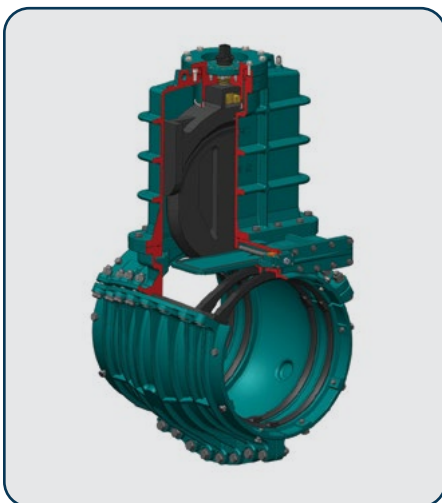


TECHNICAL DATA SHEET.

Introducing the Novus Valve

Novus Valve GEN IV - The nature of the original Novus Valve always relied on the disc staying above the temporary gate valve. Therefore, the vertical height of the Novus Valve was higher, due to its requirement to have enough clearance for the temporary gate valve and the bonnet to be placed above the housing. To address this, our engineers have developed the Novus Valve GEN IV.



**Novus VALVE GEN IV -
DN375 - 600**

Size Range:

DN 375, 400, 450, 500, 600

Allowable Operating Pressure:

1600 kPa, 16 bar, 250 psi

Maximum Temperature:

40 °C

Connection Type:

Clamp Type AS4181 – 2019, ISO1127, DIN 32676

Manufacturing and QA Managment:

ISO9001, ISO14001, ISO45001

Certifications:

AS 4181 – 2019, AS 2638.2, EN12846, EN1622, WRAS

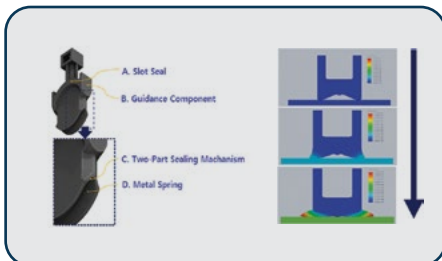


CHANGES FROM PREVIOUS NOVUS VALVE III

- » The **Novus Valve GEN IV** is an innovative product where a resilient seated valve can be installed under pressure. Water isolation is not required at any stage during the installation process.
- » In situations where the main was buried in shallow cover, the GEN III bonnet was installed above ground level, therefore was unable to be left in place as a permanent valve.
- » Novus Valve GEN IV has undergone development to significantly reduce the height of the overall valve by utilising our patented technology to ensure that the height of the bonnet can be lowered upon completion of install.

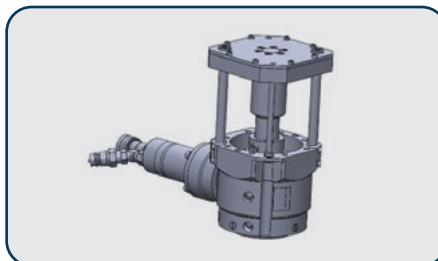
OUR UNIQUE TECHNOLOGY - NOVUS VALVE GEN IV

OUR DISC



- » Our unique disc design enables workable shuts 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 512mm.
- » Drill - (CE) Conformité Européenne

PRESSURE RATING

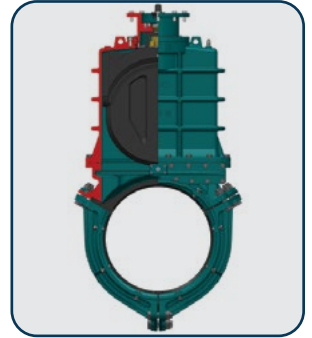
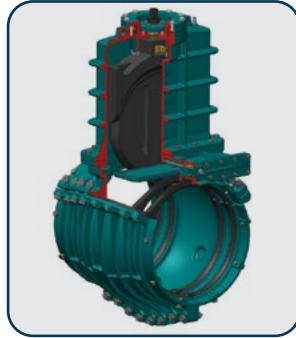
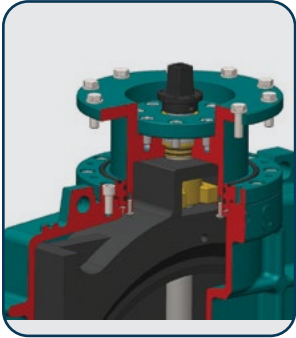


