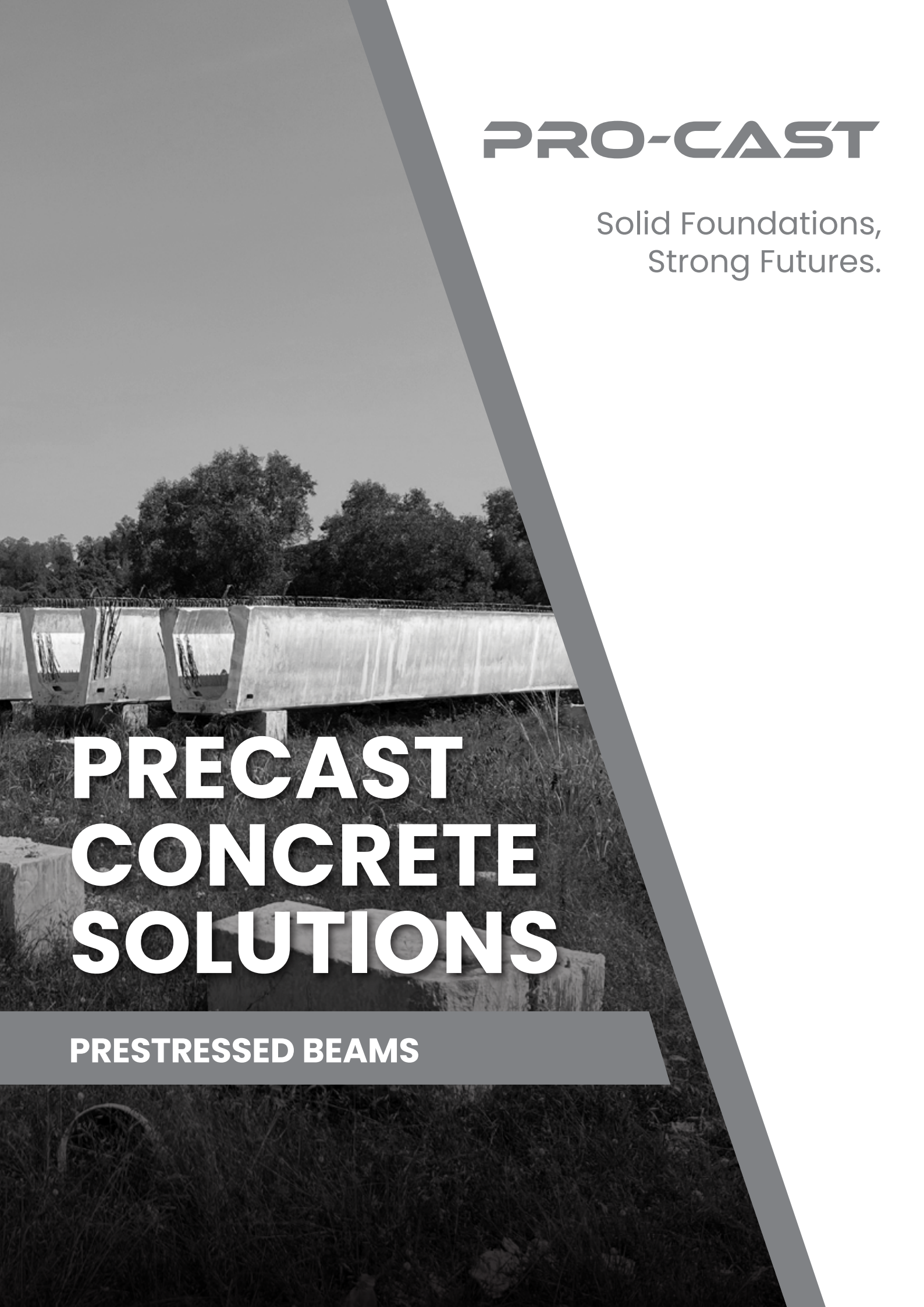




PRO-CAST

Solid Foundations,
Strong Futures.

PRECAST CONCRETE SOLUTIONS

PRESTRESSED BEAMS

INTRODUCTION

Prestressed beams are essential in modern construction, offering enhanced strength and durability. By pre-tensioning steel tendons within the concrete, they counteract tensile forces, allowing for longer spans and greater load-bearing capacity. This makes them ideal for large-scale projects like bridges and high-rise buildings, ensuring improved performance and structural efficiency.

