

Design D and DA Valves

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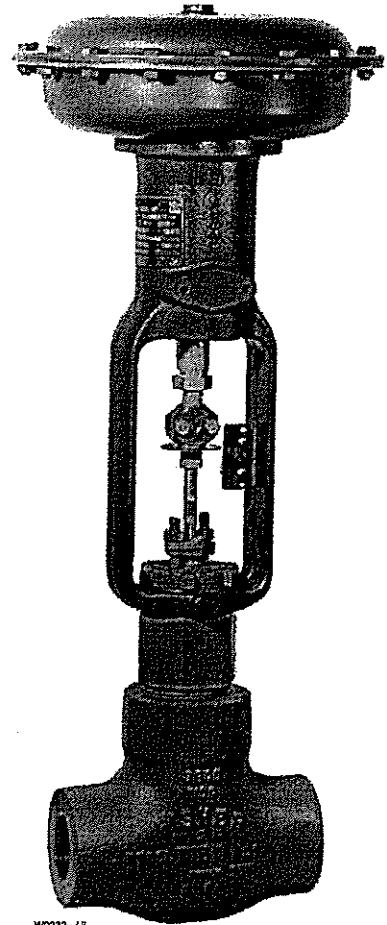
Introduction

Scope of Manual

This instruction manual includes installation, maintenance, and parts information for the Design D and DA valves. Refer to separate manuals for instructions covering the actuator, positioner, and accessories.

Do not install, operate, or maintain a Design D or DA valve without first • being fully trained and qualified in valve, actuator, and accessory installation, operation, and maintenance, and • carefully reading and understanding the contents of this manual. If you have any questions about these instructions, contact your Emerson Process Management™ sales office before proceeding.

Unless otherwise noted, all NACE references are to NACE MR0175-2002.



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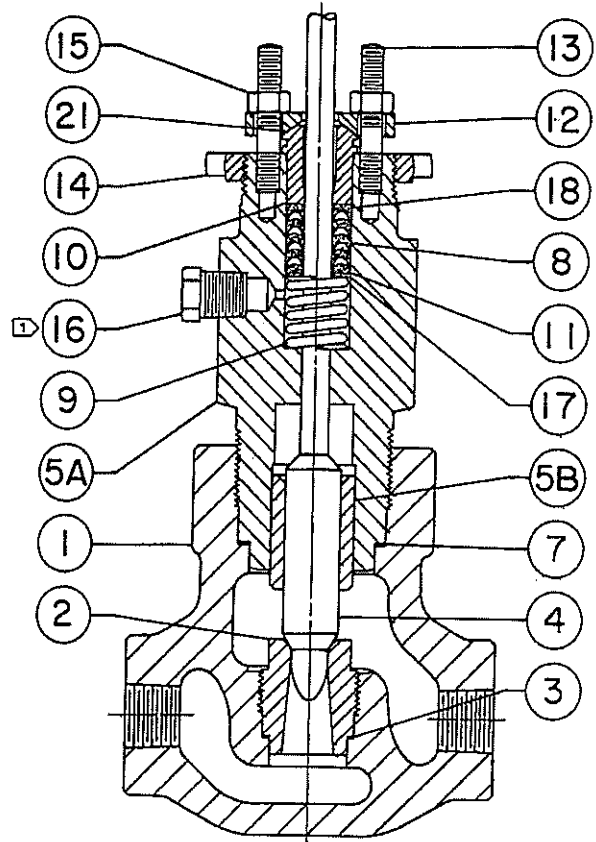
Figure 1. Design D Valve with Type 657 Actuator

Note

Neither Emerson, Emerson Process Management, nor any of their affiliated entities assumes responsibility for the selection, use and maintenance of any product. Responsibility for the selection, use, and maintenance of any product remains with the purchaser and end-user.

