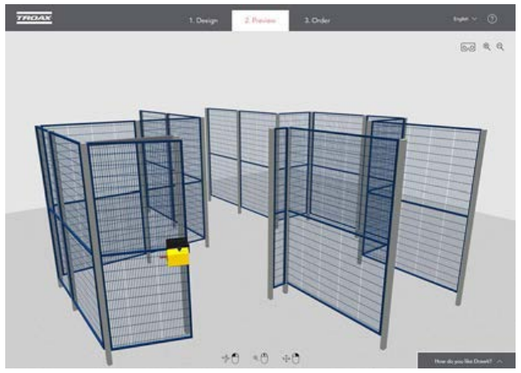
Fast, Secure Assembly

Our Machine Guarding components provide quick and secure panel-to-post connections without compromising strength. Designed for easy installation, removal, and repositioning, they simplify maintenance while maintaining high safety standards across machine guarding systems.

Designing with TROAX

Bring your plan to life with the TROAX Design Tool. Design in 2D, visualise in 3D, and generate a full bill of materials. You can then submit a quote request and our team will contact you to assist with your project.

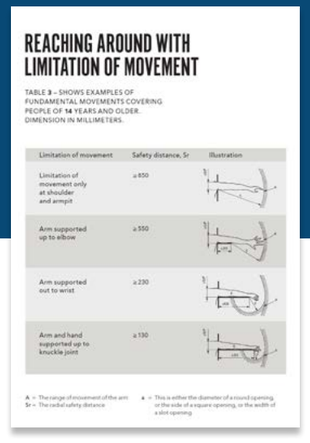




Need help designing your machinery guarding layout?
Contact our safety experts for configuration advice.

Meeting Safety Standards

Our team can assist you in designing and reviewing machinery guarding to ensure full compliance with AS4024 and other relevant standards and guidelines.

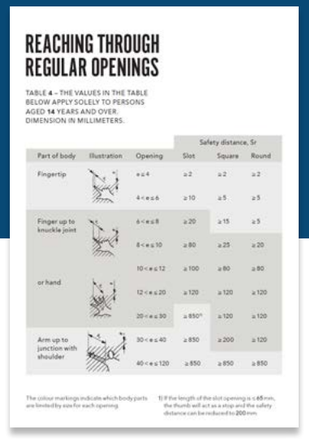


REACHING AROUND WITH LIMITATION OF MOVEMENT

TABLE 3 – SHOWS EXAMPLES OF FUNDAMENTAL MOVEMENTS COVERING PEOPLE OF 14 YEARS AND OLDER. DIMENSION IN MILLIMETERS.

Limitation of movement	Safety distance, Sr	Illustration
Limitation of movement only at shoulder and armpit	≥ 850	
Arm supported up to elbow	≥ 550	
Arm supported out to wrist	≥ 230	
Arm and hand supported up to knuckle joint	≥ 130	

A = The range of movement of the arm
Sr = The radial safety distance
a = This is either the diameter of a round opening, or the side of a square opening, or the width of a slot opening