SPECIFICATION OF PRESTRESSED BEAMS

Beam Types

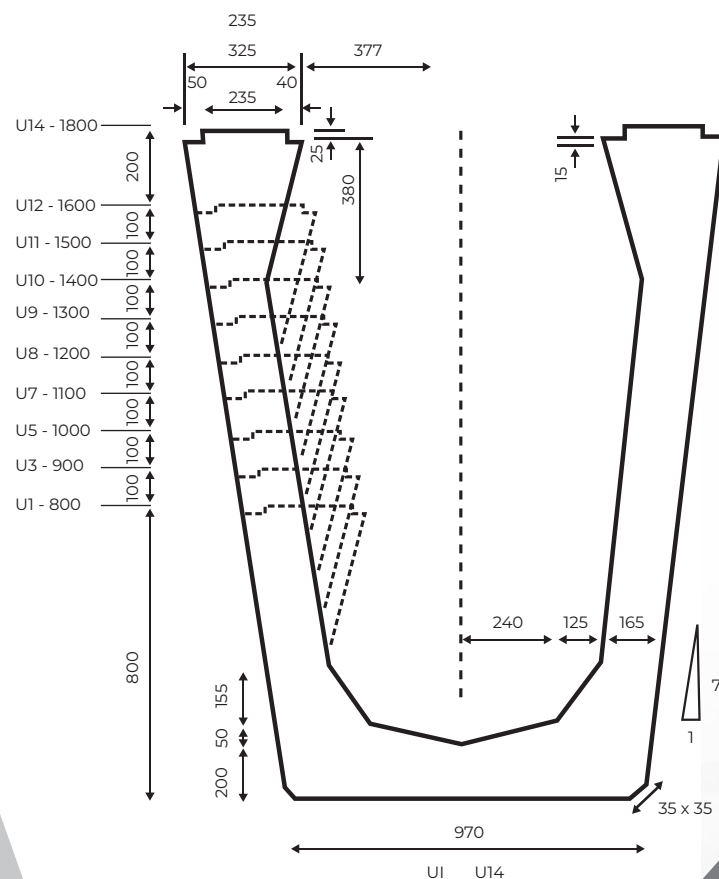
U beam, T beam, TM beam, I beam and JKR standard T beam.
Other profiles are available upon request.

Beam Length

Length of beam is limited up to 30m in consideration of transportation constraint in mind.

Concrete Characteristic Strength

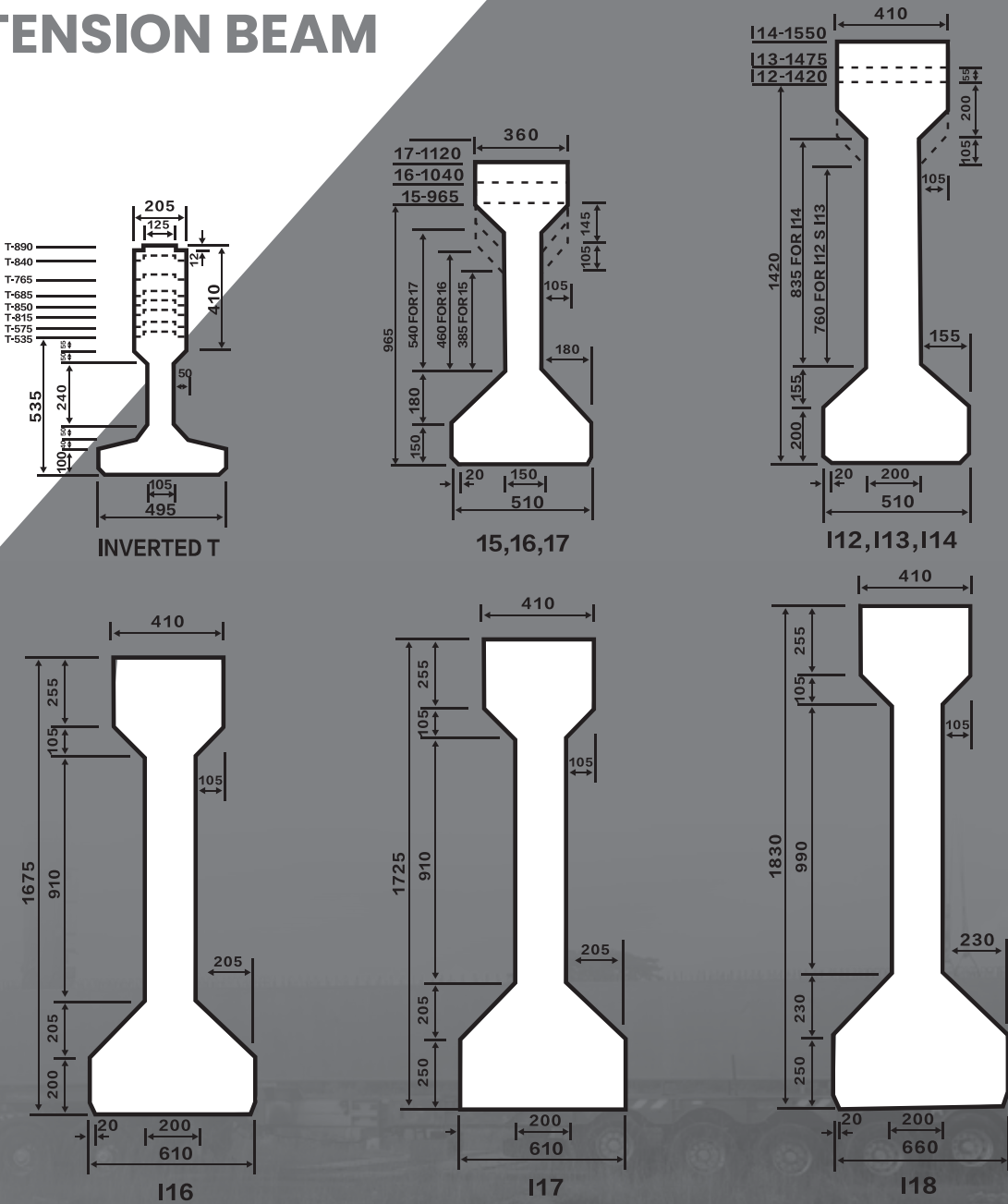
50 n/mm² with transfer strength of 40 n/mm²



