

TECHNICAL DATA SHEET

Introducing the Novus Valve

Novus Valve GEN III - A pioneering and accredited innovation, offering seamless valve installation at any desired location without disrupting water supply. Designed to be a permanent valve by conforming to all relevant engineering standards and requirements.



**DN100 to DN350mm
Novus Valve**

Size Range:

DN 80, 100, 125, 150, 200, 225, 250, 300, 350

Allowable Operating Pressure:

600 kPa, 16 bar, 250 psi

Maximum Temperature:

40 °C

Connection Type:

Clamp Type AS4181 – 2019, ISO 1127, DIN 32676

Manufacturing and QA Managment:

ISO9001, ISO14001, ISO45001

Certifications:

AS 4181 – 2019, AS 2638.2, EN12846, EN1622, WRAS
Approved Material, BS6920



Link for More
Information

ABOUT NOVUS VALVE DN100 TO DN350

The **Novus Valve Gen III** is an innovative product where a resilient seated valve can be installed under pressure. Water isolation is not required at any stage during the process.

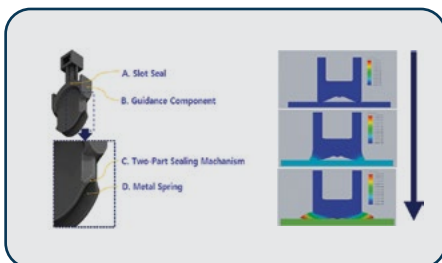
The Novus Valve enables the installations to take place without disruption by utilising a clamp type connection directly to the pipe rather than a flange/flange or socket/socket connection. By utilising our patented technology specific to the generation III, the Novus Valve utilises unique technology and provides workable shut upon installation.

Novus Valve allows installations on the following.

- » Various pipes including variations in Outside Diameter and Inside Diameter
- » Working in confined spaces with encroaching services
- » Our pipe scale cleaner allows cleaning of the inner pipe prior to the seating of the gate

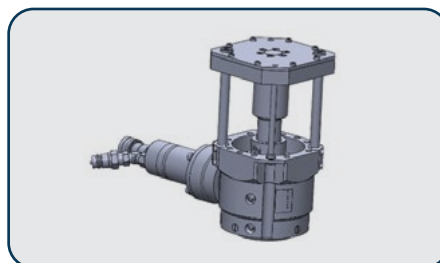
OUR UNIQUE TECHNOLOGY - NOVUS VALVE III

OUR DISC



- » Our unique disc design enables a workable shut upon installation
- » Seals on pipes with uneven surfaces
- » Seals on pipes with in-situ poured lining.

OUR DRILL



- » Our hydraulic drill has undergone development to reduce overall height of the drill.
- » When fully extended, the drill is 310mm.
- » Drill - (CE) Conformité Européenne

PRESSURE RATING



- » Our Clamps and Valve underwent multiple trials and design changes to meet stringent pressure criteria.
- » As a result, our fitting has been rated to PN16, (1600 kPa, 16 bar, 250 psi)

NOVUS VALVE COMPONENTS (DN80MM TO DN350MM)

Novus Valve Cut Away Diagram

Valve Bonnet

Novus Valve bonnet is manufactured as per the relevant sluice valve standards. The Novus Valve also passed all functionality tests as per the relevant standards allowing the valve to be classified as a permanent valve.

Temporary Valve

Made with Ductile Iron used to temporarily isolate main pressure above upper clamp.

Temporary Valve Key

Temporary valve key is operated to move the temporary gate horizontally to provide isolation, remove the drill and install the valve under pressure.

Novus Valve Key

Direction of closure can be selected to be either clockwise or anti clockwise. Designed identical to a standard valve and operated in the same manner.

Valve Stem Nut

Main valve stem nut which controls vertical movement of the disc.

Inner Main Valve Disc (Ductile Iron)

Inner Main valve disc made with Ductile Iron for durability with pressure rating up to PN16 or 1600 kPa.

Main Valve Stem

SS316 Valve Stem used to operate the direction of the disc.

