

Leviat[®]
A CRH COMPANY

MOMENT



**MOMENT
PRESTRESSING
& POST TENSIONING
SYSTEM**



We are one team.

We are Leviat.

Leviat is the new name of CRH's construction accessories companies worldwide.

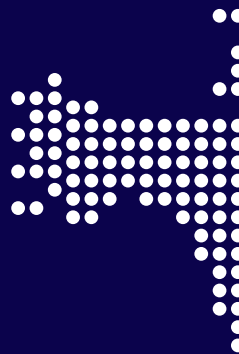
Under the Leviat brand, we are uniting the expertise, skills and resources of Halfen Moment and its sister companies to create a world leader in fixing, connecting and anchoring technology.

The products you know and trust, Moment Prestressing & Post Tensioning System (MPT) will remain an integral part of Leviat's comprehensive brand and product portfolio. As Leviat, we can offer you an extended range of specialist products and services, greater technical expertise, a larger and more agile supply chain and better, faster innovation.

By bringing together CRH's construction accessories family as one global organisation, we are better equipped to meet the needs of our customers, and the demands of construction projects, of any scale, anywhere in the world.

This is an exciting change. Join us on our journey.

Read more about Leviat at [Leviat.com](https://www.leviat.com)



Our product brands include:

Ancon  **HALFEN** **MOMENT** **PLAKA**



60
locations

sales in
30+
countries

3000
people worldwide

Imagine. Model. Make.

Leviat.com

 MPT FLAT SLAB SYSTEMS	1
 MPT DEAD END ANCHORAGE	2
 MPT MULTISTRAND ROUND SYSTEMS	2
 MPT T13 ANCHORAGE	3
 MPT T15 ANCHORAGE	4
 STRANDS	5
 POST TENSIONING JACKS	6
 GROUTING	6

MPT PRESTRESSING AND POST TENSIONING SYSTEM

Is designed and tested to meet stringent standards, the range of buildings and civil engineering applications includes:

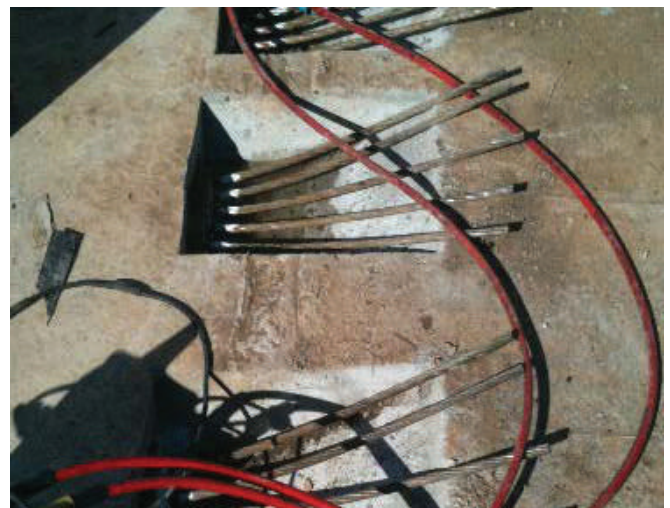
- Commercial and residential high rise
- Retails shopping centers
- Load transfer structures
- Slabs on grade
- Silos and reservoirs
- Bridges
- Ground anchoring and earth retaining

MPT FLAT SLAB SYSTEMS

MPT flat slab system is normally adopted for bonded tendon. The strands are individually gripped in one triangle flat anchor head unit and transmit their pre-stressing forces by means of flat type anchor plate casting unit. The strands are stressed individually by means of a mono strand jack. The strands are contained in one flat duct (duct size: 20mm x 70mm) which is made of corrugated galvanized metal. To ensure corrosion protection and to give adequate bond strength, the tendons are filled with suitable cement grout mix after complete stressing of the strands. Facilitating of concrete placing due to the absence of tendons in the webs, and ease for placing tendons.



MPT Flat Slab System and flat duct being layed in position.



PC strand being marked after stressing.

