

Hi-tech laminated wear blocks are wide and varied, ranging from specific wear protection on buckets or chute linings(chute liner) , rock box edges, and undercarrige and etc.

Some of our products and services:

- Chocky bar, wear button
- Roll bars, wear blocks
- Wear blocks
- Fast service and timely delivery



Laminated Wear Blocks are unique wear resistant materials in that they combine very high wear resistant qualities of a high chrome cast iron (ASTM A532 15/3CrMo, 700 BHN – 63 HRC) with a weldable & high impact toughness mild steel through a metallurgical bond to create a product that is exceptionally resistant to impact and abrasion while retaining.

A. Chemical

C	Cr	Mn	Mo	Cu	P	Si	S	B, V, Nb
2.5-3.5	15-18	0.5-1.0	0.5-2.5	0.5-1.0	0.02max	0.5-1.0	0.02max	0.1-0.5

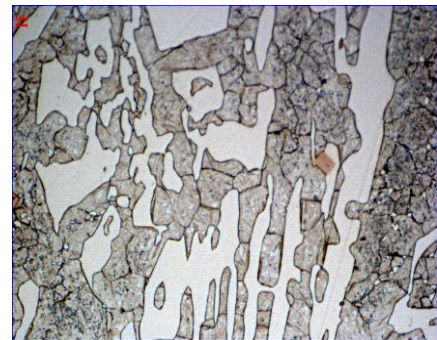
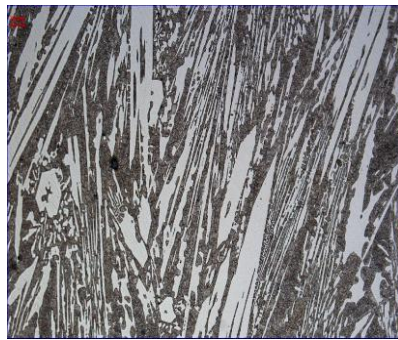
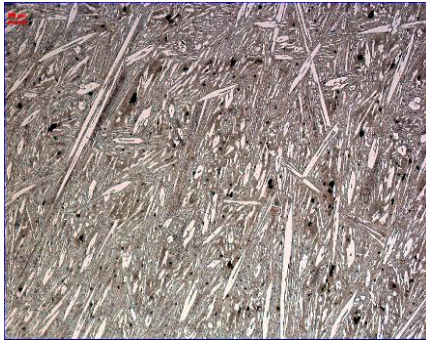
B. Mechanical Property:

- 1) Tensile Strength 630Mpa Min.
- 2) Shearing Strength 250Mpa Min.
- 3) Hardness 63 HRC / 700BHN Min.

C. Micro-structure

Carbide + Martensite + Retained Austenite

The Carbide Content is about 35%



D. Application

Wear Pads
Jaw Crushers
Chute Linings
Ore Chutes
Crusher Chutes
Tripper Chutes
Flop Gates
Bucket Liners
Grizzly Bars

Lip Protectors
Screen Plates
Bucket Liners
Floor Liners
Loaders
Wear Aprons
Knife Inserts
Crusher Bars
Run Out Rolls

Dump Hoppers
Crusher Hoppers
Vibratory Feeders
Rock Box Edges
Surge Bin Liners
Rock Box Liners
Skip Liners
Trough Liners
Draglines

Concentration Bins
Buckets
Transition Pieces
Coal Transfer Chutes
Apron Feeder Liners
Loading Pocket Liners
Splitter/Divider Plates
Hammer Mill Inserts
Rolling Mill Guides

Hopper Edges
Shovels
Arm & Hub Liners
Bolt Protectors
Truck Bed Liners
Impact Wall Liners
Distribution Plates
Bucket Wheel Protection
Conveyor Transfer Points



