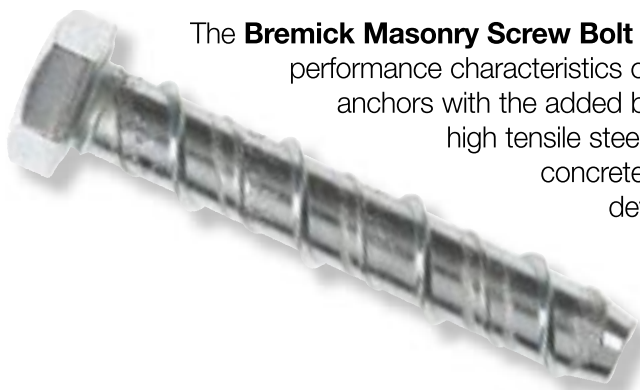


MASONRY SCREW ANCHORS



The **Bremick Masonry Screw Bolt** is a highly versatile anchor providing the combined performance characteristics of other mechanical anchors and those of chemical anchors with the added benefit of being fully removable. Manufactured from high tensile steel the shank with dual helix threads that self tap into concrete, masonry, stone and timber. The holding power is developed evenly along the entire shank with minimal pretension expansion forces enabling installation at close centres and edge distances.

APPLICATIONS

Fully removable medium duty self tapping masonry screw anchor for applications in concrete, masonry, natural stone and wood.

FEATURES

- Fast and simple installation
- Tapered point for easy starting
- Removable and reusable.
- Double helix for rapid thread formation
- Good performance in weak and brittle base materials
- Can be set close to free edges
- Can be reset in the same hole.
- Can be loaded immediately after installation.
- Can be through fastened.

ANCILLARY PRODUCTS CLEANING TOOLS

For Brushes and Blow Pumps please refer to the Chemical Injection System section of this book.

SUGGESTED SPECIFICATION

Zinc Plated Masonry Screw Anchors

Masonry Screw Anchors shall be a one piece and manufactured from high tensile Class 8.8 carbon steel with a hexagonal head and double helix threaded shank. Corrosion protection shall be provided by zinc electroplating plated and shall be sourced from Bremick Pty Ltd.

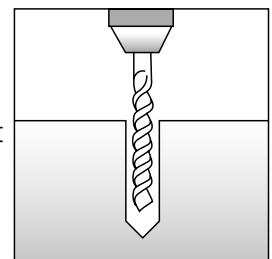
Galvanised Masonry Screw Anchors

Galvanised Masonry Screw Anchors shall be a one piece and manufactured from high tensile carbon steel with a hexagonal head and double helix threaded shank. Corrosion protection shall be provided by mechanical galvanising and shall be sourced from Bremick Pty Ltd.

SETTING INSTRUCTIONS

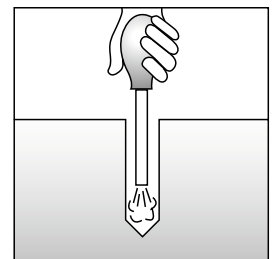
1: Drill

Drill hole to specified diameter and depth. Depth must be embedment plus 2 anchor diameters to accommodate cutting debris.



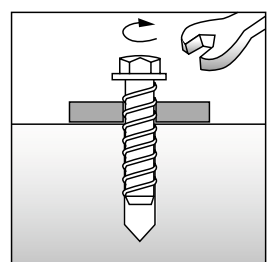
2: Clean

Blow out dust and drilling fragments.



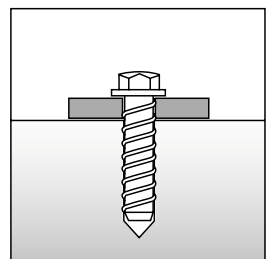
3: Set

Insert anchor into hole and screw in using spanners, sockets or an impact wrench. Apply constant forward pressure when driving. Set to specified torque.



4: Removal

Use hand tools when removing the anchor. Do not remove with power tools if resetting the anchor.





