



Technical Bulletin M/L - 705

Installation Instructions and Requirements for MXBP™ & MXBN™ Press Isolation Elements



24MXBP1243

Vibro/Dynamics Technologically Advanced Machinery Mounting Systems are an investment in productivity and efficiency. To realize the full potential of your investment, familiarize yourself with these instruction requirements to insure a successful installation.

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FOUNDATION REQUIREMENTS

1. Foundation piers must be poured so that the press is at its desired elevation. Isolation element height must be taken into account. Refer to the isolation element's specification sheet for dimensions.

To determine installed isolation element height, add approximately 3/8" (9.5mm) to the operating height of the isolation element. A shim pack, consisting of six 0.063" (1.6 mm) thick steel sheets, plus ten 0.04" (10 mm) thick anti-slip pads, is provided for leveling. Approximate shim pack thickness is 0.75" (19 mm).

2. The foundation pier area should be large enough so the isolation element does not overhang. The concrete surface directly under the isolation element must be clean and meet the flatness and slope tolerances shown in Table One in the Appendix. A brushed concrete finish is recommended. There should not be any holes, cracks, peaks or valleys under the isolation element. Pier heights should be within 1/4" (8 mm). See Figure 1.

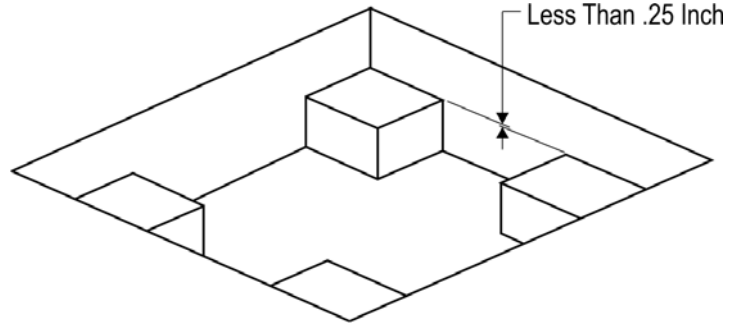


Figure 1

3. Grout or Sole plates are recommended if the Flatness and Slope tolerances cannot be met. The tolerances are shown in the Flatness and Slope Table located in the Appendix or on the Isolation Element Specification Sheets. The purpose of the plates is to insure that all of the modular resilient members in the isolation elements are evenly loaded. The plates must be flat, (a 125 Blanchard ground or shot-peened finish is recommended), anchored and grouted into place.

An epoxy grout cap on top of the foundation pier is acceptable to meet the foundation slope and flatness requirements. The epoxy grout should be viscous enough to be self-leveling when poured into a form.

4. Clearance should be provided in either the X or Y direction to allow for the installation or removal of the isolation elements. See Figure 2. Dimensions X and Y should be slightly greater than the corresponding isolation element dimension. For example, dimension X should be greater than the length of the isolation element or dimension Y should be greater than the width of the isolation element. Refer to the Isolation element Specification Sheet for dimensions.

Note: It may be possible to remove the isolation element by moving it toward the center of the press and then into a pit, but providing clearance around the isolation element is the preferred method.