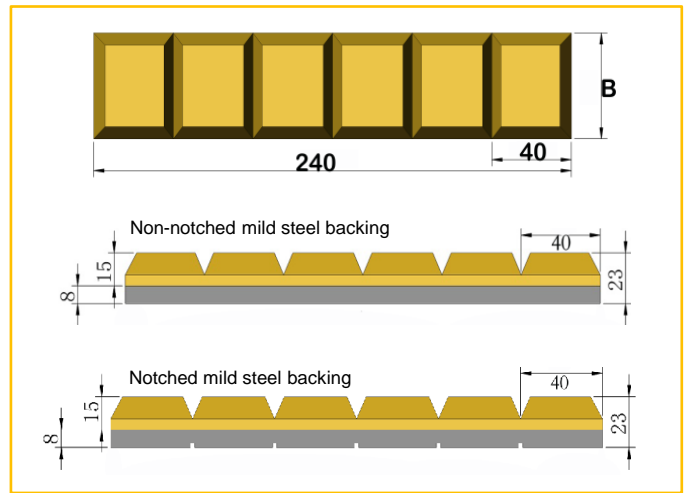
Chocky Bars

The unique, formable design of Hyster-Wear chocky bars are available in various lengths, grades and sizes and can also be customized as per the clients specific need. Applications for Chocky Bars are wide and varied, ranging from specific wear protection on buckets for loaders, excavators and draglines machines, or for weld-on hammer tips for the re-cycling industry, or chute linings and rock box edges. They are easy to use and install. They can be bent, cut and formed to suit different surfaces.

The standard is 23mm, length is 240mm, width could be from 25mm from 150mm. We can also produce according to your special requests

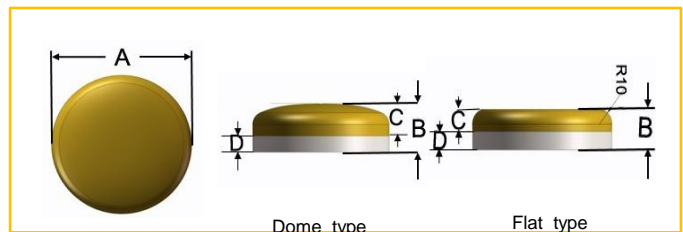


Item No.	Size (mm)	Dimension(mm)				N.W. (kg)
		A	B	C	D	
CB 25	240x25x23	240	25	15	23	0.9
CB 40	240x40x23	240	40	15	23	1.5
CB 50	240x50x23	240	50	15	23	1.9
CB 65	240x65x23	240	65	15	23	2.5
CB 80	240x80x23	240	80	15	23	3.2
CB 90	240x90x23	240	90	15	23	3.5
CB 100	240x100x23	240	100	15	23	3.9
CB 130	240x130x23	240	130	15	23	5.4
CB 150	240x150x23	240	150	15	23	6.0



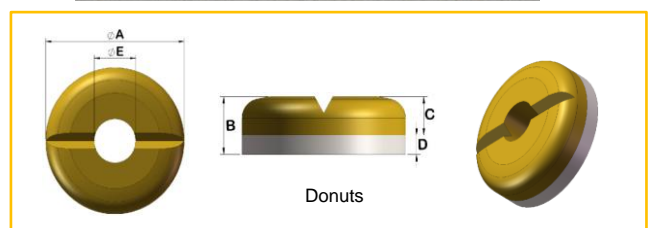
Wear Buttons

Item No.	Size (mm)	Dimension(mm)				N.W. (kg)
		A	B	C	D	
WB 60	ø60x27	60	27	17	10	0.7
WB 75	ø75x27	75	27	17	10	0.8
WB 90	ø90x27	90	27	17	10	1.4
WB 110	ø110x32	110	32	20	12	2.1
WB 115	ø115x32	115	32	20	12	2.5
WB 150	ø150x41	150	41	25	16	5.7



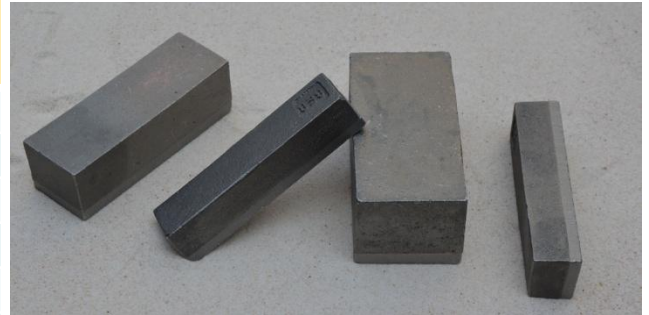
Wear Donuts

Item No.	Size (mm)	Dimension(mm)					N.W. (kg)
		A	B	C	D	E	
WD 75	ø75x25	75	25	17	8	25	0.7
WD 100A	ø100x25	100	25	17	8	50	1.0
WD 100B	ø100x32	100	32	24	8	70	1.0
WD 130	ø130x23	130	23	15	8	80	1.3
WD 148	ø148x35	148	35	25	10	108	2.2



