

Style 22, 26, 28, 31, 41, and 44 Couplings for Use with *Vic-Ring* Applications and Shouldered-End Pipe

! WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

The information contained in this instruction sheet shall be referenced for pipe preparation and installation requirements for Style 22, 26, 28, 31, 41, and 44 Couplings for *Vic-Ring* applications and shouldered-end pipe. **DO NOT** attempt to assemble these couplings on pipe that is direct grooved.

Style 22 Couplings are typically specified for use with Type "A" *Vic-Rings* (Type "C", "D", and "E" *Vic-Rings* may be specified – contact Victaulic).

Style 26 Couplings are typically specified for use with Type "C" and "D" *Vic-Rings*.

Style 28 Couplings are typically specified for use with Type "D" *Vic-Rings* (Type "B" and "C" *Vic-Rings* may be specified – contact Victaulic).

Style 31, 41, and 44 Couplings are typically specified for use with Type "C", "D", and "E" *Vic-Rings*.

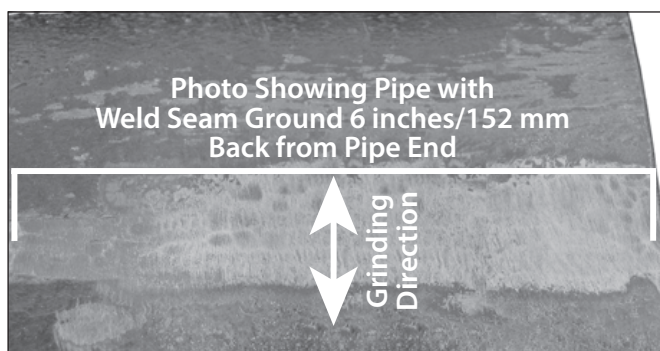
PIPE END INSPECTION AND PREPARATION

VIC-RING APPLICATIONS

! WARNING

- It is the welder's responsibility to verify that *Vic-Rings* are welded correctly to the pipe, in accordance with proper welding practices and in conformance with the *Vic-Ring* Weldment submittal drawing(s) provided for the specific project.
- The weld shall be capable of withstanding all thrust loads, in accordance with appropriate American Welding Society (AWS) specifications or other local or national codes and requirements. All welds shall be leak-tight.
- Applicable safety procedures shall be followed during the welding process.

Failure to follow these instructions could cause improper product installation, resulting in death or serious personal injury and property damage.



1. Prior to welding a *Vic-Ring* onto the pipe end, weld seams shall be ground flush to the pipe surface (outside diameter). Grind the weld seam from the pipe end to a minimum distance of 6 inches/152 mm back from the pipe end. This area, around the entire pipe circumference, shall be generally free from indentations, projections, and roll marks.

2a. Weld the *Vic-Ring* onto the pipe end per the literature provided with the shipment and the specifications listed in the applicable Victaulic Section 16 publications, which can be downloaded at victaulic.com.



2b. Clean the outside surface of the *Vic-Rings* to remove dirt and other foreign material.

SHOULDERED-END PIPE APPLICATIONS

The outside surface of the shouldered pipe ends shall be generally free from indentations and projections to ensure a leak-tight seal. All oil, grease, loose paint, dirt, and cutting particles shall be removed. For cast shoulder outside diameter "OD" dimensional requirements, refer to the applicable Victaulic Section 16 publications, which can be downloaded at victaulic.com.

GASKET INSTALLATION AND PIPE POSITIONING

1. PREPARE PIPE: Prepare the pipe by following the instructions on page 1. **Support both pipe lengths securely. Pipe support shall be maintained throughout the entire installation procedure.**

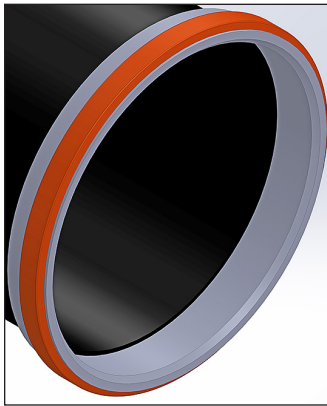
2a. CHECK GASKET: Check the gasket to verify that it is suitable for the intended service. The color code identifies the material grade. Refer to Victaulic publication 05.01 for the color code chart, which can be downloaded at victaulic.com.

CAUTION

- A thin coat of a compatible lubricant shall be applied to the gasket sealing lips, gasket exterior, and the interior surface of each coupling housing to help prevent pinching, rolling, or tearing during installation.

Failure to use a compatible lubricant may cause gasket damage, resulting in joint leakage and property damage.

2b. LUBRICATE GASKET: Apply a thin coat of a compatible lubricant, such as Victaulic Lubricant, to the gasket sealing lips and exterior.