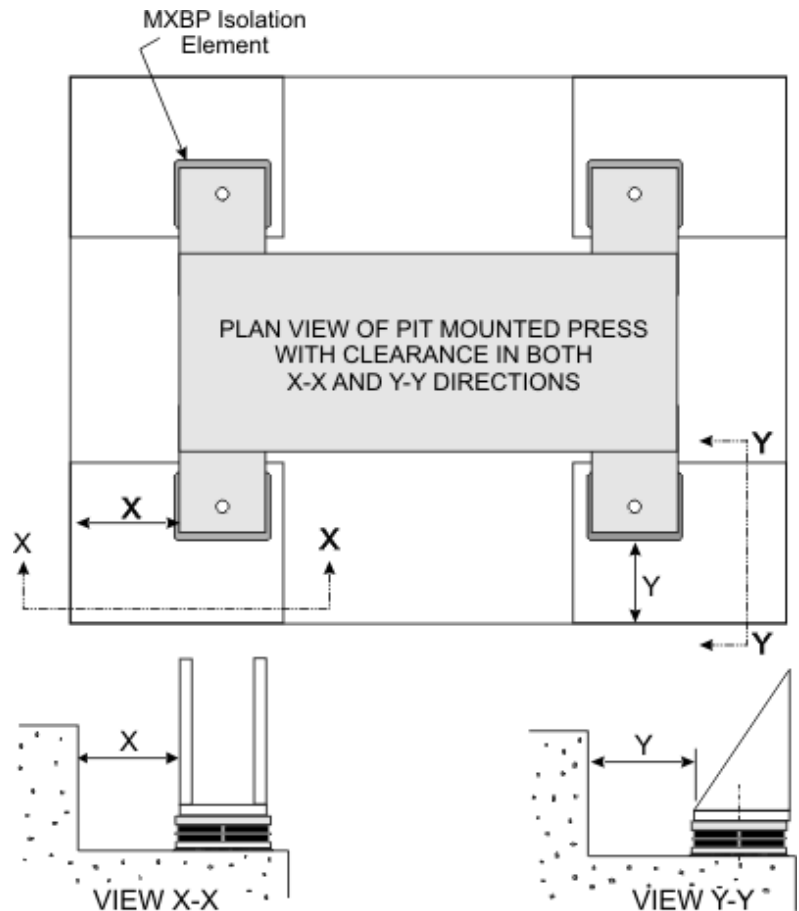
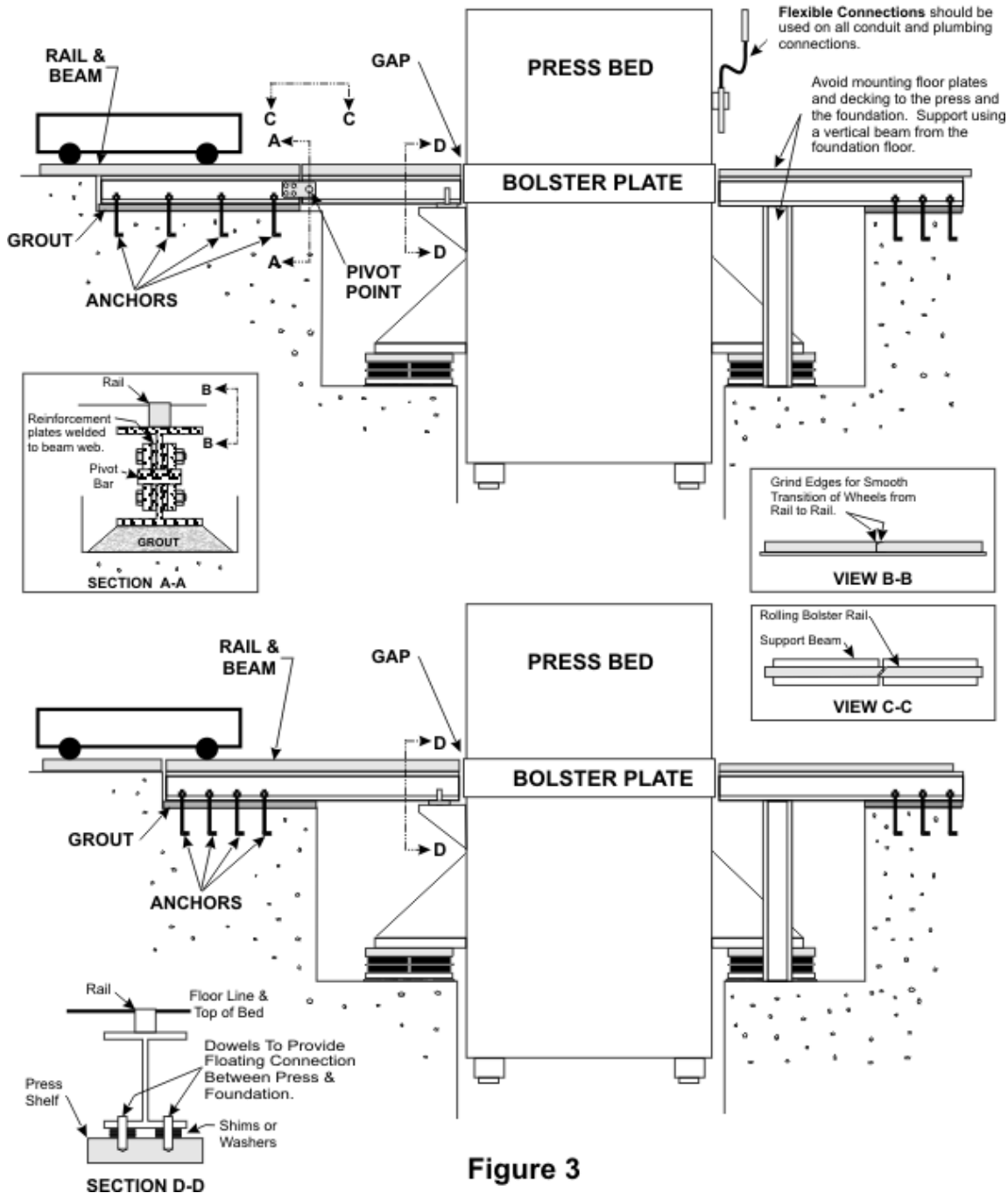


