



NOS CHEAT SHEET

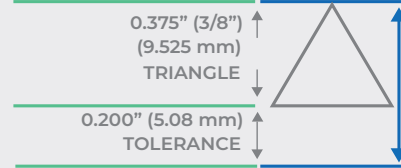
(701) 941-0423 ~ www.nos-llc.com

THE 7 TRAITS

- Planning
- Honesty & Sincerity
- Friendly & Respectful
- Leadership & Knowledge
- Appearance
- Dedication
- Communication

TERMINOLOGY TO KNOW

- TIW = Floor Valve
- ORBIT = 8-Round Valve
- A-SECTION = Casing Head
- B-Section = Casing Spool or Tubing Head
- C-Section = Tubing Head

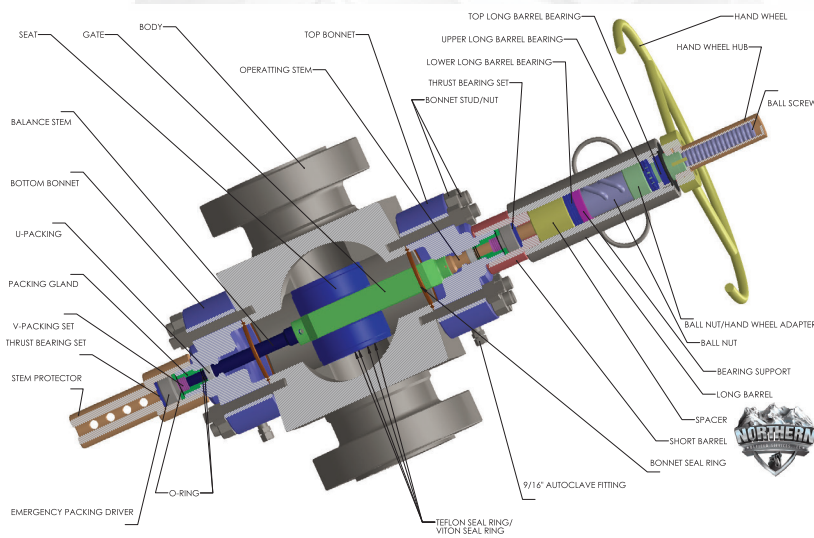


MAKE UP
ADMISSIBLE
ZONE

API 6A SPEC FLANGE BOLT & RING CHART

API Pressure Rating	Flange Size & Bore	Ring Gasket	Number of Studs	Torque (psi)		Stud Dimensions	
				2HP	4HP	Diameter	Length
5000 lb	2 1/16"	R-24	8	1660	630	7/8"	6 1/4"
	2 9/16"	R-27	8	2450	930	1"	7"
	3 1/8"	R-35	8	3480	1330	1 1/8"	7 3/4"
	4 1/16"	R-39	8	4790	1840	1 1/4"	8 1/2"
	5 1/8"	R-44	8	8320	3210	1 1/2"	10 3/4"
	7 1/16"	R-46	12	6380	2480	1 3/8"	11 1/4"
	9"	R-50	12	na	4110	1 5/8"	12 1/2"
	11"	R-54	12	na	6330	1 7/8"	14 1/2"
	13 5/8"	BX-160	16	na	4110	1 5/8"	12 3/4"

API Pressure Rating	Flange Size & Bore	Ring Gasket	Number of Studs	Torque (psi)		Stud Dimensions	
				2HP	4HP	Diameter	Length
10000 lb	1 13/16"	BX-151	8	1070	390	3/4"	5 1/4"
	2 1/16"	BX-152	8	1070	390	3/4"	5 1/2"
	2 9/16"	BX-153	8	1660	630	7/8"	6 1/4"
	3 1/16"	BX-154	8	2450	930	1"	7 1/4"
	4 1/16"	BX-155	8	3480	1330	1 1/8"	8 1/4"
	5 1/8"	BX-169	12	3480	1330	1 1/8"	9"
	7 1/16"	BX-156	12	8320	3210	1 1/2"	11 3/4"
	9"	BX-157	16	8320	3210	1 1/2"	13 1/4"
	11"	BX-158	16	na	5440	1 3/4"	15 1/2"
	13 5/8"	BX-159	20	na	6330	1 7/8"	17 3/4"

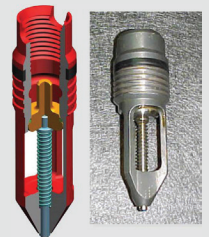


THINGS TO KNOW

- Torque Tools Push; Not Pull
- Gate Valves Turn 1/4 Back
- Lefty Loosey; Righty Tightly
- BPV & TWC are left-handed Threads
- Pin across hand wheel is slab gate
- Pin towards you is a WKM
- Hydraulic Valve is closed when Pin is in cage

Type "H" Back Pressure Valve (BPV)

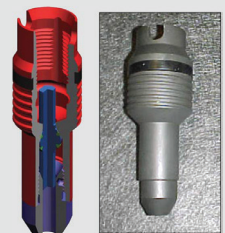
What is the Type "H" BPV? The "H" Type BPV is a one-way check valve that when installed into the tubing hanger isolates and contains pressure inside the production tubing.



