

PVC-U BALL VALVES



Welcome to Effast

Effast by Polypipe is a well-established brand name that is recognised throughout both the industrial process market and construction industries for its market-leading range of thermoplastic pipework systems suitable for use within industrial applications.

Manufactured in Cicagna North Italy, the company now provides these components to customers all over the world and leads the way in the research and development of advanced new solutions that satisfy the specific needs of the market.

Supported by its large UK based manufacturing capabilities, Polypipe has developed Effast's comprehensive product portfolio such that it now offers a proven and effective solution to virtually any requirement. No matter what the project, the Effast range can offer the perfect combination of pressure pipe fittings, ball, butterfly, diaphragm and actuated valves, compression joints, adaptors and other fittings. Normally available in both metric and imperial dimensions these products are suited to many different applications in such areas as; food and beverage processing, chemical manufacture, water treatment, marine, spa and swimming pools, building technology and agriculture.

Outstanding performance and reliability have come to represent the hallmarks by which Effast products are recognised and with these products carrying accreditation and conforming to various European standards they can be specified with complete confidence. In addition, our manufacturing facilities in Italy are certified under the relevant ISO accreditations so you can be assured you'll receive not only outstanding performance, but outstanding quality too.

Dedicated to supporting its customers at every stage the company also complements its products and systems with full technical information and support service, while a nationwide distribution network means that products are readily available, even when needed next day. Get in touch* and find out how we can support you on your next project.

EFFAST – Performance Under Pressure

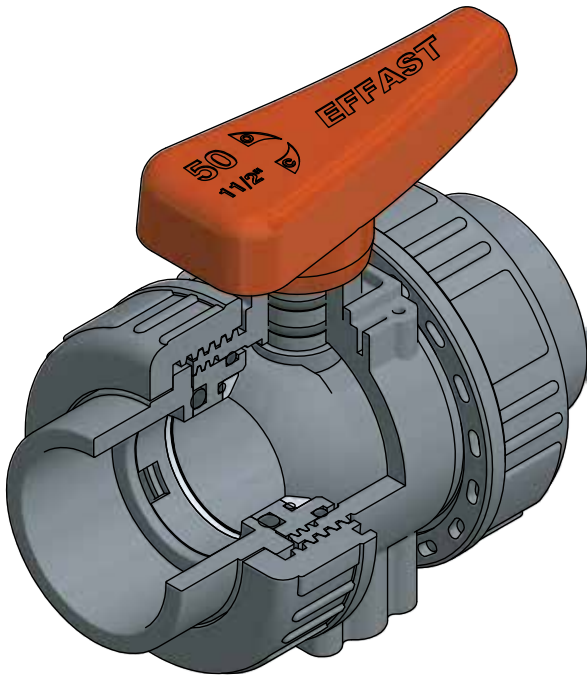
* see back page for contact details

For more information on all the relevant accreditations, please visit our website www.effast.com

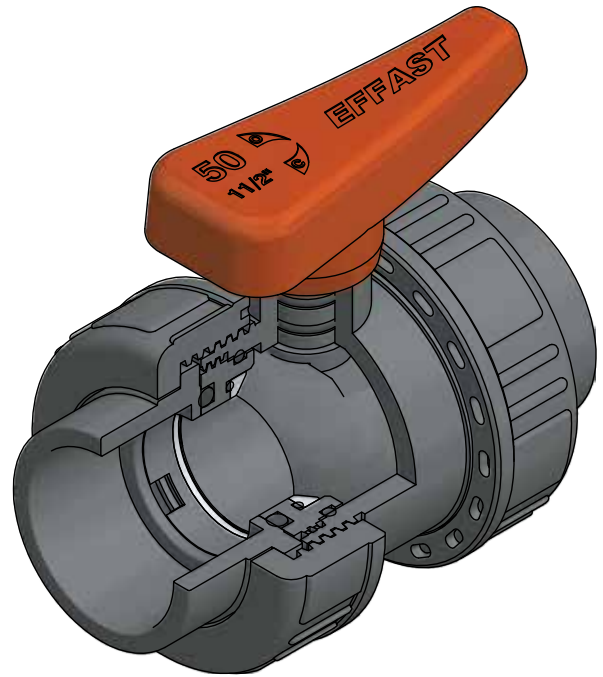
EFFAST PVC-U double union ball valves

A double union ball valve ideal for heavy duty applications, chemical applications and water treatment. The BK1 range of ball valves can be used with pneumatic actuation for sites with compressed air or electric actuation for standard voltage 24 – 240V AC/DC.

