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A Pump & Valve Mfg. Company



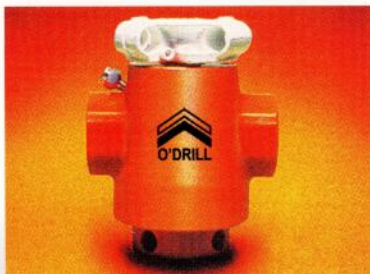
PLUG VALVES



...The Choice is yours!

Complete Valves or Repair Kits

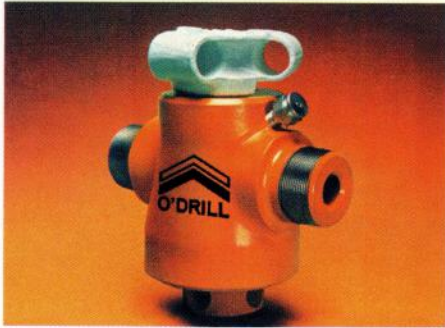
*1", 2" & 3"
5,000 - 15,000 psi*



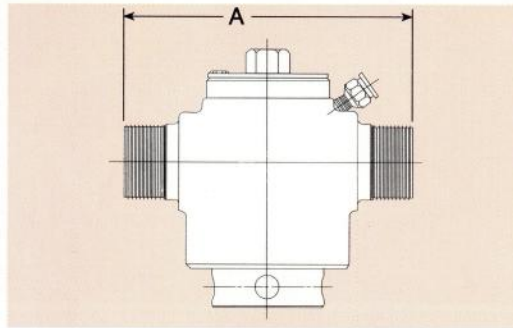
100% INTERCHANGEABLE WITH NAME BRAND PLUG VALVES AND PARTS

DIMENSIONAL OUTLINE

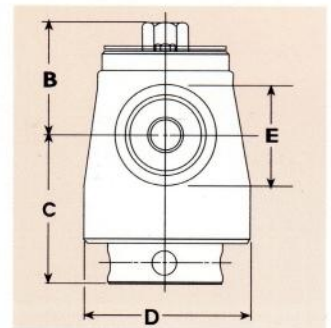
O'Drill • MCM



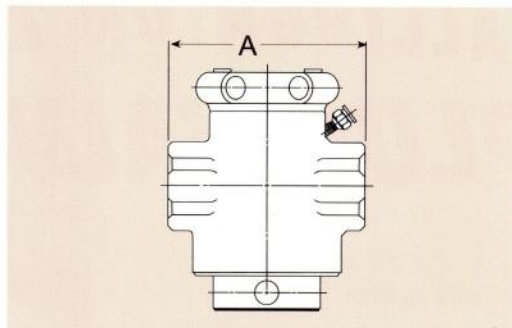
O'Drill P/N: PVC210LTM



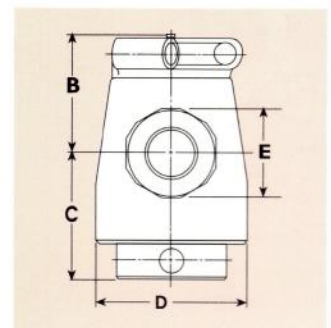
Line pipe threaded (male)



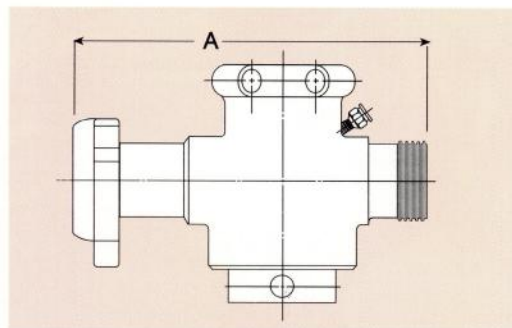
O'Drill P/N: PVC210LTF



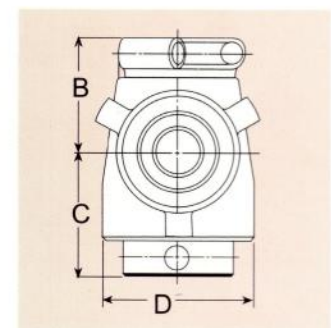
Line pipe threaded (female)



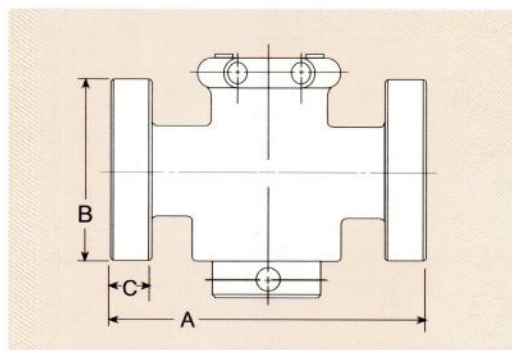
O'Drill P/N: PVC110H5, PVC210H5, PVC215H5