- » Our Clamps and Valve underwent multiple trials and design changes to meet stringent pressure criteria.
- » As a result, our fitting has been rated to PN16, (1600 kPa, 16 bar, 250 psi)

NEW TECHNOLOGY SPECIFIC TO NOVUS VALVE IV

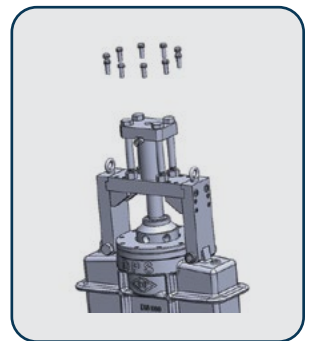
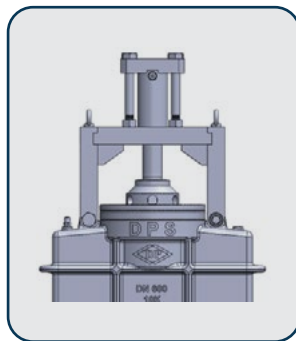
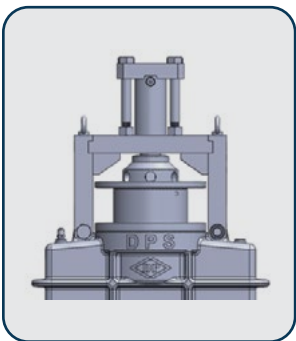
The initial height is no different to a GEN III. During this stage, the disc is sitting above the temporary gate valve, allowing the temporary gate valve to operate without obstruction.

Stage 1 - Valve Is In Fully Extended Position



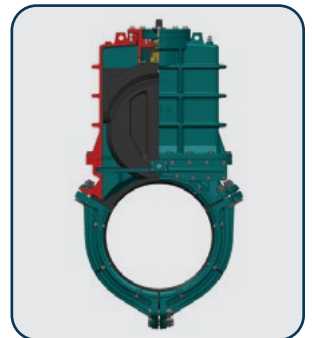
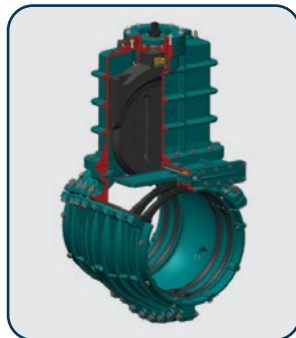
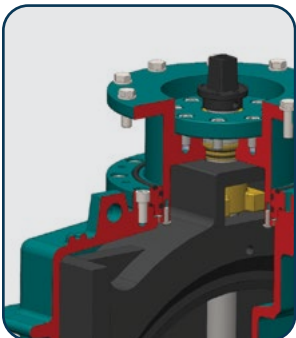
Valve disc is positioned above the temporary gate Valve

STAGE 2 - Hydraulic Press to Compress Valve



The Hydraulic Press Machine allows the valve neck to be compressed reducing the overall height. The valve neck is then bolted into place