Figure 2

5. There should not be any **solid connections** between the machine and the foundation or building structure. Flexible connections are recommended for plumbing and electrical conduit. Floor plates, walkways, railings, etc. should not be attached to both the machine and the floor, foundation or building. Hard connections will “short-circuit” isolation effectiveness.
6. If rolling bolster plates or die carts are going to be used, they should be installed in accordance with Figure 3. Since the isolation elements are resilient, they will deflect during loading and unloading of the die. The first method shown is preferred since rolling bolster beam floats with a changing press elevation, negating any alignment problems.

REQUIREMENTS FOR ROLLING BOLSTER RAIL CONNECTIONS



INSTALLATION INSTRUCTIONS

MACHINE INSPECTION

1. Clean and inspect the machine feet and legs. Repair any cracks or damage. The bottom of the machine feet/base must be clean and flat where it contacts the top of the isolation element.
2. Clean debris from the mounting holes for installations using optional attachment bolts.

ISOLATION ELEMENT INSTALLATION

3. Position each isolation element under the machine foot or base.
4. For isolation elements equipped with attachment bolts, position the isolation element under the machine foot so the tapped hole or welded nut in the isolation element is concentric with the machine's mounting hole as per Figure 4.
5. Lower the machine onto the isolation element.
6. For isolation elements equipped with **Attachment Bolts**, insert the bolt through the hole in the machine foot and thread into the tapped hole in the top of the isolation element. Make sure that the bolt is not turned in too far, causing damage to the isolation element.

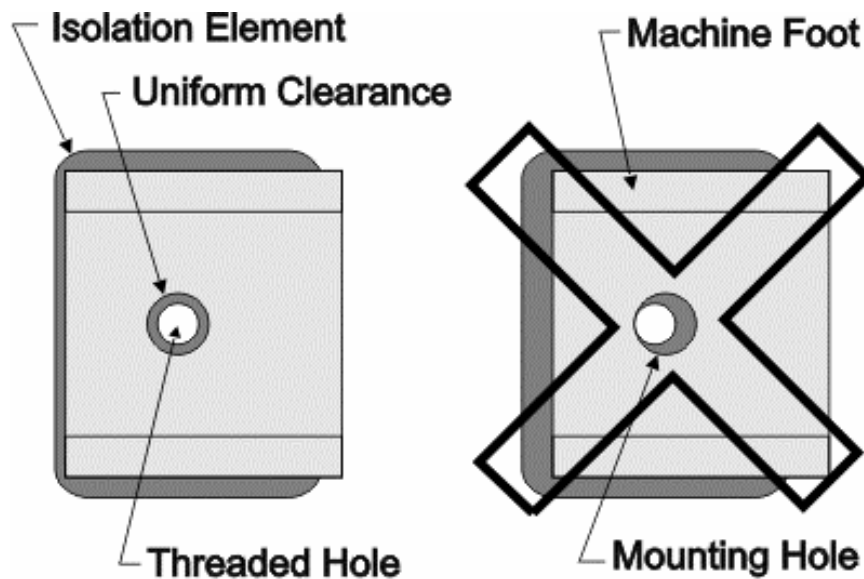


Figure 4

LEVELING

A Shim Pack, consisting of six 0.063" (1.6 mm) thick steel sheets and ten 0.04" (10 mm) thick anti-slip material pads, is provided for leveling. The shims are placed between the machine foot and the isolation element. See Figures 5 and 6. The steel and anti-slip material shims should be alternated to avoid steel-on-steel contact. A greater number of the anti-slip material shims are provided for finer leveling adjustments.