BK1 Range

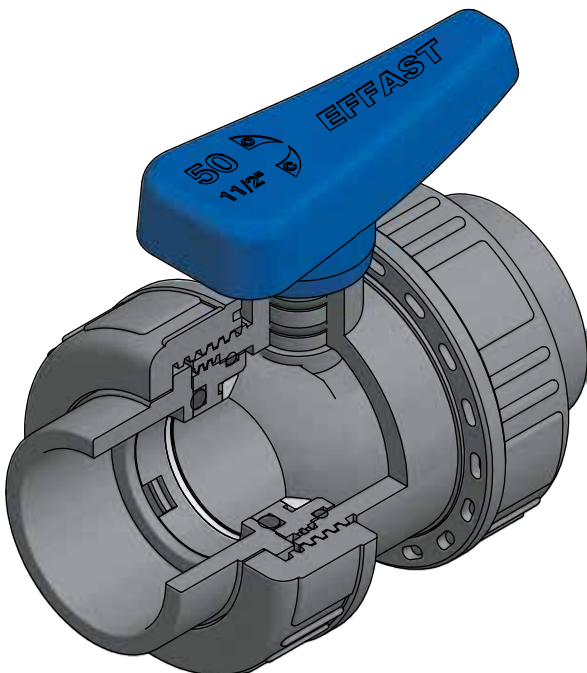


BX Range



BV Range

A double union ball valve ideal for applications in the field of agriculture, swimming pools, light water treatment and non-critical chemicals.



Key Benefits

- Full bore ball locked in place on both sides.
- Fully round ball smoothed by special turning machine.
- Locking mechanism and adjustment accessed via the handle.
- Handle made from shock resistant PVC.
- PVC-U compound fit for contact with potable water according to European, UK and USA regulations.
- Marine Application approval.
- Compliant with the requirements of Annex III, Module A2 of the Pressure Equipment Directive 2014/68/EU.

Technical information

PVC-U Features

PVC-U is stabilized with compounds conforming to the EEC safety levels for vinyl chloride monomer (VCM) and the WRAS requirements for use with potable water.

PVC-U is resistant to most solutions of acids, alkalis and salts and to solvents that can be mixed with water.

PVC-U is not resistant to aromatic and chlorinated

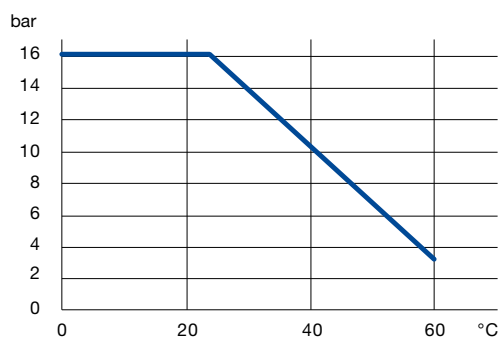
hydrocarbons. Thermal coefficient of linear expansion for PVC-U is $7,8 \times 10^{-5} \text{ m/m } ^\circ\text{C}^{-1}$.

Maximum working pressure for PVC-U: according to temperature as shown in graph.

