

# WINNARD

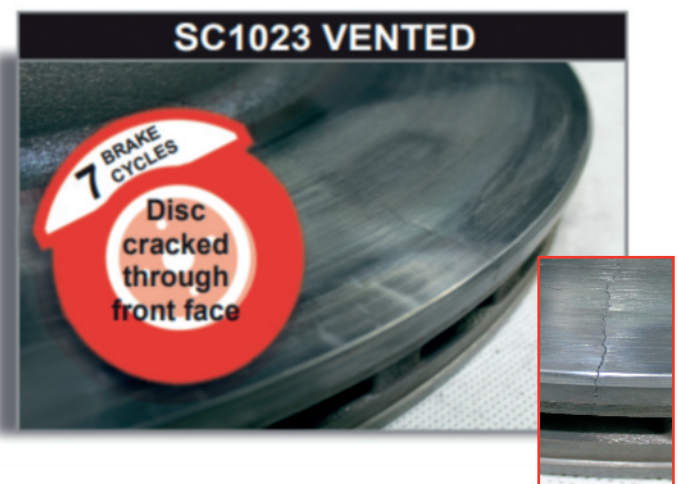
ISSUE DATE AUGUST 2022

PAGE 1 OF 3

## HAVING PROBLEMS WITH CRACKING BRAKE DISCS?

### WINNARD COULD HAVE THE SOLUTION

Extensive ECE R90 testing has proven that a solid version of a previously vented design can reduce and even prevent the premature replacement of a brake disc due to heat crazing and cracking with no operational disadvantages.



#### WHAT IS A BRAKING CYCLE ?

Each cycle consists of the following procedures, it is designed to test the disc to destruction.



##### "Bedding-in" procedure

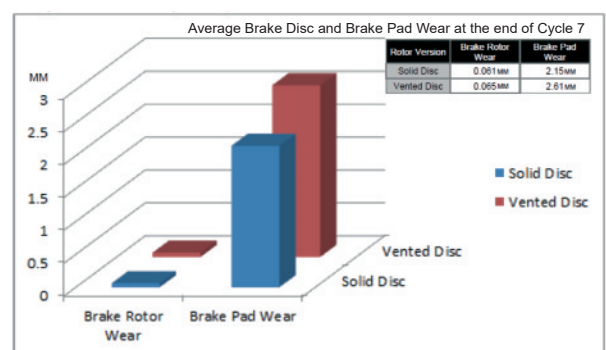
1. Conditioned braking
2. High-speed braking
3. Conditioned braking
4. High-speed braking
5. Conditioned braking
6. Continuous braking (1)
7. Conditioned braking
8. Continuous braking (2)
9. Repeat test stages 1 to 8:

##### 100 Brake applications

- 10 Brake applications from 60 to 30 km/h
- 2 Brake applications from 130 to 80 km/h
- See test stage 1. Conditioned braking
- See test stage 2. High speed braking
- See test stage 1. Conditioned braking
- 5 Brake applications at a constant speed of: 85 km/h
- See test stage 1. Conditioned braking
- 5 Brake applications at a constant speed of: 85 km/h
- 9 or 14 times (whichever is applicable)

### WINNARD SC1023 SOLID vs SC1023 VENTED PERFORMANCE SUMMARY

1. Same Dynamic Friction Performance
2. Similar operating temperatures
3. Increased brake pad life
4. Improved resistance to thermal cracking
5. Lasts up to 4 times longer
6. Reduces operational costs



# WINNARD

ISSUE DATE AUGUST 2022

PAGE 2 OF 3

## SOLID BRAKE DISC UPGRADE RANGE

Due to market demand we have developed SOLID versions of a number of brake disc applications. These design upgrades provide a more durable brake which are more resistant to heat crazing and cracking.

