

**DONKIN** SERIES 555 GAS GATE VALVES



**YOUR SAFETY, OUR PRIORITY**  
**GAS GATE VALVES**

Expect... **AVR**





# AVK WHO WE ARE



DESIGNED, ENGINEERED  
AND MANUFACTURED  
IN GREAT BRITAIN



As suppliers of the Donkin range of gas valves and fittings worldwide, AVK UK Ltd is part of the globally renowned AVK Group based in over 90 countries. AVK is recognised around the world as a leading innovator and manufacturer of high quality valves and fittings for the gas, water, waste water and fire fighting industries.

Our extensive product program for gas comprises of a wide range of valves and mechanical fittings giving the customer the optimum cost effective solutions whether working on large diameter mains, small diameter services or right up to the meter box.

All of our products are designed using our in house facilities starting with our 3D CAD systems and development against the strict requirements of the relevant specifications either industrial, national or international. Our philosophy is always to aim for the highest standard. Once designed the products are rigorously type tested (often to destruction) to ensure full compliance against the standards.

Our gas products are manufactured in our modern facilities and using the latest techniques within the AVK Group. These include the home of the world renown Donkin Gas Gate Valve, Bryan Donkin Valves Ltd in Chesterfield, and AVK Syddal in Manchester, the home of the AVK Fittings range.

We extend an open invitation to all our customers and their teams to visit our manufacturing facilities' for a tour and training.



INVESTORS IN PEOPLE



REDUCING CO2  
YEAR ON YEAR



# THE BEST JUST GOT BETTER!

UNCOMPROMISED  
PERFORMANCE

MORE  
SUSTAINABLE

HYDROGEN  
READY

STRONGER

FIRESAFE

LIGHTER

FULLY TRACEABLE  
WITH AVK ASSIST



# DONKIN SERIES 555/401

Donkin gas valves have been manufactured in the UK for over 175 years and are used on gas networks all around the world.

The Donkin Series 555 Softseal Gate Valve has been the preferred valve in the UK gas distribution sector for 50 years. Whilst there have been minor modifications and upgrades over the years, it keeps its' basic original and successful design.

This variant, the Donkin Series 555/401 Softseal Valve is a double-faced, resilient seat, internal screw, clear bore wedge gate valve. It is designed primarily for the isolation of natural gas and manufactured gas.

AVK encourages ideas from all our global customers to incorporate new preferred features into our gate valves to ensure they maintain technical superiority into the future. The fourth generation Donkin Series 555 is now available to all AVK's gas customers.

The new built-in features include:

- NEW LIGHTER WEIGHT DESIGN
- REDUCTION IN EMBODIED CARBON
- STRONGER STAINLESS STEEL SPINDLE
- USER-REPLACEABLE STEM SEALING
- FIRESAFE VERSION
- HYDROGEN READY VERSION

## Coatings

For buried application and ultimate protection, AVK Donkin supply valves with our yellow 1500µm polyurethane (PUR) coating as standard. This high build coating complies with EN10290 and the UK Gas Standard GIS/CW6. The Donkin PUR coating is specified by the UK gas networks for buried applications. Please contact us if you wish to discuss the benefits of this coating option.

For above ground applications, AVK Donkin supply valves with a standard black transit coating or primed for pressure reduction station installations. Other coating options can be used where required, please contact us to discuss other requirements where necessary.

## Installation

It is important, when installing any valve, that pipeline stresses are kept to a minimum and no undue external forces are placed on the valve connections. Correct installation procedures should be followed. For details please see the Donkin installation manual available via the QR code attached to the valve.



## QUALITY TESTING AND SPECIFICATIONS

At AVK, we're proud to say that quality is built into all our products, from the initial concept, through design and right through the manufacturing process at our factory in Chesterfield, UK.

AVK was the first in the gas distribution sector to achieve the international quality standard ISO/TS 29001:2011 for the entire design-to-delivery gas valve manufacturing process. AVK is also certified to ISO 9001 and ISO 14001 for environmental management.

Our valves are all approved to UK Gas Industry Standards (GIS) and certified to the BSI Kitemark™ scheme. Other relevant international standards are complied with where appropriate including the European Pressure Equipment Directive (PED).