MASONRY SCREW ANCHORS



HEXAGONAL FLANGE HEAD & HEXAGONAL HEAD ZINC PLATED & GALVANISED

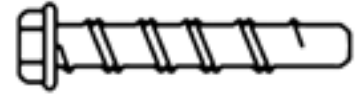
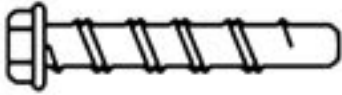


TABLE 1 - INSTALLATION DETAILS

FASTENER DETAILS			INSTALLATION DETAILS									
Anchor/ Drill Diameter	Thread Size	Anchor Length	Effective Embedment Depth	Characteristic Anchor Spacing (Tension & Shear)	Characteristic Edge Distance (Tension & Shear)	Minimum Anchor Spacing (Tension & Shear)	Minimum Edge Distance (Tension & Shear)	Minimum Base Material Thickness	Maximum Fixture Thickness	Clearance Hole Diameter (Fixture)	Installation Torque (Concrete)	Width Across Flats
D _o (mm)	D (mm)	L (mm)	h _t (mm)	S _{cr} (mm)	C _{cr} (mm)	S _{min} (mm)	C _{min} (mm)	h _{min} (mm)	t _{fix} (mm)	D _c (mm)	T _{inst} (Nm)	SW (mm)
5	7	50	25	100	80	30	20	45	25	10	15	8
			38	100	80	30	20	60	12	10	15	8
6	8	30	30	100	80	30	20	60	0	10	25	10
			25	100	80	30	20	50	5	10	25	10
		50	30	100	80	30	20	60	20	10	25	10
			45	100	80	30	20	75	5	10	25	10
		75	30	100	80	30	20	60	45	10	25	10
			45	100	80	30	20	75	30	10	25	10
		100	30	100	80	30	20	60	70	10	25	10
			45	100	80	30	20	75	55	10	25	10
8	10	60	40	120	90	40	25	75	20	12	40	15
			60	120	90	40	25	100	0	12	40	15
		75	40	120	90	40	25	75	35	12	40	15
			60	120	90	40	25	100	15	12	40	15
		100	40	120	90	40	25	75	60	12	40	15
			60	120	90	40	25	100	40	12	40	15
10	12	60	50	170	120	60	30	100	10	14	60	17
			75	170	120	60	30	125	15	14	60	17
		75	50	170	120	60	30	100	25	14	60	17
			75	170	120	60	30	125	0	14	60	17
		100	50	170	120	60	30	100	50	14	60	17
			75	170	120	60	30	125	25	14	60	17
		150	50	170	120	60	30	100	100	14	60	17
			75	170	120	60	30	125	75	14	60	17
12	14	75	60	200	140	60	35	120	15	16	80	19
			90	200	140	60	35	150	10	16	80	19
		100	60	200	140	60	35	120	40	16	80	19
			90	200	140	60	35	150	10	16	80	19
		150	60	200	140	60	35	120	90	16	80	19
			90	200	140	60	35	150	60	16	80	19
16	18	100	80	300	160	80	80	150	20	20	120	27
			100	300	160	80	80	160	0	20	120	27
		150	80	300	160	80	80	150	70	20	120	27
			120	300	160	80	80	200	30	20	120	27

MASONRY SCREW ANCHORS

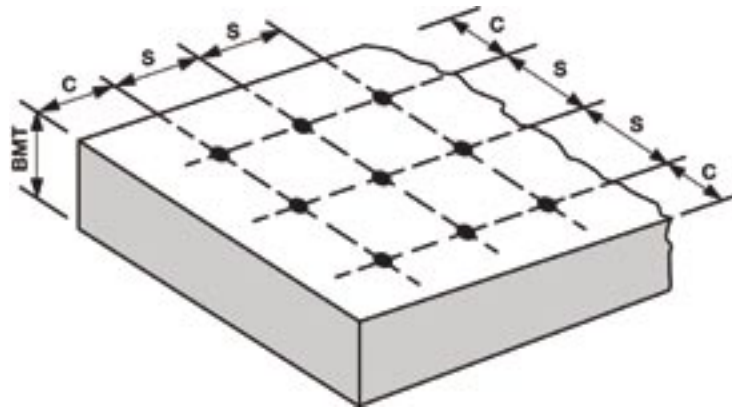


HEXAGONAL FLANGE HEAD & HEXAGONAL HEAD ZINC PLATED & GALVANISED

TABLE 2- PERFORMANCE DATA - CONCRETE (CHARACTERISTIC RESISTANCE)