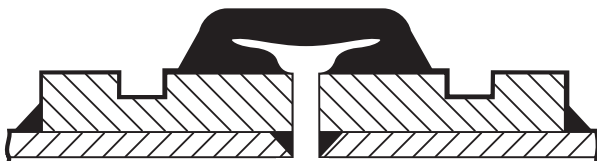
3. POSITION GASKET: Position the gasket over the *Vic-Ring* or shouldered pipe end. Verify that the gasket does not overhang the *Vic-Ring* or shouldered pipe end. **NOTE:** To ease installation for 14-inch/355.6-mm and larger sizes, the gasket may be turned inside out to slide it over the *Vic-Ring* or shouldered pipe end.



4. JOIN VIC-RINGS OR SHOULDERED PIPE ENDS: Align and bring the two *Vic-Rings* or shouldered pipe ends together. Slide the gasket into position and center it between the groove in each *Vic-Ring* or shouldered pipe end. **NOTE:** If the gasket was turned inside out in step 3 above, roll the gasket into position and center it between the groove in each *Vic-Ring* or between the shouldered pipe ends.

The gasket shall fit snug to the *Vic-Rings* or shouldered pipe ends. No gaps/sags shall be present between the gasket sealing lips and outside diameter of the *Vic-Rings* or shouldered pipe ends.

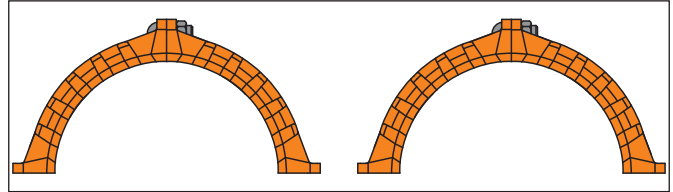
5. Apply an additional thin coat of a compatible lubricant, such as Victaulic Lubricant, to the gasket exterior.



CORRECT GASKET POSITIONING

INSTALLATION OF COUPLINGS CONSISTING OF TWO OR FOUR HOUSINGS

1. Verify that all instructions in the “Pipe End Inspection and Preparation” and “Gasket Installation and Pipe Positioning” sections have been followed.



FOR COUPLINGS CONSISTING OF FOUR HOUSINGS: Assemble the housings loosely into two equal halves. Install a bolt into each hole location at the bolt pads and thread a nut finger-tight onto each bolt. Verify that the oval neck of each bolt seats properly in the bolt hole. Tighten the nuts until metal-to-metal contact occurs at the bolt pads, then back the nuts off a full turn to provide spacing between the bolt pads.

2. INSTALL FIRST HOUSING/PRE-ASSEMBLED HALF: Install the first housing or pre-assembled half over the gasket. Verify that the housings' keys completely engage with the groove in each *Vic-Ring* or with the shouldered pipe ends.

3. INSTALL REMAINING HOUSING/PRE-ASSEMBLED HALF: Install the remaining housing or pre-assembled half over the gasket. Verify that the housings' keys completely engage with the groove in each *Vic-Ring* or with the shouldered pipe ends. While supporting the weight of the assembly, install the remaining bolt(s), and thread a nut finger-tight onto each bolt. Verify that the oval neck of each bolt seats properly in the bolt hole.

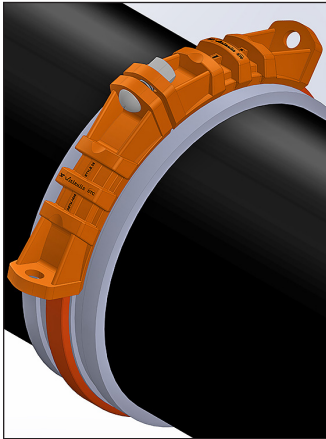
4. Follow steps 3 – 4 on the following page to complete the assembly.

INSTALLATION OF COUPLINGS CONSISTING OF SIX OR MORE HOUSINGS

NOTICE

- Victaulic recommends installing one housing at a time due to the weight of each housing.

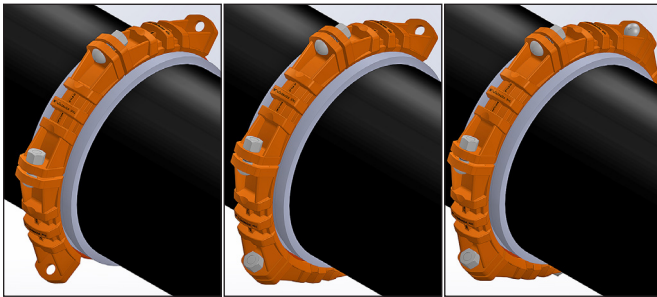
1. Verify that all instructions in the “Pipe End Inspection and Preparation” and “Gasket Installation and Pipe Positioning” sections have been followed.