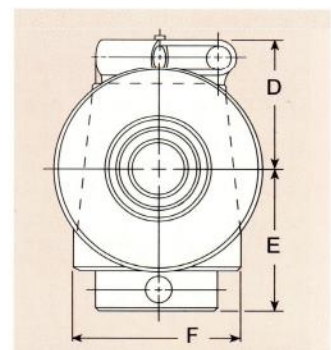
Hammer union connections.



O'Drill P/N: PVC210RJ



Ring Joint-Flanged End Valve



Complete Valves

100% interchangeable with Halliburton® Plug Valves & Parts

Valve Size	WP PSIG	O'Drill P/N	Valve Description
1"	10K	PVC110H5	1x2" 1502 Hammer Union Ends, 10K
2"	10K	PVC210LTF	2x2" LP Thread, Female x Female, 10K
2"	10K	PVC210LTM	2x2" LP Thread, Male x Male, 10K
2"	10K	PVC210RJ	2x2" Ring Joint Type Flanged Ends, 10K
2"	10K	PVC210H5	2x2" 1502 Hammer Union Ends, 10K
2"	15K	PVC215H5	2x2" 1502 Hammer Union Ends, 15K

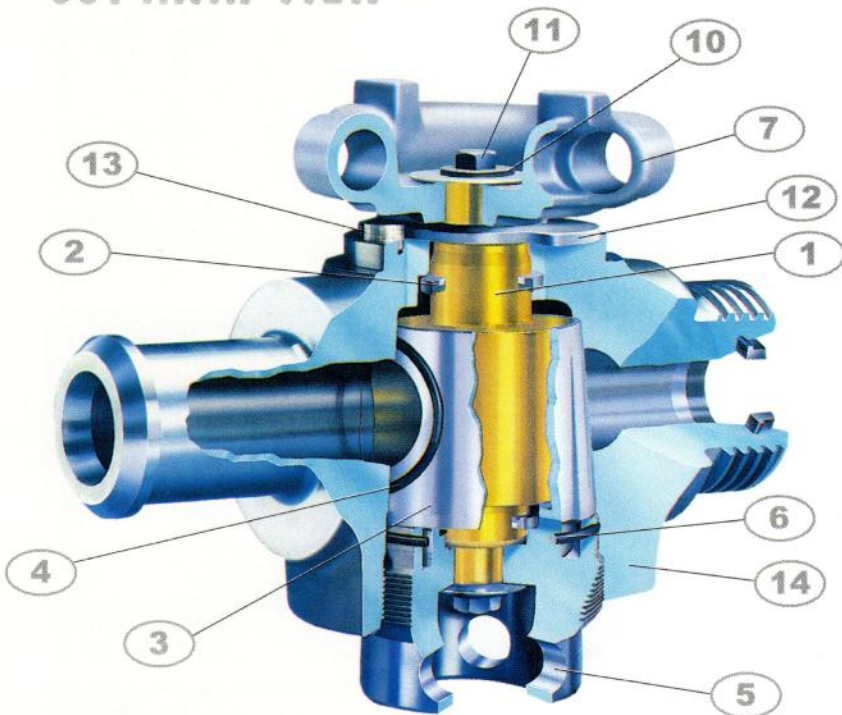
HALLIBURTON® TYPE PLUG VALVES *by O'Drill*

O'DRILL • MCM, manufactures a 'quarter turn' plug valve which is 100% interchangeable with the Halliburton plug valves and parts. O'Drill Plug Valves are manufactured from the highest grade materials. The valve cavity is tapered to ensure uniform seating of the sealing inserts, thereby providing reliable seal across the full range of pressures. The O'Drill **PLUG VALVES** and **REPLACEMENT PARTS** are designed to provide low operating torque and dependable service under severe conditions.

O'Drill • MCM Plug Valves...

Engineered for High Performance...!

CUT AWAY VIEW



PARTS LIST

1	Plug
2	Plug Seal
3	Inserts
4	Insert, O-Ring
5	Adjusting Nut
6	Adjusting Nut, O-Ring
7	Adapter
8	Grease Fitting <i>(not shown)</i>
9	Roll Pins <i>(not shown)</i>
10	Flat Washer
11	Plug Screw
12	Stop Collar
13	Stop Collar Screw
14	Body

Design Features

- Design for positive shut off or full open.
- Balanced to reduce operating torque.
- Fully Documented (Data Books).
- Certified Quality.
- In Stock Parts Availability.
- Complete Testing & Inspection.
- Customer Satisfaction guaranteed!