- **MXBN** isolation elements require external lifting devices, such as an overhead crane or hydraulic cylinders placed outside of the isolation elements, to insert shims between the top of the isolation element and the machine foot. See Figure 5.

- **MXBP** isolation elements can use external lifting devices or hydraulic cylinders can be placed within the element to raise the machine foot off the element to insert shims. See Figure 6.
Note: The hydraulic cylinders should be connected together via a manifold to equalize the hydraulic pressure. This ensures uniform lifting pressure and loading of the element.

- For installations using optional attachment bolts, the shim pack is cut in two, allowing for placement of equal stacks of shims on both sides of the attachment bolt.

7. Refer to the machine manual for the machine's leveling locations and tolerances.

8. Using a precision machinists' level, or laser, determine the machine's low side in the front-to-back direction.

9. Apply an equal amount of shims to all isolation elements on the low side until the machine is level in that direction.

10. Repeat procedure in the left-to-right direction.

11. Repeat the above Steps until the machine is level.

12. Tighten Attachment Bolts and Nuts if so supplied.

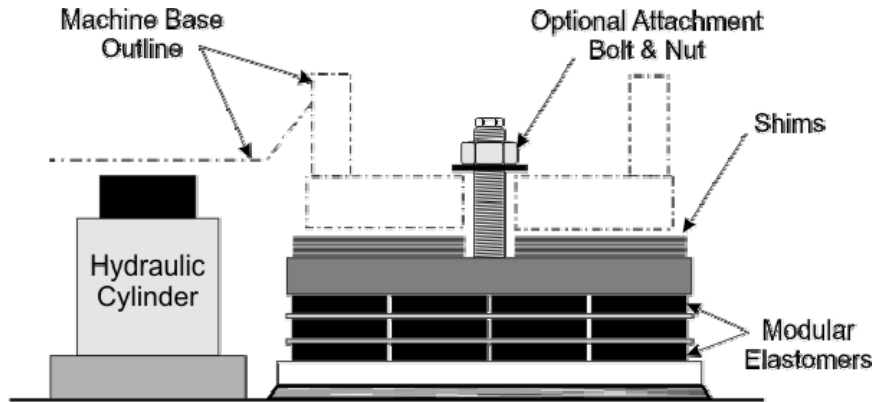


Figure 5

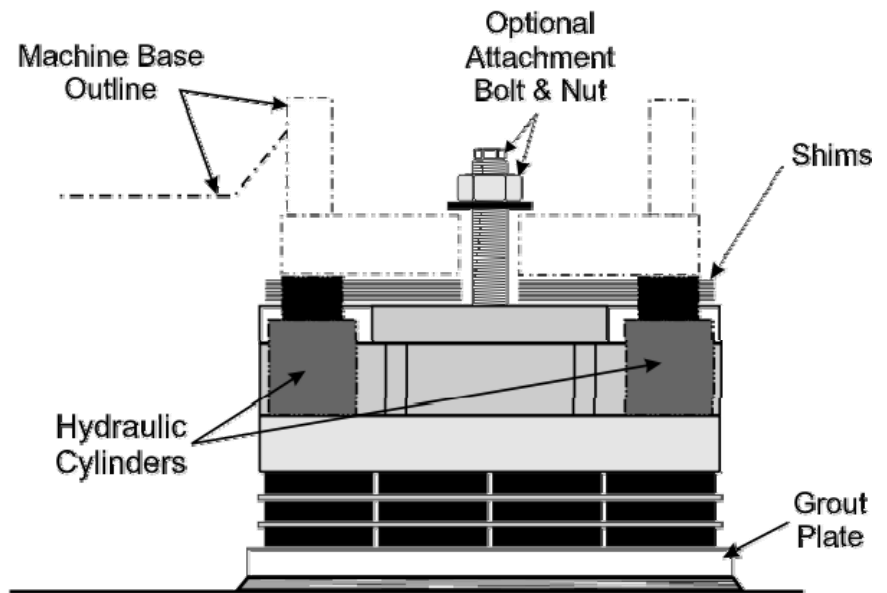


Figure 6

Please call us at 1-800-842-7668 for assistance or questions regarding your installation.

