

# **D-02**

### MODEL 7041 FLANGE ADAPTER- PN 10 / PN 16

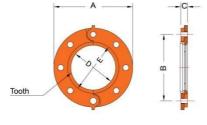
The Model 7041 Flange Adapter allows for a direct connection of PN 10<sup>\*</sup> and PN 16 flanges. The specially designed gasket enables the transition from a grooved system to a flanged system or component with this single flange adapter. The two-segment design provides an easy and fast installation. 2" through 12" (50 mm – 300 mm) flange adapters are supplied hinged as a single assembly, while 14" -24" (Model 7041N) are supplied with two separate segments and a draw kit. All include an EPDM rubber gasket and plated track bolts and nuts. Housing segments are supplied with our standard painted finishes, i.e. orange or RAL3000 red. Optional finishes such as hot dipped zinc galvanized and custom epoxy coatings are available.

\* PN10: 2" - 6" (50 mm - 150 mm) only.

 $\widehat{\mathbb{CD}}$  Always fasten the bolts to the required torque. Please refer to page 3.



For Fire Protection pressure rating, listing, and approval information, refer to Data Sheet B-42 or visit **SHURJOINT** website, <u>www.shurjoint.com</u> for details or contact your **SHURJOINT** Representative.



2"~12" (Hinged)



can be found on www.shurjoint.com

Nominal	Pipe	Max. Working Pressure	Max. End Load	Dimensions			Sealing Surface		Bolts		_
Size	0.D.	(CWP)*	(CWP)	Α	В	C	D	Е	No.	Size	Weight
in mm	in mm	PSI Bar	Lbs <sub>kN</sub>	mm	mm	mm	mm	mm		mm	Lbs Kgs
<b>2</b> 50	<b>2.375</b> 60.3	<b>300</b> 20	1000 4.6	165	125	22	60	78	4	M16	5.1 2.3
76.1 mm	<b>3.000</b> 76.1	<b>300</b> 20	1590 7.3	185	145	22	76	92	4	M16	<b>5.7</b> 2.6
3 80	3.500 88.9	<b>300</b> 20	2165 9.9	200	160	24	89	106	8	M16	<b>7.1</b> 3.2
<b>4</b> 100	<b>4.500</b> 114.3	<b>300</b> 20	<b>3580</b> 16.4	220	180	24	114	132	8	M16	7.5 3.4
139.7 mm	<b>5.500</b> 139.7	<b>300</b> 20	<b>5340</b> 24.5	250	210	25	140	159	8	M16	9.8 4.4
165.1 mm	<b>6.500</b> 165.1	<b>300</b> 20	7460 34.2	285	240	24	165	182	8	M20	<b>11.3</b> 5.1
<b>6</b> 150	<b>6.625</b> 168.3	<b>300</b> 20	<b>7750</b> 35.6	285	240	24	168	182	8	M20	10.1 <i>4.6</i>
<b>8</b> 200	<b>8.625</b> 219.1	<b>300</b> 20	13140 60.3	340	295	29	219	236	12	M20	<b>17.2</b> 7.8
10 250	<b>10.750</b> 273.0	<b>300</b> 20	20410 93.6	405	355	30	273	295	12	M24	25.2 11.4
12 300	12.750 323.9	<b>300</b> 20	28710 131.8	460	410	32	324	346	12	M24	<b>30.2</b> 13.7

Note: 2" - 6" flange drilling to PN 10 / PN 16 and 8" and above to PN 16.

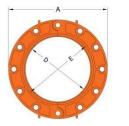
\* Working Pressure is based on roll grooved standard wall carbon steel pipe.

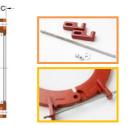


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### MODEL 7041N FLANGE ADAPTER - PN 16, 14" ~ 24"





14" ~ 24": Supplied with a draw kit.