MPT DEAD END ANCHORAGE

Stressing of a tendon from one end only, to which the load is applied.



MPT dead end anchorage being laid in position.

MPT MULTISTRAND ROUND SYSTEMS

A method of reinforcing and pre-stressing concrete, masonry and other structural elements. Today, it is used for a wide range of applications including office buildings, condominiums, hotels, parking structures, slab-on-ground foundations, ground anchors, storage tanks, stadiums, silos, and bridges.

The systems are normally adopted for bonded tendons. The tendons consist of a bundle of strands with a nominal diameter of 0.5" (12.7 mm.) or 0.6" (15.2 mm.). The number of strands per tendon can be from 4 strands up to 42 strands of diameter 0.5" or 31 strands of diameter 0.6". The strands in the tendons are contained in one round duct which is made of corrugated galvanized metal.

The strands are individually gripped in one anchor head unit and transmit their pre-stressing force by means of anchor plate casting unit. For each anchor size, special spiral reinforcement is provided at the anchor plate casting to give adequate splitting reinforcement for bursting stresses developed at the anchorage zone. The strands in tendon are stressed simultaneously by means of a multi strand stressing jack from capacity 1,100 KN up to 5,000 KN. The strands can also be stressed individually by means of mono jack.

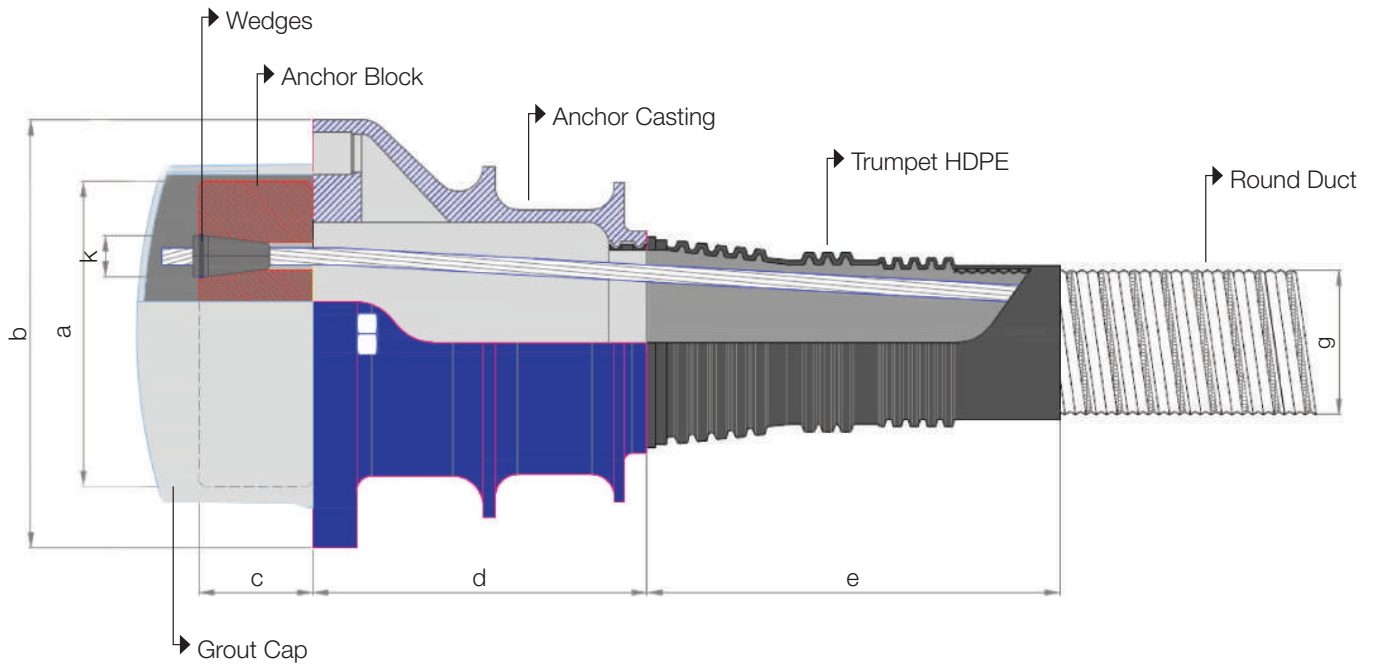


MPT Multistrand Round System on post tensioning beam.