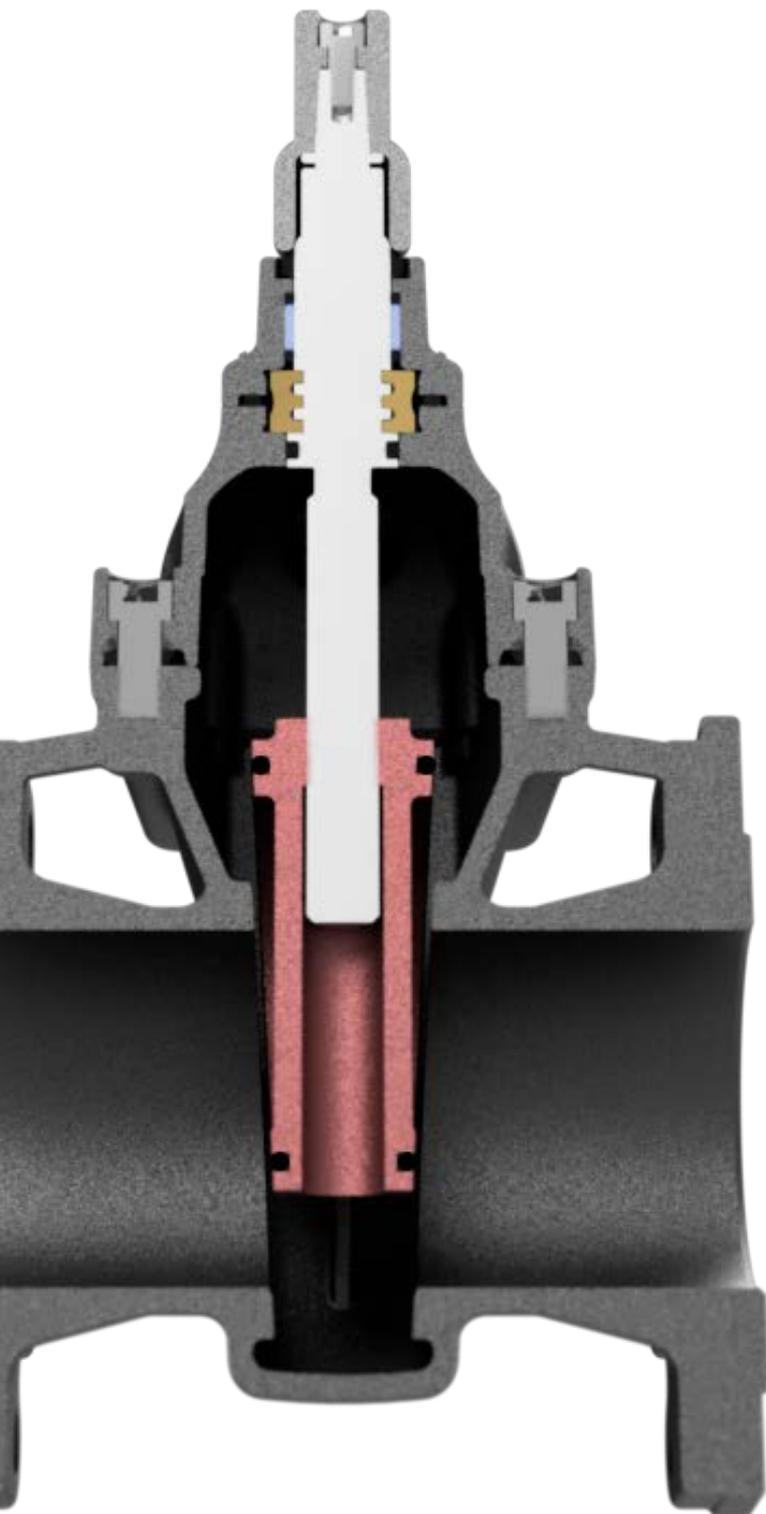
The Donkin Series 555/401 Softseal Wedge Gate Valve is specified as follows:

- Designed according to GIS/V7-1 & Kitemark™ approved.
- Face-to-face dimensions according to EN 558 Table 2 Basic Series 3.
- Standard flange drilling is PN16 (to EN 1092-2), Class 150 (to ANSI B 16.42 is available as an option).
- Tested according to EN12266-1.
- Maximum Operating Pressure 7 bar (10 bar available as an option).
- Temperature -10°C to +60°C.

# SERIES 555/401

## FEATURES AND BENEFITS

The latest Donkin Series 555/401 gate valves have been enhanced with some fantastic new features while maintaining the fundamental design strengths of the original Donkin valve.