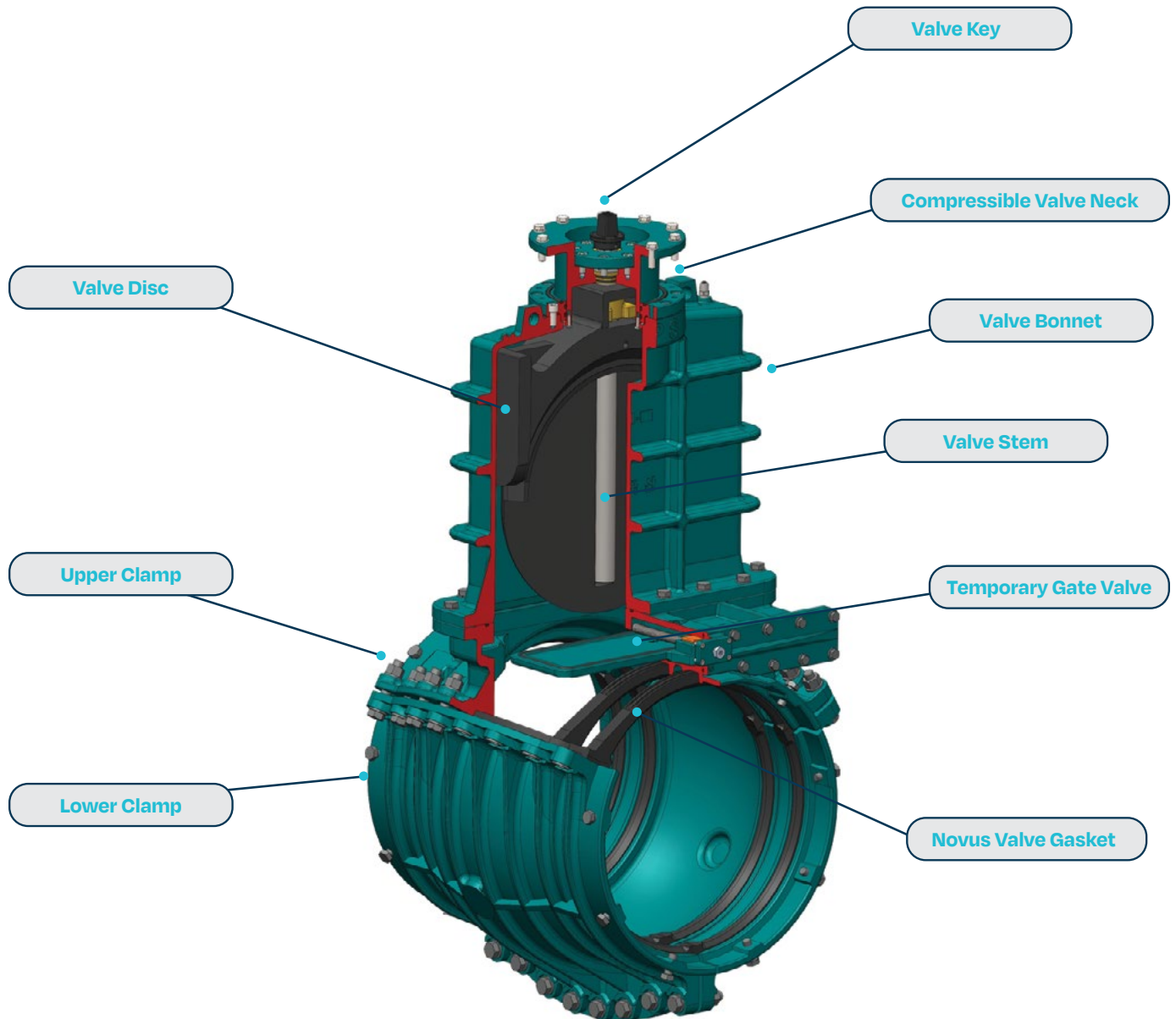
STAGE 3 - Valve is fully Compressed



This allows the valve gate to remain below the temporary gate after the installation is complete

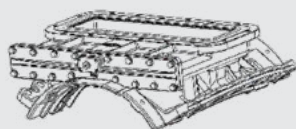
NOVUS VALVE COMPONENTS (GEN IV)

Novus Valve Cut Away Diagram

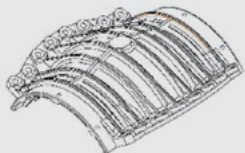


NOVUS VALVE IV DIMENSIONS (DN375MM TO DN600MM)

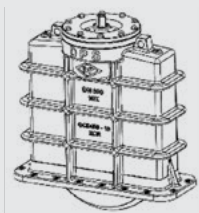
Typical valve arrangement for Novus Valve between size DN375 and DN600mm.