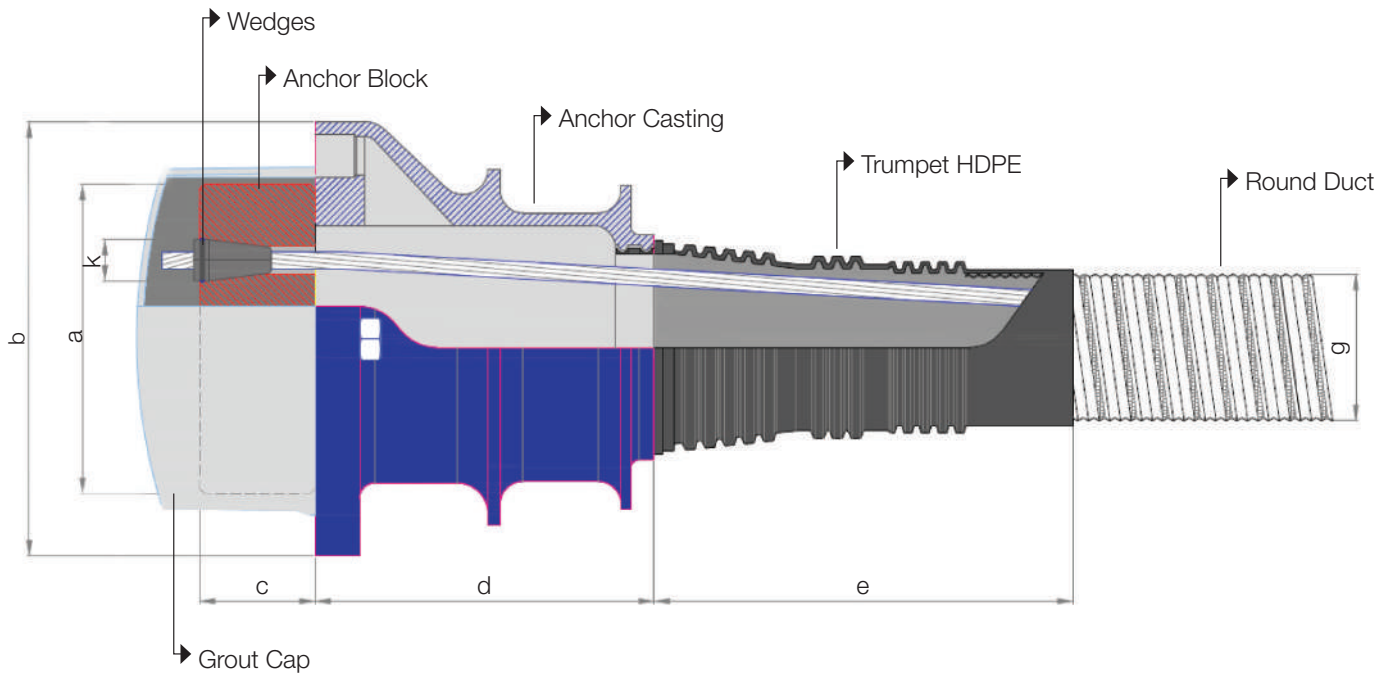
Post tensioning beams with anchor block and strand in place ready for stressing.