INSTALLATION DETAILS			CHARACTERISTIC RESISTANCE IN CONCRETE (Nruk, Vruk)									
Hole/ Drill Diameter (mm)	Major Thread Diameter (mm)	Embedment Depth (mm)	25MPa Concrete (fc)		32MPa Concrete (fc)		40MPa Concrete (fc)		50MPa Concrete (fc)		65MPa Concrete (fc)	
			Tension (NRuk) KN	Shear (VRuk) KN	Tension (NRuk) KN	Shear (VRuk) KN	Tension (NRuk) KN	Shear (VRuk) KN	Tension (NRuk) KN	Shear (VRuk) KN	Tension (NRuk) KN	Shear (VRuk) KN
5	7	25	4.6	12.4	5.3	14.2	6.0	16.0	6.5	17.5	7.5	20.3
		38	10.6	12.9	12.0	14.7	13.6	16.6	14.9	18.1	17.2	21.0
6	8	30	8.8	11.0	10.0	12.5	11.4	14.2	12.4	15.5	14.3	17.9
		45	17.6	15.4	20.1	17.6	22.7	19.9	24.8	21.7	28.7	25.1
8	10	40	13.2	26.4	15.0	30.1	17.0	34.1	18.6	37.2	21.5	43.0
		60	26.4	33.0	30.1	37.6	34.1	42.6	37.2	46.5	43.0	53.8
10	12	50	19.8	44.0	22.6	50.2	25.5	56.8	27.9	62.0	32.3	71.7
		75	39.6	55.0	45.1	62.7	51.1	71.0	55.8	77.6	64.5	89.7
12	14	60	28.6	59.4	32.6	67.7	36.9	76.6	40.3	83.8	46.6	96.8
		90	57.2	66.0	65.2	75.2	73.8	85.1	80.7	93.1	93.2	107.6
16	18	80	49.5	60.5	56.4	69.0	63.9	78.0	69.8	85.3	80.7	98.6
		120	68.2	77.0	77.7	87.8	88.0	99.3	96.2	108.6	111.2	125.5

All above Values are Characteristic Values in concrete with anchors installed at embedment depths, as shown.
 Characteristic Resistances are derived from test data and are valid for products supplied by Bremick Pty Ltd only.
 All testing was undertaken in unreinforced concrete with a minimum sample rate (n) of 10.
 All Shear Values are Single Shear, where shear loads were applied normal to, and towards the edge of the concrete.



Notation, Spacing, Edge Distance & BMT



MASONRY SCREW ANCHORS



HEXAGONAL FLANGE HEAD & HEXAGONAL HEAD ZINC PLATED & GALVANISED

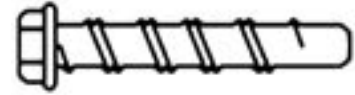
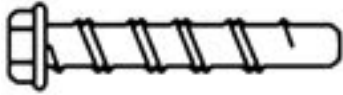


TABLE 3 - PERFORMANCE DATA - CONCRETE (WORKING STRESS DESIGN)