Material Specifications

• Valve Body	4130/4140 forged alloy steel
• Adjusting Nut	4130/4140 forged alloy steel
• Plug	a) 17-4 PH – Std. Service b) K-500 Monel – H2S Service c) 4140-Q.P.Q.
• Inserts	a) Ductile Iron-Phosphate Coated b) 8160 Alloy Steel c) Aluminium Nickle Bronze
• Plug Seals	a) Buna-N – Std. Service b) Viton – H2S Service

👉 We've got the Quality...We've got the Price!!!

Check with O'Drill • MCM before your next plug valve order.

Call: (713) 541-2020 • FAX (713) 541-9090 • 1-800-255-6263

REPLACEMENT PARTS 'Regular' SERVICE

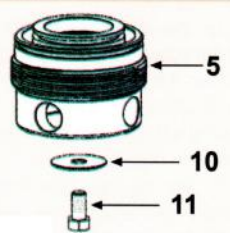
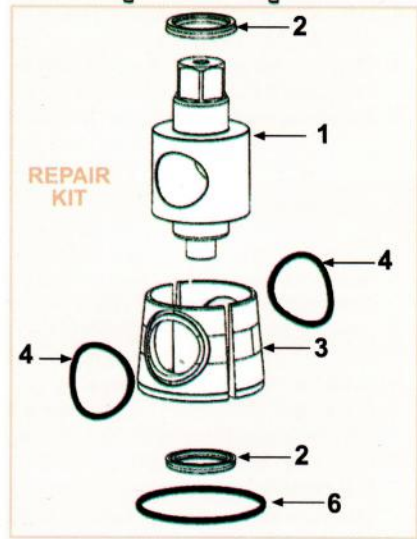
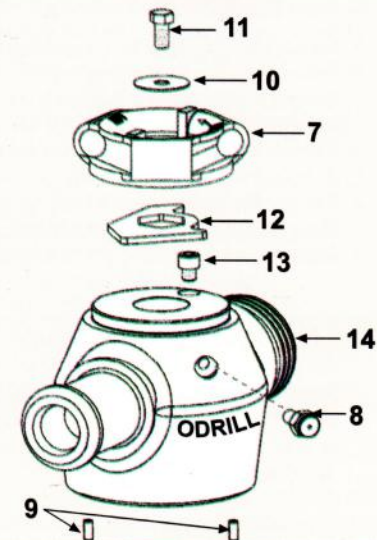
100% Interchangeable with Halliburton Plug Valve Parts.



ASSEMBLY LOCATION	DESCRIPTION	SVC	VALVE BORE SIZE		PART NUMBERS		10-15K	
			1"	2"	1"	2"	1"	2"
1	Plug	Reg	1	101		201		
2	Plug Seals	Reg	2	104		174		
3	Inserts	Reg	1 pr	102		202		
4	Insert O-rings	Reg	2	105		205		
5	Adjusting Nut +	Reg	1	103		203 + 243		
6	Adjusting Nut O-ring	Reg	1	106		176		
7	Adapter	Reg	1	877		878		
8	Grease Fitting	Reg	1	777		777		
9	Roll Pin	Reg	2	108		108		
10	Flat Washer	Reg	2	996		997		
11	Plug Screw	Reg	2	117		118		
12	Stop Collar	Reg	1	—		137		
13	Stop Collar Screw	Reg	1	126		118		

* Repair Kit	Reg	—	K113	—	K1758	K295	K258	K391	K392
** Seal Kit	Reg	—	K111	—	K1759	K291	K259	K393	K394
*** Lubricant	O'Drill # 2000								

- * **Repair Kit:** Consists of ① Plug, ② Plug Seals, ① Insert Set, ② Insert O-Rings and ① Adjusting Nut O-Ring
 - ** **Seal Kit:** Consists of ② Plug Seals, ② Insert O-Rings and ① Adjusting Nut O-Ring
 - *** **Lubricant:** Heavy Castor Oil based grease is recommended.
- + Use only in assembly of M-2026.



Check us out!
 We carry...
 all sizes of
 repair kits in
 Ready Stock!

Lowest Prices...Guaranteed!!!

DISASSEMBLY & REASSEMBLY INFORMATION

★ **Valve Repair:** O'Drill can rebuild your damaged 'Plug Valves' to a brand new condition for a very nominal price!



