



PRODUCT OPERATING MANUAL

**Manual No. ZVP-PC-0110-00
JUNIOR PLANA NPT VALVE**

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PRODUCT OPERATING MANUAL

1.0 GENERAL INFORMATION

1.1 Pan Abrasives Group Notice to Purchasers and Users

1.1.1 All products and equipment designed and manufactured by Pan Abrasives are intended for use by experienced users of abrasive blasting equipment and its associated operations and abrasive blasting media.

1.1.2 It is the responsibility of the user to:

- Determine if the equipment and abrasive media is suitable for the users' intended use and application.
- Familiarize themselves with any appropriate laws, regulations and safe work practices which may apply within the users working environment.
- Provide appropriate operator training and a safe working environment including operator protective equipment such as, but not limited to, safety footwear, protective eyewear and hearing protection.

1.1.3 Pan Abrasives Standard Terms and Conditions of Sale apply. Contact your local Pan Abrasives office should you require any further information or assistance.

1.2 ! WARNING ! READ THIS SECTION CAREFULLY BEFORE USING THIS EQUIPMENT

1.2.1 Heavy metal paint, asbestos and other toxic material dusts will cause serious lung disease or death without the use of properly designed and approved air supplied respiratory (SAR) equipment by blast operators and all personnel within the work site area.

1.2.2 The compressor must have adequate output and the plumbing between the compressor and the point of attaching the air supply hose must have sufficient capacity to supply the volume of air at the pressure required.

1.3 Standard Safety Precautions

1.3.1 Approved safety eyewear, hearing and footwear protection should be worn at all times by the operator and anyone else in the immediate area that may be exposed to any hazards generated by the abrasive blasting process.

1.3.2 Suitably approved respiratory protection (PPE) should also be worn when handling abrasive media, abrasive refuse dust and when carrying out any service/maintenance work where any dust may be present.

1.3.3 Any work performed on any electrical wiring or components must only be carried out by suitably qualified and registered electrical personnel.

1.3.4 Under no circumstances should any safety interlocks / lockouts or features be altered or disabled in any way.

1.3.5 All equipment must be isolated from the compressed air supply and electrical power

prior to any service or maintenance work being carried out.

1.3.6 All care must be taken by the operator(s) when lifting or moving equipment or components in order to prevent injury. Blast pots must always be emptied of abrasive media before any attempt is made to move them.

1.3.7 Any modification of the equipment or use of non genuine PanBlast™ replacement parts will void warranty.

1.3.8 Always check the Material Data Sheet (MSDS) on the abrasive media being used to ensure that it is free of harmful substances, in particular, free silica, cyanide, arsenic or lead.

1.3.9 Test the surface to be blasted for harmful substances, taking the appropriate measures to ensure the safety of all personnel.

1.3.10 The operator should carry out a daily inspection of all related components prior to startup of all wearing and safety items to ensure they are in correct operating order.

In particular check all Hose Couplings and Nozzle Holders, ensuring that all Hose Couplings are fitted correctly, the Safety Pins are engaged and in good order. Always install Safety Whip Check Cables at every hose connection. Ensure that the Blast Nozzle has been securely screwed into the Nozzle Holder and the Nozzle Holder has been secured to the Blast Hose correctly and all screws are engaged.

2.0 INTRODUCTION

2.1 **Scope.** These instructions cover the installation, operation and maintenance of the PanBlast™ Junior Plana NPT Valve.

2.2 **Application.** The PanBlast™ Junior Plana NPT Valve is designed to suit a multitude of abrasive media from mineral abrasives such as Garnet to metallic abrasives such as Steel Grit.

3.0 INSTALLATION

3.1 Depressurize and disconnect the air supply from the blast machine and drain the abrasive media from the Blast Pot ensuring that all threads are clean of abrasive.

3.2 Disconnect the lower Pusher Line hose at the existing abrasive metering valve. Remove the existing abrasive valve including pipe fittings and inspect the condition of the rubber hose Pusher Line and replace if necessary.

3.3 Screw the Junior Plana Valve onto the existing pipe nipple. Ensure that the threads are free of abrasive and debris, use thread sealant to ensure that an air tight joint is achieved.

3.4 Ensure that the valve arrangement is positioned to allow unobstructed movement of the metering adjustment handle.



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3.5 Fit the Pusher Line hose barb fitting to the supply air end of the lower "T" piece fitting (client supply), use thread sealant to ensure an air tight joint.

3.6 Push the Pusher Line hose onto the hose barb fitting and tighten the two bolt hose clamp on to the hose.

3.7 Fit the screwed hose coupling to the discharge end of the lower "T" piece, use thread sealant to ensure an air tight joint.

