Readylok & Extendable Transoms

User Guide

LW/06.19





Generation UK Ltd Trinity Street, Off Tat Bank Road, Oldbury, West Midlands, B69 4LA Tel: 0800 779 7113 Email: enquiries@generationuk.co.uk www.generationuk.co.uk

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Introduction

Readylok prefabricated transom units and associated intermediate xtendable transoms allow users to take advantage of system scaffold efficiency (fast erection, reduced components) within their tube & fitting scaffold erection.

Advantages:

Fixed length end connections facilitate efficient setting out and self-alignment.

Reducded number of components due to coupler's ability to join 3 tubes instead of 2.

Elimination of ledger bracing (compliance criteria within TG20:13).



Board Spans

Products described in this user guide are intended for use with standard scaffold boards as specified in BS2482:2009 and NASC TG5:10. Maximum spans are assumed as 1.2m/1.5m accordingly.

Component Identification

The illustrations below show the components in use:



Compliance with criteria within TG:20:13 should be checked by a competent person.

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Readylok Transoms

Used at standards at every lift to join the standard/ ledger/ transom. Typically at 2m CTS. These facilitate setting out to pre-determined bay widths (3/4/5 board). The fixings allow the transom and standard to occur at the same node point, reducing parts and adding to structural rigidity. The added rigidity, used in accordance with NASC TG20 compliance sheets can eliminante ledger bracing for clear walkways and increased build efficiency.



Code	Description	Weight (kg)
046531	3 Board Readylok Transom	8.32
046536	4 Board Readylok Transom	8.66
046515	5 Board Readylok Transom	9.00

Safe Working Load with Ledger Bracing Omitted

Debris netted independant with Readylok Transoms, in accordance with NASC TG20:13 compliance sheet, can be erected up to 16m to the top lift with up to 1 inside board; 14m (load class 3) or 12m (load class 4) with 2 inside boards.

Load Class (BS EN12811)	Duty	Maximum Loading*
3	General Purpose	2.0 kN/m²
3	Heavy Duty	3.0 kN/m²

^{*} One lift loaded, with one lift 50% loaded. Inside boards loaded to 0.75 kN/m2 at working lift. Foundation design leg load (for the client): 13.9kN

^{**}For requirements outside of the above compliant parameters, scaffold must be designed for site specific conditions by a competent engineer. See 'Certificates of Conformity' section.

Extendable Transoms

Used within bays to reduce board spans between Readylok and/or main transoms, with a telescopic extension designed to support inside boards.

There are two types, the fixed width extendable and the Universal extendable transom.

The fixed width extrendable transom (FET) is suited to ledgers at fixed, pre-determined distances, the FET is secured by steel wedges set by hammer blows at the front and rear. Different versions are required to suit 4 board or 5 board wide scaffolds and an additional 3 inside boards are offered by the extendable insert.

The universal extendable transom (UET) suits tube and fittings scaffolds, system scaffolds and Readylok scaffolds. It can be used on 4 or 5 board wide main platforms. For 4 board wide scaffolds a fixed inside board exists and an additional 3 inside boards are offered by the extendable transom insert. For 5 board wide scaffolds there are no fixed inside boards and up to 3 inside boards are offered by the extendable transom insert. The rear of the UET is a modified Readylok bracket and is secured using a standard scaffold spanner, the front is secured using a single coupler.

for both transom types it is essential that the insert is fixed in position during transportation and storage, this is achieved by tightening the front bolt.