### BO1002S

#### Specification

|                    |          |
|--------------------|----------|
| (A) DIAMETER:      | 430      |
| (B) THICKNESS:     | 45       |
| (B) MIN THICKNESS: | 37       |
| (C) REGISTER:      | 203      |
| (D) HEIGHT:        | 131      |
| (E) PCD:           | 235      |
| (F) STUD HOLES:    | 10xM16   |
| WEIGHT             | 40.50 kg |



**OEM:** 0.8213.5830, 0004200172, 0004200272, 0004210312, 050131449, 050131522, 0501315228, 050131695, 0501316953, 0707000036, 082135830, 11015508, 1137179, 1525365, 20234110, 221414, 222475, 234110, 36.50803-0000, 4200172, 42541277, 501314498, 501315228, 501316953, 501316958, 82133300, 82135830, 82850005890, 8285472000, B221412, II310251, II371910061, II376530061, K021958

### BP1026S

#### Specification

|                    |             |
|--------------------|-------------|
| (A) DIAMETER:      | 377         |
| (B) THICKNESS:     | 45          |
| (B) MIN THICKNESS: | 37          |
| (C) REGISTER:      | 230         |
| (D) HEIGHT:        | 160         |
| (E) PCD:           | 275         |
| (F) STUD HOLES:    | 8x23        |
| EXTRA HOLES        | 5T for ABS* |
| WEIGHT             | 35.50 kg    |

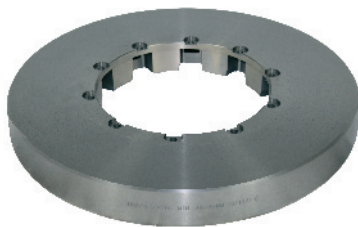


**OEM:** 03.088.34.01.0, 03.088.34.01.7, 03.088.34.03.0, 03.088.34.03.7, 03.088.34.15.7, 03.088.34.16.7, 0308834010, 0308834017, 0308834030, 0308834037, 0308834157, 0308834167, 0308834167, 0908834167, 125669203, 42550442 \* ABS RINGS AVAILABLE

### DA1058S

#### Specification

|                    |          |
|--------------------|----------|
| (A) DIAMETER:      | 430      |
| (B) THICKNESS:     | 45       |
| (B) MIN THICKNESS: | 37       |
| (C) REGISTER:      | 217      |
| (D) HEIGHT:        | 45       |
| (E) PCD:           | 233      |
| (F) STUD HOLES:    | 10x8.5   |
| WEIGHT             | 33.60 kg |



**OEM:** 1387439, 1640560, 1640561, 1690788, 1726138, 1739542, 1783346, 1812563, 1812582, K034248K50, K034249K50

### MD1023S

#### Specification

|                    |          |
|--------------------|----------|
| (A) DIAMETER:      | 430      |
| (B) THICKNESS:     | 45       |
| (B) MIN THICKNESS: | 37       |
| (C) REGISTER:      | 131      |
| (D) HEIGHT:        | 130      |
| (E) PCD:           | 168      |
| (F) STUD HOLES:    | 12x19    |
| WEIGHT             | 45.40 kg |



**OEM:** 28050090, 81.50803-0023, 81.50803-0038, 81.50803-0040, 81.50803-0046, 81.50803.0023, 81.50803.0038, 81.50803.0040, 81.50803.0046, 81.50803.3023, 81508030023, 81508030038, 81508030040, 81508030046, 81508033023, N508030038, N508030040

### MD1025S

#### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 432     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 208     |
| (D) HEIGHT:        | 135     |
| (E) PCD:           | 235     |
| (F) STUD HOLES:    | 10xM16  |
| WEIGHT             | 46.7 kg |



**OEM:** 81.50803.0021, 81.50803.0041, 81.50803.0047, 81.50803.3041, 81508030021, 81508030041, 81508030047, 81508033041

### MNE1065S

#### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 430     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 211     |
| (D) HEIGHT:        | 132.5   |
| (E) PCD:           | 238     |
| (F) STUD HOLES:    | 10xM14  |
| WEIGHT             | 40.4 kg |



**OEM:** 1137415, 1149978, 30138351, A6954230512, A9424210312, A9424210912, A9424211012, A9424211112, A9424211212, A9424212112, A9424212512, A9424212612, A9424230012, A9424230112, CF104132, CF104493, II49978, K075758

# WINNARD

ISSUE DATE AUGUST 2022

PAGE 3 OF 3

## MNE1120S

### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 430     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 131     |
| (D) HEIGHT:        | 131     |
| (E) PCD:           | 168     |
| (F) STUD HOLES:    | 10x21   |
| WEIGHT             | 40.2 kg |



**OEM:** - SOLID VERSION, 0004213512, 960 421 0312, 960 421 0412, 9604210312, 9604210412, A9604210312, A9604210412, JAE0111000412, K119842

