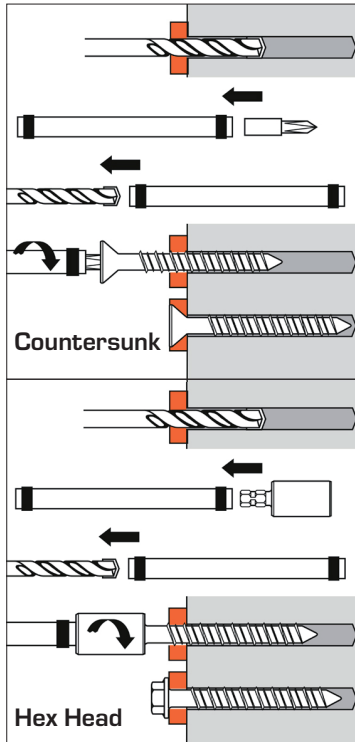


High performance concrete anchor that cuts own thread into concrete, brick or block

## INSTALLATION



### Tapcon Installation Accessories

- \* Condrive Sleeve for SDS - Code 921437
- \* 6.5mm Hex Socket - Code 921162
- \* 8mm Hex Socket - Code 921163
- \* SDS+ Hex 4.35 x 180mm Tapcon Drill Bit (Up to 100mm) - Code 921137
- \* SDS+ Hex 5.15 x 180mm Tapcon Drill Bit (Up to 100mm) - Code 921154
- \* SDS+ Hex6 x 180mm Tapcon Drill Bit (Up to 100mm) - Code 920940

## MATERIAL

### Countersunk Blue version:

- Carbon steel
- **Coating:** Mechanical galvanised

### Hex Head Blue version:

- Carbon steel
- **Coating:** Mechanical galvanised

## CORROSION RESISTANCE

### Blue Climaseal™

Kesternich Results (DIN 40018)  
2.0L 30 cycles – 10% or less rust

Salt Spray Results (ASTM B117)720  
hours – 10% or less rust

Designed for use in dry interior  
locations (Please refer to Approval  
ICC-ESR 2202 Concrete)

## PRODUCT APPLICABILITY

- Suitable for non-cracked concrete only
- Not designed for fire rated applications

## Approvals

ICC-ESR  
1671  
Masonry

ICC-ESR  
2202  
Concrete

## The Original TAPCON

THE ORIGINAL  
**Tapcon**®

- Blue Climaseal™**  
provides extended corrosion protection
- Hex Head**  
style on TAPCON anchors is available for majority of fixture anchoring need
- New Star Recess**  
style is available when is available when flush seating is necessary in countersunk applications with increased productivity and minimised bit slip.
- Underhead Ribs**  
on head washer head screws to resist spin outs and head snaps.
- Advanced Threadform**  
cuts into concrete and masonry for reduced installation torque and increased pullout performance
- Nail-Type Point**  
guides the anchor into the pre-drilled hole. Excellent for wood to concrete applications
- Lengths of TAPCON Anchors**  
3F - 32mm to 82mm  
4F - 45mm to 125mm  
3H - 32mm to 57mm  
4H - 45mm to 100mm

## Applications

- Steel framing systems
- Temp safety rails
- Railings, hand rails
- Cable tray, channel
- Insulation system to masonry
- Suspended ceiling
- Brackets & signs
- Brackets & signs

## Performance Data - TAPCON Strength and Reliability

TAPCON Masonry anchors are manufactured from special high quality cold forming steel, heat treated to give a hard cutting surface for efficient thread cutting action in a wide variety of masonry materials. The standard finish on TAPCON anchors is electroplated and passivated zinc with colour identifying blue coating.

Rigid quality control in all phases of production ensures consistent and reliable performance. TAPCON anchors have been laboratory tested on an Avery Densison testing machine in concrete product manufacturers' standard materials. Appropriate curing times were allowed for the masonry test blocks to ensure reliable results.