Novus Valve Upper
Clamp



Novus Valve Lower
Clamp x 2



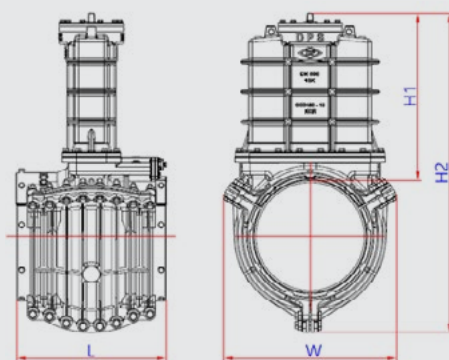
Valve Bonnet
(Disc)



EPDM Gaskets
x 3



SS316 Nuts &
Bolts



Novus Valve IV Diagram (DN375 to DN600)

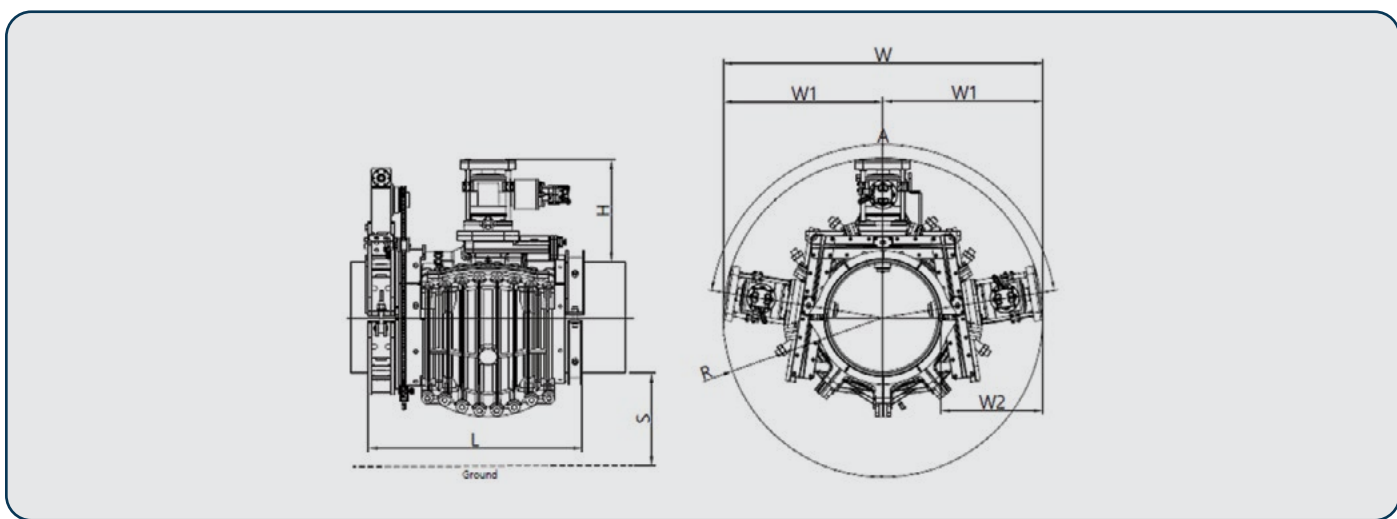
NOVUS VALVE GEN IV CLAMP RANGE

DN (mm)	Typical Turns to Shut	Length (L)	Width (W)	Height (H1)	Total Height (H2)	Total Weight (kg)
375	27	680	727	746	1362	990kg
400	27	680	727	746	1362	990kg
450	31	770	814	811	1498	1080kg
500	34	850	898	877	1641	1275kg
600	52	850	978	948	1808	1684kg