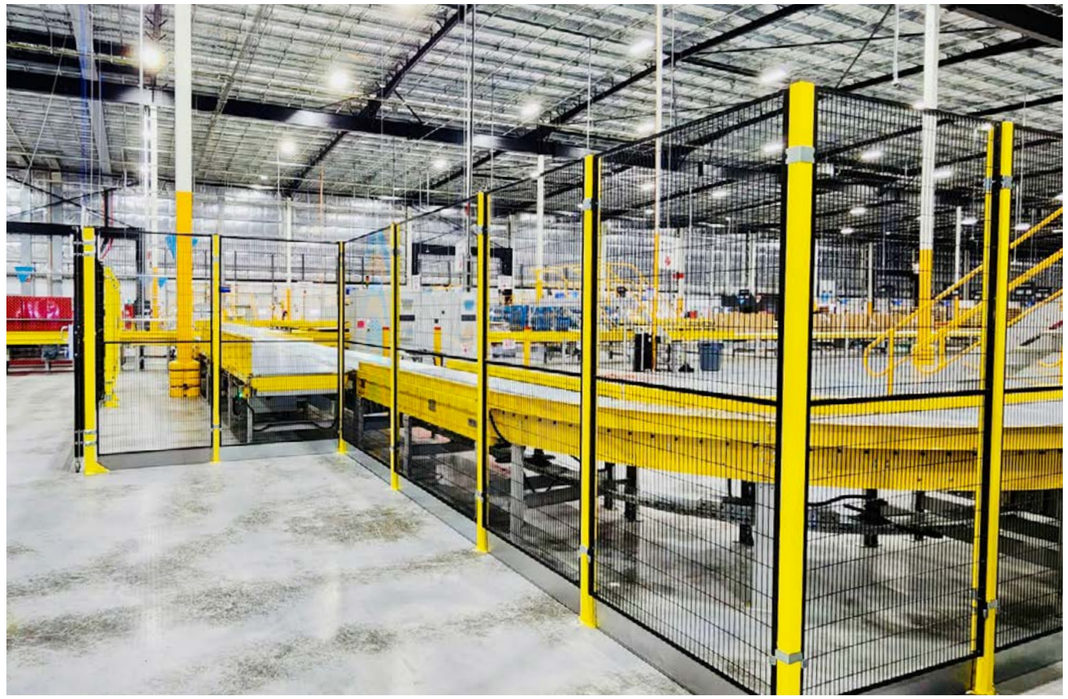
REACHING THROUGH REGULAR OPENINGS

TABLE 4 – THE VALUES IN THE TABLE BELOW APPLY SOLELY TO PERSONS AGED 14 YEARS AND OVER. DIMENSION IN MILLIMETERS.

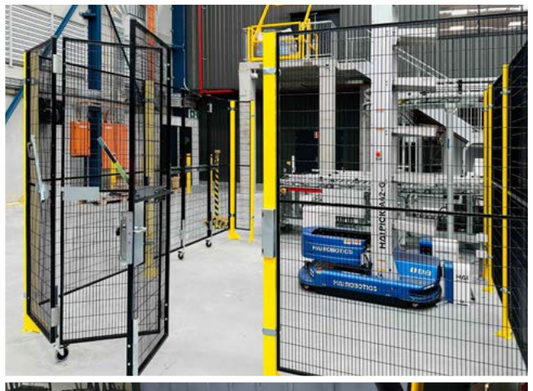
Part of body	Illustration	Opening	Safety distance, Sr: Slot	Square	Round
Fingertip		e ≤ 4	≥ 2	≥ 2	≥ 2
		4 < e ≤ 6	≥ 10	≥ 5	≥ 5
Finger up to knuckle joint		6 < e ≤ 8	≥ 20	≥ 15	≥ 5
		8 < e ≤ 10	≥ 80	≥ 25	≥ 20
or hand		10 < e ≤ 12	≥ 100	≥ 80	≥ 80
		12 < e ≤ 20	≥ 120	≥ 120	≥ 120
		20 < e ≤ 30	≥ 850*	≥ 120	≥ 120
Arm up to junction with shoulder		30 < e ≤ 40	≥ 850	≥ 200	≥ 120
		40 < e ≤ 120	≥ 850	≥ 850	≥ 850

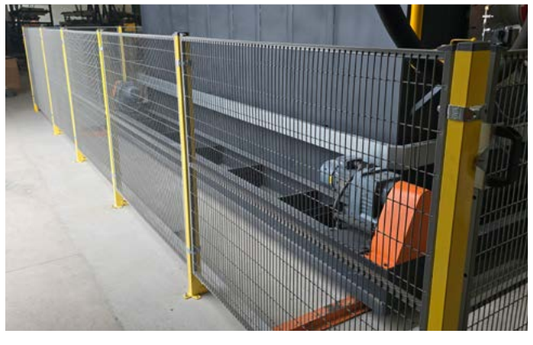
The colour markings indicate which body parts are limited by size for each opening.
1) If the length of the slot opening is ≤ 65 mm, the thumb will act as a stop and the safety distance can be reduced to 200 mm.