Code	Description	Weight (kg)
278326	866mm (4+3), Use with 4 board Readylok	9.00
278328	1098mm (5+3), Use with 5 board Readylok	9.90
278334	1300mm (5+3) Genlok with Stub	7.00
278336	Extendable Tube Transom (5+3)	8.60
278330	Universal Extendable Transom (5+3)	7.25

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Extendable Transoms Continued

Safe working loads based on bending only

2 Inside Boards

No. of transoms per 13' board	Nominal CTS. (M) - (inches)	Allowable load (kN/m2)	Load Class (BS EN12811)
4	(1.2m) - (48')	5.6	5
5	(0.9m) - (39')	7.5	6
6	(072m) - (36')	9.4	6
7	(0.6m) - (24')	11.3	6

3 Inside Boards

No. of transoms per 13' board	Nominal CTS. (M) - (inches)	Allowable load (kN/m2)	Load Class (BS EN12811)
4	(1.2m) - (48')	2.5	3
5	(0.9m) - (39')	3.4	4
6	(072m) - (36')	4.3	4
7	(0.6m) - (24')	5.1	5

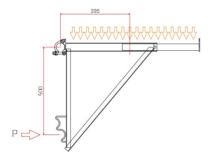
Extendable Hop-Up Brackets

These brackets provide an alternatve for inside board support. Extension piece allows for up to 3 boards. Design enables inside platform to move up/down without effecting main platforms. Ensure extension piece is retracted and secured with the bolt during storage and transportation.



Code	Description	Weight (kg)
278337	Extendable Hop-Up Bracket (2+1)	6.55

Designed to be used on independant scaffolds or birdcages. the scaffold design should clarify that the inside platforms supported by hop-up brackets should be limited to 0.75kN/m² (see table below). Intended for light access, not for storage of materials



Load (kN/m²)	Bracket CTS (m)	Load P (kN)	Load Class (BS EN12811)	
0.75	1.2	0.6	1	
1.5	1.2	1.2	2	

Load P is the horizontal reaction at the lower bracket and occurs at 1.2m CTS. The scaffold designer should check the support ledger can resist this load.

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Certificates of Conformity - NASC TG20:13

Generation's Readylok transoms have been tested in accordance with the NASC requirements and test procedures for TG20 compliance.

Working with the NASC, Generation carry out testing on their products to ISO9001:2008 quality Management Standards.

Certificates on Conformity are available (upon request) to cover the Readylok system.



Tabel 1, below, issued in a guide from the NASC in July 2016 shows characteristic values. They are now design values. the stiffness values are minimum average values for each group of at least 5 tests. Design values based on Table 1 are given in Table 5.15 of the NASC TG20:13 Design Guide.

Structural property	Symbol	Min. value	Units
1: Characteristic slip resistance down the standard	F _{sy}	10.00	kN
(when loaded via the ledger)			
2: Characteristic slip resistance along the ledger	F _{sx}	1.85	kN
3: Transom to standard – rotation about the ledger axis			
3a: - characteristic resistance moment	M _{ksx}	1.75	kNm
3b: - rotational stiffness up to moment = 1.06 kNm	C _{φsx1}	45.00	kNm/rad
4: Transom to standard – rotation about transom axis			
4a: - characteristic resistance moment	M _{ksz}	1.65	kNm
4b: - rotational stiffness up to moment = 1.00 kNm	C _{φsz1}	24.00	kNm/rad
5: Transom to ledger - rotation about the standard axis			
5a: - characteristic resistance moment	M _{kly}	0.70	kNm
5b: - rotational stiffness up to moment = 0.42 kNm	C _{φly1}	7.50	kNm/rad

Table 1: Required structural properties for TG20 compliant structural transom couplers

General Safety and Maintenance

All operatives erecting scaffold have a duty of safety to themselves, others working on or near the scaffold and all persons who may be nearby.

Opertives should work within the requirements of the Health and Safety at Work Act 1974, Construction Regulations Safe Place of Work Act 1996 and the Work at Height Regulations 2005.

All components shown in this guide should be inspected before and during erection as well as after dismantle for damage and/or corrosion. Bolt threads should be free to turn, telescopic parts of extendable transoms should be free to move as designed.

When storing/transporting extendable items, they should be secured and locked off to prevent damage.