Disassembly

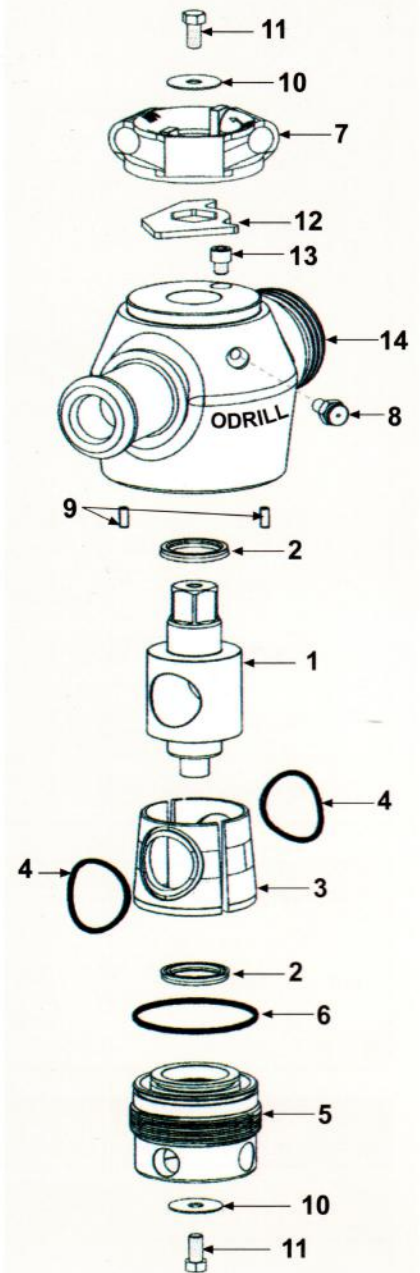
1. Remove the top capscrew (11), washers (10), adapter (7), and stop collar (12).
2. Secure the valve assembly with the adjusting nut facing up.
3. Using a bar, unscrew the adjusting nut (5) counter-clockwise until it disengages from the valve body (14). Leaving the bottom capscrew (11) in place will allow the entire internal assembly to be removed from the valve at once.
4. Remove the bottom capscrew (11) and washers (10).
5. Remove the plug (1) and inserts (3) from the adjusting nut.
6. Remove the insert o-rings (4), adjusting nut o-ring (6), and plug seals (2).
7. Remove all the grease and debris from all valve components.
8. Remove the grease fitting (8) from the body or plug (1).

Inspection and Repair

1. After degreasing the parts, visually inspect for wear, corrosion, or any other physical damage.
2. Inspect the primary sealing surface of the plug (1) and inserts (3) for any scratches or dings. Parts with heavy wear or deep scratches in the sealing surfaces should be replaced. For light wear or superficial blemishes, use 600-grit sandpaper along with a solvent polish to smoothen the surfaces.
3. All surfaces which contact the elastomeric seals must be smooth and free of rust and pitting. Use sandpaper to polish. Parts with excessive pitting and rust should be replaced.
4. Lubricate and screw the adjusting nut (without the o-ring) completely into the valve body. Check for damaged threads. It should turn easily all the way.
5. Check the roll pins (9) in the valve body by gently sliding a set of inserts (3) into the valve. The inserts should move freely up and down the length of the roll pin slots without interference.
6. Inspect the grease fitting (8) for damaged threads or sealing surface.

Re-Assembly

1. Secure the valve body in a vise or other fixed position with the valve pocket facing up.
2. Clean and visually inspect all new and used parts. Make sure all dirt, rust and old grease is removed prior to assembly.
3. Lubricate the plug seal and glands of the valve/adjusting nut with grease and install the plug seals (2) with the metal backup ring adjacent to the seal glands and facing away from the valve cavity.
4. Install the o-ring (6) onto the adjusting nut.
5. Apply a thin film of plug valve grease onto the primary sealing surface of the inserts (3) and install onto the adjusting nut. Split inserts are installed after the plug is inserted into the adjusting nut.
6. Apply a thin film of plug valve grease onto the large diameter of the plug (1) and carefully insert the lower end of the plug, opposite the hex/keyway, down through the inserts (3) until it seats into the adjusting nut. When using split inserts, the plug is seated into the adjusting nut first. The inserts are then evenly spaced around the plug, hooking onto the adjusting nut.
7. Install the insert o-rings (4) by pressing them into the grooves of the inserts (3) with plug valve grease.
8. Tilt the subassembly and install the bottom capscrew (11) and washers (10) through the bottom of the adjusting nut and into the plug (1).
9. Apply anti-seize compound to the adjusting nut threads and o-ring area and lubricate the valve pocket below the threads with all-purpose grease.
10. Install the plug (1), inserts (3), and adjusting nut assembly into the valve body. Make sure that the roll pins (9) in the body are aligned with the slots of the inserts as you screw the subassembly into the adjusting nut.
11. Screw in the adjusting nut until proper alignment is obtained between the valve bore and the insert and plug. Do not tighten beyond proper alignment. If sight through the bore is not possible, then screw in the adjusting nut until no more than one half of a thread or no threads are visible.
12. Install the grease fitting (8) into the valve body plug using 50-60 ft-lbs of torque. Teflon tape should not be used with Safe Tap grease fittings since they do not seal on the threads.
13. Install the stop collar screw (13) and stop collar (12) if required.
14. Install the adapter (7), top plug screw (11) and washer (10) onto the top of the valve. If the valve has an actuator or gear operator, bolt it back on the valve body and verify full 90° rotation. Adjust limit stops as necessary.
15. Remove excess grease from the valve bore and inspect plug alignment. Adjust as necessary with adjusting nut.
16. Grease the valve in the open position to approximately 3000psi, cycle once, and then grease one more time. Grease Seal fitting, should be greased in the open position to pack the valve cavity but may also be greased in the closed position prior to testing or while in service.



