

Coupon & Electrode Brochure - 2021





## COUpons for the 2" Access System

The 2" Access System is the most widely used method of inserting and retrieving corrosion test coupons from oil pipelines under pressure.

All coupons are:

- Ground and grit blasted to give an even finish
- Sequentially numbered
- Pre-weighted to 0.1mg
- Nylon insulators fitted (PTFE or ceramic insulators also available)
- Individually packed in data front VCI envelopes, then sealed in a heavy-duty polythene bag
- Certificate of analysis and master weight log sheet supplied as standard

### Dimensions

#### 3" Strip Coupon

2-7/8 x 7/8 x 1/8" (73.0 x 22.2 x 3.2mm).

#### 6" Strip Coupon

6 x 7/8 x 1/8" (152.4 x 22.2 x 3.2mm).

#### 2" Ladder Coupon

2 x 7/8 x 1/8" (50.8 x 22.2 x 3.2mm).

#### Flush Disc Coupon

1-1/4 diam x 1/8" thick (31.75 x 3.2mm) with countersunk hole

#### Multiple Disc Coupon

1-1/4 diam x 1/8" thick (31.75 x 3.2mm) with 1/2" (12.7mm)

**3" and 6" Scale Coupon** are as strip coupons above with two rows of seven varying sized scale evaluation holes.

\*Other sizes and can be manufactured to order and coupons can also be manufactured from customers own pipe.

### Materials

Carbon Steel C1018	G10180
API 5CT Grade H40	
API 5CT Grade L80-1	
API 5CT Grade L80-13Cr	
API 5CT Grade N80	
API 5L Grade B	K03005
API 5L Grade X52	
API 5L Grade X60	
API 5L Grade X65	
ASTM A53 Grade B	
ASTM A105	K03504
ASTM A106 Grade B	K03006
ASTM A182 Grade F-5	
ASTM A182 Grade F-11	
ASTM A182 Grade F-22	
ASTM A333 Grade 3	
ASTM A333 Grade 6	K03006
ASTM A350 Grade LF-2	
Stainless Steel 304	S30400
Stainless Steel 304L	S30403
Stainless Steel 310	S31000
Stainless Steel 316	S31600
Stainless Steel 316L	S31603
Stainless Steel 405	S40500
Stainless Steel 410	S41000
Stainless Steel 420	S42000
Duplex 2205	S31803
Duplex 2507	S32750
Cupro-Nickel 90/10	C70600
Nickel Alloy 400	N04400
Nickel Alloy 825	N08250



## COUPONS for the 1" Access System

Coupons with a width of ½" are used in retractable systems. Smaller than the 2" Access System, these generally have fittings of 1" NPT and are installed through isolation valves – see Axxess Datasheet XXXXXX

Coupons can be manufactured from most materials shown on page 2. Coupons can be made pipe, casing and tubing steels and will be manufactured at 1/8" thick unless otherwise agreed. This is due to residual stress in the pipe that may cause warping of thin coupons.

All coupons are:

- Ground and grit blasted to give an even finish
- Sequentially numbered
- Pre-weighted to 0.1mg
- Nylon insulators fitted (PTFE or ceramic insulators also available)
- Individually packed in data front VCI envelopes, then sealed in a heavy-duty polythene bag
- Certificate of analysis and master weight log sheet supplied as standard

### Dimensions

#### 3" Strip Coupon

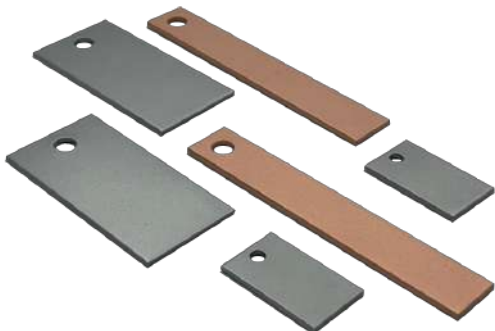
3 x ½ x 1/16 or 1/18", depending on material

#### Flush Disc Coupon

- \* Scale version are also available and other sizes and can be manufactured to order and coupons can also be manufactured from customers own pipe.