MPT T13 ANCHORAGE



Anchorage			Dimension in mm							
			4T13	7T13	12T13	15T13	19T13	22T13	27T13	31T13
Anchor Block	a	Diameter	85	100	140	155	170	190	210	230
	c	Length	40	40	50	55	60	65	70	90
Anchor Casting	b	Diameter	125	155	190	210	230	265	340	360
	d	Length	120	150	160	190	190	200	230	280
Trumpet HDPE	e	Length	225	220	290	280	320	350	390	420
Round Duct	g	Internal Diameter (ID)	40	45	60	65	75	80	90	95
Wedges	k	Diameter	23	23	23	23	23	23	23	23

MPT T15 ANCHORAGE



Anchorage			Dimension in mm							
			4T15	7T15	12T15	15T15	19T15	22T15	27T15	31T15
Anchor Block	a	Diameter	100	125	170	190	200	230	250	260
	c	Length	45	45	55	60	70	70	85	95
Anchor Casting	b	Diameter	140	180	220	250	270	300	330	336
	d	Length	130	160	190	220	220	240	275	310
Trumpet HDPE	e	Length	225	225	260	295	305	360	355	355
Round Duct	g	Internal Diameter (ID)	45	55	75	80	90	100	110	115
Wedges	k	Diameter	28	28	28	28	28	28	28	28



STRANDS

The strands are formed with seven steel wires: one central wire around which the other six are wrapped. They are generally supplied already stabilized (low relaxation) and certified according to the regulations by an independent laboratory, in coils weighing kg 2500-3000. Usually greased or waxed strands, incased in a HDPE sheath, commonly called unbounded, are used to manufacture the external tendons. Such Strands can be hot-dip galvanized too.

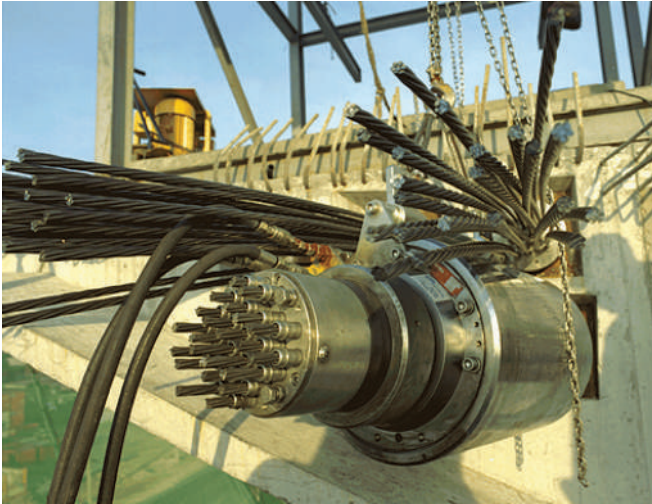


Appearance	Nominal Dia. (mm)	Tensile Strength (Mpa)	Relaxation (Mpa)	Standards
Seven wires left or right lay	8.0, 9.3, 9.53, 11.1, 12.5, 12.7, 15.2, 15.24, 15.7	1770, 1860	Low relaxation $\leq 2.5\%$	ASTM A416 BS5896 EN10138-3 AS/NZS4672 GB/T5224 KS7002 ISO6934-4 SS213620 JISG3536 UNE36094 NEN3868

Other standard and non-standard products are available upon request

POST TENSIONING JACKS

The jack is placed over the strand and when tensioning starts they are automatically and simultaneously engaged in the pulling head of the jack. Once the required elongation and load are reached the lock-off device of the jack can be activated to house the wedges in the anchor head uniformly. The tensioning can be accomplished in more steps based on the elongation of the cable. A tensioned cable can be released using proper releasing devices.



Multi Stressing Jack being hoisted to position.



Multi Strand Stressing in progress. This process shall be done with caution.

GROUTING

Cables are normally grouted after sealing their anchorages with concrete or, if required, using proper grouting caps. Before grouting the tendons, they should be flushed to ensure that no obstruction would impede the flow of the injected grout.

The sandless grout, injected using MPT grouting pump, is kept under pressure throughout curing. The water-to-cement ratio is kept as low as possible. Usual proportion of ingredients are: 36-38 liters of water, 100kg of cement and additive according to the instructions of the manufacturer. The mix produces 72-74 liters of grout.



The usage of Grout Mixer and Pump is to make sure smooth flowing of grout, filling the captivity of the duct.

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