Outer Main Valve Disc (EPDM Rubber)

Triple-layer rubber coating with high elasticity to provide greater isolation.

Bolt & Nut

SS316 bolts and nuts for assembly of the valve.

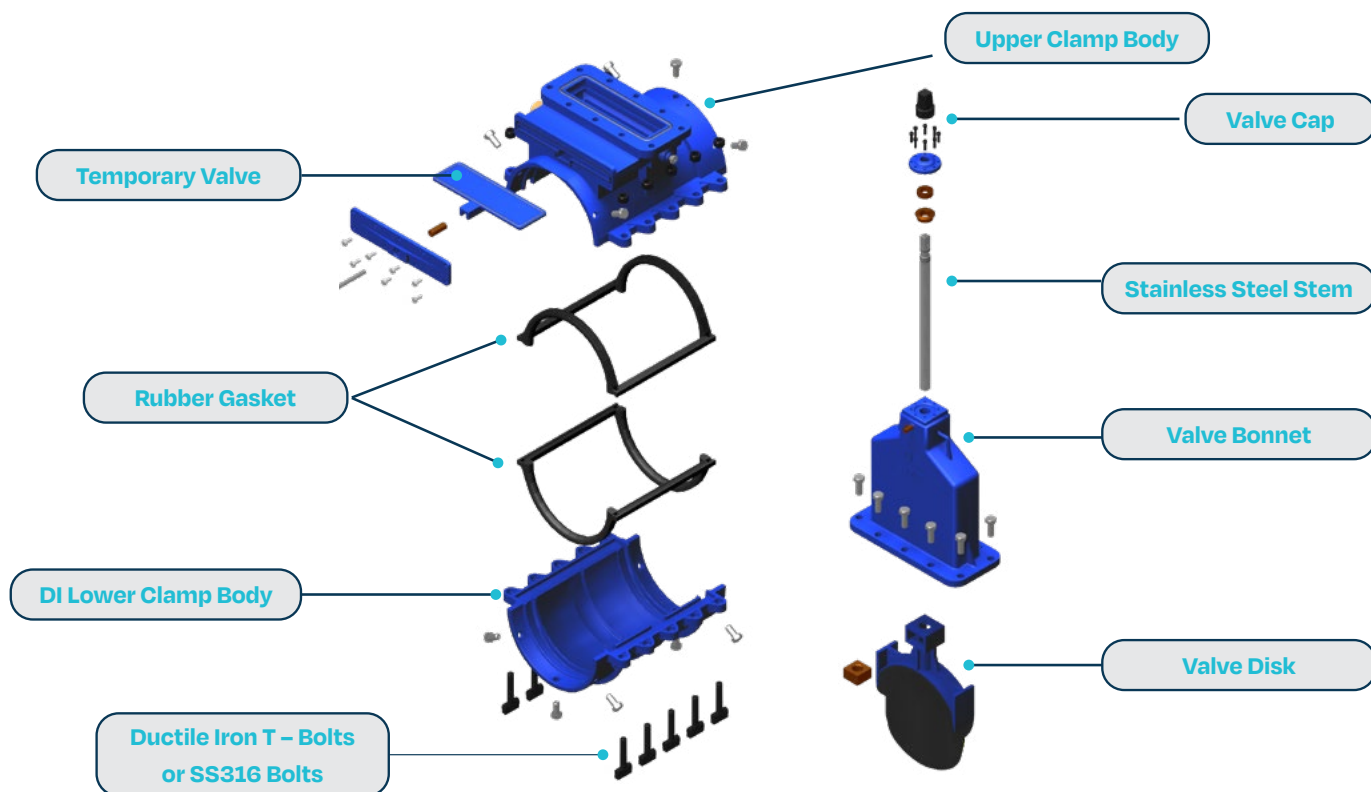
Gasket (EPDM Rubber)

Gaskets come in two components. Made with EPDM rubber. With the rubber Gaskets designed to sit within the grooves of the casting to avoid any movement.