- New ergonomic, lighter weight design for improved handling and installation.
- Improved sustainability with reduction of embodied carbon.
- Firesafe tested (BS EN 1775), hydrogen ready (BSI PP1547) and PE tailed variants available.
- Replaceable stem seal technology, providing live maintenance functionality.
- Enhanced strength stainless steel spindle, offering extended service life.
- Full 'Clear Bore' design, for high performance applications.
- DONKIN soft-seal, metallic wedge gate design, providing dual sealing technology.
- Globally proven double block and bleed functionality, outperforming industry standards.
- Self-supporting "Flange Feet" for ease of installation and storage.
- PUR coated for buried applications, black transit coated for above ground applications.
- Fasteners fully encapsulated and sealed with a hot melt for superior protection.
- 28mm false cap or handwheel options available.

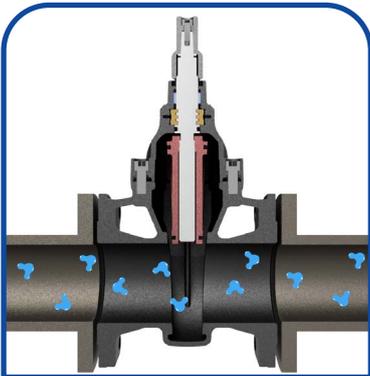


# FEATURES

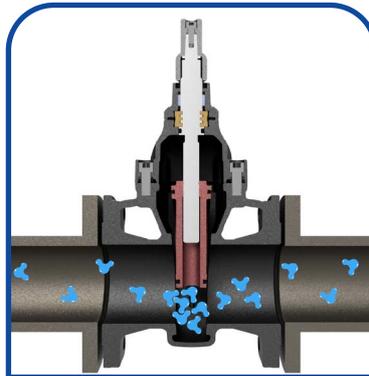
## DOUBLE BLOCK & BLEED

At the heart of every Donkin Series 555 gate valve is the tried and trusted Donkin cast or ductile iron wedge gate.

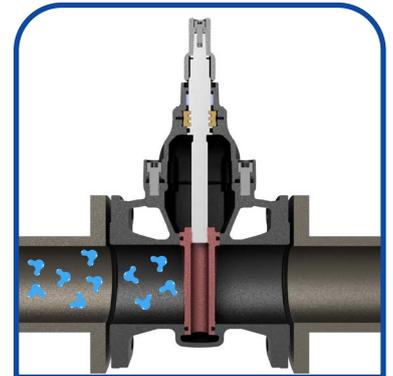
The Donkin wedge far exceeds the strength requirements of the EU Pressure Equipment Directive and the closed gate is intrinsically safe with both the precision machined faces giving a very effective secondary seal against gas flow with the machined faces inside the valve body (in addition to the primary O-ring seals on both faces).



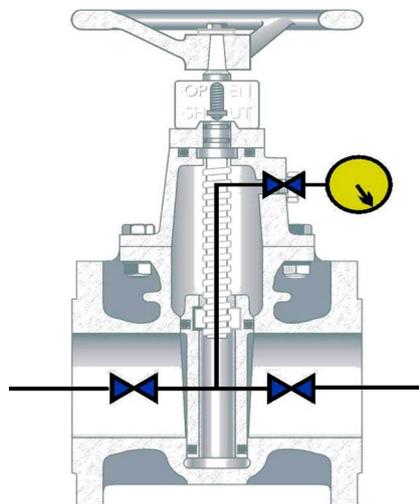
When open, the Donkin 555 gate rests completely outside the flow of gas for optimal flow and the metallic gate means reduced wear over time from any particulates in the gas flow.



The Donkin wedge gate seals on the sides of the valve well at the foot. Even so, as the valve is closed the increased velocity of gas through the closing gap flushes any debris from the well.



This forms the basis of the effective double block, and the gas bleed plug enables the void in the valve's center to be vented to atmosphere creating the double block and bleed which facilitates safe working on the network downstream of the valve.



### Vent Plug

The Donkin vent plug is designed specifically with a cross drilled hole to allow safe removal. After closure of the valve, the plug can be undone one and a half turns allowing the pressure in the cavity to be safely vented through the cross drilled hole. The plug can then be fully removed for an extended vent to be fitted. The sealing of the valve can also be tested using a pressure gauge.

### Replaceable Stem Seal

Once the cavity is vented the pressure in the cavity will remain at zero if the valve is closed and 100% sealed. Standard coated valves allow user replacement of the stem seals with gas under pressure for easier maintenance. This could be supplied as an option for PUR coated valves if required.