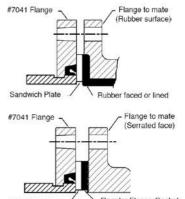
Model 7041N Flange Adapter - PN 16												
Nominal Size	Pipe O.D.	Max. Working Pressure (CWP)*	Max. End Load _ (CWP)	A	Dimensions B	<u> </u>	<u>Sealing</u> D	<u>Surface</u> E	<u>Bo</u> No.	olts Size	_ Weight	
in	in	PSI	Lbs	<u></u>				-	110.	OILC	Lbs	
mm	mm	Bar	kN	mm	mm	mm	mm	mm		mm	Kgs	
14	14.000	300	34620	520 4	470 36	356	383	16	M24	48.7		
350	355.6	20	158.8	520	470	30	300	303	10	IVIZ4	22.1	
16	16.000	300	45220	580	525	38	406	431	16	M27	59.7	
400	406.4	20	207.4	560	525	50	400	431	10		27.1	
18	18.000	300	57230	57230	640	585	40	457	486	20	M27	71.6
450	457.2	20	262.5	040	565	40	457	400	20	IVIZ7	32.5	
20	20.000	300	70650	715	715 650	43	508	3 537	20	M30	103.4	
500	508.0	20	324.0	115							47.0	
24	24.000	300	101740	840	770	48	610	635	20	M33	160.6	
600	609.6	20	466.7	640	770	40	010	030		IVI33	73.0	

\* Working Pressure is based on roll grooved standard wall carbon steel pipe.



# **Important Notes:**

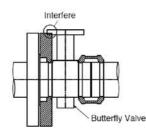
1. The Model 7041 flange adapter requires a hard flat face for effective sealing. When the mating surface is not adequate as with the serrated faces of some valves or the rubber-faced wafer valves, a sandwich plate must be used.



Sandwich Plate / Regular Flange Gasket

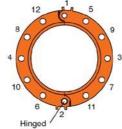
- 2. The Model 7041 flange adapter has small triangular teeth inside the key shoulder to prevent the pipe from rotating. The teeth should be ground off when mating to a rubber-lined flange.
- 3. The Models 7041 flange adapter shall not be used as anchor points for tie-rods across non-restrained joints.

4. When assembling a Model 7041 flange adapter against a butterfly valve or ball valve, make sure that the outside diameter of the flange adapters do not interfere with the valve actuator or the mounting pad of the actuator.



 Bolt tightening sequence: Like a regular flange joint, it is important to make flange faces contact parallel. Tighten nuts alternately in the sequence of diagonally opposite pairs as shown below until the flange faces meet and make a metalto-metal contact.







### **Performance Data**

The following tables show the maximum working pressures (CWP) of **Shurjoint** Model 7041 Flange Adapter PN 10 / PN 16 used on both carbon steel and stainless steel pipes. **Shurjoint** ductile iron couplings can be used in conjunction with stainless steel pipe in non-corrosive environment as the flow media does not come in direct contact with the coupling housings but rather only the gasket.

Model 7041 on Carbon Steel Pipe									
Nom. Size	Cut-G	rooved	Roll-Grooved						
in / mm	XS	STD	STD	Sch. 10	Sch. 7				
in / mm	PSI / Bar	PSI / Bar	PSI / Bar	PSI / Bar	PSI / Bar				
2	300	300	300	250	250				
50	20	20	20	17	17				
21/2	300	300	300	250	250				
65	20	20	20	17	17				
3	300	300	300	250	250				
80	20	20	20	17	17				
4	300	300	300	250	250				
100	20	20	20	17	17				
5	300	300	300	250	200				
125	20	20	20	17	14				
6	300	300	300	250	200				
150	20	20	20	17	14				
8	300	300	300	200	NR				
200	20	20	20	14					
10	300	300	300	200	NR				
250	20	20	20	14					
12	300	300	300	200	NR				
300	20	20	20	14	DIN N				

N	Model 7041 on Stainless Steel Pipe									
Nom. Size	Cut-G	irooved	Roll-Grooved							
in / mm	Sch. 80S	Sch. 40S	Sch. 40S	Sch. 10S	Sch. 5S					
In / mm	PSI / Bar	PSI / Bar	PSI / Bar	PSI / Bar	PSI / Bar					
2	300	300	275	275	250					
50	20	20	19	19	17					
21⁄2	300	300	275	275	250					
65	20	20	19	19	17					
3	300	300	275	275	250					
80	20	20	19	19	17					
4	300	300	275	275	250					
100	20	20	19	19	17					
5	300	300	275	200	200					
125	20	20	19	14	14					
6	300	300	250	200	200					
150	20	20	17	14	14					
8	300	300	200	75	NR					
200	20	20	14	5	INIX					
10	300	300	200	75	NR					
250	20	20	14	5	INK					
12	300	300	200	50	NR					
300	20	20	14	3	INIX					

Note: Hydrostatic shell test: 450 psi (30 Bar) per ANSI B16.5

### **Required Bolt Torque**

The table below provides the standard torque values for proper assembly of *Shurjoint* flange adapters. Use a torque wrench so that all the nuts are tightened equally with a same torque value. *Shurjoint* flange adapters are sealed with elastic (rubber) gaskets, which require much lower torques than those that utilize metallic gaskets.