Machinery Guarding Solutions



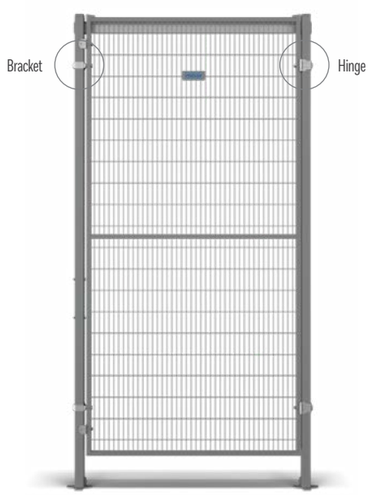






Technical Specifications

- **Available Heights:** 1250 and 2050mm
- **Available Widths**: 8 widths ranging from 200mm to 1500mm
- **Post Sizes:** 60 x 40mm and 80 x 80mm
- **Mesh Size:** Steel wire – 20 x 100mm welded mesh
- **Materials:** Steel frame – 19 x 19mm (ST20) profile, 30 x 20mm (ST30) profile with 3mm diameter wire mesh
- **Impact Resistance:** Tested to withstand impacts up to 2.1 kJ when installed with Smart Fix system
- **Fixings:** Panel Bracket Kit; Expander Bolt
- **Door Accessories Available:** Hinged Door Kit; Door Handle; Door Stays (4 sizes available).




Panel Mesh
200 x 100mm


Smart Fix Bracket




Smart Fix Hinge


60 x 40mm Post


Door Handle

ST20 Panels

Code	Size (mm)
20020626	1250(H) x 200(W)
20030626	1250(H) x 300(W)
20050626	1250(H) x 500(W)
20070626	1250(H) x 700(W)
20080626	1250(H) x 800(W)
20100626	1250(H) x 1000(W)
20120626	1250(H) x 1200(W)
20150626	1250(H) x 1500(W)
20020606	2050(H) x 200(W)
20030606	2050(H) x 300(W)
20050606	2050(H) x 500(W)
20070606	2050(H) x 700(W)
20080606	2050(H) x 800(W)
20100606	2050(H) x 1000(W)
20120606	2050(H) x 1200(W)
20150606	2050(H) x 1500(W)

ST30 Panels

Code	Size (mm)
30020626	1250(H) x 200(W)
30030626	1250(H) x 300(W)
30050626	1250(H) x 500(W)
30070626	1250(H) x 700(W)
30080626	1250(H) x 800(W)
30100626	1250(H) x 1000(W)
30120626	1250(H) x 1200(W)
30150626	1250(H) x 1500(W)
30020606	2050(H) x 200(W)
30030606	2050(H) x 300(W)
30050606	2050(H) x 500(W)
30070606	2050(H) x 700(W)
30080606	2050(H) x 800 (W)
30100606	2050(H) x 1000(W)
30120606	2050(H) x 1200(W)
30150606	2050(H) x 1500 W)

Posts

Code	Size (mm)
29601502	60 x 40 x 1400(H)
29601522	60 x 40 x 2200(H)
29801542	80 x 80 x 1400(H)
29801552	80 x 80 x 2200(H)