# ASSOCIATED PRODUCTS



**S.555/401-001**  
 Flanged gate valve  
 Twin pack black epoxy coating  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 ASA150 Flanges  
 DN50-300



**S.555/401-002**  
 Flanged gate valve  
 Polyurethane Coated  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 PN16 Flanges  
 DN50-300



**S.555/401-003**  
 Flanged gate valve  
 Twin pack black epoxy coating  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 PN16 Flanges  
 DN50-300



**S.555/401-004**  
 Firesafe flanged gate valve  
 Nitrile seals, graphite body/bonnet joint  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 PN16 Flanges  
 DN50-150



**S.555/401-005**  
 Flanged gate valve  
 Red oxide primer  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 PN16 Flanges  
 DN50-300



**S.555/411-001**  
 Flanged gate valve  
 Fusion bonded epoxy  
 Viton seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Ductile Iron  
 MOP 7 Bar  
 PN16 Flanges  
 DN50-250



**S.555/370-003**  
 PE tailed gate valve  
 Viton seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1 and GIS/PL3  
 Cast Iron  
 MOP 4 Bar or 2 Bar  
 PE80 and PE100 options available  
 DN80-300



**S.555/163-001**  
 Weld end gate valve  
 Red oxide primer  
 Viton seals  
 Double block and bleed  
 Designed to API 6D-1982  
 Cast Steel  
 MOP 50 Bar  
 Steel welding ends  
 DN50-300



**S.158/04-002**  
 Under pressure drilling valve  
 Polyurethane Coated  
 Nitrile seals  
 Cast iron  
 MOP 7 Bar  
 PN16 Studded  
 DN80-400



**S.555/103-002**  
 Flanged gate valve  
 Polyurethane Coated  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Cast steel  
 MOP DN50 16 Bar  
 PN16, 19bar ASA150.  
 DN400+ 7bar  
 PN16 Flanges, others available on request  
 DN50-600



**S.555/100-002**  
 Flanged gate valve  
 Polyurethane Coated  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Cast iron  
 MOP 2 bar. 4 Bar available on certain sizes  
 PN16 Flanges  
 DN350-800



**S.555/303-002**  
 Flanged gate valve  
 Polyurethane Coated  
 Nitrile seals  
 Double block and bleed  
 Kitemark GIS/V7:Part1  
 Cast steel  
 MOP 7 Bar PN16, 19bar ASA150  
 PN16 Flanges, others available on request  
 DN80-300  
**Non PUR see S.555/303-001**

# ASSOCIATED PRODUCTS



**S.455/74-001**  
Ball valve, PE tailed  
Nitrile seals and PTFE  
seats  
Kitemark approved to  
GIS/V4 and GIS/PL3  
Ductile iron  
MOP 4 bar  
1"x32mm-2"x63mm



**S.85/30-001**  
Certus PE Ball Valve  
Hydrogen ready  
Kitemark approved  
to GIS/V7:Part 2 and  
EN1555-4  
Polyethylene PE100  
MOP dependant on  
SDR rating  
Valve sizes OD20 up to  
OD180



**S.460/02-001**  
Flanged ball valve.  
Bare  
Nitrile seals and PTFE  
seats  
BS5159 and EN1226  
Cast Steel  
MOP 7 bar  
PN16 Flanges, others  
available on request  
DN20-50



**S.202/31-001**  
Stainless steel repair  
clamp  
Zinc plated and  
passivated fasteners  
Nitrile rubber seals  
Approved to GIS/  
LC8:Part 4  
See website for MOP  
Sealing range DN80-  
1200 Length 150-  
1500mm



**S.215/31-001**  
Under Pressure Tees  
Zinc plated and  
passivated fasteners  
Nitrile rubber seals  
Approved to GIS/  
LC8:Part 4  
See website for MOP  
PN16 Flange  
Flange range: DN50-  
600  
Pipe size: DN80-1200  
Length to suit outlet  
size



**S.253/31-001**  
Supa collar repair  
clamp  
Approved to GIS/  
LC8:Part 4  
Ductile iron  
MOP 7 bar  
Sealing: DN80-300  
2" boss option  
available



**S.257/31-001**  
Supatee under  
pressure tee  
Approved to GIS/  
LC8:Part 4  
Ductile iron  
MOP 7 bar  
Sealing: DN80-300  
Flange: DN80-300  
Suitable for flow  
stopping



**S.248/32-001**  
Universal end caps  
for gas  
Nitrile seals  
Approved to GIS/F13  
Fabricated above  
DN300  
Ductile iron  
MOP 2 bar  
DN80-1200



**S.260/31-001**  
Fabricated flange  
adapter for gas  
Nitrile seals  
Steel  
Fusion bonded epoxy  
coating  
Approved to GIS14525  
MOP 2 bar  
PN16 Flange drilling  
DN300-1200



