



# 904 Drilling Machine

Sizes: 1/2- to 4-inches *Model 904B*



T.D. Williamson, Inc.

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■ 904 Drilling Machine  
Model 904B

## Description

Drilling machines are used to make connections to pipelines, tanks and plant piping without shutdown and are used to make hot taps in preparation for plugging machine applications.

The 904 Drilling Machine is a manual or power-driven machine which taps into pipe while under pressure. It is used for making 1/2-through 4-inches (DN 15 - DN 100) taps without shutdown. It can be used to install 2-inch and 3-inch completion plugs in tapping nipples to permit recovery of tapping valves and to install TDW PIG-SIG® Scraper Passage Indicators.

## Features

The Model 904B Drilling Machine is available in the XL Model with 28-inches of travel.

The 904B Drilling Machine meets NACE Standard MR0175-2002, sulfide stress cracking resistant metallic material for oilfield equipment. The maximum working pressure is 2,220 psi (153 bar) at 100°F (38°C). Its operating temperatures are -20°F (-29°C) to 180°F (82°C) for intermittent service. The maximum continuous rating is 180°F (82°C) at 1,025 psi (48 bar).

The 904B Drilling Machine is a high pressure balanced machine. At this high pressure, it is limited to a maximum of 4-inch (DN 100) taps. For special requirements, such as higher pressure or temperature, consult the factory.

Other features include:

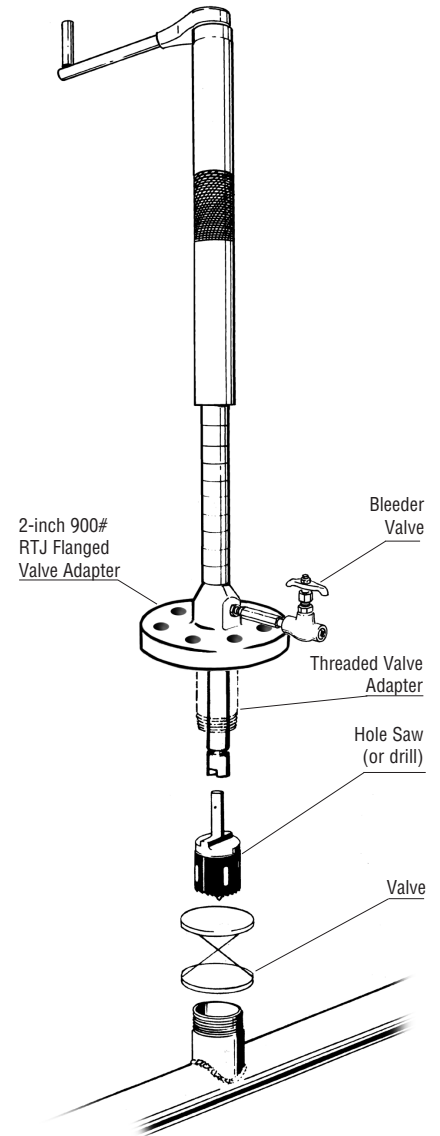
- Lightweight 85 pounds (39 kg)
- Versatile 1/2- through 4-inch taps
- Operates to 2,220 psi

## Options

T.D. Williamson, Inc. is committed to providing you with the exact product to assist you in planning, budgeting and meeting the specifications for your individual application needs. The following options are available:

- The 904B Drilling Machine is furnished with a ratchet crank for manual operation. An optional hose-connected, hand-held air motor can be easily added or a hand held hydraulic drive option is available

## Typical Setup



ISO 9001 Certified

Toll Free

**1-888-TDWmSon (839-6766)**



# 904 Drilling Machine *Model 904B*

## Drilling Machine



- The cap locks the feed and rotation of machine to set and retrieve completion plugs.

