

## PAUT AND TOFD CALIBRATION BLOCK

**ASTM E2491 PHASED ARRAY ASSESSMENT BLOCK****PAUT IIW ISO 19675 CALIBRATION BLOCK****PHASED ARRAY NAVSHIPS TEST BLOCK****PHASED ARRAY TYPE A BLOCK (IIW-TYPE)****PHASED ARRAY CALIBRATION STANDARD BLOCKS****CONTOURED BOILER TUBE CALIBRATION BLOCK****CONTOURED PHASED ARRAY CALIBRATION BLOCK****PHASED ARRAY NOTCH CALIBRATION BLOCKS****AWS TYPE PHASED ARRAY CALIBRATION BLOCKS****PHASED ARRAY ASME TYPE PIPING CALIBRATION BLOCK**

## EDDY CURRENT CALIBRATION BLOCK

**12 HOLE 15 NOTCH GENERAL PURPOSE EDDY CURRENT BOLT HOLE STANDARD BLOCK**



**3 NOTCH EDDY CURRENT STANDARD BLOCK**



**DAC GSET REFERENCE STANDARD BLOCK**



**MIL-STD-271F REFERENCE BLOCK**



**USAF EDDY CURRENT STANDARD BLOCK**

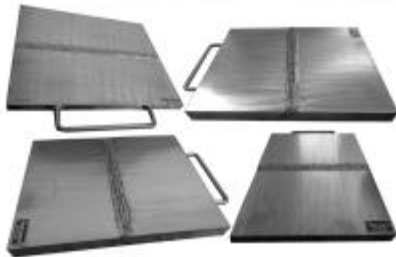


**NAVY EDDY CURRENT STANDARD BLOCK**



## NDE FLAWED SPECIMENS

**ISO-9712 NDT TRAINING ULTRASONIC PLATE FLAW SPECIMENS PCN CATEGORY-3.1.2,3.1.4**



**AWS CWI WELDING TRAINING KIT**



**MAGNETIC FLUX LEAKAGE MFL FLOOR INSPECTION REFERENCE STANDARD**



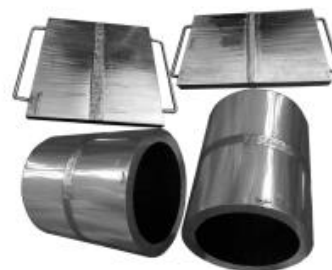
**SURFACE EDDY CURRENT WELD FLAW TEST SPECIMENS**