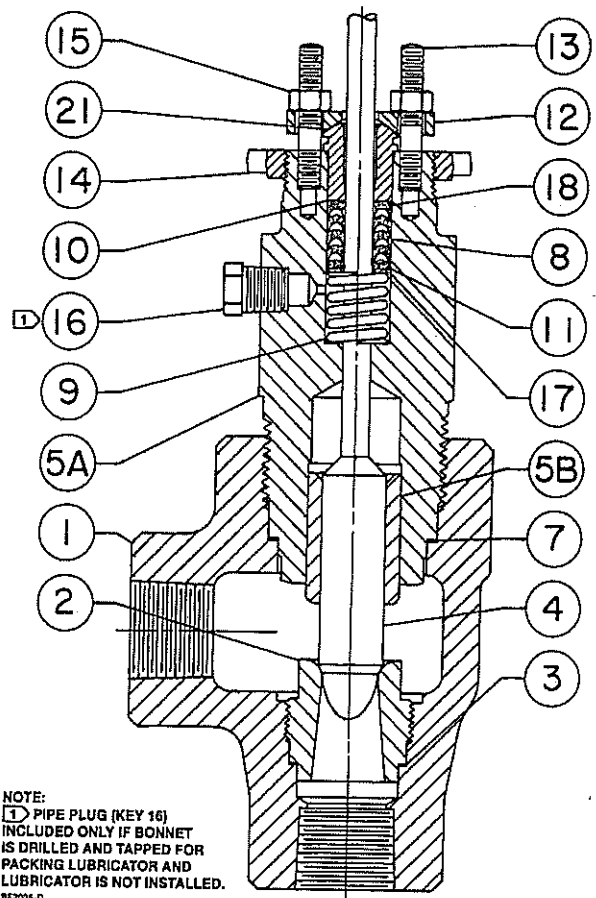


D and DA Valves



NOTE:
[16] PIPE PLUG (KEY 16) INCLUDED ONLY IF BONNET IS DRILLED AND TAPPED FOR PACKING LUBRICATOR AND LUBRICATOR IS NOT INSTALLED.
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Figure 4. Design D Globe-Style Valve



NOTE:
[16] PIPE PLUG (KEY 16) INCLUDED ONLY IF BONNET IS DRILLED AND TAPPED FOR PACKING LUBRICATOR AND LUBRICATOR IS NOT INSTALLED.
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Figure 5. Design DA Angle-Style Valve

7. If you had previously chosen to remove the valve plug/stem assembly and packing from the bonnet, then remove any protective tape or covering from the valve plug/stem assembly (key 4) and carefully install it into the valve body. Slide the bonnet (key 5) over the stem and thread it tightly into the valve body. Install new packing and the metal packing box parts according to the correct arrangement in figure 3. Place a smooth-edged pipe over the valve stem, and gently tap each soft packing part into the packing box.

8. Slide the packing follower, upper wiper, and packing flange (keys 10, 21, and 12) into position. Lubricate the packing flange studs (key 13) and the washer surfaces of the packing flange nuts (key 15). Install the packing flange nuts.

9. For spring-loaded PTFE V-ring packing, tighten the packing flange nuts (key 15) until the packing follower (key 10) contacts the bonnet. For other packing arrangements, tighten the packing flange nuts (key 15) alternately in small equal increments. Continue until one of the nuts reaches the minimum recommended torque shown in table 3. Then tighten the remaining packing flange nut until the packing flange is level and at a 90-degree angle to the valve stem.

10. Mount the actuator on the bonnet (key 5) and connect the actuator and valve plug stem according to the procedure in the appropriate actuator instruction manual. Check for leakage around the packing follower (key 10) when you put the control valve assembly into service. Retighten the packing flange nuts as required.

Parts Ordering

Each body-bonnet assembly is assigned a serial number, which is on the body or nameplate. The serial number also appears on the actuator nameplate if you bought a valve and actuator assembly. Refer to this serial number when contacting your Emerson Process Management sales office for technical advice. When ordering replacement parts, mention the serial number. Also specify key number, part description, material, and part number from the following lists of Parts Kits and part numbers.



WARNING

Use only genuine Fisher® replacement parts. Components that are not supplied by Emerson Process Management should not, under any

circumstances, be used in any Fisher valve, because they will void your warranty, might adversely affect the performance of the valve, and could give rise to personal injury and property damage.

Note

Neither Emerson, Emerson Process Management, nor any of their affiliated entities assumes responsibility for the selection, use and maintenance of any product. Responsibility for the selection, use, and maintenance of any product remains with the purchaser and end-user.