APPENDIX
Table One

VIBRO/DYNAMICS® Corporation									
MRBP & MXBN Models	Flatness Tolerance ±		Slope Tolerance		MRBP & MXBN Models	Flatness Tolerance ±		Slope Tolerance	
	Inches ±	Metric ±	inches/foot	mm/meter		Inches ±	Metric ±	inches/foot	mm/meter
24 MXBP, MXBN 0801	0.07	1.7	0.04	3.7	35 MXBP, MXBN 2851	0.07	1.7	0.03	2.5
24 MXBP, MXBN 0802	0.07	1.7	0.09	7.4	35 MXBP, MXBN 2852	0.07	1.7	0.06	5.0
24 MXBP, MXBN 0803	0.07	1.7	0.13	11.1	35 MXBP, MXBN 2853	0.07	1.7	0.09	7.5
24 MXBP, MXBN 0804	0.07	1.7	0.18	14.8	35 MXBP, MXBN 2854	0.07	1.7	0.12	10.0
24 MXBP, MXBN 0951	0.07	1.7	0.04	3.7	35 MXBP, MXBN 3721	0.05	1.3	0.02	1.9
24 MXBP, MXBN 0952	0.07	1.7	0.09	7.4	35 MXBP, MXBN 3722	0.05	1.3	0.05	3.8
24 MXBP, MXBN 0953	0.07	1.7	0.13	11.1	35 MXBP, MXBN 3723	0.05	1.3	0.07	5.8
24 MXBP, MXBN 0954	0.07	1.7	0.18	14.8	35 MXBP, MXBN 3724	0.05	1.3	0.09	7.7
24 MXBP, MXBN 1241	0.05	1.3	0.03	2.8	36 MXBP, MXBN 4321	0.04	1.0	0.02	1.5
24 MXBP, MXBN 1242	0.05	1.3	0.07	5.7	36 MXBP, MXBN 4322	0.04	1.0	0.04	3.1
24 MXBP, MXBN 1243	0.05	1.3	0.10	8.5	36 MXBP, MXBN 4323	0.04	1.0	0.06	4.6
24 MXBP, MXBN 1244	0.05	1.3	0.14	11.4	36 MXBP, MXBN 4324	0.04	1.0	0.07	6.2
25 MXBP, MXBN 1441	0.04	1.0	0.03	2.3	36 MXBP, MXBN 4801	0.03	0.6	0.01	1.0
25 MXBP, MXBN 1442	0.04	1.0	0.05	4.5	36 MXBP, MXBN 4802	0.03	0.6	0.02	1.9
25 MXBP, MXBN 1443	0.04	1.0	0.08	6.8	36 MXBP, MXBN 4803	0.03	0.6	0.03	2.9
25 MXBP, MXBN 1444	0.04	1.0	0.11	9.1	36 MXBP, MXBN 4804	0.03	0.6	0.05	3.9
25 MXBP, MXBN 1601	0.03	0.6	0.02	1.4	48 MXBP, MXBN 4281	0.07	1.7	0.02	1.8
25 MXBP, MXBN 1602	0.03	0.6	0.03	2.9	48 MXBP, MXBN 4282	0.07	1.7	0.04	3.5
25 MXBP, MXBN 1603	0.03	0.6	0.05	4.3	48 MXBP, MXBN 4283	0.07	1.7	0.06	5.3
25 MXBP, MXBN 1604	0.03	0.6	0.07	5.7	48 MXBP, MXBN 4284	0.07	1.7	0.08	7.0
30 MXBP, MXBN 1201	0.07	1.7	0.03	2.5	48 MXBP, MXBN 5581	0.05	1.3	0.02	1.3
30 MXBP, MXBN 1202	0.07	1.7	0.06	5.0	48 MXBP, MXBN 5582	0.05	1.3	0.03	2.7
30 MXBP, MXBN 1203	0.07	1.7	0.09	7.5	48 MXBP, MXBN 5583	0.05	1.3	0.05	4.0
30 MXBP, MXBN 1204	0.07	1.7	0.12	10.0	48 MXBP, MXBN 5584	0.05	1.3	0.06	5.4
30 MXBP, MXBN 1431	0.07	1.7	0.03	2.5	50 MXBP, MXBN 6481	0.04	1.0	0.01	1.1