Model 7041 Flange Adapter – PN 10 / PN 16									
Nom. Size	Bo	olt	Required	l Torque					
mm	No	Size (mm)	Lbs-Ft	Nm					
50	4	M16	110 ~ 140	149 ~ 190					
65	4	M16	110 ~ 140	149 ~ 190					
80	8	M16	110 ~ 140	149 ~ 190					
100	8	M16	110 ~ 140	149 ~ 190					
125	8	M20	220 ~ 250	298 ~ 339					
150	8	M20	220 ~ 250	298 ~ 339					
200	12	M20	220 ~ 250	298 ~ 339					
250	12	M24	320 ~ 400	434 ~ 542					
300	12	M24	320 ~ 400	434 ~ 542					
350	16	M24	320 ~ 400	434 ~ 542					
400	16	M27	360 ~ 520	488 ~ 705					
450	20	M27	360 ~ 520	488 ~ 705					
500	20	M30	450 ~ 725	610 ~ 982					
600	20	M33	620 ~ 1000	841 ~ 1356					



# 7041

### **MATERIAL SPECIFICATIONS**

#### Housing:

Ductile Iron to ASTM A536, Gr. 65-45-12 and or ASTM A395, Gr. 65-45-15, min. tensile strength 65,000 psi (448 MPa).

Surface Finish:

Standard painted finishes in orange or RAL3000 red.

- □ Hot dip zinc galvanized (Option).
- □ Epoxy coatings in RAL3000 red or other colors (Option)

#### • Rubber Gasket:

**Grade E-pw EPDM** (Color code: Double Green stripe) approved under NSF/ANSI 61 and NSF/ANSI 372 for potable water service to +180°F (+82°C). Also good for services for water with acid, water with chlorine, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.

# Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.

Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C)\*.

\*EPDM seat for water services are not recommended for steam services unless valves or components are accessible for frequent replacement.

□ (Option) Grade "E" EPDM (Color code: Green stripe) Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with chlorine, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals. Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons. Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C)\*.

\*EPDM seat for water services are not recommended for steam services unless valves or components are accessible for frequent replacement. □ (Option) Grade "T" Nitrile (Color code: Orange stripe) Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Also good for water services under +150 °F (+66 °C). Temperature range: -20 °F to +180 °F (-29 °C to +82 °C).

Do not use for HOT WATER above +150°F (+66°C) or HOT DRY AIR above +140°F (+60°C).

 Other options: Grade "O" - Fluoroelastomer. Grade "L" - Silicone.
 For additional details contact *Shurjoint*.

#### Standard Hex Bolts & Nuts:

Plated hex bolts conforming to ASTM A307 with hex nuts. (2 nuts and bolts are supplied). Bolts and nuts for the flange connection to be supplied by installer.

#### Draw Kit:

Screw Rod: Carbon Steel. Assembly holders: Ductile Iron. Bolts & Nuts: Commercial.



#### General Notes:

- Maximum Working Pressure (CWP) listed is the maximum cold water pressure for general piping services tested to ASTM F1476 and or AWWA C606 methods. Figures listed are based on roll-or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact Shurjoint for additional information.
- Max. End Load is calculated based on the maximum working pressure (CWP).
- Listed and or Approved Pressures are pressure ratings for fire protection systems, tested and approved by various approval bodies. Please always
  refer to the latest approval data posted on the Shurjoint website.
- Field Joint Test: For one time only the system may be tested hydrostatically at 1½ times the maximum working pressure listed (AWWA C606 5.2.3).
- Warning: Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- The 10 Year Limited Warranty applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- Shurjoint reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.

**Shurjoint** product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact **Shurjoint** Technical Service. **Shurjoint** reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligations to make such changes and modifications on **Shurjoint** products previously subsequently sold.