Parts Kits

Key	Description	Part Number
---	Packing Box Parts for Double PTFE V-Ring Packing (Includes keys 3, 7, 8, 11, 18, 19, and 21)	
	9.5 mm (3/8 Inch) Stem	RDX0000CN12
	12.7 mm (1/2 Inch) Stem	RDX0000CN22
---	Trim Package (S31600)	
	[Includes Equal Percentage S31600 (316 SST) W/R30006 (alloy 6) tip valve plug/stem (key 4), S31600 w/alloy 6 seat ring (key 2), stainless steel gaskets (keys 3 & 7), and single PTFE packing parts (keys 8, 9, 11, 17, 18, and 21) or double PTFE packing parts (keys 8, 11, 18, 19, and 21)]	
	Double PTFE V-Ring Packing	
	1 In. Valve w/ 9.5 mm (3/8 Inch) Stem Dia.	
	6.4 mm (0.25 Inch) port dia.	RDXCNTRM112
	9.5 mm (0.375 Inch) port dia.	RDXCNTRM122
	12.7 mm (0.5 Inch) port dia.	RDXCNTRM132
	19.1 mm (0.75 Inch) port dia.	RDXCNTRM142
	2 In. Valve w/ 12.7 mm (1/2 Inch) Stem Dia.	
	6.4 mm (0.25 Inch) port dia.	RDXCNTRM212
	9.5 mm (0.375 Inch) port dia.	RDXCNTRM222
	12.7 mm (0.5 Inch) port dia.	RDXCNTRM232
	19.1 mm (0.75 Inch) port dia.	RDXCNTRM242
	25.4 mm (1-Inch) port dia.	RDXCNTRM252
	31.8 mm (1.25 Inch) port dia.	RDXCNTRM262
---	Trim Package (Ceramic)	
	[Includes seat ring and valve plug/stem assy (keys 2 and 4)]	
	1-In. Valve w/ 9.5 mm (3/8 Inch) Stem Dia.	
	6.4 mm (0.25 Inch) port dia.	RDXVTC00012
	9.5 mm (0.375 Inch) port dia.	RDXVTC00022
	12.7 mm (0.5 Inch) port dia.	RDXVTC00032
	19.1 mm (0.75 Inch) port dia.	RDXVTC00042
	2-In. Valve w/ 12.7 mm (1/2 Inch) Stem Dia.	
	6.4 mm (0.25 Inch) port dia.	RDXVTC00052
	9.5 mm (0.375 Inch) port dia.	RDXVTC00062
	12.7 mm (0.5 Inch) port dia.	RDXVTC00072
	19.1 mm (0.75 Inch) port dia.	RDXVTC00082
	25.4 mm (1-Inch) port dia.	RDXVTC00092
	31.8 mm (1.25 Inch) port dia.	RDXVTC00102

Note

Part numbers are shown for recommended spares only. For part numbers not shown, contact your Emerson Process Management sales office.

Parts List

Note

Abbreviations used in this parts list are: SST (stainless steel), RTJ (ring-type joint), RF (raised face), SCH (schedule), BWE (butt welding end), dia. (diameter), in. (inches), mm (millimeters), psi (pounds per square inch), and zn pl (zinc plated).

Sizes shown in inches are valve sizes unless otherwise stated.

Select parts titled 3600 PSI if your valve has a Class 1500 or lower rating and select parts titled 6000 PSI if your valve has a Class 2500 rating.