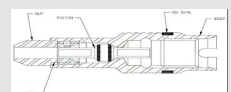
The Type "H" BPV has external left-hand and acme threads that hold the BPV in the tubing hanger and internal right-hand ACME threads which are used to install and remove the BPV using specialized tools ran on the PBMO Lubricator.

TYPE "H" TWO-WAY CHECK VALVE (TWCV)

What is a two-way check valve? The type "H" TWCV is an externally threaded (Left-Hand thread) valve that holds pressure from top and the bottom.



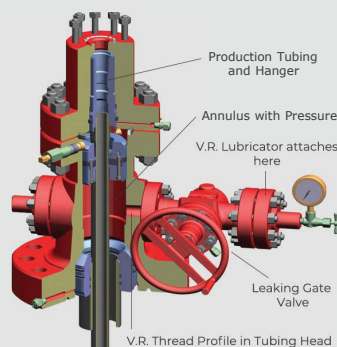
Unlike the ISA TTP which allows pressure from below to flow through the TTP, the TWCV will hold pressure from both directions. The TWCV also incorporates internal threads (Right-Hand) for installation and retrieval.



When do we use a V.R. Lubricator

Before we begin discussion about the V.R. Lubricator, let's start with the purpose of the tool and why we need a V.R. Lubricator.

Situation: Let's say that a customer has a tubing head, and one of the gate valves on the annulus of the tubing head is leaking and needs to be repaired or replaced.



The V.R. Lubricator can attach to the gate valve, extending the pressure envelope and installing a V.R. Plug into the thread profile of the tubing head, with pressure still on the annulus. The valve can be replaced and the V.R. plug can be removed with pressure still on the well.



Average GREASE CAPACITY & TURNS

	LBS	TURNS	BORE SIZE
1-13/16" 10k	3	12-1/3	1.81
2-1/16" 5k wkm	3	12-1/3	2.06
2-9/16" 5k wkm	2.75	15-1/8	2.56
2-9/16" 10k gate	2.75	15-1/8	2.56
3-1/16" 10k gate	5	18-1/8	3.06
4-1/16" 10k gate	4.25	23-1/4	4.06
4-1/16" 15k gate	11.5	29-1/4	4.06
5-1/8" 10k BS	13.5	12	5.12
7-1/16" 10k gate	24.8	42	7.06
7-1/16" 10k BS	24.8	15-1/2	7.06
7-1/16" 15k BS	34	40	7.06

TUBING HEAD IDENTIFICATION

TYPE	PIN SPOT	BOWL	HANGER	MEASURE DOWN FROM TOP OF FLANGE
CAMERON	1-1/2"	7.030	7.010	
DOWNING	2"			
FMC/OCT	2-7/8"	7.00	6.985	

FMC, WEATHERFORD & DOWNING HANGER WILL LAND IN CAMERON BOWL W/ .045 DIFFERENCE

CAMERON HANGER WILL NOT LAND IN FMC/OCT BOWL

THIS DOCUMENT IS CONSIDERED CLASSIFIED AND MAY NOT BE SHARED OUTSIDE THE ORGANIZATION WITHOUT WRITTEN CONSENT

TUBING HEAD SEALS

	PE SEAL	4-O
CUT OFF	6-1/4"	4-1/2"
ASSEMBLY	3 PIECE	1 PIECE
SEALS	(1) 2" SEAL	(4) SEALS
SIZES	7" OR 7-5/8"	7" OR 7-5/8"

TUBING SPECS

SIZE	LBS	SCH	ID
2-3/8"	5.95	L-85	1.867
2-7/8"	7.8	L-80	2.323
3-1/2"	9.3	L-80	2.992
4-1/2"	11.6	P-110	4
4-1/2"	13.5	P-110	3.92
5-1/2"	20	P-110	4.778
7"	32	Q-125	6.094
7-5/8"	34	Q-125	6.625
9-5/8"	36	J055	8.921

URINE COLOR CHART

NO COLOR TRANSPARENT
You are drinking a lot of water

PALE STRAW COLOR
You're normal & well hydrated

TRANSPARENT YELLOW
Normal

DARK YELLOW
You need to drink some water soon

AMBER OR HONEY
Your body isn't getting enough water

SYRUP OR BROWN ALE
You need to drink water NOW & A LOT

80%

OVERHEAD CRANE HAND SIGNAL

Hoist: Hand with index finger pointing up.

Lower: Hand with index finger pointing down.

Bridge Travel: Hand with index finger pointing right.

Trolley Travel: Hand with index finger pointing left.

Stop: Hand held flat, palm facing forward.

Emergency Stop: Hand held flat, palm facing forward, with a red stop sign icon.

Multiple Trolleys: Hand with index finger pointing up and two fingers pointing down.

Move Slowly: Hand with index finger pointing down and the other hand held flat, palm facing forward.

Magnet Disconnected: Hand held flat, palm facing forward, with a magnet icon.