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

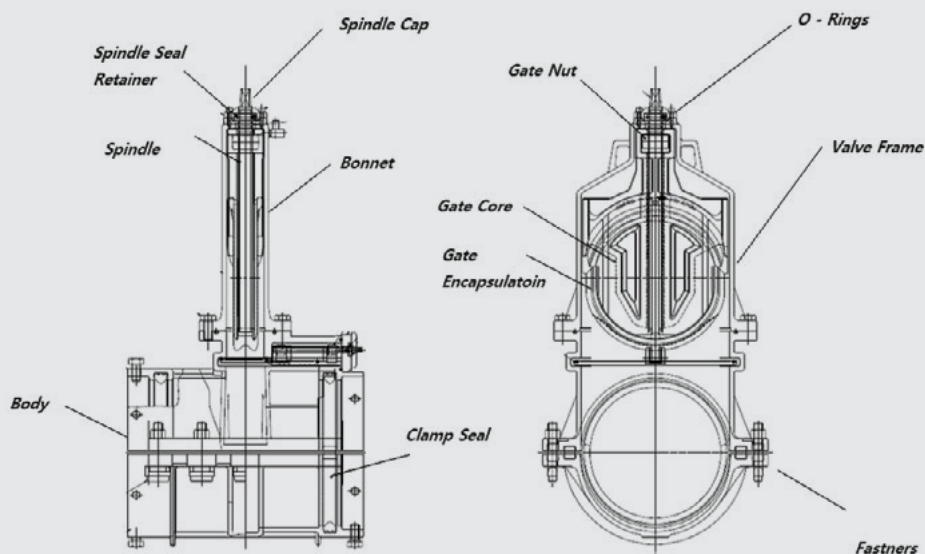
Clamp Codes (Outside Diameter)					
DN	DP (mm)	SP (mm)	PE (mm)	AU ST (mm)	AU OS (mm)
375	X	X	X	425-433	X
400	425-433	402-410	396-404	X	X
450	476-484	453-461	446-454	504-512	512-520
500	528-536	504-512	X	X	X
600	610-635	X	X	TBA	TBA

MINIMUM SPACE REQUIRED FOR NOVUS VALVE



DN	W	W1	W2	L	S (min)	H
375mm	1580	790	575	980	300	575
400mm	1580	790	575	980		575
450mm	1630	815	575	1070		575
500mm	1680	840	570	1150		575
600mm	1800	900	585	1180		575

NOVUS VALVE COMPONENT MATERIALS



NOVUS-VALVE COMPONENT MATERIAL LIST

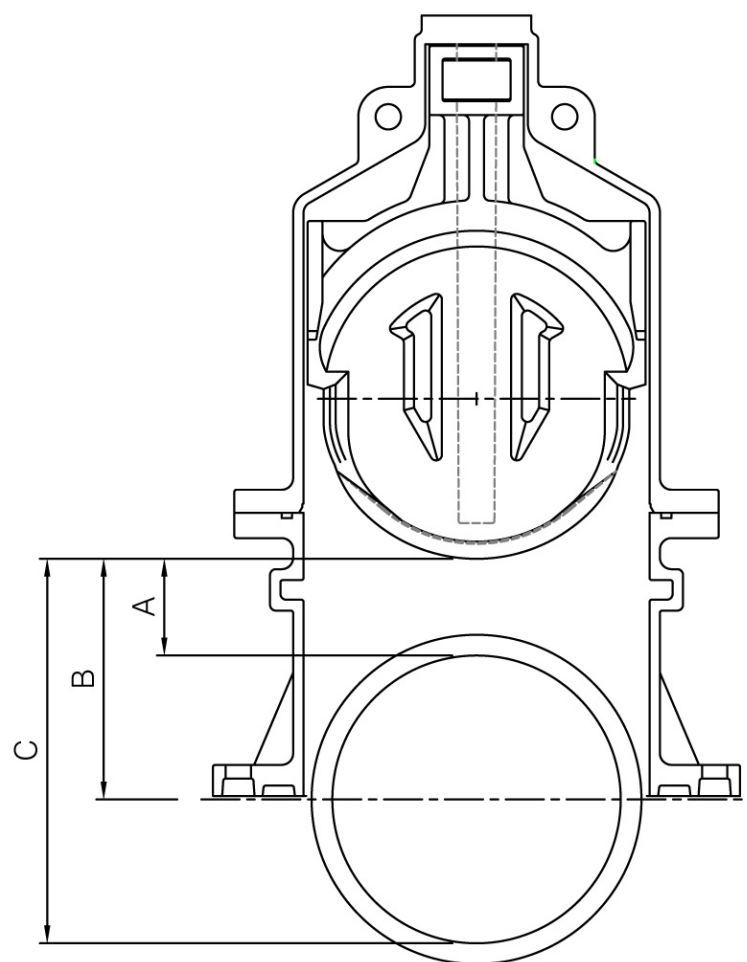
Component	Basic Material	Novus-Valve		
		Material	Standard	Grade
Body	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Bonnet	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Spindle seal retainer	Copper Alloy	Copper Alloy	AS/NZS 2638.2	CAC703*
Gate core	Ductile Iron	Ductile Iron	ISO1083	JS/400/15
Valve frame	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 IV DISC POSITION