## RN1041S

### Specification

|                    |       |
|--------------------|-------|
| (A) DIAMETER:      | 434   |
| (B) THICKNESS:     | 45    |
| (B) MIN THICKNESS: | 37    |
| (C) REGISTER:      | 131   |
| (D) HEIGHT:        | 97    |
| (E) PCD:           | 165   |
| (F) STUD HOLES:    | 10x17 |
| WEIGHT             | 42 kg |



**OEM:** 35010422593, 500055596, 5001672150, 5006172150, 5010216437, 5010422363, 5010422593, 5010423363, 5010423393, 68323662, 7482194787, 82196750, Z001637

## SAU1018S

### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 430     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 131     |
| (D) HEIGHT:        | 130     |
| (E) PCD:           | 168     |
| (F) STUD HOLES:    | 12x19   |
| WEIGHT             | 33.0 kg |



**OEM:** 015733, 017347, 04.079.0005.00, 04.079.0005.01, 04.079.0005.02, 04.079.0006.00, 04079000500, 04079000501, 04079000502, 04079000600, 1009863, 4079000500, 4079000501

## SAU1031S

### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 430     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 164     |
| (D) HEIGHT:        | 48      |
| (E) PCD:           | 190     |
| (F) STUD HOLES:    | 10x13.5 |
| WEIGHT             | 35.3 kg |



**OEM:** - SOLID VERSION, 04.079.0013.00, 04.079.0013.01, 04.079.0013.02, 04.079.0013.03, 04.079.0013.53, 04079001300, 04079001301, 04079001302, 04079001303, 2004079001300, 2004079001301, 2004079001302, 2004079001303, 204079001303

## SC1023S

### Specification

|                    |         |
|--------------------|---------|
| (A) DIAMETER:      | 430     |
| (B) THICKNESS:     | 45      |
| (B) MIN THICKNESS: | 37      |
| (C) REGISTER:      | 208     |
| (D) HEIGHT:        | 131     |
| (E) PCD:           | 237     |
| (F) STUD HOLES:    | 10xM16  |
| WEIGHT             | 38.0 kg |



**OEM:** 1367735, 1386686, 1402272, 1852817

## ABS RING DESIGN UPGRADES DE1053+2 & RO1028+2

# WINNARD

## BRAKE DISC DESIGN UPDATE NEW BOLT ON MILLED STEEL ABS RING

We are always looking at ways to improve the performance and operation longevity of our products and we are pleased to announce an upgraded option for a limited number of Winnard references.

We know from market experience that, despite rust preventative coatings, cast ABS teeth located on the base of the Brake Disc can suffer from decay causing ABS sensor faults. This usually results in premature replacement of the Brake Disc. Therefore, Winnard is re-designing this old technology and upgrading the design to include a milled steel ABS ring.

This design upgrade will reduce the level of decay to the ABS ring, removing the need to replace the disc due to ABS corrosion. We will also be offering the ABS Ring separately should any damage occur during distribution or operation.

The part numbers available with this upgrade are:

### DE1053+2

**OEM X REF:**  
102983, 1132019F, 11363013, 1136279F, 657304-22, 657304-22, 657304-22, 632079F, 639279F

**Vehicle Applications:**  
Alexander Dennis PSV Panther 2001 → Current  
Alexander Dennis PSV Trident S 2001 → Current  
Dennis Elite 2 2001 → Current  
Dennis Phoenix 2 2001 → Current  
Phoenix Panther & Panther 2001 → Current  
Van Hool PSV T 9 2001 → Current

### RO1028+2

**OEM X REF:**  
66323625, 12001520006, 5021170653, 6632362504

**Vehicle Applications:**  
Daimler Chassis City Bus 1999 → Current  
Meritor - D Euro - DMX axle code 2000 → Current  
Meritor - D Euro 2 2000 → Current  
Meritor - D L8 Euro 2000 → Current  
Meritor - DAX28 2000 → Current  
Meritor - Euro 2 - EMX axle code 2000 → Current  
Meritor - EX225 2000 → Current

Manufacturers part numbers and names are used for reference purposes only and does not imply that their parts will be supplied.  
Thos. Winnard & Sons Ltd Mangham Road, Rotherham, South Yorkshire, England S62 6EF T: +44 (0)1709 712000 www.winnard.co.uk

Login to the Winnard web site for further information: [www.winnard.co.uk](http://www.winnard.co.uk)