Upper Clamp Body

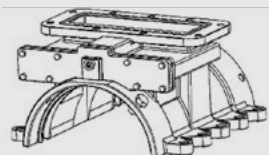
Lower Clamp body

Novus Valve Components

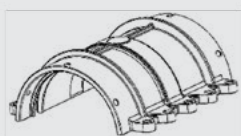


NOVUS VALVE DIMENSIONS (DN80MM TO DN350MM)

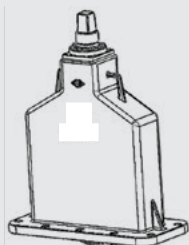
Typical Valve Arrangement For Novus Valve Between Size DN80 To DN350mm.



Novus Valve Upper
Clamp



Novus Valve Lower
Clamp



Valve Bonnet
(Disc)

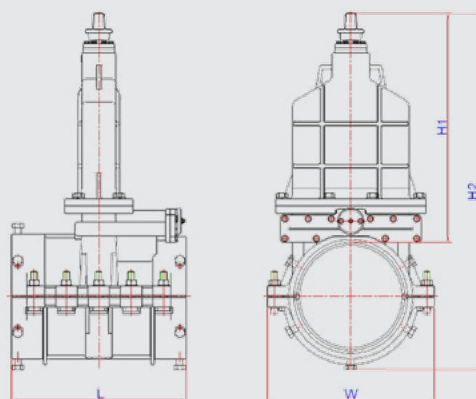


EPDM Gaskets
x 2



SS316 Nuts &
Bolts

Novus Valve Diagram (DN80 to DN350)



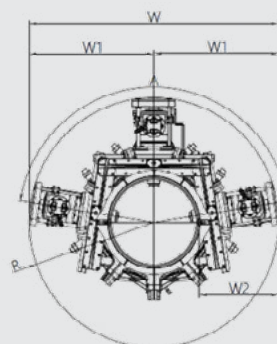
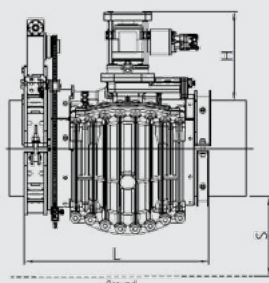
DN (mm)	Typical Turns to Shut	Length (L)	Width (W)	Height (H1)	Total Height (H2)
80	7	398mm	233mm	352mm	469mm
100	9	398mm	274mm	433mm	573mm
125	11	422mm	303mm	464mm	631mm
150	13	448mm	331mm	498mm	692mm
200	17	450mm	389mm	563mm	811mm
225	21	520mm	444mm	638mm	940mm
250	21	520mm	444mm	638mm	940mm
300	26	540mm	514mm	711mm	1084mm
350	29	650mm	598mm	833mm	1398mm

NOVUS VALVE GEN III CLAMP RANGE (OUTSIDE DIAMETER)

Novus Valve GEN III clamps developed to suit various pipes with variance in outside diameter.

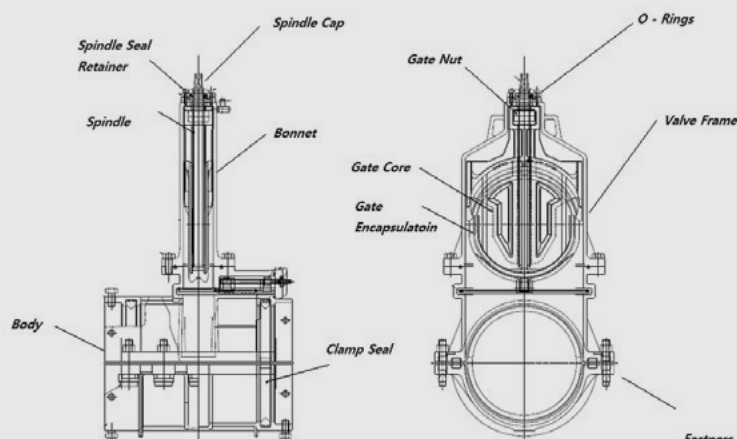
Clamp Codes					
DN	DP (mm)	SP (mm)	PE (mm)	AU ST (mm)	AU OS (mm)
80	95 to 101	86 to 92	X	X	X
100	115 to 121	111 to 117	107 to 113	119 to 125	128 to 135
125	141 to 147	136 to 142	X	X	X
150	167 to 173	162 to 168	157 to 163	174 to 180	180 to 186
200	219 to 225	213 to 219	222 to 238	229 to 235	236 to 242
225	X	X	X	256 to 262	265 to 271
250	271 to 277	264 to 270	277 to 283	282 to 290	290 to 298
300	323 to 329	315 to 321	X	341 to 353	352 to 360
350	375 to 381	352 to 358	X	X	X