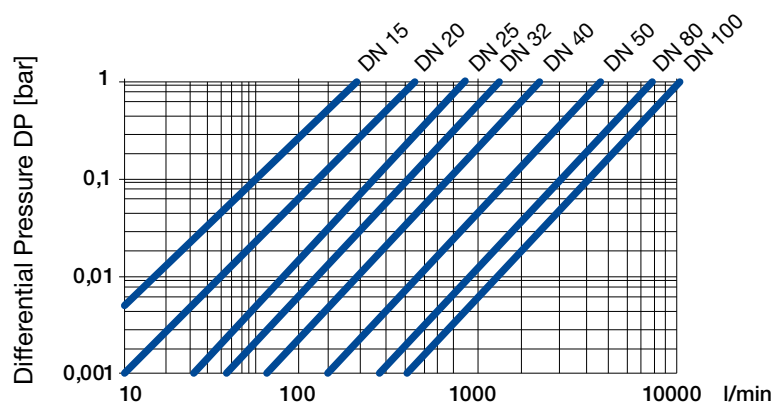
Technical Features

	BK1	BX	BV
NOMINAL PRESSURE	PN 16 (at 20 °C)		
VALVE MATERIAL	PVC-UH		
SEALS MATERIAL	O-rings: EPDM/FKM Ball seats: PTFE	O-rings: EPDM/FKM Ball seats: PTFE	O-rings: EPDM Ball seats: PE
TEMPERATURE RANGE	0 °C ÷ 60 °C		
COUPLING STANDARDS	Solvent welded sockets: metric, BS Threaded sockets: BSPP EN/ISO/DIN flanges HDPE spigots	Solvent welded sockets: metric, BS Threaded sockets: BSPP EN/ISO/DIN flanges HDPE spigots	Solvent welded sockets: metric, BS, ASTM, JIS Threaded sockets: BSP, NPT Compression joints
CONTROL OPTIONS	Hand-operated Electrically actuated Pneumatically actuated	Hand-operated	Hand-operated

Working Pressure



Pressure Loss



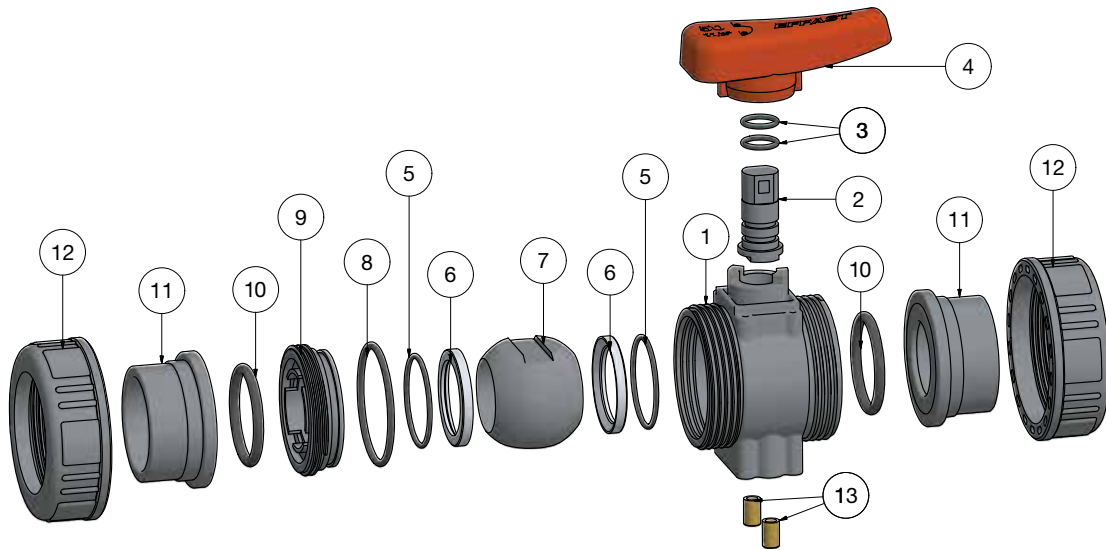
Flow Rate Coefficient Kv100 at $\Delta p = 1 \text{ bar}$

DN	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 80	DN 100
l/min	190	380	700	1000	1700	3200	7000	10000

Torque Force at Maximum Pressure Rate

DN	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 80	DN 100
Nm	1.5	2	3	5	7	10	24	30

PVC-U double union ball valve BK1



n.	Component	Material	Qty
1	Body	PVC-U	1
2	Stem	PVC-U	1
3	Stem O-rings	EPDM/FKM	2
4	Handle	PVC-U	1
5	Ball Seat O-rings	EPDM/FKM	2
6	Ball Seat	PTFE	2
7	Ball	PVC-U	1

n.	Component	Material	Qty
8	Body O-ring	EPDM/FKM	1
9	Gasket Carrier	PVC-U	1
10	Sockets O-rings	EPDM/FKM	2
11	Sockets	PVC-U	2
12	Nuts	PVC-U	2
13	Threaded Inserts ¹	Brass	2

1) From DN 15 to DN 50.