# TAPCON BLUE

2/5 Countersunk & Hex head version



## Technical data

Versions	Description	Anchor Dia (mm)	Drill Dia (mm)	Drive	Across Flats (mm)	Fixture Thickness (mm)	Anchor Length (mm)	Minimum Embedment (mm)	Minimum Embedment Hole Depth (mm)	Maximum Embedment (mm)	Maximum Embedment Hole Depth (mm)	Minimum thickness of base material	Minimum thickness diameter	Installation torque (Nm)	Box Qty	Code
Countersunk Blue	3F32	5	4	T25	-	0-7	32	25	35	25	35	100	6	5	100	921507
	3F45	5	4	T25	-	5-20	45	25	35	25	35				100	921508
	3F70	5	4	T25	-	30-45	70	25	35	45	55				100	921510
	3F82	5	4	T25	-	42-57	82	25	35	45	55				100	921511
	4F45	6	5	T30	-	5-20	45	25	35	45	55				100	921514
	4F57	6	5	T30	-	17-32	5	25	35	45	55				100	921515
	4F70	6	5	T30	-	30-45	70	25	35	45	55				100	921516
	4F100	6	5	T30	-	60-75	100	25	35	45	55				100	921518
	4F125	6	5	T30	-	85-100	125	25	35	45	55				100	921519
Hex Head Blue	3H32	5	4	HEX	6.5	0-7	32	25	35	25	35	100	7	10	100	921498
	3H45	5	4	HEX	6.5	5-20	45	25	35	25	35				100	921499
	3H57	5	4	HEX	6.5	17-32	57	25	35	45	55				100	921500
	4H32	6	5	HEX	8.0	0-7	32	25	35	25	35				100	921501
	4H45	6	5	HEX	8.0	5-20	45	25	35	25	35				100	921502
	4H57	6	5	HEX	8.0	17-32	57	25	35	25	35				100	921503
	4H70	6	5	HEX	8.0	30-45	70	25	35	25	35				100	921504
	4H82	6	5	HEX	8.0	42-57	82	25	35	25	35				100	921505
	4H100	6	5	HEX	8.0	60-75	100	25	35	25	35				100	921506

Mechanical anchors

## Edge and spacing distances

Description	Spacing for Tension Normal Weight Concrete			Spacing for Shear Normal Weight Concrete			Edge Distance for Tension Normal Weight Concrete			Edge Distance for Shear Normal Weight Concrete		
	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor
3F	76.2	38.1	0.73	76.2	38.1	0.83	47.6	25.4	0.83	57.1	28.5	0.70
4F	101.6	50.8	0.66	101.6	50.8	0.82	63.5	31.7	0.82	76.2	38.1	0.59
3H	76.2	38.1	0.73	76.2	38.1	0.83	47.6	25.4	0.83	57.1	28.5	0.70
4H	101.6	50.8	0.66	101.6	50.8	0.82	63.5	31.7	0.82	76.2	38.1	0.59
Description	Spacing for Tension Concrete Masonry Units			Spacing for Shear Concrete Masonry Units			Edge Distance for Tension Concrete Masonry Units			Edge Distance for Shear Concrete Masonry Unit		
	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor	FULL Capacity (mm)	Reduced Capacity (mm)	Load Reduction Factor
3F	76.2	38.1	1.00	76.2	38.1	1.00	101.6	50.8	0.91	57.1	28.5	0.93
4F	101.6	50.8	0.84	101.6	50.8	0.81	101.6	50.8	0.88	76.2	38.1	0.80
3H	76.2	38.1	1.00	76.2	38.1	1.00	101.6	50.8	0.91	57.1	28.5	0.93
4H	101.6	50.8	0.84	101.6	50.8	0.81	101.6	50.8	0.88	76.2	38.1	0.80

Reduction factors are cumulative. Multiple reduction factors for more than one spacing or edge distance are calculated separately and multiplied.  
 Load reduction factors for anchors loaded in tension or shear with spacing between critical and minimum are obtained by linear interpolation.  
 Load reduction factors for anchors loaded in tension or shear with edge distances between critical and minimum are obtained by linear.