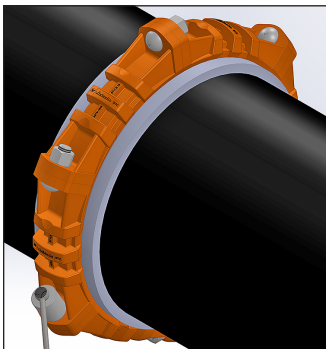
2a. Install the first housing over the gasket. Verify that the housings' keys engage the groove in each *Vic-Ring* or with the shouldered pipe ends. Install the second housing in the same manner.

2b. While supporting the housings, install a bolt and thread a nut finger-tight onto the bolt.

NOTE: Verify that the oval neck of the bolt seats properly in the bolt hole.



2c. Rotate the housings to gain access to the next bolt pad location. Install each additional housing over the gasket, as described in steps 2a and 2b.



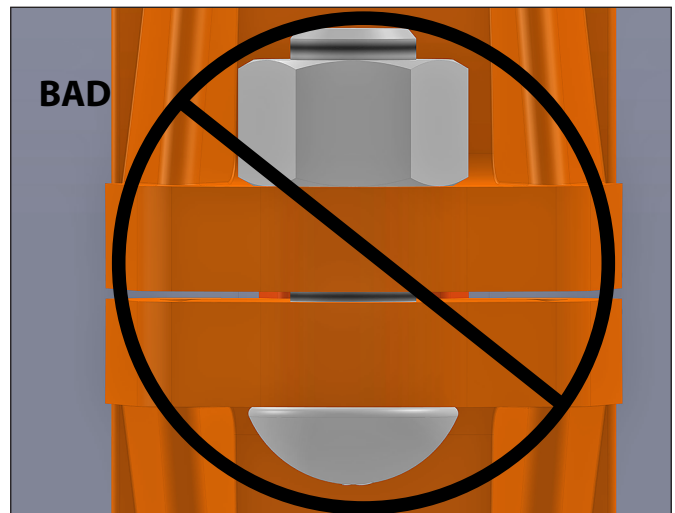
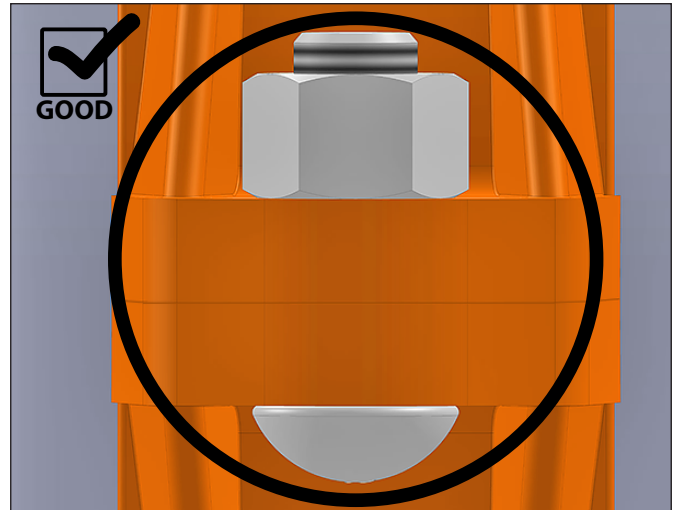
3. TIGHTEN NUTS. Tighten all nuts evenly by alternating bolt pad locations until metal-to-metal contact occurs at each bolt pad.
NOTE: It is important to tighten all nuts evenly by alternating bolt pad locations to prevent gasket pinching. Deep well sockets are required for proper installation due to the longer bolt lengths associated with these products. Refer to the “Helpful Information” tables on the following pages.

TO PREVENT LUBRICATION FROM DRYING OUT AND CAUSING GASKET PINCHING, ALWAYS BRING THE BOLT PADS INTO METAL-TO-METAL CONTACT IMMEDIATELY AFTER ASSEMBLING THE COUPLING ONTO THE VIC-RINGS OR SHOULDERED PIPE ENDS.

⚠ WARNING

- Nuts shall be tightened evenly by alternating all bolt pad locations until metal-to-metal bolt pad contact is achieved at each bolt pad location.
- Always bring the bolt pads into metal-to-metal contact immediately after assembling the coupling onto the *Vic-Rings* or shouldered pipe ends.
- Keep hands away from coupling openings during tightening.

Failure to follow these instructions could cause joint failure, resulting in death or serious personal injury and property damage.



4. Visually inspect the bolt pads at each joint to verify that metal-to-metal contact is achieved across the entire bolt pad section, in accordance with step 3.