MINIMUM SPACE REQUIREMENT



DN	W	W1	W2	L	S (min)	H
80mm	760mm	380mm	330mm	700mm	300mm	340mm
100mm	770mm	385mm	330mm	700mm		340mm
125mm	800mm	400mm	330mm	730mm		340mm
150mm	840mm	420mm	330mm	750mm		340mm
200mm	900mm	450mm	340mm	750mm		340mm
225mm	970mm	485mm	355mm	820mm		345mm
250mm	970mm	485mm	355mm	820mm		345mm
300mm	1040mm	520mm	355mm	840mm		348mm
350mm	1080mm	540mm	360mm	950mm		348mm

NOVUS VALVE COMPONENT MATERIALS



NOVUS VALVE COMPONENT MATERIAL LIST

Component	Basic Material	Novus-Valve		
		Material	Standard	Grade
Body	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Bonnet	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Spindle seal retainer	Copper Alloy	Copper Alloy	AS/NZS 2638.2	CAC703*
Gate core	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Valve frame	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Gate Encapsulation	Synthetic Rubber	Synthetic Rubber	AS1646	EPDM
Gate nut	Copper Alloy	Copper Alloy	AS/NZS 2638.2	CAC703*
Spindle	Stainless Steel	Stainless Steel	ASTM A 276	431
Spindle cap	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
O-rings	Synthetic Rubber	Synthetic Rubber	ISO4658	NBR
Fasteners	Stainless Steel	Stainless Steel	ASTM A 276	316
Clamp seal	Synthetic Rubber	Synthetic Rubber	AS1646	EPDM

NOVUS VALVE GEN III DISC POSITION

TECHNICAL DATA SHEET

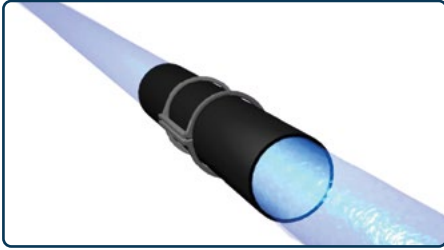
Novus Valve: Number of Turns for Disc Engagement (EU)

Standard Novus Valve Specification (EU - GENIII)

Reference Pipe Standard & Travel Distance

DN	Outside Diameter (mm)	Inside Diameter (mm)	Number of Turns (± 1.5 Turns)	Travel per Turn (1 Turn)
80	89	80	7	18mm
100	114	100	9	18mm
125	139	125	11	18mm
150	165	150	13	18mm
200	216	200	17	18mm
250	267	250	21	16mm
300	318	300	25	15mm
350	378	350	29	16mm
400	428	400	32	16mm
450	479	450	36	16mm
500	531	500	40	16mm

NOVUS VALVE INSTALLATION PROCESS



STEP 1

PREPARATION OF PIPE

Pipe is to be cleaned free of any sharp objects. Low friction tape and lubricants are applied to the pipe. The gaskets are placed on top of the tape.



STEP 2

PLACEMENT OF THE CLAMP

Both upper clamps and lower clamps are placed on the pipe. Using the correct fasteners, both upper clamp and lower clamps are tightened.



STEP 3

INSTALLATION OF END RINGS

End rings are installed on both sides against the clamps. End rings are installed temporarily during installation to allow the valve to rotate to the correct angle during the cutting process.