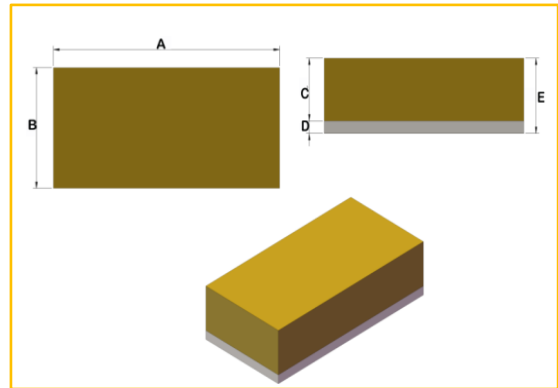
Standard Wear Bars

Item No.	Size (mm)	Dimension(mm)					N.W. (kg)
		A	B	C	D	E	
DLP 919	200x25x25	200	25	15	10	25	1.0
DLP 1191	300x25x25	300	25	15	10	25	1.5
DLP 295	153x38x33	153	38	25	8	33	1.5
DLP 4	300x38x33	300	38	25	8	33	3.0
DLP 271	203x50x20	203	50	12	8	20	1.6
DLP 270	254x50x20	254	50	12	8	20	2.0
DLP 508	190x50x30	190	50	20	10	30	2.2
DLP 337	127x50x50	127	50	38	12	50	2.4
DLP 1101	150x50x50	150	50	40	10	50	2.9
DLP 369	210x50x50	210	50	38	12	50	4.1
DLP 125	230x50x50	230	50	38	12	50	4.5
DLP 453	294x50x50	294	50	40	10	50	5.8
DLP 201A	432x50x50	432	50	38	12	50	8.5
DLP 2230	600x50x50	600	50	38	12	50	11.8
DLP 965	250x60x20	250	60	12	8	20	2.4
DLP 184	150x75x39	150	75	29	10	39	3.4
DLP 528	150x75x50	150	75	40	10	50	4.4
DLP 619	150x75x60	150	75	50	10	60	5.3
DLP 392/20	241x100x58	241	100	38	20	58	11.0



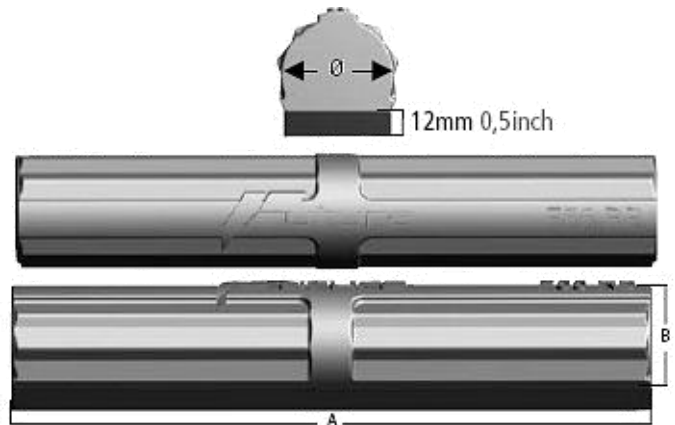
- Better wear resistance performance
- Durable
- Fine polish
- Cost effective
- Excellent quality

Note: Studs Extra
If arc studs are required, please stipulate the size and position required.



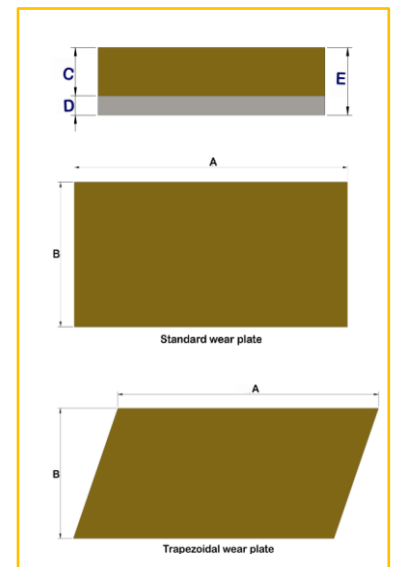
Roll Bars

Item No.	Size (mm)	Dimension(mm)			N.W. (kg)
		A	B	φ	
RB 35	229x35	229	28	35	1.9
RB 55	305x55	305	42	55	5.7
RB 80	305x80	305	59	80	10.8