Key	Description	Part Number
001	Valve Body If you need a valve body as a replacement part, order by valve size, serial number, and desired material.	
002*	Seat Ring CF8M or S31600 (316 SST) w/COCR-A seat	
	1-inch valve	
	6.4 mm (0.25 inch) port dia.	2B5097X0012
	9.5 mm (0.375 inch) port dia.	2B5098X0012
	12.7 mm (0.5 inch) port dia.	2B5099X0012
	19.1 mm (0.75 inch) port dia. ✓	2B5100X0012
	2-inch valve	
	6.4 mm (0.25 inch) port dia.	2B5106X0012
	9.5 mm (0.375 inch) port dia.	2B5107X0012
	12.7 mm (0.5 inch) port dia.	2B5108X0012
	19.1 mm (0.75 inch) port dia.	2B5109X0012
	25.4 mm (1-inch) port dia.	2B5110X0012
	31.8 mm (1.25 inch) port dia.	2K1801X0012
	316 SST w/tungsten carbide insert	
	1-inch valve	
	6.4 mm (0.25 inch) port dia.	1J6886000A2
	9.5 mm (0.375 inch) port dia.	1J6887000A2
	12.7 mm (0.5 inch) port dia.	1J6888000A2
	19.1 mm (0.75 inch) port dia.	1J6889000A2
	2-inch valve	
	6.4 mm (0.25 inch) port dia.	1J6899000A2
	9.5 mm (0.375 inch) port dia.	1J8154000A2
	12.7 mm (0.5 inch) port dia.	1J8156000A2
	25.4 mm (1-inch) port dia.	1J8160000A2
	Ceramic	
	1-inch valve	
	6.4 mm (0.25 inch) port dia.	22B8996X012
	9.5 mm (0.375 inch) port dia.	22B8997X012
	12.7 mm (0.5 inch) port dia.	22B8998X012
	19.1 mm (0.75 inch) port dia.	22B8999X012
	2-inch valve	
	6.4 mm (0.25 inch) port dia.	22B9000X012
	9.5 mm (0.375 inch) port dia.	22B9001X012
	12.7 mm (0.5 inch) port dia.	22B9002X012
	19.1 mm (0.75 inch) port dia.	22B9003X012
	25.4 mm (1-inch) port dia.	22B9004X012
	31.8 mm (1.25 inch) port dia.	22B9005X012

Key	Description	Part Number
003*	Gasket S31600 (316 SST) For 1 in. valves and NACE MR0175-2002 ⁽¹⁾ For 2 in. valves and NACE MR0175-2002 ⁽¹⁾	1B198636042 1B198836042
004*	Micro-Flute valve plug/stem assembly NACE MR0175-2002 ⁽¹⁾ S31600, COCR-A seat - S20910	
	1-in. valve, 9.5 mm (3/8 in.) stem	
	1 flute	
	6.4 mm (0.25 inch) port dia.	2N7147X0032
	3 flutes	
	6.4 mm (0.25 inch) port dia.	2F3280X0022
	9.5 mm (0.375 inch) port dia.	2N7389X0022
	12.7 mm (0.5 inch) port dia.	2N7338X0022
	19.1 mm (0.75 inch) port dia.	2N7393X0022
004*	Equal percentage valve plug/stem assembly S31600 (316 SST) w/S20910 (22-13-5) & Alloy 6 for NACE MR0175-2002 ⁽¹⁾	
	1 in. valve, 9.5 mm (3/8 in.) stem	
	6.4 mm (0.25 inch) port dia.	2F1388X0042
	9.5 mm (0.375 inch) port dia.	2F1389X0032
	12.7 mm (0.5 inch) port dia.	2F1390X0032
	19.1 mm (0.75 inch) port dia.	2F1391X0032
	2 in. valve, 12.7 mm (1/2 in.) stem	
	6.4 mm (0.25 inch) port dia.	2F1427X0022
	9.5 mm (0.375 inch) port dia.	2F1428X0022
	12.7 mm (0.5 inch) port dia.	2F1429X0022
	19.1 mm (0.75 inch) port dia.	2F1430X0022
	25.4 mm (1-inch) port dia.	2F1431X0022
	31.8 mm (1.25 inch) port dia.	2L5331X0032
	S31600 (316 SST) w/tungsten carbide tip for NACE MR0175-2002 ⁽¹⁾	
	1 in. valve, 9.5 mm (3/8 in.) stem	
	6.4 mm (0.25 inch) port dia.	2J6894X0022
	9.5 mm (0.375 inch) port dia.	2J6895X0022
	12.7 mm (0.5 inch) port dia.	2J6896X0022
	19.1 mm (0.75 inch) port dia.	2J6897X0022
	2 in. valve, 12.7 mm (1/2 in.) stem	
	6.4 mm (0.25 inch) port dia.	2J8189X0022
	9.5 mm (0.375 inch) port dia.	2J8191X0022
	12.7 mm (0.5 inch) port dia.	2J8193X0022
	19.1 mm (0.75 inch) port dia.	2J8195X0022
	25.4 mm (1-inch) port dia.	2J8197X0052
	31.8 mm (1.25 inch) port dia.	2V2234X0022
	Ceramic	
	1-in. valve, 9.5 mm (3/8 in) stem	
	6.4 mm (0.25 inch) port dia.	22B8956X012
	9.5 mm (0.375 inch) port dia.	22B8957X012
	12.7 mm (0.5 inch) port dia.	22B8958X012
	19.1 mm (0.75 inch) port dia.	22B8959X012
	1-in. valve, 12.7 mm (1/2 inch) stem	
	6.4 mm (0.25 inch) port dia.	22B8960X012
	9.5 mm (0.375 inch) port dia.	22B8961X012
	12.7 mm (0.5 inch) port dia.	22B8962X012
	19.1 mm (0.75 inch) port dia.	22B8963X012
	1-in. valve, 19.1 mm (3/4 in) stem	
	6.4 mm (0.25 inch) port dia.	22B8964X012
	9.5 mm (0.375 inch) port dia.	22B8965X012
	12.7 mm (0.5 inch) port dia.	22B8966X012
	19.1 mm (0.75 inch) port dia.	22B8967X012
	2-in. valve, 12.7 mm (1/2 in) stem	
	6.4 mm (0.25 inch) port dia.	22B8968X012
	9.5 mm (0.375 inch) port dia.	22B8969X012
	12.7 mm (0.5 inch) port dia.	22B8970X012
	19.1 mm (0.75 inch) port dia.	22B8971X012