INSTALLATION DETAILS			WORKING STRESS DESIGN - DESIGN CAPACITIES IN CONCRETE (WLN, WLV)									
Hole/ Drill Diameter	Major Thread Diameter	Embedment Depth	25MPa Concrete (fc)		32MPa Concrete (fc)		40MPa Concrete (fc)		50MPa Concrete (fc)		65MPa Concrete (fc)	
			Tension (WLN) KN	Shear (WLV) KN	Tension (WLN) KN	Shear (WLV) KN	Tension (WLN) KN	Shear (WLV) KN	Tension (WLN) KN	Shear (WLV) KN	Tension (WLN) KN	Shear (WLV) KN
(mm)	(mm)	(mm)										
5	7	25	1.5	4.1	1.8	4.7	2.0	5.3	2.2	5.8	2.5	6.8
		38	3.5	4.3	4.0	4.9	4.5	5.5	5.0	6.0	5.7	7.0
6	8	30	2.9	3.7	3.3	4.2	3.8	4.7	4.1	5.2	4.8	6.0
		45	5.9	5.1	6.7	5.9	7.6	6.6	8.3	7.2	9.6	8.4
8	10	40	4.4	8.8	5.0	10.0	5.7	11.4	6.2	12.4	7.2	14.3
		60	8.8	11.0	10.0	12.5	11.4	14.2	12.4	15.5	14.3	17.9
10	12	50	6.6	14.7	7.5	16.7	8.5	18.9	9.3	20.7	10.8	23.9
		75	13.2	18.3	15.0	20.9	17.0	23.7	18.6	25.9	21.5	29.9
12	14	60	9.5	19.8	10.9	22.6	12.3	25.5	13.4	27.9	15.5	32.3
		90	19.1	22.0	21.7	25.1	24.6	28.4	26.9	31.0	31.1	35.9
16	18	80	16.5	20.2	18.8	23.0	21.3	26.0	23.3	28.4	26.9	32.9
		120	22.7	25.7	25.9	29.3	29.3	33.1	32.1	36.2	37.1	41.8

All above Values are Design Values for anchors installed in concrete with anchors installed at characteristic embedment depths, as shown. Working Stress Design Values have been derived with a safety factor of 3, and are valid for products supplied by Bremick Pty Ltd only. All Shear Values are Single Shear.

MASONRY SCREW ANCHORS



HEXAGONAL FLANGE HEAD & HEXAGONAL HEAD ZINC PLATED & GALVANISED

TABLE 4 - PERFORMANCE DATA - CONCRETE (LIMIT STATE DESIGN)

INSTALLATION DETAILS			LIMIT STATE DESIGN - DESIGN CAPACITIES IN CONCRETE (NRD,c, VRD,c)									
Hole/ Drill Diameter (mm)	Major Thread Diameter (mm)	Embedment Depth (mm)	25MPa Concrete (fc)		32MPa Concrete (fc)		40MPa Concrete (fc)		50MPa Concrete (fc)		65MPa Concrete (fc)	
			Tension (NRD,c) KN	Shear (VRD,c) KN	Tension (NRD,c) KN	Shear (VRD,c) KN	Tension (NRD,c) KN	Shear (VRD,c) KN	Tension (NRD,c) KN	Shear (VRD,c) KN	Tension (NRD,c) KN	Shear (VRD,c) KN
5	7	25	2.1	5.7	2.4	6.5	2.8	7.4	3.0	8.1	3.5	9.4
		38	4.9	5.9	5.6	6.8	6.3	7.7	6.9	8.4	7.9	9.7
6	8	30	4.1	5.1	4.6	5.8	5.2	6.5	5.7	7.2	6.6	8.3
		45	8.1	7.1	9.3	8.1	10.5	9.2	11.5	10.0	13.2	11.6
8	10	40	6.1	12.2	6.9	13.9	7.9	15.7	8.6	17.2	9.9	19.9
		60	12.2	15.2	13.9	17.4	15.7	19.6	17.2	21.5	19.9	24.8
10	12	50	9.1	20.3	10.4	23.2	11.8	26.2	12.9	28.6	14.9	33.1
		75	18.3	25.4	20.8	28.9	23.6	32.7	25.8	35.8	29.8	41.4
12	14	60	13.2	27.4	15.0	31.3	17.0	35.4	18.6	38.7	21.5	44.7
		90	26.4	30.5	30.1	34.7	34.1	39.3	37.2	43.0	43.0	49.7
16	18	80	22.8	27.9	26.0	31.8	29.5	36.0	32.2	39.4	37.2	45.5
		120	31.5	35.5	35.9	40.5	40.6	45.8	44.4	50.1	51.3	57.9