Actuation and Fastening

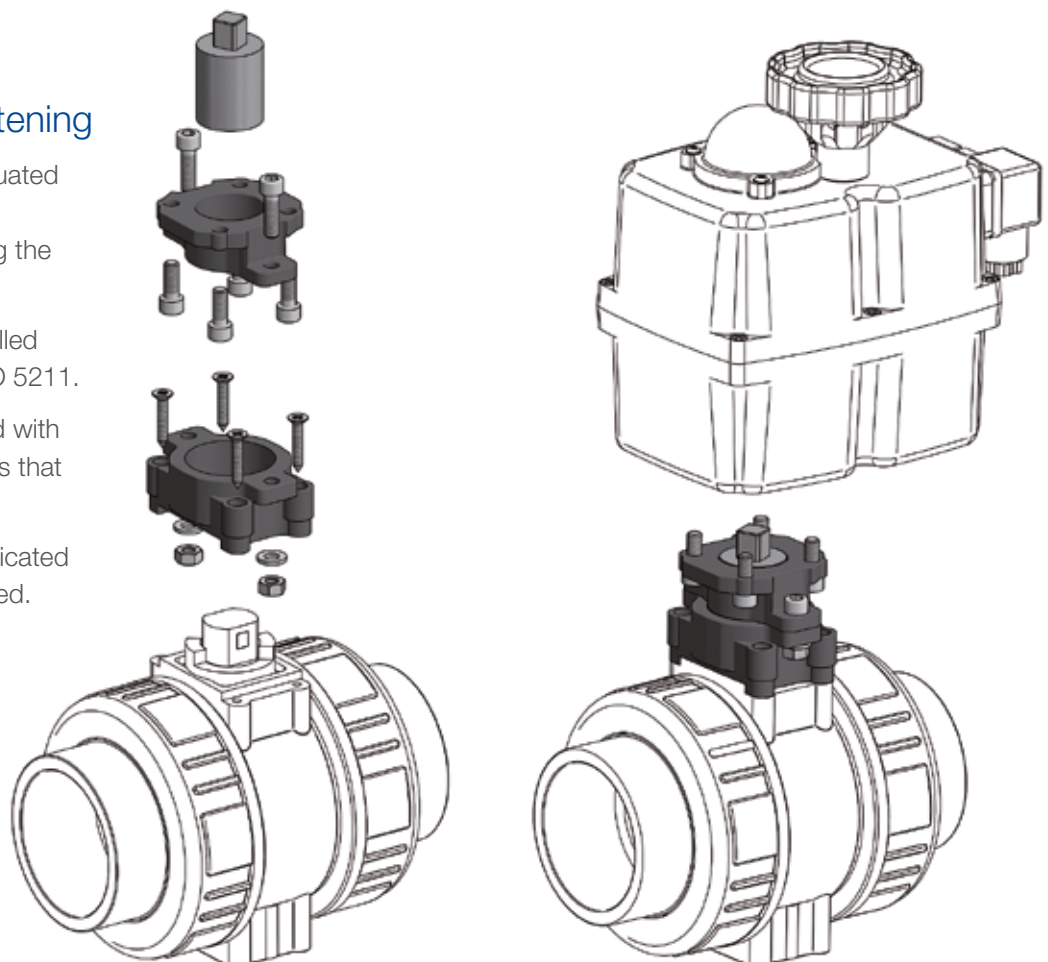
BK1 ball valve can be actuated with standard electric or pneumatic actuators using the dedicated kit.

The mounting flange is drilled according to standard ISO 5211.