**STANDARD BOILER TUBES FLAW SPECIMEN KIT AS PER BS CODE**



**PAUT AND TOFD FLAWED SPECIMENS-PHASED ARRAY ULTRASONIC TESTING**



## NDE FLAWED SPECIMENS

### ISO-9712 NDT TRAINING AND EXAMINATION PENETRANT TESTING FLAWED SPECIMENS



### ISO-9712 NDT TRAINING AND EXAMINATION MAGNETIC PARTICLE FLAWED SPECIMENS MT



### ISO-9712 NDT TRAINING AND EXAMINATION VISUAL TESTING FLAW SPECIMENS VT



### ISO-9712 NDT TRAINING AND EXAMINATION RADIOGRAPHY TESTING FLAW SPECIMENS RT



### ASNT SNT-TC-1A NDT TRAINING FLAWED SPECIMENS KIT



### ISO-9712 NDT TRAINING PIPE WELD FLAWED SPECIMENS PCN CATEGORY-3.2.1,3.2.5 & 3.2.7



## NDE FLAWED SPECIMENS

**ISO-9712 NDT TRAINING T JOINT FLAW SPECIMENS  
PCN CATEGORY-3.4.2**



**ISO-9712 NDT TRAINING TUBULAR NODES FLAW  
SPECIMENS PCN CATEGORY-3.9**



**ISO-9712 NDT TRAINING NOZZLE FLAWED  
SPECIMENS PCN CATEGORY-3.4.1**



**CORROSION EROSION AND PITTING SPECIMENS**



**CASTING AND FORGING FLAW SPECIMENS**



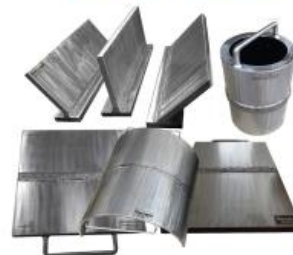
**ASME APPENDIX VIII KIT SPECIMEN**



**NDT ASME SECTION XI, APPENDIX VII KIT SPECIMEN**



**API RP AND API UT FLAW SPECIMEN  
QUALIFICATION KIT**



# “INTERNATIONAL”BLOCKS

## Conventional UT blocks

### BLOCK V1

Calibration blocks certified for ISO 2400. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

**Ref :**

- CAL1A: carbon steel
- CAL1I: stainless steel
- CAL1AL: aluminium

The block can be supplied with its rotative stand.



### BLOCK V2

Calibration blocks certified for ISO 2400. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

**Ref :**

- CAL2A12: Carbon steel, Thickness 12 mm.
- CAL2A20: Carbon steel, Thickness 20 mm.
- CAL2AL12: Aluminium, Thickness 12 mm.
- CAL2AL20: Aluminium, Thickness 20 mm
- CAL2I12: Stainless steel, Thickness 12 mm.
- CAL2I20 : Stainless steel, Thickness 20 mm.



## BLOCK V3

Calibration block including 3 radii to calibrate shear and longitudinal wave probes. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

Ref:

- CAL3 A: V3 in carbon steel



## AC BLOCKS

### Conventional UT blocks in compliance with US 319-21

Calibration block in conformity with the recommendation IS.US-319.21, document A, Annex C. including a side-drilled hole and a 2x2 mm notch. Every block is supplied with its own material and metrological certificate. A US certificate can also be provided upon request.

AC 0 BLOCK



REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS LxIxe
AC0AØ1.5	1.5	STEEL	250x40x15 mm
AC0AØ2	2		
AC0AØ3	3		
AC0IØ1.5	1.5	STAINLESS STEEL	
AC0IØ2	2		
AC2IØ3	3		
AC0ALØ1.5	1.5	ALUMINIUM	
AC0ALØ2	2		
AC0ALØ3	3		

### AC 1 BLOCK



REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS Lxlxe
AC1AØ1.5	1.5	STEEL	250x40x25 mm
AC1AØ2	2		
AC1AØ3	3		
AC1IØ1.5	1.5	STAINLESS STEEL	
AC1IØ2	2		
AC1IØ3	3		
AC1ALØ1.5	1.5	ALUMINIUM	
AC1ALØ2	2		
AC1ALØ3	3		

### AC 2 BLOCK



REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS Lxlxe
AC2AØ1.5	1.5	STEEL	300x40x50 mm
AC2AØ2	2		
AC2AØ3	3		
AC2IØ1.5	1.5	STAINLESS STEEL	
AC2IØ2	2		
AC2IØ3	3		
AC2ALØ1.5	1.5	ALUMINIUM	
AC2ALØ2	2		
AC2ALØ3	3		

### AC 3 BLOCK



REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS Lxlxe
AC3AØ1.5	1.5	STEEL	325x50x100 mm
AC3AØ2	2		
AC3AØ3	3		
AC3IØ1.5	1.5	STAINLESS STEEL	
AC3IØ2	2		
AC3IØ3	3		
AC3ALØ1.5	1.5	ALUMINIUM	
AC3ALØ2	2		
AC3ALØ3	3		



## AC 4 BLOCK



REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS Lxlxe
AC4AØ1.5	1.5	STEEL	425x55x150 mm
AC4AØ2	2		
AC4AØ3	3		
AC4IØ1.5	1.5	STAINLESS STEEL	
AC4IØ2	2		
AC4IØ3	3		
AC4ALØ1.5	1.5	ALUMINIUM	
AC4ALØ2	2		
AC4ALØ3	3		