30 MXBP, MXBN 1432	0.07	1.7	0.06	5.0	50 MXBP, MXBN 6482	0.04	1.0	0.03	2.2
30 MXBP, MXBN 1433	0.07	1.7	0.09	7.5	50 MXBP, MXBN 6483	0.04	1.0	0.04	3.2
30 MXBP, MXBN 1434	0.07	1.7	0.12	10.0	50 MXBP, MXBN 6484	0.04	1.0	0.05	4.3
30 MXBP, MXBN 1861	0.05	1.3	0.02	1.9	50 MXBP, MXBN 7201	0.03	0.6	0.01	0.7
30 MXBP, MXBN 1862	0.05	1.3	0.05	3.8	50 MXBP, MXBN 7202	0.03	0.6	0.02	1.4
30 MXBP, MXBN 1863	0.05	1.3	0.07	5.8	50 MXBP, MXBN 7203	0.03	0.6	0.02	2.0
30 MXBP, MXBN 1864	0.05	1.3	0.09	7.7	50 MXBP, MXBN 7204	0.03	0.6	0.03	2.7
31 MXBP, MXBN 2161	0.04	1.0	0.02	1.5	58 MXBP, MXBN 5701	0.07	1.7	0.02	1.3
31 MXBP, MXBN 2162	0.04	1.0	0.04	3.1	58 MXBP, MXBN 5702	0.07	1.7	0.03	2.6
31 MXBP, MXBN 2163	0.04	1.0	0.06	4.6	58 MXBP, MXBN 5703	0.07	1.7	0.05	3.9
31 MXBP, MXBN 2164	0.04	1.0	0.07	6.2	58 MXBP, MXBN 5704	0.07	1.7	0.06	5.2
33 MXBP, MXBN 1601	0.07	1.7	0.03	2.6	58 MXBP, MXBN 7441	0.05	1.3	0.01	1.0
33 MXBP, MXBN 1602	0.07	1.7	0.06	5.3	58 MXBP, MXBN 7442	0.05	1.3	0.02	2.0
33 MXBP, MXBN 1603	0.07	1.7	0.09	7.9	58 MXBP, MXBN 7443	0.05	1.3	0.04	3.0
33 MXBP, MXBN 1604	0.07	1.7	0.13	10.5	58 MXBP, MXBN 7444	0.05	1.3	0.05	4.0
33 MXBP, MXBN 1901	0.07	1.7	0.03	2.6	60 MXBP, MXBN 8641	0.04	1.0	0.01	0.8
33 MXBP, MXBN 1902	0.07	1.7	0.06	5.3	60 MXBP, MXBN 8642	0.04	1.0	0.02	1.6
33 MXBP, MXBN 1903	0.07	1.7	0.09	7.9	60 MXBP, MXBN 8643	0.04	1.0	0.03	2.4
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33 MXBP, MXBN 2481	0.05	1.3	0.02	2.0	68 MXBP, MXBN 7601	0.07	1.7	0.02	1.3
33 MXBP, MXBN 2482	0.05	1.3	0.05	4.0	68 MXBP, MXBN 7602	0.07	1.7	0.03	2.6
33 MXBP, MXBN 2483	0.05	1.3	0.07	6.0	68 MXBP, MXBN 7603	0.07	1.7	0.05	3.9
33 MXBP, MXBN 2484	0.05	1.3	0.10	8.1	68 MXBP, MXBN 7604	0.07	1.7	0.06	5.2
34 MXBP, MXBN 2881	0.04	1.0	0.02	1.6	68 MXBP, MXBN 9921	0.05	1.3	0.01	1.0
34 MXBP, MXBN 2882	0.04	1.0	0.04	3.2	68 MXBP, MXBN 9922	0.05	1.3	0.02	2.0
34 MXBP, MXBN 2883	0.04	1.0	0.06	4.8	68 MXBP, MXBN 9923	0.05	1.3	0.04	3.0
34 MXBP, MXBN 2884	0.04	1.0	0.08	6.5	68 MXBP, MXBN 9924	0.05	1.3	0.05	4.0
34 MXBP, MXBN 3201	0.03	0.6	0.01	1.0	68 MXBP, MXBN 11521	0.04	1.0	0.01	0.8
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