## Recommended loads

Description	Effective Embedment Depth (mm)	Med Density Block		20 N/mm <sup>2</sup> Concrete		25 N/mm <sup>2</sup> Concrete		35 N/mm <sup>2</sup> Concrete	
		Tensile N <sub>rec</sub> (kN)	Shear V <sub>rec</sub> (kN)	Tensile N <sub>rec</sub> (kN)	Shear V <sub>rec</sub> (kN)	Tensile N <sub>rec</sub> (kN)	Shear V <sub>rec</sub> (kN)	Tensile N <sub>rec</sub> (kN)	Shear V <sub>rec</sub> (kN)
3F32	25	0.36	1.10	0.50	1.23	0.60	1.23	0.66	1.26
3F45	25	0.36	1.10	0.50	1.23	0.60	1.23	0.66	1.26
3F45	32	0.66	1.16	0.86	1.26	0.90	1.23	0.93	1.26
3F45	38	0.93	1.20	1.26	1.26	1.30	1.30	1.36	1.33
3F70	25	0.36	1.10	0.50	1.23	0.60	1.23	0.66	1.26
3F70	32	0.66	1.16	0.86	1.26	0.90	1.23	0.93	1.26
3F70	38	0.93	1.20	1.26	1.26	1.30	1.30	1.36	1.33
3F70	44	1.13	1.36	1.56	1.50	1.66	1.50	1.83	1.50
3F82	25	0.36	1.10	0.50	1.23	0.60	1.23	0.66	1.26
3F82	32	0.66	1.16	0.86	1.26	0.90	1.23	0.93	1.26
3F82	38	0.93	1.20	1.26	1.26	1.30	1.30	1.36	1.33
3F82	44	1.13	1.36	1.56	1.50	1.66	1.50	1.83	1.50
4F45	25	0.76	1.66	1.06	2.16	1.20	2.30	1.36	2.46
4F45	32	1.23	1.90	1.70	2.36	1.83	2.46	2.06	2.56
4F45	38	1.66	1.90	2.60	2.40	2.36	2.50	2.50	2.60
4F45	44	1.96	2.23	2.76	3.03	3.03	3.20	3.33	3.26
4F57	25	0.76	1.66	1.06	2.16	1.20	2.30	1.36	2.46
4F57	32	1.23	1.90	1.70	2.36	1.83	2.46	2.06	2.56
4F57	38	1.66	1.90	2.60	2.40	2.36	2.50	2.50	2.60
4F57	44	1.96	2.23	2.76	3.03	3.03	3.20	3.33	3.26
4F70	25	0.76	1.66	1.06	2.16	1.20	2.30	1.36	2.46
4F70	32	1.23	1.90	1.70	2.36	1.83	2.46	2.06	2.56
4F70	38	1.66	1.90	2.60	2.40	2.36	2.50	2.50	2.60
4F70	44	1.96	2.23	2.76	3.03	3.03	3.20	3.33	3.26
4F100	25	0.76	1.66	1.06	2.16	1.20	2.30	1.36	2.46
4F100	32	1.23	1.90	1.70	2.36	1.83	2.46	2.06	2.56
4F100	38	1.66	1.90	2.60	2.40	2.36	2.50	2.50	2.60
4F100	44	1.96	2.23	2.76	3.03	3.03	3.20	3.33	3.26
4F125	25	0.76	1.66	1.06	2.16	1.20	2.30	1.36	2.46
4F125	32	1.23	1.90	1.70	2.36	1.83	2.46	2.06	2.56
4F125	38	1.66	1.90	2.60	2.40	2.36	2.50	2.50	2.60
4F125	44	1.96	2.23	2.76	3.03	3.03	3.20	3.33	3.26

Note:  
 (-) Represents that this embedment depth is not achievable with this anchor.



### Ultimate Performance Values

Description		ULTIMATE Tension and Shear Values in CONCRETE							
		f <sub>c</sub> 2000 psi (13.8 N/mm <sup>2</sup> )		f <sub>c</sub> 3000 psi (20.7 N/mm <sup>2</sup> )		f <sub>c</sub> 4000 psi (27.6 N/mm <sup>2</sup> )		f <sub>c</sub> 5000 psi (34.5 N/mm <sup>2</sup> )	
		Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
Minimum Embedment Depth (mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
3F	25.40	2.67	3.20	2.78	3.20	2.89	3.20	3.56	3.83
3F	31.75	3.76	3.20	3.82	3.20	3.87	3.20	4.50	3.83
3F	38.10	4.85	3.83	4.85	3.83	4.85	3.83	5.43	3.83
3F	44.45	6.45	3.87	6.48	3.87	6.50	4.41	7.70	4.41
4F	25.40	3.34	4.01	3.45	4.01	3.56	6.05	4.23	6.41
4F	31.75	4.67	4.01	5.16	4.01	5.65	6.05	6.74	6.41
4F	38.10	6.14	5.34	7.12	5.34	8.10	6.14	9.66	7.43
4F	44.45	8.99	7.43	9.79	7.43	10.59	7.43	12.33	7.43

