

Why do plumbing washers have letters and numbers on them?

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I don't really have an answer to the question, but I can help you to understand what they mean. We could find no plumber, nor plumbing manufacturer who could actually tell us the origin of the plumbing code for rubber washers. My guess is that it probably had something to do with the inside diameter of the fixtures in a day when there were only three or four sizes. Hence the washer often referred to as 1/4 standard or now labelled 1/4R for 1/4 Regular (although the outside diameter is actually 9/16 of an inch) probably was used for the most common sized of all the fixtures. As a wider and wider variety of fixtures were developed, they needed more classifications. So we got the 1/4L, probably meaning Large. Then they got smaller so the (0), referred to as "AUGHT" (thanks for the right spelling Jim Deming) , and the (00) referred to as the "Double AUGHT" (or sometimes "LOT", since no-one has written this designation down who knows which pronunciation is right). These two small ones also have the 1/4 designation with 1/4M and 1/4S, probably meaning medium and small. In the 3/8 series things got more confused as the M is now between the R & L, that makes sense, Regular, Medium and Large. But the 1/4 series goes S, M, R, L. Confusion reigns. 1/2, 5/8, and 3/4 seem to only be available in the R size.

Today, neither plumbers nor the manufacturers who sell or make these things know why they are called what they are called, at least not any that we could find. Apparently the molds were made long ago and there has been no reason to change them. At least all the manufacturers use the same code system, even if they don't understand it. If anyone out there has more information on the origin of this plumbing coding, please write me a letter.

23 years after I asked this question, Matt Undy from Ann Arbor dug this out of a plumbing forum: "It is the size of the opening it seals and there are different size seats and stems for the same size opening so there are different size washer with the same nominal size." In my opening paragraph I guessed it had something to do with the opening but this more specific explanation makes a lot of sense. Thanks Matt.

However the distributors of these washers have taken measures to help you out, all while keeping this strange code system. If you take your old worn washer with you to the store, there are often charts hanging on the wall with life sized circles for each of the washer sizes and on the back of each of the packages you will find a life sized drawing of the washer size, allowing you to match up without ever knowing the plumbing code nor the diameter of your washer.

For those who want to know, here is the key to decode the plumbing washer codes, all the fractions on the right represent the outside diameter of the washer in inches -- and the 32ths listing is for Jim:

(000)	1/2"	= 15/32"
1/4S (00)	1/2"	= 16/32"
1/4M (0)	1/2"	= 17/32"
1/4R	= 9/16"	= 18/32"
1/4L		= 19/32"
3/8R	= 5/8"	= 20/32"
3/8M		= 21/32"
3/8L	= 11/16"	= 22/32"
1/2R	= 3/4"	= 24/32"
1/2L		= 25/32"
5/8R	= 13/16"	= 26/32"
5/8L	= 15/16"	= 30/32"
3/4R	= 7/8"	= 28/32"

Now stick that in a metric faucet.

Then comes the question of whether you should buy bevelled or flat washers? Apparently the bevelled washers are of European origin while the flat washers are of North American origin, with both intended to do the same job. It seems that originally the European seats were a bit funnel shaped, so that the slope of the bevelled washers would contact a larger surface. They both appear to work in any fixture that requires washers. For all practical purposes I will accept the comment made by Ed, one of our viewers who didn't say in the e-mail where he was from: "I have known for many a year (I'm now 81) that if you want the water to come gushing out fast as soon as you open the tap, then you use a flat washer. If you want the water to flow slowly at first and gain speed and volume as you open the tap more and more, then you install a bevelled washer."

The other recommendation I have received is; "if you are replacing a flat washer with a beveled one, put the flat face against the fixed part of the faucet where it gets screwed down to - and the beveled side on the moving side where the water flows. That will keep it from bending over to one side."

This article is a good example of why I like my own website, rather than scrolling through and trying to compile an unending string of comments like on a forum, or never finding an old question on a Facebook feed, here, the questions and answers simply get refined with time -- like aging good wine and cheese. Thanks all. Jon

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