All above Values are Design Values in concrete with anchors installed at characteristic embedment depths, as shown, and are valid for products supplied by Bremick Pty Ltd only
Limit State Design Values have been derived in accordance with AS 3600-2001 with an expected coefficient of variance of 20%.
All Shear Values are Single Shear.

TABLE 5 - PERFORMANCE DATA - CONCRETE (RECOMMENDED LOADS)

INSTALLATION DETAILS			RECOMMENDED LOADS IN CONCRETE (Nrec,c/ Vrec,c)									
Hole/ Drill Diameter (mm)	Major Thread Diameter (mm)	Embedment Depth (mm)	25MPa Concrete (fc)		32MPa Concrete (fc)		40MPa Concrete (fc)		50MPa Concrete (fc)		65MPa Concrete (fc)	
			Tension (Nrec,c) KN	Shear (Vrec,c) KN	Tension (Nrec,c) KN	Shear (Vrec,c) KN	Tension (Nrec,c) KN	Shear (Vrec,c) KN	Tension (Nrec,c) KN	Shear (Vrec,c) KN	Tension (Nrec,c) KN	Shear (Vrec,c) KN
5	7	25	1.2	3.1	1.3	3.5	1.5	4.0	1.6	4.4	1.9	5.1
		38	2.6	3.2	3.0	3.7	3.4	4.2	3.7	4.5	4.3	5.2
6	8	30	2.2	2.8	2.5	3.1	2.8	3.5	3.1	3.9	3.6	4.5
		45	4.4	3.9	5.0	4.4	5.7	5.0	6.2	5.4	7.2	6.3
8	10	40	3.3	6.6	3.8	7.5	4.3	8.5	4.7	9.3	5.4	10.8
		60	6.6	8.3	7.5	9.4	8.5	10.6	9.3	11.6	10.8	13.4
10	12	50	5.0	11.0	5.6	12.5	6.4	14.2	7.0	15.5	8.1	17.9
		75	9.9	13.8	11.3	15.7	12.8	17.7	14.0	19.4	16.1	22.4
12	14	60	7.2	14.9	8.2	16.9	9.2	19.2	10.1	20.9	11.7	24.2
		90	14.3	16.5	16.3	18.8	18.4	21.3	20.2	23.3	23.3	26.9
16	18	80	12.4	15.1	14.1	17.2	16.0	19.5	17.4	21.3	20.2	24.7
		120	17.1	19.3	19.4	21.9	22.0	24.8	24.0	27.1	27.8	31.4

All above Values are Design Values for anchors installed in concrete with anchors installed at characteristic embedment depths, as shown. Working Stress Design Values have been derived with a safety factor of 3, and are valid for products supplied by Bremick Pty Ltd only.
All Shear Values are Single Shear.



MASONRY SCREW ANCHORS

DESIGN DATA - REDUCTION FACTORS

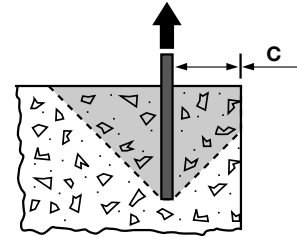


TABLE 6 - ϕ_{cN} - EDGE REDUCTION FACTORS - TENSION ONLY

Anchor Size d, (mm)	EDGE DISTANCE, c (mm)														
	20	25	30	35	40	45	50	60	70	80	90	100	110	120	130
5	0.56	0.58	0.59	0.66	0.73	0.80	0.86	1.00							
6	0.56	0.58	0.59	0.66	0.73	0.80	0.86	1.00							
8		0.65	0.72	0.79	0.86	0.90	0.93	1.00							
10		0.32	0.39	0.46	0.52	0.58	0.64	0.77	0.90	1.00					
12			0.52	0.56	0.60	0.65	0.69	0.77	0.85	0.92	1.00				
16						0.39	0.46	0.52	0.58	0.64	0.77	0.90	1.00		