HELPFUL INFORMATION

	Nominal inches DN	Number of Housings	Approximate Weight of Each Housing pounds/kilograms	Total Number of Bolts/Nuts Per Coupling	Nut Size inches/Metric	Socket Size inches/mm
Style 22	17 DN425	4	16 7.3	4	1 M24	1 5/8 36
	20 DN500	4	22 10.0	4	1 M24	1 5/8 36
	24 DN600	4	32 14.5	4	1 1/8 M27	1 13/16 41
	30 DN750	6	23 10.4	6	1 M24	1 5/8 36
	33 DN825	6	33 15.0	6	1 1/4 M30	2 46
	36 DN900	6	42 19.1	6	1 1/2 M36	2 3/8 55
	60 DN1500	10	46 20.9	10	1 5/8 M42	2 9/16 65
Style 26	20 DN500	4	20 9.1	4	1 1/8 M27	1 13/16 41
	24 DN600	4	29 13.2	4	1 1/8 M27	1 13/16 41
Style 28	18 DN450	4	28 12.7	4	1 1/8 M27	1 13/16 41
	20 DN500	4	28 12.7	4	1 1/8 M27	1 13/16 41
	22 DN550	6	25 11.3	6	1 1/8 M27	1 13/16 41
	24 DN600	6	25 11.3	6	1 1/8 M27	1 13/16 41
	26 DN650	6	47 21.3	6	1 1/2 M36	2 3/8 55
	27 DN675	6	47 21.3	6	1 1/2 M36	2 3/8 55
	28 DN700	6	55 24.9	6	1 1/2 M36	2 3/8 55
	30 DN750	6	55 24.9	6	1 1/2 M36	2 3/8 55
Style 31	14 DN350	4	10 4.5	4	1 M24	1 5/8 36
	16 DN400	4	16 7.3	4	1 M24	1 5/8 36
	18 DN450	4	20 9.1	4	1 M24	1 5/8 36
	20 DN500	4	19 8.6	4	1 1/8 M27	1 13/16 41
	24 DN600	6	18 8.2	6	1 1/8 M27	1 13/16 41
	30 DN750	6	27 12.2	6	1 1/8 M27	1 13/16 41
	36 DN900	6	34 15.4	6	1 1/8 M27	1 13/16 41
Style 41	30 DN750	6	30 13.6	6	1 1/8 M27	1 13/16 41
	36 DN900	6	35 15.9	6	1 1/8 M27	1 13/16 41
	38 DN950	6	37 16.8	6	1 1/4 M30	2 46
	42 DN1050	8	34 15.4	8	1 3/8 M33	2 3/16 50
	46 DN1150	8	42 19.1	8	1 1/2 M36	2 3/8 55
	48 DN1200	8	49 22.2	8	1 5/8 M39	2 9/16 60
	54 DN1350	8	59 26.8	8	1 3/4 M42	2 3/4 65
	60 DN1500	10	57 25.9	10	1 7/8 M45	2 15/16 70
	66 DN1650	12	63 25.6	24	1 1/2 M36	2 3/8 55

HELPFUL INFORMATION (CONTINUED)

	Nominal inches DN	Number of Housings	Approximate Weight of Each Housing pounds/kilograms	Total Number of Bolts/Nuts Per Coupling	Nut Size inches/Metric	Socket Size inches/mm
Style 44	4 DN100	2	4 1.8	2	$\frac{5}{8}$ M16	$1\frac{1}{16}$ 24
	6 DN150	2	6 2.7	2	$\frac{5}{8}$ M16	$1\frac{1}{16}$ 24
	8 DN200	2	9 4.1	2	$\frac{3}{4}$ M20	$1\frac{1}{4}$ 30
	10 DN250	2	12 5.4	2	$\frac{3}{4}$ M20	$1\frac{1}{4}$ 30
	12 DN300	2	16 7.3	2	$\frac{7}{8}$ M22	$1\frac{7}{16}$ 34
	14 DN350	4	11 5.0	4	1 M24	$1\frac{5}{8}$ 36
	16 DN400	4	16 7.3	4	1 M24	$1\frac{5}{8}$ 36
	18 DN450	4	22 10.0	4	1 M24	$1\frac{5}{8}$ 36
	20 DN500	4	23 10.4	4	$1\frac{1}{4}$ M30	2 46
	24 DN600	6	18 8.2	6	$1\frac{1}{4}$ M30	2 46
	30 DN750	6	38 17.2	6	$1\frac{1}{2}$ M36	$2\frac{3}{8}$ 55
	36 DN900	6	45 20.4	6	$1\frac{1}{2}$ M36	$2\frac{3}{8}$ 55
	42 DN1050	8	48 21.8	8	$1\frac{3}{4}$ M42	$2\frac{3}{4}$ 65
	48 DN1200	8	65 29.5	16	$1\frac{3}{8}$ M33	$2\frac{3}{16}$ 50
	54 DN1350	8	77 34.9	16	$1\frac{1}{2}$ M36	$2\frac{3}{8}$ 55
	60 DN1500	10	69 31.3	20	$1\frac{1}{2}$ M36	$2\frac{3}{8}$ 55

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