3.8 Refit the blast hose ensuring that the coupling Safety Lock Pins are fitted.

4.0 OPERATING INSTRUCTIONS

4.1 The Junior Plana Valve is fully CLOSED when the metering handle is positioned in a parallel line to the abrasive inlet feed port, the fully OPEN position can be obtained by moving the metering handle either side of the parallel position.

4.2 To set the correct abrasive feed on the valve, have a suitably experienced person assist in the adjustment. Point the nozzle at a test piece, deactivate the safety lock on the Deadman Handle and depress the lever, have the person assist in slowly moving the control handle from the CLOSED position toward the OPEN position in small incremental movements. Allow the abrasive feed to stabilize at each position and ascertain whether a correct blast mixture has been achieved. The valve opening is correct when the flow from the Blast Nozzle slightly discolours when viewed from a light contrasting background.

4.3 If no discoloration is evident and there is a high pitched sound from the Blast Nozzle, the abrasive media feed is too lean and the abrasive media flow needs to be increased by further opening the valve's metering handle.

4.4 If the feed to the Blast Nozzle is erratic and surging then the abrasive media feed is too rich and the abrasive flow needs to be decreased.

5.0 MAINTENANCE

⚠ ! WARNING ! THE COMPRESSED AIR SOURCE MUST BE ISOLATED BEFORE PERFORMING ANY MAINTENANCE WORK. FAILING TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.

5.1 Inspection of the Control Plate can be done with the valve in place on the blast machine. Ensure the blast machine has been completely depressurized and that the compressed air supply has been isolated. Remove the metering handle from the Control Plate. Undo the 4 bolts on the valve assembly which allows the lower body assembly to drop away from the Upper Body allowing easy inspection of the Control Plate and replace if required.

5.2 With the lower body assembly removed inspect the discharge nipple and "T" piece assembly for wear and replace if required.

6.0 TROUBLE SHOOTING

6.1 *No abrasive flow.*

6.1.1 Damp abrasive. Depressurize the blast machine, and remove the metering handle from the Control Plate. Undo the 4 bolts on the valve assembly which allows the lower body assembly to drop away from the Upper Body allowing easy inspection, clean and remove any damp abrasive media and reassemble the valve.

6.1.2 Obstruction in valve. Depressurize the blast machine and remove the metering handle from the Control Plate. Undo the 4 bolts on the valve assembly which allows the lower body assembly to drop away from the Upper Body allowing easy inspection, clean and remove any damp abrasive media and reassemble the valve.

6.2 *Irregular abrasive flow.*

6.2.1 Incorrect adjustment of the abrasive media valve may cause irregular abrasive flow, check the metering plate setting as outlined in section 4.2.

6.2.2 A high degree of fines in the abrasive mix can cause "Rat Holing" leading to erratic abrasive feed, check the abrasive and replace if necessary. Refer section 6.1.1 above.

6.2.3 Abrasive media is not free flowing; this will require adjustment of the Pusher Line Ball Valve to improve flow from the blast machine.

6.3 *Air leakage at the Valve.*

6.3.1 Check the body clamping bolts have been tightened correctly.

6.3.2 Inspect the Upper Body O-Ring condition, replace if worn.

6.4 *No abrasive or air from nozzle.*

6.4.1 Obstruction at the Blast Nozzle, depressurize blast machine and remove the nozzle from the Nozzle Holder and inspect.



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7.0 ASSEMBLIES, PARTS LISTING & EXPLODED VIEW

7.1 Junior Plana NPT Valve Assembly

Stock Code	Description	Weight
BAC-VA-0335-00	Junior Plana NPT Valve	2.60kg (5.73lbs)

7.1.1 Junior Plana NPT Valve Parts Listing

Item	Stock Code	Description	Qty
1	YAC-FN-0337-00	5/16" UNC Nut	4
2	YAC-FN-PB-0021	Spring Washer	4
3	YAC-FN-PB-0022	Flat Washer	8
4	YAC-VA-0339-00	Lower Body - NPT	1
5	YAC-VA-0340-00	Control Plate	1
6	YAC-VA-0341-00	Nylon Washer	1
7	YAC-BS-PB-0003	O-Ring	1
8	YAC-VA-0342-00	Rubber Gasket	1
9	YAC-VA-0343-00	Upper Body - NPT	1
10	YAC-FN-0338-00	Hex Head Bolt	4
11	YAC-RC-PB-0129	Spring	1
12	YAC-VA-0344-00	Handle	1
13	YAC-FN-0339-00	Spring Pin	1

7.1.2 Junior Plana NPT Valve Exploded View