## AC 5 BLOCK



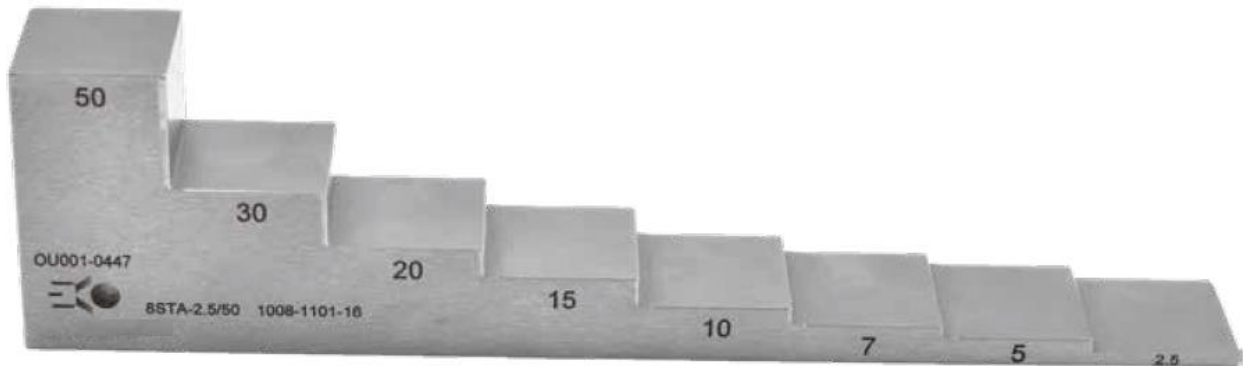
REFERENCE	SIDE DRILL HOLE DIAMETER mm	MATERIAL	DIMENSIONS Lxlxe
AC5AØ1.5	1.5	STEEL	525x60x200 mm
AC5AØ2	2		
AC5AØ3	3		
AC5IØ1.5	1.5	STAINLESS STEEL	
AC5IØ2	2		
AC5IØ3	3		
AC5ALØ1.5	1.5	ALUMINIUM	
AC5ALØ2	2		
AC5ALØ3	3		

# STEP BLOCKS

## Step blocks for thickness gage calibration

Standard calibration blocks used for thickness gage calibration. Made out of with high quality selected raw material, entirely manufactured in France. Each block is supplied with its own metrological certificate, including 5 different velocity check per step.

REFERENCE	NUMBER OF STEPS	MATERIAL	THICKNESSES mm
5STA-2/10	5	Steel	2 to 10
5STI-2/10		Stainless steel	
5STA-5/25		Steel	5 to 25
5STI-5/25		Stainless steel	
7STA-1/10	7	Steel	1 to 10
7STI-1/10		Stainless steel	
7STA-2/25		Steel	2 to 25
7STI-2/25		Stainless steel	
7STA-5/50		Steel	5 to 50
7STI-5/50		Stainless steel	
8STA-2.5/50	8	Steel	2.5 to 50
8STI-2.5/50		Stainless steel	
8STA-6/65		Steel	6 to 65
8STI-6/65		Stainless steel	
10STA-1/10	10	Steel	1 to 10
10STI-1/10		Stainless steel	
10STA-2.5/25		Steel	2.5 to 25
10STI-2.5/25		Stainless steel	