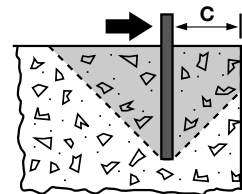
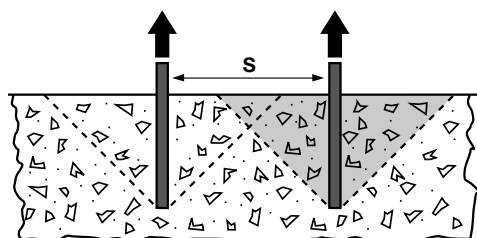


TABLE 7 - ϕ_{cV} - EDGE REDUCTION FACTORS - SHEAR ONLY

Anchor Size d, (mm)	EDGE DISTANCE, c (mm)														
	20	25	30	35	40	45	50	60	70	80	90	100	120	140	160
5	0.35	0.44	0.52	0.61	0.70	0.74	0.78	0.85	0.92	1.00					
6	0.35	0.44	0.52	0.61	0.70	0.74	0.78	0.85	0.92	1.00					
8		0.25	0.28	0.30	0.32	0.36	0.40	0.48	0.65	0.83	1.00				
10			0.20	0.23	0.25	0.28	0.31	0.33	0.39	0.51	0.63	0.76	1.00		
12				0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.36	0.48	0.74	1.00	
16										0.17	0.22	0.32	0.48	0.74	1.00

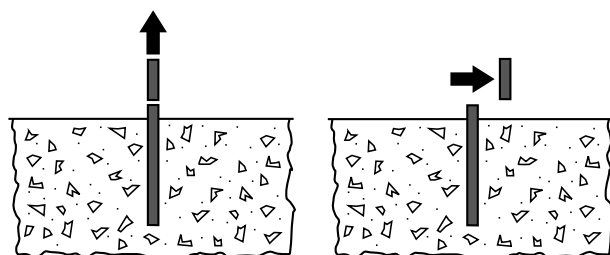
MASONRY SCREW ANCHORS



DESIGN DATA - REDUCTION FACTORS

TABLE 8 - ϕ_{sN} , ϕ_{sV} - ANCHOR SPACING REDUCTION FACTORS - TENSION AND SHEAR

Anchor Size d, (mm)	ANCHOR SPACING, s (mm) Distance between Anchors - Centre to centre															
	30 (mm)	35 (mm)	40 (mm)	45 (mm)	50 (mm)	60 (mm)	70 (mm)	80 (mm)	90 (mm)	100 (mm)	120 (mm)	140 (mm)	170 (mm)	200 (mm)	300 (mm)	
5	0.52	0.56	0.59	0.63	0.66	0.73	0.80	0.86	0.93	1.00						
6	0.52	0.56	0.59	0.63	0.66	0.73	0.80	0.86	0.93	1.00						
8			0.78	0.80	0.81	0.84	0.87	0.89	0.92	0.95	1.00					
10						0.69	0.70	0.70	0.71	0.72	0.73	0.84	1.00			
12						0.76	0.77	0.77	0.78	0.78	0.79	0.85	0.92	1.00		
16							0.69	0.70	0.70	0.71	0.72	0.73	0.84	1.00		