## Materials

Carbon Steel C1018	G10180
API 5CT Grade H40	
API 5CT Grade L80-1	
API 5CT Grade L80-13Cr	
API 5CT Grade N80	
API 5L Grade B	K03005
API 5L Grade X52	
API 5L Grade X60	
API 5L Grade X65	
ASTM A53 Grade B	
ASTM A105	K03504
ASTM A106 Grade B	K03006
ASTM A182 Grade F-5	
ASTM A182 Grade F-11	
ASTM A182 Grade F-22	
ASTM A333 Grade 3	
ASTM A333 Grade 6	K03006
ASTM A350 Grade LF-2	
Stainless Steel 304	S30400
Stainless Steel 304L	S30403
Stainless Steel 310	S31000
Stainless Steel 316	S31600
Stainless Steel 316L	S31603
Stainless Steel 405	S40500
Stainless Steel 410	S41000
Stainless Steel 420	S42000
Duplex 2205	S31803
Duplex 2507	S32750
Cupro-Nickel 90/10	C70600
Nickel Alloy 400	N04400
Nickel Alloy 825	N08250



## WATER TREATMENT INDUSTRY CORROSION TEST COUPONS

Most corrosion testing in water systems is carried out with just a few materials. Mild steel is by far the most common, with copper the next most widely used. The materials shown on this page are only for those most commonly used for test purposes. For other materials, please see page 2.

The coupon sizes generally used in field tests are 4 x 1/2", and 3 x 1/2", as these fit the By-passes and 1" LP Retractable coupon holders (3 x 1/2" only) shown later. All three sizes are used for laboratory experimentation. Should you require coupons of sizes different to those shown, please let us know.

The ASTM-D688 standard, entitled 'Corrosivity of Water in the absence of Heat Transfer (Weight Loss methods)' gives much useful information regarding the corrosion testing of water. Although we have generally followed the details specified, certain details have been amended to improve coupon mounting, number legibility and reproducibility.

Axess provide full corrosion assessment services for exposed coupons. See page **XX**

## Coupon Specifications

Coupons are:

4 x 1/2" x 20 gauge or

3 x 1/2" x 1/16" or

50 x 25 x 1.6mm

- Fixing hole as required. For non-insulated coupons a 5mm hole is standard, and a 6.4mm diameter hole is used for coupons having insulation.
- Edges and hole de-burred
- Material Identified (except mild steel)
- Sequentially numbered
- Glass Bead Blast finish except Mild Steel 20-gauge coupons which are 'as rolled' finish
- Pre-weighed to 0.1mg
- Nylon insulators and M4 stainless steel screws and nuts inserted if required
- Individually packed in data front VCI envelope, and each sealed in heavy-duty polythene bags
- Master weight log sheet and material certification supplied

## Materials

Mild Steel

Copper

Brass

Aluminum

Stainless Steel

Galvanized M/S

Zinc 99.5%

Grey Cast Iron



### REPLACEMENT PROBE ELECTRODES

Electrodes are available in many varieties and we have listed the most common options.

Size: 0.188" diameter  
1.203" long, flat end

0.245" diameter  
1.725" long, flat end

0.188" diameter  
1.25" long, full radius tip

Materials: Carbon Steel C1018  
Aluminum 6082  
Copper C101 (C11000)  
Stainless Steel 304L  
Stainless Steel 316L

Washers: Viton washers included

Packing: Sets of two or three electrodes.  
Each electrode is packed in a VCI Envelope and sealed with the Viton washers in a heavy-duty Polythene bag.

Finish: Carbon Steel  
Fine ground 600 grit  
'Grey' dust blasted  
Other Materials  
Fine Glass Bead blast



### ROTATING CYLINDER ELECTRODES

Size: 8mm long, 12mm diameter  
6mm long, 15mm diameter

Materials: Carbon Steel C1018

Packing: Each electrode is packed in a VCI envelope and sealed with the in a heavy-duty Polythene bag.

Finish: Circumference  
Fine ground 600 grit  
Ends  
Machined Smooth

Central Hole: 6.35mm (Reamed)  
Or Tapped ¼ - 28UNF

\*There are many different materials and dimensions of electrodes available upon request.



Scale Coupons – Standard and mesh and  
saw tooth

By-pass racks – PVC and Steel

Analysis and reporting



**Corrosion Management Systems Designed by Experts**