DIVISION 03 . SB-RHB

Rigid H-Beam Frame PVDF

Rigid frame with crane capability

A rigid frame in the structural sense: rolled H-sections, bolted moment connections, and a roof that can carry a crane or a suspended load. The membrane is the cladding, not the structure.

CLEAR SPAN **18 - 75 m**	BAY **6 - 9 m**	CRANE **5 - 30 t**
FRAME **Q355B H-section**	WALL **4 m concrete**	SNOW **L1 - L3**

Structure

· Variable-depth Q355B welded H-sections, bolted site connections, hot-dip galvanised or painted system.
· Crane runway on the column line, 5-30 t, with a separate bracket detail so fatigue load does not enter the cladding.
· 4 m concrete push wall as standard where a loader works against the wall.
· Bracing in the end bays; the intermediate bays stay open for circulation.

Membrane & envelope

· PVDF-polyester 950-1,150 g/m2 as roof and upper wall cladding.
· Lower wall in concrete, masonry or sandwich panel, detailed with a drip edge over the membrane.
· Gutter and downpipe in PVC or coated steel, sized to the roof area.
· Membrane removable in panels for crane maintenance.

Openings & options

· Overhead crane, monorail or jib crane, with power feed to the bridge.
· Mezzanine, office pod, or racking load designed into the frame.
· Insulation, ventilation and process extract.
· Loading dock, canopy and drive-through configuration.

What we need in order to quote

Site location and altitude drives snow and wind, not just the tier	**Clear span and length** whole bays; whole containers for DIV-07	**Opening size** door or end wall clear width and height
Largest machine or aircraft sets the door, not the span	**Floor and foundations** slab by others, or our anchor design	**Services** lighting, power, ventilation, fire strategy



Rigid frame bay with silo and conveyor penetration.

Size and price matrix

EXW price per square metre of covered area, standard configuration, excluding installation, freight, concrete and VAT. The three columns are the snow-load packages L1 to L3; steel weight is the L2 column.

Clear span x length	Area	Steel	L1 0.5 kN/m2	L2 2.0 kN/m2	L3 3.5 kN/m2
18 x 36 m	648 m2	43 kg/m2	$116	$125	$155
24 x 48 m	1152 m2	49 kg/m2	$123	$132	$167
36 x 72 m	2592 m2	60 kg/m2	$138	$149	$192
45 x 90 m	4050 m2	69 kg/m2	$150	$163	$212
60 x 120 m	7200 m2	83 kg/m2	$169	$185	$244
75 x 150 m	11250 m2	97 kg/m2	$189	$207	$276

Load basis

Tier	Snow load	Equivalent snow depth	Typical use
L1	**0.5 kN/m2**	**250 mm at 200 kg/m3**	**Sheltered sites, temporary cover, low-altitude temperate**
L2	**2.0 kN/m2**	**900 mm at 220 kg/m3**	**Central and northern Europe, most of North America**
L3	**3.5 kN/m2**	**1,250 mm at 280 kg/m3**	**Alpine, Nordic, Canadian prairie, heavy drift sites**

Wind: designs are checked against the basic wind speed for the site, up to 180 km/h at the lightest tier. Snow and wind are always recalculated for the project; the tier is a commercial package, not the site load.

Typical applications

Steel and fabrication workshops, mining maintenance bays, cement and fertiliser plants, paper and timber processing.

Notes, exclusions and basis of quotation

- Crane capacity is a structural input; the price table is for a building without crane load.
- Foundations are designed for the crane overturning moment and are quoted per site.
- Fire strategy for occupied workshops requires a project-specific assessment.

Design basis: ASCE 7-16 or EN 1991-1-3 / 1-4 as applicable; steel to Q235B / Q355B; hot-dip galvanising to ISO 1461; membrane PVDF-polyester, PVC on request. Certification documents, mill certificates and membrane test reports are issued with the shipping documents. Warranty: 25 years on the structure, membrane per manufacturer's data.