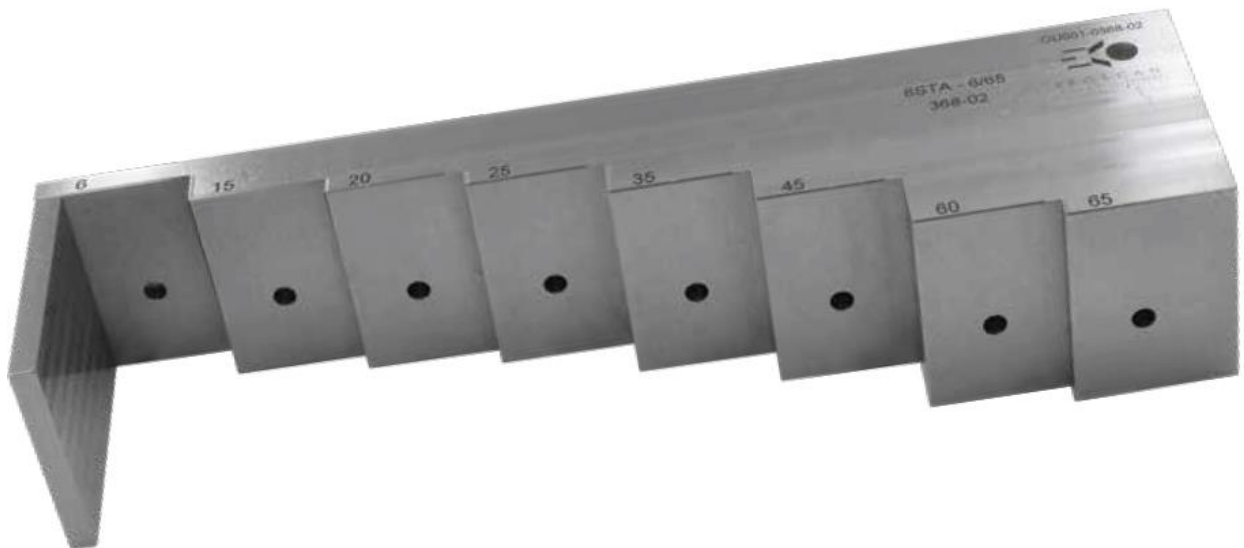


# STEP BLOCKS EN 10160

## Conventional UT blocks in compliance with EN10160

Standard calibration blocks in conformity with the recommendations of the EN 10160 standard for ultrasonic inspection of flat materials. Each block is supplied with its own certificate of compliance. Engraving can also be supplied upon request.

REFERENCE	FLAT BOTTOM HOLE DIAMETER mm	NUMBER OF STEPS	MATERIAL	THICKNESSES mm
8STFPA-6/65-1.5	1,5	8	Steel	6 to 65
8STFPI-6/65-1.5			Stainless steel	
8STFPA-6/65-2	2		Steel	
8STFPI-6/65-2			Stainless steel	
8STFPA-6/65-3	3		Steel	
8STFPI-6/65-3			Stainless steel	
8STFPA-6/65-5	5		Steel	
8STFPI-6/65-5			Stainless steel	
8STFPA-6/65-6	6		Steel	
8STFPI-6/65-6			Stainless steel	
8STFPA-6/65-8	8		Steel	
8STFPI-6/65-8			Stainless steel	
8STFPA-6/65-11	11		Steel	
8STFPI-6/65-11			Stainless steel	