STEEL CAPACITIES GALVANISED & ZINC PLATED PROPERTY CLASS 8.8

TABLE 10

DIMENSIONS		CHARACTERISTIC VALUES Characteristic Resistance			DESIGN VALUES					
Hole/Drill Diameter d (mm)	Thread Diameter D (mm)	Tensile	Yield	Shear	Working Stress Design		Limit State Design AS3600		Recommended Loads	
		$N_{Rk,s}$ KN	$N_{Ryk,s}$ KN	$V_{Rk,s}$ KN	Tensile $W_{L,N,s}$ KN	Shear $W_{L,V,s}$ KN	Tensile $N_{RD,u,s}$ KN	Shear $V_{RD,s}$ KN	Tensile $N_{rec,s}$ KN	Shear $V_{rec,s}$ KN
5	7	16.08	12.86	8.25	5.36	2.75	8.04	4.12	4.02	2.06
6	8	29.28	23.42	12.22	9.76	4.07	14.64	6.11	7.32	3.06
8	10	46.40	37.12	22.51	15.47	7.50	23.20	11.26	11.60	5.63
10	12	67.44	53.95	35.92	22.48	11.97	33.72	17.96	16.86	8.98
12	14	88.23	70.58	47.16	29.41	15.72	44.12	23.58	22.06	11.79
16	18	155.58	124.46	87.69	51.86	29.23	77.79	43.84	38.89	21.92

All above Values are Mechanical properties, steel and are only applicable to products supplied by Bremick Pty Ltd.
Characteristic Values are Ultimate Values derived in accordance with Australian Standard 4291.1-2000 / ISO 898.1 - 1999.
All Shear Values are Single Shear.

SUMMARY OF TRADING TERMS

SUMMARY OF TRADING TERMS

FIS Delivery

Our company does not pass on the cost of normal freight to customers, providing orders are despatched by our nominated carriers.

Payment/Credits

Our trading terms are 30 days from statement date. Consignment stock is not available.

Returns for credit are subject to prior approval and allocation of an acceptance number, without which our warehouse is directed not to receive them. Receipt of goods in this way does not imply agreement to issue a credit note.

Approval of credit can only be considered if the request for credit in writing is received (within 14 days of receipt of goods) showing the credit acceptance number, original invoice number, date and reason for return.

No freight charges for return of goods shall be accepted unless authorised by Bremick.

Products which have been reworked, specially manufactured or zinc plated cannot be returned.

List Prices

All prices are Industrial List, current at the time of printing and adopted by leading suppliers and distributors. Relevant trade discounts apply. Tax is not included. All care but no responsibility is taken.

Fixed Term Pricing

Some end users request firm (eg, 12 month contract) pricing arrangements. We receive no guarantees in relation to our costs. Increases usually occur without advance notice, resulting from currency fluctuation and in reaction to raw material costs and worldwide demand. Hence we cannot make fixed longterm price undertakings to distributors and do not recommend they do so to end users. However, we can advise anticipated price trends resulting from recent changes in our own costs.

We are unable to commit to a fixed period of prior advice of upcoming price changes (detailed written explanation available on request) but have always worked closely with specialist merchant distributors.

Romalpa Clause

1. Notwithstanding anything in these Conditions of Sale contained, expressed or implied or incorporated herein by reference and notwithstanding any rule of law or equity to the contrary and notwithstanding any course of dealing between the Company and the Purchaser, property in goods shall not pass from the Company to the Purchaser unless and until –

- (a) Such goods have been delivered in accordance with these conditions and
- (b) The Purchaser shall have made payment in full for such goods ("the goods") and
- (c) The Purchaser shall have fully discharged all other indebtedness and other liability (if any) of the Purchaser to the Company on whatsoever account. The Purchaser shall, notwithstanding the foregoing, be empowered as the agent of the Company to sell the goods and shall hold the proceeds of such sale upon trust to apply the same, firstly in payment or otherwise discharging the price payable to the Company for such goods and any other costs of carriage or insurance or other costs or expenses borne by the Company in respect thereof; secondly, in paying or otherwise discharging all the other indebtedness or liability (if any) of the Purchaser to the Company on whatsoever account, which is outstanding at the date that the Purchaser receives such proceeds of sale; thirdly, as to any balance, for the Purchaser's own use and benefit. Pending the passing of title to the goods the Company may require the Purchaser to mark the goods as being the property of the Company.



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- Bremick Pty Ltd takes no responsibility at all for the use or misuse of those products in any way.

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