Fixings

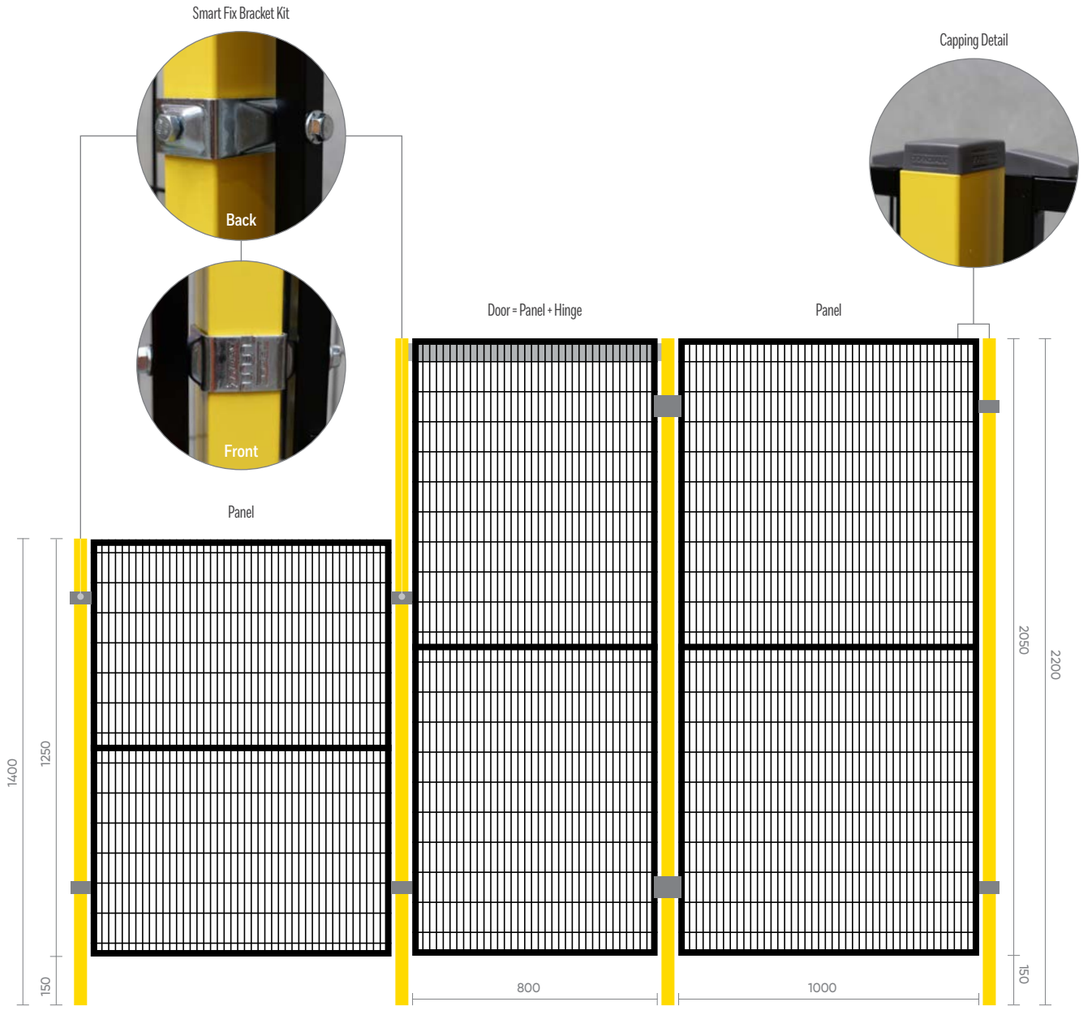
Code	Description
36700074	Smart Fix Bracket Kit
36700098	Strong Fix Bracket Kit
89050090	M10 x 80mm Expander Bolt

Door Accessories

Code	Description
36905000	Smart Fix Hinged Door Kit
36908150	Strong Fix Hinged Door Kit
36906400	Door Handle with Magnet Lock
36900918	Door Stay (Suits 800mm Door)
36900938	Door Stay (Suits 1000mm Door)
36900948	Door Stay (Suits 1200mm Door)
36901008	Door Stay (Suits 1500mm Door)

VIEW ONLINE

Configuration Example



Safety Solutions Backed by a Lifetime Satisfaction Guarantee

NZ 0800 500 147
hello@vanguardgroup.co.nz
vanguardgroup.co.nz





VANGUARD™