*Recommended spare parts

1. These materials are listed in NACE standard MR0175-2002 as being acceptable for direct exposure to sour environment when used under conditions stated in that standard.

D and DA Valves

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Key	Description	Part Number	Key	Description	Part Number
	25.4 mm (1-inch) port dia.	22B8972X012			
	31.8 mm (1.25 inch) port dia.	22B8973X012			
	2-in. valve, 19.1 mm (3/4 inch) stem		011*	Packing Adaptor, male	
	6.4 mm (0.25 inch) port dia.	22B8974X012		Double PTFE V-Ring packing	
	9.5 mm (0.375 inch) port dia.	22B8975X012		9.5 mm (3/8 in.) stem (2 req'd)	1F124801012
	12.7 mm (0.5 inch) port dia.	22B8976X012		12.7 mm (1/2 in.) stem (2 req'd)	1F124701012
	19.1 mm (0.75 inch) port dia.	22B8977X012		19.1 mm (3/4 in.) stem (2 req'd)	1F124601012
	25.4 mm (1-inch) port dia.	22B8978X012	012	Packing Flange	
	31.8 mm (1.25 inch) port dia.	22B8979X012	013	Packing Box Stud	
005	Bonnet/Bushing Assy		014	Yoke Locknut, steel	
	If you need a bonnet as a replacement part, order by valve size and stem diameter, serial number, and desired material.		015	Hex Nut	
007*	Gasket		016	Pipe Plug	
	S31600 (316 SST)		016	Stem Lubricator/Isolating Valve	
	For 1 in. valves and NACE MR0175-2002 ⁽¹⁾	1B198236042	016	Pipe Nipple, for lubricator/isolating valve	
	For 2 in. valves and NACE MR0175-2002 ⁽¹⁾	1B198436042	016	Stem Lubricator	
008*	Packing Ring		018*	Packing Adaptor, female	
	Double PTFE/Composition packing			Double PTFE V-Ring	
	9.5 mm (3/8 in.) stem (7 req'd)	1F3370X0012		9.5 mm (3/8 in.) stem (2 req'd)	1F124401012
	12.7 mm (1/2 in.) stem (10 req'd)	1E319001042		12.7 mm (1/2 in.) stem (2 req'd)	1F124301022
	19.1 mm (3/4 in.) stem (8 req'd)	1E319101042		19.1 mm (3/4 in.) stem (2 req'd)	1F124201012
	Double PTFE V-Ring		019	Lantern Ring	
	9.5 mm (3/8 in.) stem (6 req'd)	1C752601012	021*	Upper Wiper, felt	
	12.7 mm (1/2 in.) stem (6 req'd)	1C752701012		9.5 mm (3/8 in.) stem	1J872606332
	19.1 mm (3/4 in.) stem (6 req'd)	1C752801012		12.7 mm (1/2 in.) stem	1J872706332
010	Packing Follower			19.1 mm (3/4 in.) stem	1J872806332
			025	Seal & Wire (not shown), lead	
				Required only if actuator is not furnished	
			---	Tag, warning (not shown)	

*Recommended spare parts

1. These materials are listed in NACE standard MR0175-2002 as being acceptable for direct exposure to sour environment when used under conditions stated in that standard.