Novus Valve GEN IV Specification

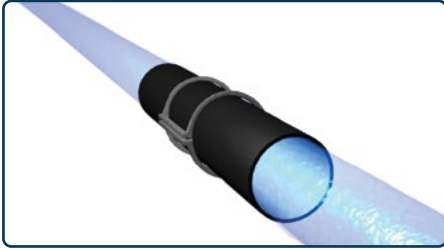
Reference Pipe Standard & Travel Distance

Specification (DN)	Outside Diameter (mm)	Inside Diameter (mm)	Total Number of Turns	Sector A	Sector B	Sector C
400	429	401	27	1	13	26
450	480	451	31	1	15	29
500	532	502	34	1	17	33
525	572	525	48	2	24	46
600	635	603	52	1	26	51
650	667	637	55	1	27	54



For technical support, engineering verification, or application questions, please contact your Aquanovus representative.
Corporate Website: www.aquanovus.net

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. Then the gaskets are placed on top of the prepared pipe.



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

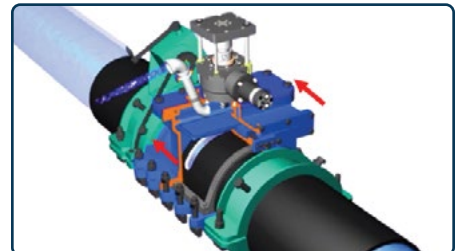
The drill is placed onto the upper clamp of the Novus Valve. With the drill and the upper clamp attached, pressure testing is completed to ensure that the fitting is installed correctly, and no leakages are observed.



STEP 5

CUTTING THE PIPE

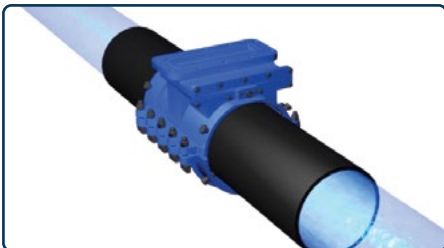
Using the correct end mill, the drill is lowered, and rotated allowing the pipe to be cut. End rings are used to ensure that correct angle for the cut has been achieved.



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

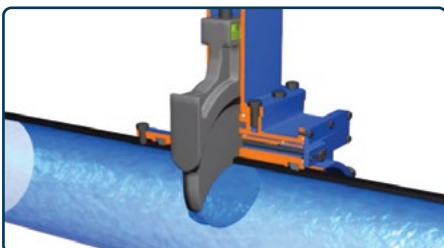
All temporary fitting including end rings are removed. The valve bonnet is placed on top of the upper clamp.



STEP 9

TEMPORARY GATE VALVE

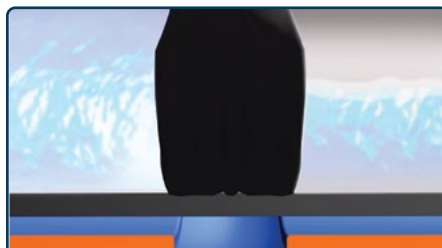
The temporary gate valve is opened so that the disc can be lowered into the incision made on the pipe. All components of the valve are now exposed to mains pressure.



STEP 10

OPERATION OF THE VALVE

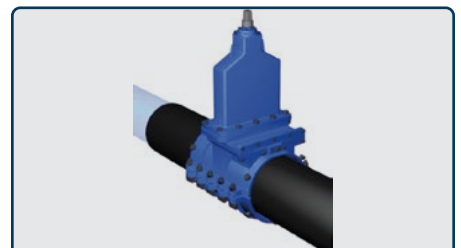
The Novus Valve is operated, allowing the disc to be lowered into the main.



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

AQUANOVUS
Innovative Aqua Engineering

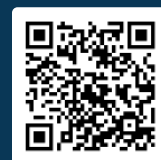
FOR ANY QUERIES

Please contact:

Jason Taylor

jason@aquanovus.net

+44 7931 603606



**Link to Live
Installation
Video**