# ASME BLOCKS

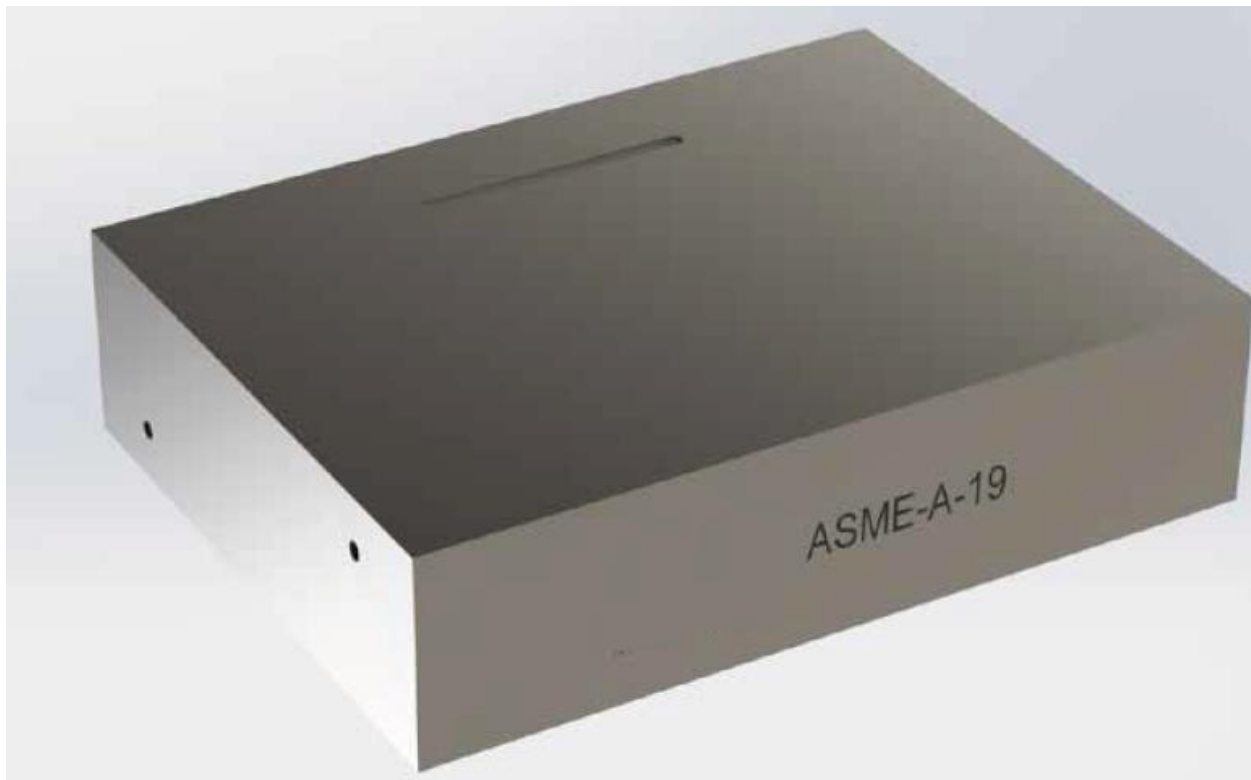
## Conventional UT blocks in compliance with ASME V and VIII

Standard calibration blocks in conformity with the recommendations of ASME V and VIII standards for ultrasonic welding inspection. Each block is supplied with its own certificate of compliance. Engraving can also be supplied upon request.

### Specification :

ASME Sec V Art. 4 Fig. T-434.2.1

REFERENCE	SIDE DRILLED HOLE DIAMETER mm	NOTCH DEPTH mm	THICKNESS mm
ASME-A-19	2,5	0,38	19
ASME-I-19	2,5	0,38	19
ASME-A-38	3	0,76	38
ASME-I-38	3	0,76	38
ASME-A-75	5	1,5	75
ASME-I-75	5	1,5	75



Santricals Services India Private Limited|4-100-1 Rambalaji Bhavan |Madurai – Dindigul Bypass Road | T. Andipatti, T. Vadipatti | Madurai- 625 218 | Contact: +91 9940870870; +91 9892501239

Website: [www.sdrgroups.com](http://www.sdrgroups.com); email:[support@sdrgroups.com](mailto:support@sdrgroups.com)

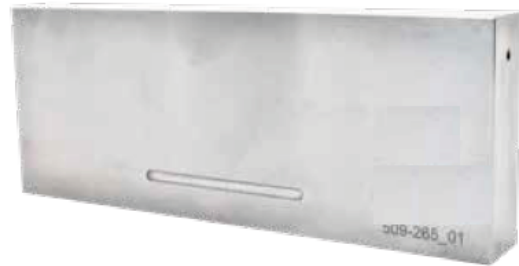
## ASME 19

### Description

Calibration block in carbon steel thickness 3/4" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EDM notches in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

#### Ref:

- ASME-A-19 : Carbon steel
- ASME-I-19 : Stainless steel 304L



## ASME 38

### Description

Calibration block in carbon steel thickness 1,5" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EE in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

#### Ref:

- ASME-A-38 : Carbon steel
- ASME-I-38 : Stainless steel 304L



## ASME 75

### Description

Calibration block in carbon steel thickness 3" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EE in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

#### Ref:

- ASME-A-75 : Carbon steel
- ASME-I-75 : Stainless steel 304L



## PACS BLOCK

### Description

Used to check refracted angles and exit points. Allows the calibration of sensitivity and DAC/TCG curves for thicknesses of up to 50 mm.