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TROUBLE SHOOTING GUIDE

O'Drill • MEM

PROBLEM

POSSIBLE CAUSE

RECOMMENDED REPAIR

Leak at adjusting nut threads.

Refer to Item 6,
Service and Assembly
Information



- Adjusting Nut loose allowing extrusion of O-Ring.
- Aged, worn, or damaged O-Ring.
- Re-installation of used O-Ring can cause it to be cut upon re-entry into body.
- Dents, deep scratches, in top of body cavity creates a leak path, damaging O-Ring.
- Foreign matter in threads.

- Remove Adjusting Nut, check for O-Rings that have nicks, cuts or are worn out.
- Replace Adjusting Nut O-Ring with new one.
- Check body cavity for foreign matter in threads and for scratches or dents in the body sealing surface where O-Ring makes contact.
- Repair as required, reassemble and relubricate.
- Retest the valve to ascertain the problem is corrected.

Leak between inserts and body.

Refer to Item 2 & 4,
Service and Assembly
Information

- Prolonged throttling of valve.
- Corrosion or damaged surface.
- Worn, damaged, aged, or blown out Insert O-Rings.

- Disassemble valve.
- Check for corrosion or damaged Insert surfaces.
- Inspect surface of body in contact with Inserts for corrosion or foreign matter. Also check for damaged Insert O-Ring.
- Repair as required, reassemble and relubricate.

Leaked from top or bottom of valve at end of plug.

Refer to Item 3 & 8,
Service and Assembly
Information

- Improperly tightened nut.
- Corroded or scored sealing surface for Seals in Adjusting Nut or valve body.
- Aged, worn or damaged Seals.
- Scoring of Plug and Seals due to abrasive matter being trapped between them.

- Disassemble valve.
- Remove Plug and Inspect end surface of Plug mating with Seals.
- Inspect Plug Seals for damage such as cuts to elastomer or damage to metal retainer.
- Replace parts as required, reassemble and relubricate.
- Re-test the valve.

Grease fitting leaking.

Refer to Item 9,
Service and Assembly
Information

- Over or under tightening of a fitting may cause them to leak.
- Reusing of previously tightened Fittings may result in leak at threads.

- Disassemble valve.
- Remove Plug Inspect end surface of Plug mating with Seals.
- Inspect Plug Seals for damage such as cuts to elastomer or damage to metal retainer.
- Replace parts as required, reassemble and relubricate.

Leakage between plug and inserts.

Refer to Item 3 & 4,
Service and Assembly
Information

- Valve not properly lubricated permitting wear and corrosion of valve or contamination with abrasive matter.
- Normal wear of Plug or Inserts.
- Scoring of Plug due to contact with damaged Inserts.

- Disassemble valve.
- Remove Plug Inspect end surface of Plug mating with Seals.
- Inspect Plug Seals for damage such as cuts to elastomer or damage to metal retainer.
- Replace parts as required, reassemble and relubricate.

Caution: The Plug Valve is designed to operate on a metal to metal seal with an assist from the lubricant. Any abrasive particles trapped between plug and insert will cause severe scratches or scoring, and will result in leakage.



O'DRILL • MCM

A pump & Valve Mfg. Company

Manufacturers of Precision, Quality Products...



- ★ **Reset Relief Valves**
Cameron (& Retsco)
Type "B" 2" - 3"
Type "C" (Flanged) 3"



- ★ **Pressure Relief Valves**
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- ★ **Pressure Relief Valves**
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★ *Corporate Office & Manufacturing Facility:* ★



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