DIMENSION AND SECTION PROPERTIES

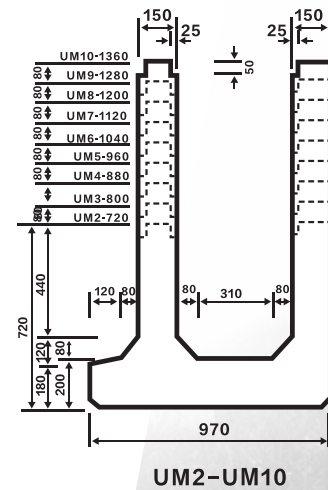
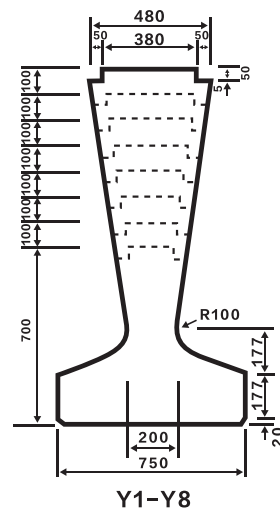
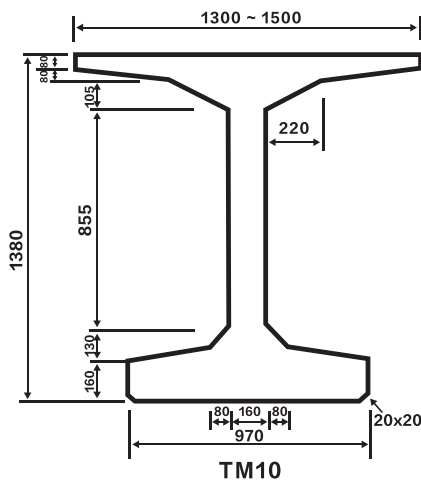
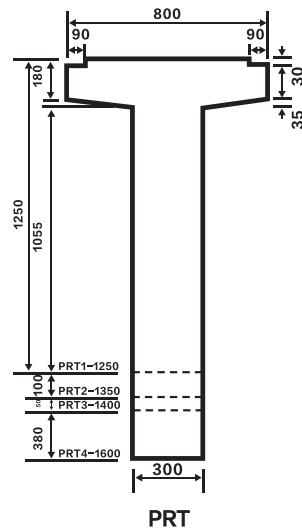
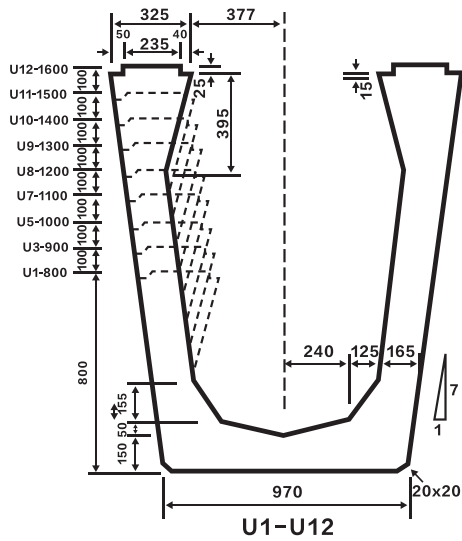
Beam Series		Unit	U1	U3	U5	U7	U8	U9	U10	U11	U12	U14
Depth	D	mm	800	900	1000	1100	1200	1300	1400	1500	1600	1800
Length		m	14 - 18	14.5-20	16-22	17.5-24.5	19-26.5	21-28.5	22.5-30	24-30	25.5-30	29-31.75
Weight		kN/m ²	11.44	12.21	12.98	13.75	14.52	15.29	16.06	16.83	17.60	19.44
Sectional Area		mm ²	466944	498334	529756	561179	592609	624035	655458	686881	718291	797841
Neutral Axis	Yt	mm	445	498	551	603	655	707	759	810	862	973
	Yb	mm	355	402	449	497	545	593	641	690	738	827
Moment of Inertia	Ixx	x10 ⁹ mm ⁴	29.9	41.7	56.0	72.9	92.7	115.4	141.3	170.4	202.9	279.4
Section Modulus	Zt	x10 ⁶ mm ³	67.1	83.7	101.7	121.0	141.5	163.2	186.1	210.2	235.4	287.3
	Zb	x10 ⁶ mm ³	84.0	103.6	124.6	146.8	170.1	194.7	220.3	247.1	274.9	337.7

PRE-TENSION BEAM



DETAIL

PRE-TENSION BEAM



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