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Y SERÁ PAÍS AMAZÓNICO

CONTENIDO DEL SOBRE

PARA LOS PROCESOS DE SUBASTA EN LINEA

El participante presentará en un solo sobre, la documentación técnica y legal que se señala a continuación en original, copia certificada o notariada.

- 1) No incluir en el sobre la propuesta económica, ésta deberá ser ingresada en el portal www.compraspublicas.gov.ec del SNCP, según el cronograma establecido para el efecto. Además, de acuerdo a los principios de la Subasta Inversa Electrónica, la propuesta económica no podrá ser igual o mayor al precio referencial de Petroproducción.
- 2) Las especificaciones técnicas del bien propuesto, no se aceptarán productos genéricos, equivalentes o remanufacturados.
- 3) Documento que acredite la capacidad técnica, de ser el caso.
- 4) Documento que acredite la capacidad jurídica (nombramiento del representante legal debidamente inscrito en el Registro Mercantil para las personas jurídicas y matrícula de comercio para las personas naturales).
- 5) Copia del Registro Único de Contribuyentes.
- 6) En caso de compañías, el Certificado de la existencia legal y cumplimiento de obligaciones de la Superintendencia de Compañías, Escritura de Constitución y sus Reformas de Estatutos.
- 7) Certificado de la Central de Riesgos de no tener créditos calificados con categoría E, emitido por los burós de información crediticia calificados y aprobados, conforme la Resolución de la Superintendencia de Bancos No. JB-2008-1081 del 26 de febrero del 2008, publicada en el Registro Oficial No. 290 del 7 de marzo del 2008.
- 8) No serán calificados los participantes que consten como proveedores inhabilitados, incumplidos o fallidos en el portal COMPRASPUBLICAS.
- 9) Tiempo de validez de la oferta: 60 días calendario, a partir de su última propuesta económica ingresada en el portal.
- 10) Plazo de pago: 30 días laborables de entregados los bienes, contra la presentación de la factura y documentos de recepción de bodega.
- 11) Plazo de entrega de los materiales: será en el menor tiempo posible indicado en días (laborables o calendario).
- 12) Lugar de entrega: Bodega Tránsito Quito.
- 13) El participante garantizará que los bienes son nuevos originales de fábrica. Si éstos resultasen defectuosos serán reemplazados inmediatamente sin costo para Petroproducción.
- 14) No se aceptarán propuestas parciales.



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- 15) El participante favorecido en la subasta tiene el plazo de diez (10) días hábiles para firmar la Orden de Compra y los Términos para la Compra, luego de ser publicada la notificación de adjudicación en COMPRASPUBLICAS y deberá presentar una garantía de fiel cumplimiento equivalente al 5% del valor total de su cotización sin IVA.
- 16) En caso de existir algún reclamo relacionado con su cotización, luego de la adjudicación de la Orden de Compra, se deberá presentar junto al reclamo, una garantía incondicional, irrevocable y de cobro inmediato, con una vigencia mínima de 90 días, por un monto equivalente al 2% de su cotización, de conformidad a lo estipulado en el Art. 31 del Reglamento de Contratación de Petroecuador y sus Empresas Filiales.

NOTAS IMPORTANTES:

El sobre con la propuesta técnica y legal se recibirá en la planta baja del edificio Villafuerte (Av. 6 de Diciembre 4226 y Gaspar Cañero, frente Colegio Benalcázar), en horario de 09h00 a 11h00.

En el cronograma adjunto se detalla toda la información cronológica respecto a la evolución de este proceso de adquisición, el mismo que no puede ser modificado una vez publicado el proceso en COMPRASPUBLICAS.

Se recomienda que los participantes que califiquen para el proceso de puja en línea, intervengan en la capacitación del SNCP, simulacros previstos e ingresar al menos su primera propuesta económica en el SNCP.

Para mayor información sobre este proceso de Subasta Inversa en Línea, podrán comunicarse a los teléfonos de PETROPRODUCCION: 02-2440333 Ext. 3768; 02 2267023.