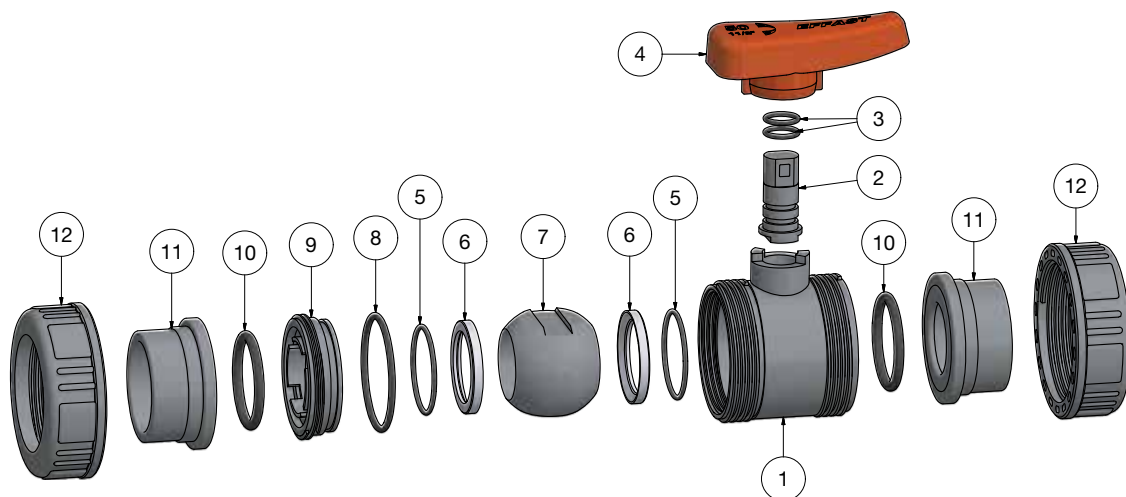
BK1 ball valve¹ is provided with integrated threaded inserts that permit to fasten the valve.

For wall installation, a dedicated mounting plate can be used.

¹ From DN 15 to DN 50.



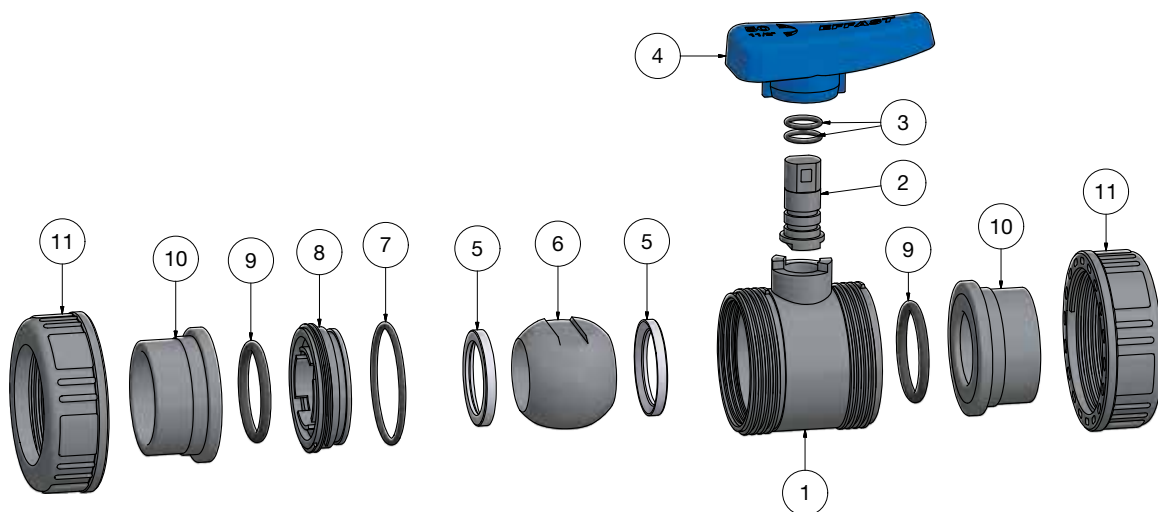
PVC-U double union ball valve BX



n.	Component	Material	Qty
1	Body	PVC-U	1
2	Stem	PVC-U	1
3	Stem O-rings	EPDM/FKM	2
4	Handle	PVC-U	1
5	Ball Seat O-rings	EPDM/FKM	2
6	Ball Seat	PTFE	2

n.	Component	Material	Qty
7	Ball	PVC-U	1
8	Body O-ring	EPDM/FKM	1
9	Gasket Carrier	PVC-U	1
10	Sockets O-rings	EPDM/FKM	2
11	Sockets	PVC-U	2
12	Nuts	PVC-U	2

PVC-U double union ball valve BV



n.	Component	Material	Qty
1	Body	PVC-U	1
2	Stem	PVC-U	1
3	Stem O-Rings	EPDM	2
4	Handle	PVC-U	1
5	Ball Seats	PE	2
6	Ball	PVC-U	1

n.	Component	Material	Qty
7	Body O-Ring	EPDM	1
8	Gasket Carrier	PVC-U	1
9	Sockets O-Rings	EPDM	2
10	Sockets	PVC-U	2
11	Nuts	PVC-U	2

Certifications

Quality Marks

Our knowledge and expertise to bring innovation in all we do has helped us produce a specialist range of products and solutions that are always up to date with the very latest regulations and quality standards.