**S.39/50-001**  
Flange adapter  
Fusion bonded epoxy  
Kitemark GIS/PL3  
Cast iron  
MOP 4 Bar or 7 Bar  
PE80 and PE100  
options available  
PN16 Flanges  
DN50-400



**S.218/31-001**  
Below ground entry  
fitting  
Fusion bonded epoxy  
Kitemark GIS/PL3  
Mild steel  
MOP 2 Bar or 5.5 Bar  
PE80  
DN0.75-3

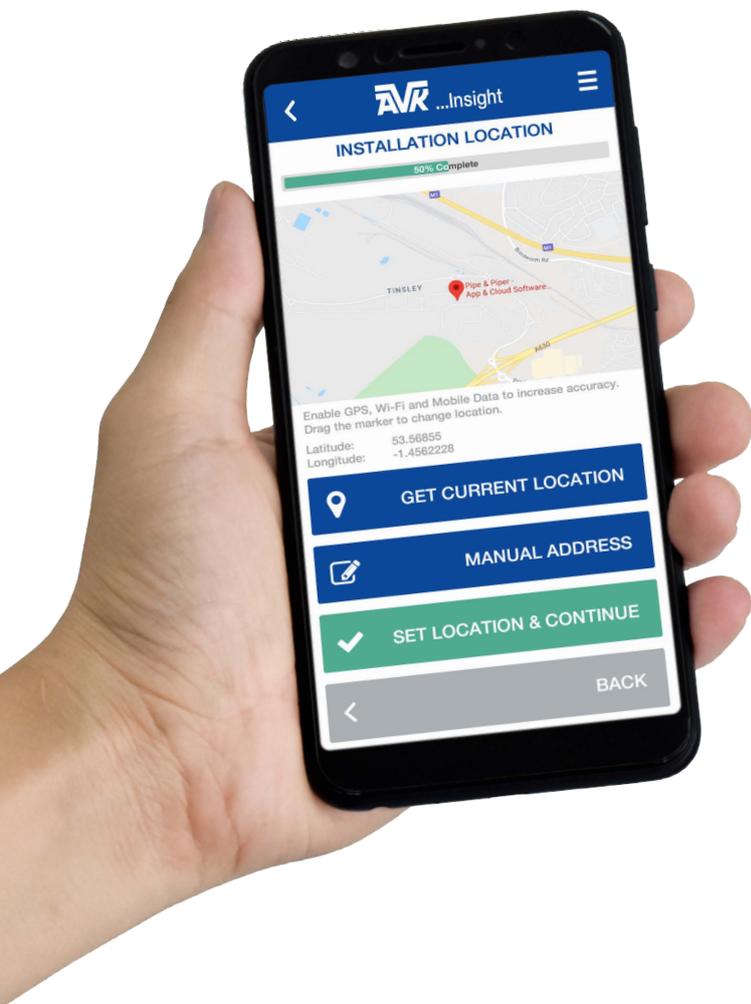


**S.604/1-001**  
PE tailed coupling  
Fusion bonded epoxy  
Kitemark GIS/PL3  
Ductile iron  
MOP 2  
PE80  
DN90-355

# AVK ASSIST

## ONE COMBINED SYSTEM FOR ALL ASSETS

As a leading innovative solutions provider AVK brings you AVK Assist. Trace, keep track and stay informed about all of your assets.



By building relationships with our partners, through listening and responding to both their key strategies and to their daily operational challenges, we are able to develop solutions led products and services which help deliver and resolve.

AVK ASSIST is a free app, aimed at utility and industrial gas engineers, that helps specify, select and then record the installation quality and GPS location of the asset.

Using AVK ASSIST gives an extended product warranty, and can be integrated into existing customer systems without compromise to data safety and security. No data is held by AVK.

Network management and asset mapping are two key subjects highlighted in the majority of utility strategies as ongoing issues, the AVK ASSIST mobile app can make a major contribution on the journey to a resolution.

The AVK ASSIST app is available to download for free on the App Store and Google Play.



### FULL TRACEABILITY IN A FEW SIMPLE STEPS...

The QR code is generated when the valve successfully passes all the relevant test procedures. It assigns a unique serial number for the product which is linked to the full material and test records. When installed the data record becomes complete from raw material to accurate position and application.



SCAN THE QR CODE



SET LOCATION



TAKE INSTALLATION PICTURE



STREAM  
E  
INLET

**AVK UK Head Office**

8 Rushmills  
Northampton  
NN4 7YB  
England

T: +44 (0) 1246 479100  
E: [customerservice@avkuk.co.uk](mailto:customerservice@avkuk.co.uk)

[www.avkuk.co.uk](http://www.avkuk.co.uk)

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Expect... 