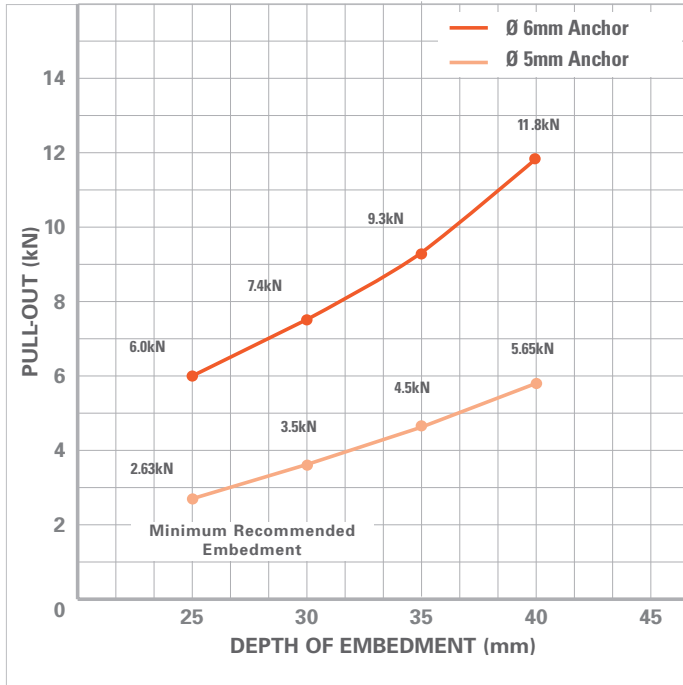
Mechanical anchors

Description		ULTIMATE Tension and Shear Values in CONCRETE							
		f <sub>c</sub> 2000 psi (13.8 N/mm <sup>2</sup> )		f <sub>c</sub> 3000 psi (20.7 N/mm <sup>2</sup> )		f <sub>c</sub> 4000 psi (27.6 N/mm <sup>2</sup> )		f <sub>c</sub> 5000 psi (34.5 N/mm <sup>2</sup> )	
		Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
Minimum Embedment Depth (mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
3H	25.40	2.67	3.20	2.78	3.20	2.89	3.20	3.56	3.83
3H	31.75	3.76	3.20	3.82	3.20	3.87	3.20	4.50	3.83
3H	38.10	4.85	3.83	4.85	3.83	4.85	3.83	5.43	3.83
3H	44.45	6.45	3.87	6.48	3.87	6.50	4.41	7.70	4.41
4H	25.40	3.34	4.01	3.45	4.01	3.56	6.05	4.23	6.41
4H	31.75	4.67	4.01	5.16	4.01	5.65	6.05	6.74	6.41
4H	38.10	6.14	5.34	7.12	5.34	8.10	6.14	9.66	7.43
4H	44.45	8.99	7.43	9.79	7.43	10.59	7.43	12.33	7.43