Wear Plates-Standard type/Trapezoidal type

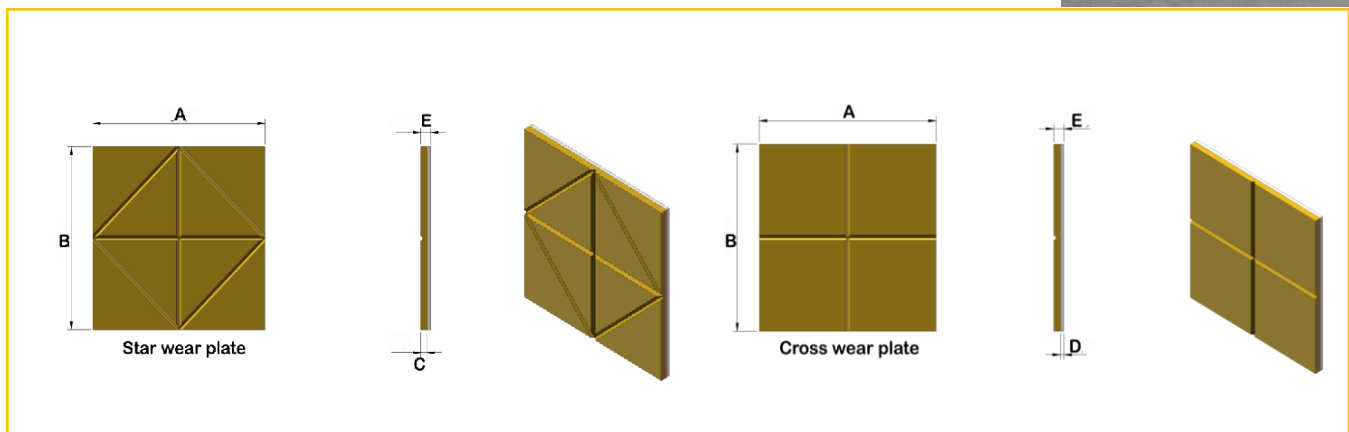
Type	Item No.	Size (mm)	Dimension(mm)					N.W. (kg)
			A	B	C	D	E	
Standard	WP 200-18	200x200x18	200	200	12	6	18	5.7
	WP 200-20	200x200x20	200	200	14	6	20	6.3
	WP 300A	300x150x20	300	150	14	6	20	7.0
	WP 250	250x250x20	250	250	14	6	20	9.8
	WP 300C	300x300x18	300	300	12	6	18	12.7
	WP 300B	300x300x20	300	300	14	6	20	14.1
	WP 305	305x150x24	305	150	18	6	24	8.6
	WP 300C	300x150x25	300	150	19	6	25	8.8
	WP 300D	300x300x25	300	300	19	6	25	17.7
	WP 445	445x445x25	445	445	19	6	25	38.9
	WP 301	301x200x28	301	200	18	10	28	13.2
	WP 294A	294x144x30	294	144	20	10	30	10.2
	WP 294B	294x294x30	294	294	20	10	30	20.4
	WP 300E	300x150x30	300	150	20	10	30	10.6
	WP 300F	300x300x30	300	300	20	10	30	21.2
	WP 372	372x372x28	372	372	20	8	28	30.4
	WP 300G	300x300x50	300	300	40	10	50	35.3
	WP 300H	300x148x50	300	148	40	10	50	17.4
Trapezoidal	WPt 190	190x212.5x25	190	212.5	17	8	25	7.9
	WPt 241	241x290.5x30	241	290.5	22	8	30	19.5



Note: Studs Extra
If arc studs are required, please stipulate the size and position required.