For the naval industry.

### Options

- Carbon steel with anti-corrosion coating
- Stainless steel 304L

### Ref:

- CALPACSA



## DSC BLOCK (DISTANCE / SENSITIVITY CALIBRATION BLOCK)

### Specification

ASTM E164-97 fig. A1.11

### Description

Calibration block used for calibration of transverse and longitudinal wave transducers. Verification of exit point and refracted angles (from 45° to 70°) and adjustment in sensitivity. Carbon steel block with anti-corrosion coating.

### Ref:

- CALDSCA



## DC BLOCK (DISTANCE CALIBRATION BLOCK)

### Specification

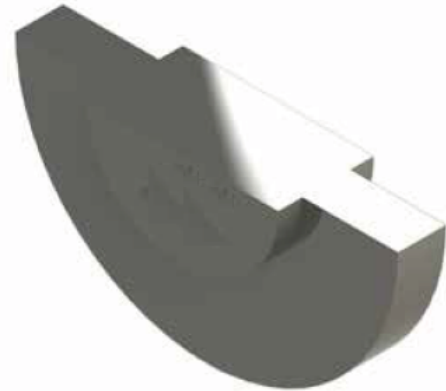
ASTM E164-97 Fig. 1.9

### Description

Calibration block used for distance calibration and for verification of the exit point and refracted angles. Carbon steel block with anti-corrosion coating.

#### Ref:

- CALDCAA



## DS BLOCK (SENSITIVITY AND DISTANCE BLOCK)

### Specification

AWS D1.1

### Description

Calibration block used to check horizontal linearity as well as to calibrate in distance and sensitivity with a normal incidence transducer. Carbon steel block.

#### Ref:

- CALDSAA



## RC BLOCK (CALIBRATION RESOLUTION BLOCK)

### Specification

AWS D1.1

### Description

Calibration block used to verify Angle Transducer resolution (45°, 60° and 70°). Carbon steel block with anti-corrosion coating.

#### Ref:

- CALRCAA



## Conventional UT, TOFD, Phased Array



### The block includes

- 5 x Notches: for sensitivity calibration in TOFD or Phased Array (notches: 10 mm long, 3 mm high, 0.2 mm aperture)
- 5 x Flat Bottom Holes: to evaluate the reflectivity of volumetric flaws for TOFD or to draw a DAC for conventional UT (diameter:  $\text{Ø}3$  mm or  $\text{Ø}5$  mm)
- 5 x Side-Drilled Holes: to characterize TOFD Lateral Wave or for sensitivity calibration in conventional UT or Phased Array (diameter  $\text{Ø}1.5$  mm or  $\text{Ø}3$  mm)
- 1 x Radius: for delay and angle calibration (radius 50 mm)

A certificate that includes a metrological report of the block is supplied on delivery (optional moldings of artificial flaws).

length: 475 mm, width: 50 mm, height: 52 mm



Each block is delivered with its material certificate and TOFD B-scan.

Ref:

- TOFDV6A
- TOFDV6I

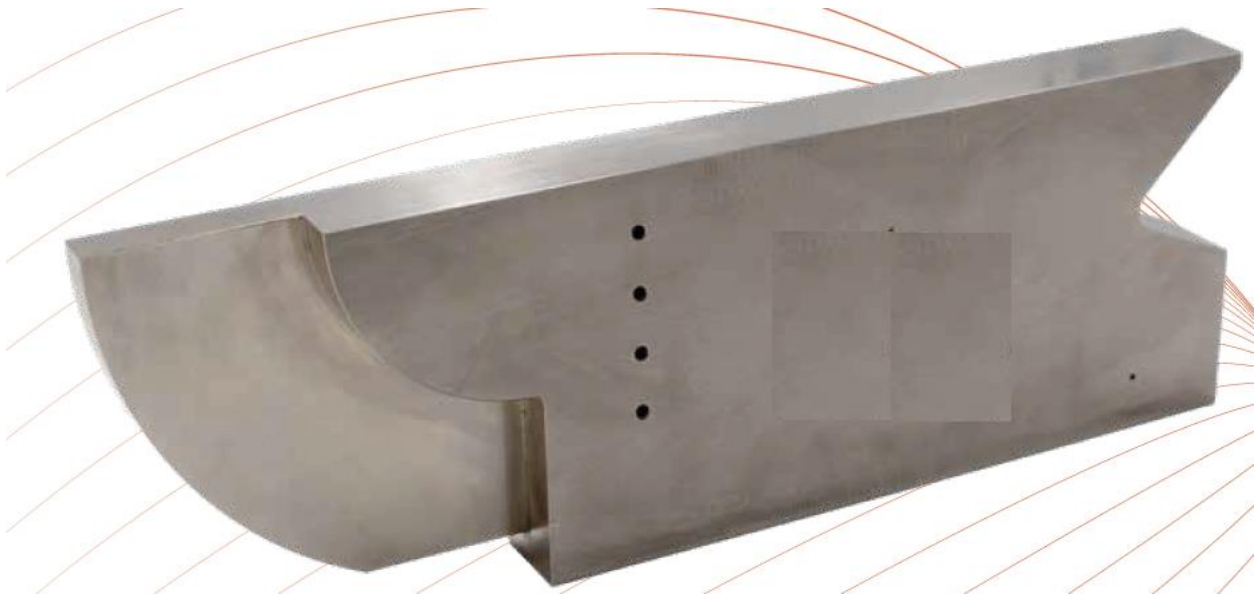
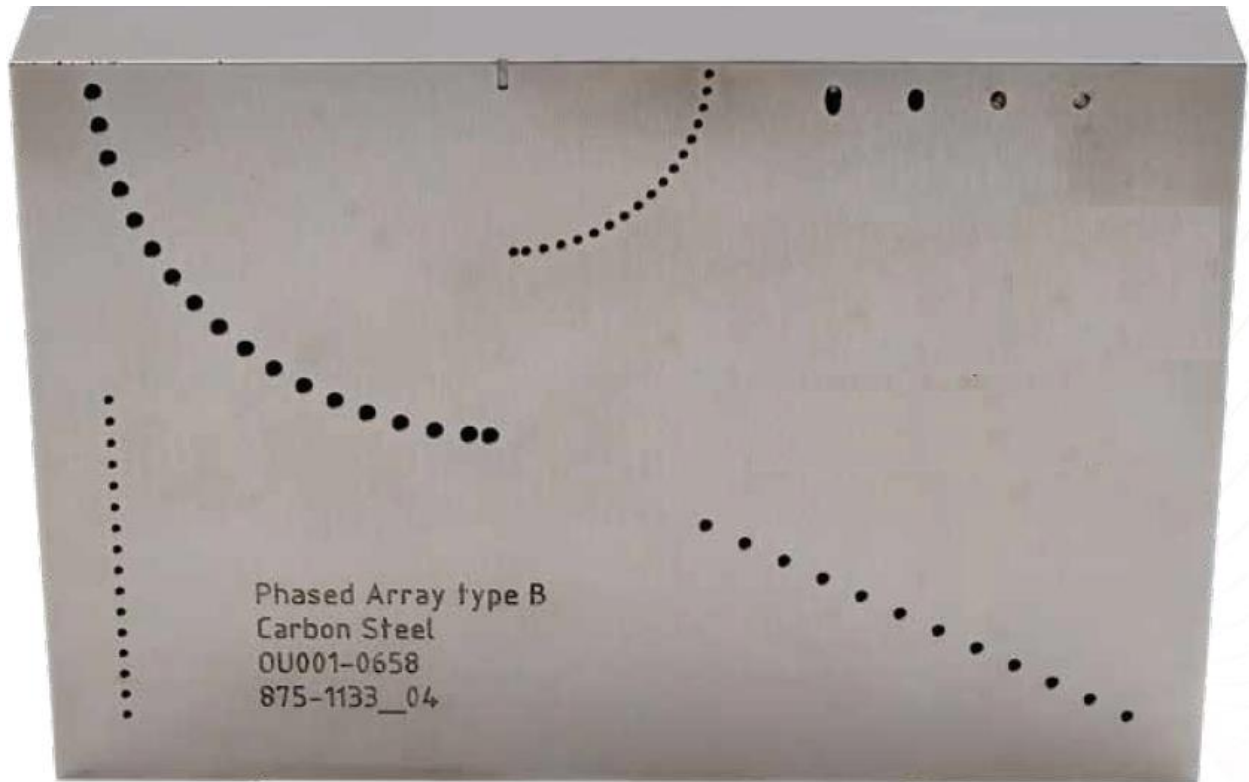