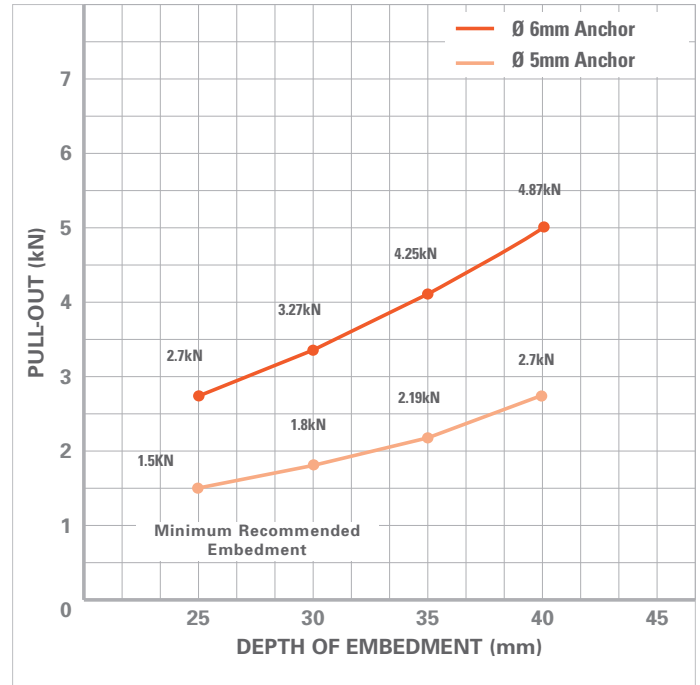


## Embedment graphs

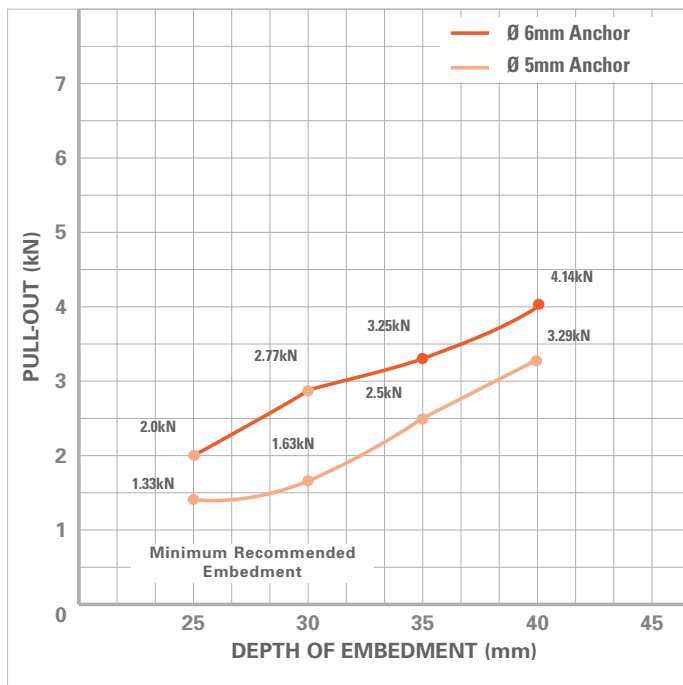
### 40 Newton Concrete



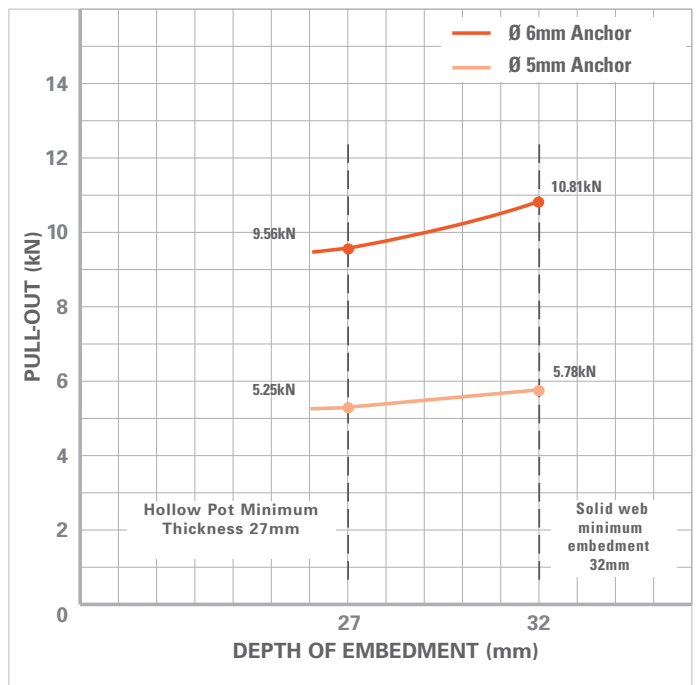
### Typical Dense Concrete Block



### Common Brick



### Typical Hollow Concrete Beam



5 mm 3F & 3H

6 mm 4F & 4H

NOTE. All loads given above are ultimate failure loads and should have a safety factor of 3 applied for Recommended Load Values.

SPIT products are specifically designed for trained professional end users.

Operation and safety instructions within the user manuals must be adhered to at all times. Anchors must be selected according to the nature of base materials, the load to be supported and environmental conditions. The selected product shall be checked according to technical data, calculation and on-site tests if required.

In cases where base materials not defined please feel free to contact us for advice: [www.itwcp.co.uk](http://www.itwcp.co.uk) or technical helpline: 0800 731 4924  
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