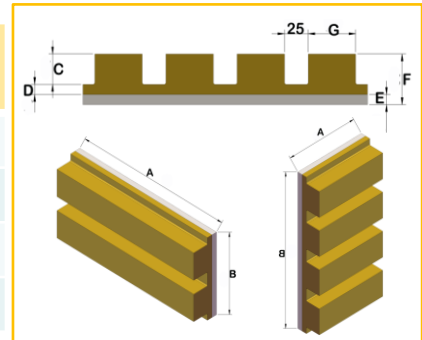
Notched Wear Plates - 3mm deep notch

Type	Item No.	Size (mm)	Dimension(mm)					N.W. (kg)
			A	B	C	D	E	
Star	WPs 400	400x400x23	400	400	15	8	23	28.7
Cross	WPc 200	200x200x12	200	200	6	6	12	3.8
	WPc 300	300x300x12	300	300	6	6	12	8.5



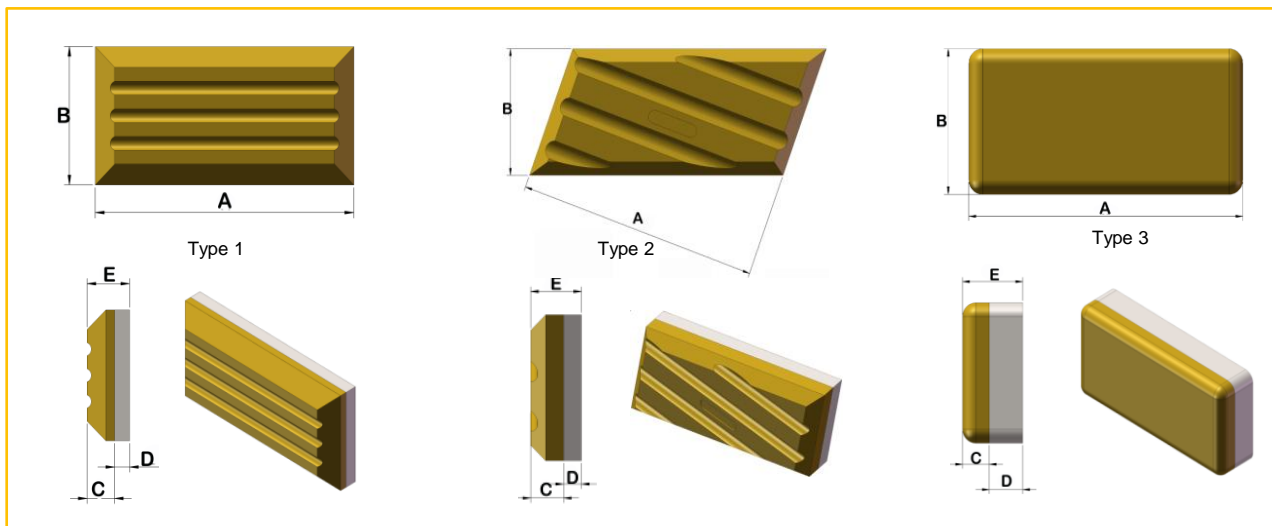
Rockbox Liners

Item No.	Size (mm)	Dimension(mm)							N.W. (kg)
		A	B	C	D	E	F	G	
RL 300A	300x300x50	300	300	30	10	10	50	50	28.7
RL 300B	300x148x50	300	148	30	10	10	50	50	13.8
RL 148A	148x452x50	148	452	30	10	10	50	50	21.1
RL 148B	148x300x50	148	300	30	10	10	50	50	14.0



Skid Wear Bars

Type	Item No.	Size (mm)	Dimension(mm)					N.W. (kg)
			A	B	C	D	E	
1	SB1-214	214x101x34	214	101	22	12	34	5.1
	SB1-302	302x101x34	302	101	22	12	34	7.3
	SB1-154	154x101x34	154	101	22	12	34	3.7
	SB1-279	279x75x34	297	75	22	12	34	6.1
2	SB2-214	214x101x34	214	101	22	12	34	5.9
	SB2-214R	214x101x34	214	101	22	12	34	5.9
	SB2-302	302x101x34	302	101	22	12	34	8.4
	SB2-302R	302x75x34	302	75	22	12	34	8.4
	SB2-154	154x101x34	154	101	22	12	34	4.2
	SB2-154R	154x75x34	154	75	22	12	34	4.2
3	SB3-250A	250x150x45	250	150	20	25	45	13.1
	SB3-200	200x150x45	200	150	20	25	45	10.5
	SB3-250B	250x250x45	250	250	20	25	45	21.9