## PHASED ARRAY TYPE A & B BLOCKS

Reference block in carbon steel, stainless or aluminium for Phased Array application.

Control of refraction angles, delay and amplitude correction for parts up to a 50 mm thickness

REFERENCE	MATERIAL	DESCRIPTION
PATYPEAA	Stell	Block in accordance with ASME code (code cases 2541.2557.2558)
PATYPEAI	Stainless steel	
PATYPEAAL	Aluminium	
PATYPEBA	Stell	Block in accordance with ASTM E2491 code
PATYPEBI	Stainless steel	
PATYPEBAL	Aluminium	
PATYPE19675A	Stell	Block in accordance with ISO 19675
PATYPE19675I	Stainless steel	
PATYPE19675AL	Aluminium	



**PATYPE19675**

## SPECIFIC BLOCKS

Conventional machining of blocks of maximum size  
L 600 x W 400 x H 400 mm and up to 40 kg.





Santricals Services India Private Limited  
www.sdrgroups.com | support@sdrgroups.com

- Working area for wire erosion : L 350 x l 500 x h 250 mm.
- Working area for electro-erosion by die sinking : L 400 x l 300 x h 250 mm.
- Opening notches 0.2 mm +-0.05 depth up to 15 mm (under conditions).
- Minimum generator diameters 0.18 mm.
- Material control carried out according to our internal procedure, more restrictive than the control standard for flat products (NF EN 10160) in order to ensure the absence of indications that could disrupt the use of the block.
- Specific block plan validated with the customer before machining.
- Mark check for defect shape.
- Provision of TQR plan (As Realized) on request with actual measured ratings.
- Custom laser engraving (on request).
- Each block is supplied with a control report including: dimensional survey, material certificate, average speed reading in OL and OT as well as the manufacturing plan of the block.
- Our measuring devices are connected COFRAC in accordance with ISO 9001.
- Certificates of conformity kept at our premises for ten years.

Santricals Services India Private Limited|4-100-1 Rambalaji Bhavan |Madurai – Dindigul Bypass Road | T. Andipatti, T. Vadipatti | Madurai- 625 218 | Contact: +91 9940870870; +91 9892501239

**Website: [www.sdrgroups.com](http://www.sdrgroups.com); email:[support@sdrgroups.com](mailto:support@sdrgroups.com)**



Santricals Services India Private Limited

[www.sdrgroups.com](http://www.sdrgroups.com) | [support@sdrgroups.com](mailto:support@sdrgroups.com)

Santricals Services India Private Limited|4-100-1 Rambalaji Bhavan |Madurai – Dindigul Bypass Road | T. Andipatti, T.  
Vadipatti | Madurai- 625 218 | Contact: +91 9940870870; +91 9892501239

**Website: [www.sdrgroups.com](http://www.sdrgroups.com); email:[support@sdrgroups.com](mailto:support@sdrgroups.com)**