STEP 4

PLACEMENT OF THE DRILL

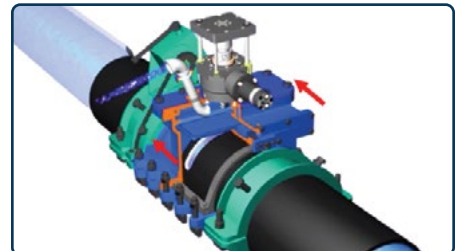
The drill is placed onto the upper clamp of the Novus Valve. With the drill and the upper clamp attached, pressure testing is completed to ensure that the fitting is installed correctly, and no leakages are observed.



STEP 5

CUTTING THE PIPE

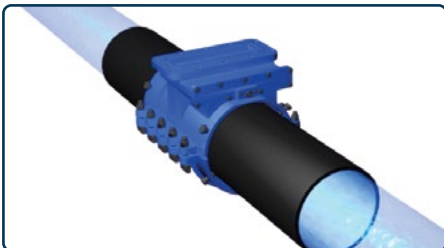
Using the correct end mill, the drill is lowered, and rotated allowing the pipe to be cut. End rings are used to ensure that correct angle for the cut has been achieved.



STEP 6

TEMPORARY GATE VALVE

The temporary gate valve is operated to isolate the mains pressure to the upper clamp. Once the temporary gate valve is fully closed, the drill can be removed.



STEP 7

Removal of the Drill

With the temporary gate valve isolating the mains pressure, the drill can be removed safely without the operator being exposed to unnecessary risk.



STEP 8

PLACEMENT OF THE BONNET

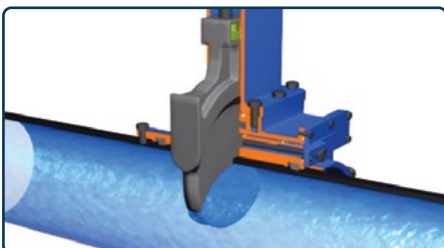
All temporary fitting including end rings are removed. The valve bonnet is placed on top of the upper clamp.



STEP 9

TEMPORARY GATE VALVE

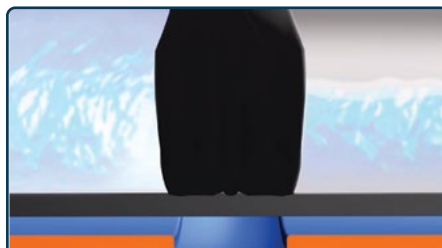
The temporary gate valve is opened so that the disc can be lowered into the incision made on the pipe. All components of the valve are now exposed to mains pressure.



STEP 10

OPERATION OF THE VALVE

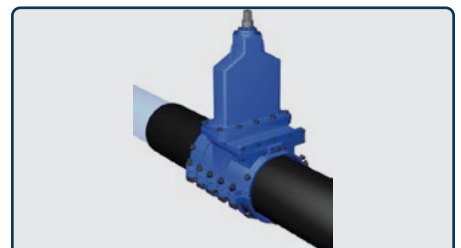
The Novus Valve is operated, allowing the disc to be lowered into the main.



STEP 11

ISOLATION OF WATER

As the valve is lowered and compressed onto the inner surface of the pipe, water isolation can be achieved.



STEP 12

COMPLETED INSTALLATION

The Novus Valve is fully functional and can be operated at any time.

OUR ACCREDITATION, CERTIFICATES, STANDARD CONFORMANCE



AUSTRALIA



WSAA

Water Services
Association of
Australia



AS4020

Testing of Products
for Use in Contact
with Drinking Water



AS2638.2

Gate valves for
water works
purposes



AS4181

Repair and off-take
clamps for water
industry purposes



THE UNITED KINGDOM



WRAS

Water Regulations
Approval Scheme



REGULATION 31

Completed Report by DWI
approved consultancy



THE REPUBLIC OF KOREA



Korean Standard
KS Conformance



K Water



Korean Water Association



Water Standard
Conformance
Verification



Drinking Water
Product Approval

AQUANOVUS
Innovative Aqua Engineering

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**Link to Live
Installation
Video**