Recommended Cutting Instruction for Hi-tech-Wear Blocks

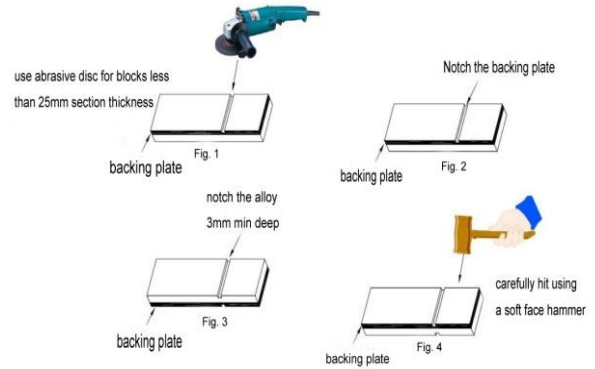
High pressure water jet cutting is preferred cutting method for Hi-tech-wear blocks. Thermal cutting using an oxyacetylene torch, Arc-air or plasma is NOT recommended due to high localized heat penetration and high risk of cracking and delamination.

For Hi-tech Wear Blocks no greater than 25mm section thickness, cutting by abrasive disc is an accepted practice (Fig 1)

Caution: Extreme care must be taken when cutting to minimize local pre-heating or cracks and delamination may occur.

Alternatively, Wear Blocks smaller than 25mm section thickness can be cut following the following procedure:

- Secure the piece to be cut in a vice or clamp
- Notch the backing plate as shown in Fig 2
- Notch the white iron a minimum of 3mm deep opposite the notch in the backing plate, as pre Fig 3
- Wrap the piece with a rag and carefully hit using a soft face hammer as shown in Fig4. The piece should break cleanly at the notch.



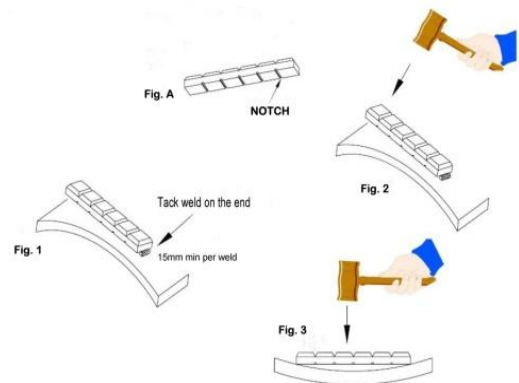
Recommended Forming Procedure for Hi-tech-Wear Blocks

This practice is suitable for chocky bars only

For severe curves with radius of less than 305mm, or inside curves, it is advisable to notch the mild steel backing plate opposite the “V” to assist forming.

It is normal the chocky block may crack during bending.

1. Clean the surface to which chocky block will be welded
2. Tack weld one end of the chocky block (as per the welding procedure) by 15mm minimum length per weld.
 - a. Outside curves: Hammer down the unwelded end with a soft faced hammer to bend bar to match mating radius.
 - b. Inside curves: Starting in the centre strike bar with a soft face hammer to bend bar to match mating radius.
3. Stitch weld as per the welding procedure.



Recommended Welding Procedure for Hi-tech Wear Blocks

Please Read All Procedures Completely

Hi-tech recommends you always use a soft-face hammer and ANSI-approved (Z87.1) eye protection during cutting and bending procedures.

1. Ensure that the surface to which the Hyster-wear Blocks will be attached to is as flat as possible and the area to be welded is clean.
2. Clamp and tack weld Hyster-wear Blocks into position.
3. Stitch weld, laying 50mm max length on each run, alternating ends or sides to minimize heat penetration. Do NOT deposit weld within 2mm from the joint between alloy and steel backing plate
4. **DO NOT WELD CONTINUOUSLY**-Continuous welding may cause warpage, delaminating and cracking. Use thermal crayons to check temperature. Maximum allowed 200°C.
5. If a complete peripheral weld is required, use stitch weld method.
6. **WELDING RODS**- Hyster recommends low hydrogen weld rods or gas covered cored wire Gas shielded solid MIG wire – 1.2mm diameter max

- Flux cored wire -1.6mm diameter max to ASTM/AWS A5.18 classification ER705-6
- Low hydrogen electrode -3.25mm diameter max to ASTM/AWS A5.1 classification E7016-1H8 or E7018-1H4

WELDING PROCEDURE OVERVIEW

1. Read procedures completely
2. Tack weld into position
3. Stitch weld with max. length (50mm) each run
4. Maintain 2mm gap between weld and joint line

****CAUTION: TOO MUCH HEAT PENETRATION MAY CAUSE CRACKING AND SEPARATION.****