0800 779 7113 **11**

Hire and Sale Branches Freephone:

<u>0800 779 7113</u>

Birmingham (West)

Trinity Street Off Tat Bank Road, Oldbury, West Midlands, B69 4LA T: 0121 544 3355 F: 0121 544 3131 E: birmingham@generationuk.co.uk

Birmingham (East) @

87-93 Amington Road, Birmingham, West Midlands, B25 8ET T: 0121 706 0000 F: 0121 706 9832 E: birminghameast@generationuk.co.uk

Bristol

Unit 7, 12-16 Foundry Lane, Fishponds, Bristol, BS5 7UE

T: 0117 972 4550 F: 0117 972 4502 E: bristol@generationuk.co.uk

Cardiff

Martin Road, Tremorfa Industrial Estate Cardiff, CF24 5SD T: 029 2046 3835 F: 029 2046 3246

E: cardiff@generationuk.co.uk

Edinburgh

West Lothian, EHS2 5AU
T: 01506 863 864 F: 01506 863 916
E: edinburgh@generationuk.co.uk

Frimley (West London)

22-30 Sturt Road, Frimley Green Camberley, GU16 6HY T: 01252 838 696 F: 01252 837 614 E: frimley@generationuk.co.uk

Gateshead @

Stoneygate Lane, Abbotsford Road, Felling, Gateshead, NE10 OEX T: 0191 469 7504 F: 0191 469 8237 E: gateshead@generationuk.co.uk

Glasgow

Duchess Road, Rutherglen Glasgow, G73 1AU T: 0141 647 6969 F: 0141 647 5851 E: glasgow@generationuk.co.uk

Grays @

Europa Business Park, Magnet Road, Grays, Essex, RM20 4DB T: 01375 312 120 F: 01375 386 844 E: grays@generationuk.co.uk

Leeds

Unit 2 Ledger Park, Haigh Park Road, Stourton, Leeds LS10 1RT T: 0113 277 8822 F: 0113 277 7545 E: leeds@generationuk.co.uk

London (East)

Unit H, Hangman's Wood Ind Park, Stifford Road, South Ockendon, Essex, RM15 GRL

T: 020 7473 6056 F: 01708 858 493 E: london@generationuk.co.uk

Newcastle

Forward House, Portobello Road Portobello Industrial Estate, Birtley, Tyne and Wear, DH3 2SN T: 0191 492 1190 F: 0191 411 1148 E: newcastle@generationuk.co.uk

Northampton

Kingsfield Way, Dallington, Northampton, NN5 7QN T: 01604 580 444 F: 01604 580 487 E: northampton@generationuk.co.uk

Salsburgh (6)

Duntilland Road, Shotts, Salsburgh, North Lanarkshire, ML7 4NZ T: 01698 870 200 F: 01698 870 159 E: salsburgh@generationuk.co.uk

Stockport

Unit 4 Vauxhall Industrial Estate, Greg Street, Reddish, Stockport, SK5 7BR T: 0161 477 0131 F: 0161 477 7618 E: stockport@generationuk.co.uk

West Thurrock (East London)

4 Riverside Ind. Park, Oliver Road, West Thurrock, RM20 3ED T: 020 7476 4760 F: 020 7476 3157 E: westthurrock@generationuk.co.uk

Widnes **G**

Pitt Street, West Bank, Widnes, Cheshire, WA8 OTG T: 0151 420 3331 F: 0151 495 2298 E: widnes@generationuk.co.uk

Altrad Training Services

Unit 20B Greens Industrial Park, Calder Vale Road, Wakefield, WF1 5PH T: 01924 370 640 F: 01924 377 530 Freephone: 0800 587 5224 E: training@altraduk.co.uk

Generation Export

Trinity Street, Off Tat Bank Road Oldbury, West Midlands, B69 4LA T: +44 (0) 121 543 2964 E: exportagenerationuk.co.uk

Generation UK Head Office

Trinity Street, Off Tat Bank Road Oldbury, West Midlands, B69 4LA T: 0121 543 2950 F: 0121 543 2953 E: enquiries@generationuk.co.uk