Item	Wt./ Lb.	Wt./Kg.	Part Number
904B XL Drilling Machine	85	39	05-1046-0000
Includes: Ratchet Crank			00-1443-0001
Cap			05-1028-0046
Bleeder Valve			00-0774-0001
Nipple			00-0220-0001
Packing Wrench			05-0184-0020
Optional Equipment:			
Air Motor	8	4	00-1508-0004
Hydraulic Drive (w/ 60' Hoses)	30	14	05-1026-0000
Drive Socket			00-1509-0004
Steel Carrying Case (XL)	20	9	05-2152-0000
Plug Holder for 2" THREAD-O-RING™ Plug			05-0185-0001
Plug Holder for 2" and 3" SHORTSTOPP® Completion Plug			08-2120-0000

## Operating Specifications

Maximum Operating Pressure	2220 psi (153 bar) @ 100°F (38°C)
Maximum Operating Temperature	180°F (82°C) @ 700 psi (48 bar)

## Drilling Machine Specifications

Item	Standard Model (XL)	
	Inches	mm
Boring Bar Travel	28	711
Overall Length	70 3/4	1797
Boring Bar Extension/Revolution	0.125	3.2
Feed Mechanism	Hand-Fed Machine	
2-inch 900# Flange	Standard	
2-inch NPT Adapter	Standard	

## Accessories for PIG-SIG® IV Installation

Item	Part Number
Drill for wall thickness more than 3/8" (9.5mm)	05-0193-0001
Valve Adapter for Cutter or Drill - for use on 2" (50 mm) threaded valve	00-0706-0016
2" (50 mm) THREAD-O-RING™ Plug Holder	05-0185-0001

2" (50 mm) ASME Class 600 conventional valve with 2-1/16" (53mm) through-bore is recommended for use in making PIG-SIG® IV Taps.



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Drills	Drill Diameter		Drill Length		Valve Size		Part Number
	Inches	DN	Inches	mm	Inches	mm	
	1/2	12.7	6	150	1-1/4 - 2	32-50	05-0203-0005
	1/2	12.7	22-1/4	565	1	25	05-0189-0001
	3/4	19.0	6	150	1-1/4 - 2	32-50	05-0203-0009
	3/4	19.0	22-1/4	565	1	25	05-0189-0002
	1	25.0	6	150	1-1/4 - 2	32-50	05-0203-0012
	1-1/4	32.0	6	150	1-1/2 - 2	40-50	05-0203-0013
	1-7/16	36.5	7-3/8	187	1-1/2 - 2	40-50	05-0193-0001

Hole Saws/Cutters and Holder Pilots	Tap Size		Cutter Diameter		Size-on-Size		Not Size-on-Size
	Inch	DN	Inch	mm	Hole Saw/Cutter Part No.	Holder Pilot Part No.	Holder Pilot Part No.
	1-1/4	32	1-5/16	33.3	00-1151-0005	05-1094-0000	05-1064-0000
	1-1/2	38	1-9/16	39.7	00-1151-0009	05-0275-0000	05-0290-0000
	2	50	1-7/8	47.6	05-0179-0002	05-0204-0000	05-0207-0000
	3	80	2-7/8	73.0	05-0179-0003	05-0204-0000	05-0207-0000
	4	100	3-7/8	98.4	05-0179-0004	05-0205-0000	05-0228-0000

Threaded Valve Adapters	Inches	DN	Part Number	Maximum Pressure	
				psi	Bar
	1	25	06-1223-0001	1480	100
	1-1/4	32	00-0757-0012	1480	100
	1-1/2	38	00-0757-0011	1480	100
	2	50	00-0706-0015	1480	100
	3	80	06-1303-0001-02	1480	100

Flanged Valve Adapters - ASME Class	Inches	DN	Class 150 RF	Class 300 RF	Class 600 RF	Class 900 RJT
3	80	06-1318-0015	06-1318-0030	06-1318-0060	-*	
4	100	06-1302-0015	06-1302-0030	06-1302-0060	-*	

\*Consult Factory

Valve Dimensions for Making Taps	Nominal Size		Minimum Bore	
	Inches	DN	Inches	mm
	2	50	2-1/16	52.4
	3	80	3-1/16	72.8
	4	100	4-1/32	102.4