Quality Management System ISO 9001:2015 and Environmental Management System ISO 14001:2015, certified by Kiwa Cermet Italia for "Design and manufacturing of plastic fittings and valves through moulding and assembling processes; trading of accessories".



Product certificate Kiwa-UNI for PVC-U plastic fittings for water supply and for buried and above-ground drainage and sewerage under pressure, according to UNI EN ISO 1452-3.



Product certificate, issued in accordance with Kiwa Regulations for Product Certification, for Solvent cemented fittings of PVC-U, according to KIWA Evaluation Guideline BRL-K17301.



Certificate of conformity of PVC fittings according to DIN EN ISO 1452-3.



Certificate for plastic piping systems for water supply following the French standards NF EN ISO 1452-3, NF T 54-029.



Kitemark licence for PVC-U plastic piping systems for water supply, according to BS EN ISO 1452-3.



Kitemark licence for ABS plastic piping systems for water supply, according to BS 5392 part 1.



Type Approval Certificate for thermoplastic material Pipes and Fittings on Marine Application.



Approvals for PVC-U and ABS range of fittings and valves, PVC-U and ABS valves and solvent cement, according to the requirements of the United Kingdom Water Supply (Water Fittings) regulations and Scottish Water Byelaws.



Certificate according to the Guideline for Hygienic Assessment of Organic Materials in Contact with Drinking Water (KTW Guideline).



Attestation de Conformité Sanitaire for PVC-U raw material compound and PVC-U valves.



Russian Hygienic and Sanitary certificate.



Certified to NSF/ANSI 61

Certificate of compliance with NSF/ANSI 61 and all applicable requirements (for products appearing in NSF Official Listing).



Certificate of conformity for Valves in thermoplastic material, according to the requirements of Annex III, Module A2 of the Pressure Equipment Directive 2014/68/EU.

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Effast Pressure System Range

Effast Pressure Systems are suited to a wide range of Commercial and Industrial applications, with an extensive range of pipes, fittings and valves, easily and permanently assembled using solvent cement, electro-fusion weld or mechanical installation.

Applications include:

- Chemical
- Cold water services
- Slurry lines
- Water treatment
- Reactor cooling
- Available in PVCu, ABS, PPH or PE
- WRAS approved for use with potable water
- Valves available electrically or pneumatically actuated if required

PRODUCTS	RANGE
 ABS Industrial Double Union Ball Valve, BK1 range	From 3/8" to 4" BS
 PPH Industrial Double Union Ball Valve, BK1 range	From 20 mm to 63 mm; From 1/2" to 2" BSPP
 PVC-U Industrial Single Union Ball Valve, SX range	From 20 mm to 110 mm; From 1/2" to 4"
 Industrial Double Union Ball Valve with actuators, EBK1 and PBK1 range	From 16 mm to 110 mm; From 3/8" to 4"
 PVC-U Butterfly Valves, ProFlow H series	From 75 mm to 225 mm; From 2"½ to 8"
 PVC-U Butterfly Valves, ProFlow P series	From 75 mm to 225 mm; From 2"½ to 8"
 PP-H Butterfly Valves, ProFlow T series	From 75 mm to 225 mm; From 2"½ to 8"

PRODUCTS	RANGE
 Butterfly Valves ProFlow H, P, T with actuators	From 75 mm to 225 mm; From 2"½ to 8"
 PVC-U Spring Check Valve CV and Ball Check Valve CB	From 16 mm to 110 mm; From 3/8" to 4"
 PVC-U Spring Check Valve with clear body, CVT range	From 20 mm to 110 mm; From 1/2" to 4"
 PVC-U Foot Valve with Strainer, HV range	From 20 mm to 110 mm; From 1/2" to 4"
 PVC-U Swing Check Valve, CKD range	From 75 mm to 225 mm; From 2"½ to 8"
 PVC-U Diaphragm Valve	From 20 mm to 63 mm; From 1/2" to 2"
 Solvent cement	Large Tite (THF-free) and Tite'n Fast

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