

[Question]



Are the "Rp" and the "PS" parallel pipe internal threads, the same? If not, how are they different? Also, what type of taps should be used for parallel pipe threads? Are there two kinds of parallel pipe threads, "PS" and "Rp"?

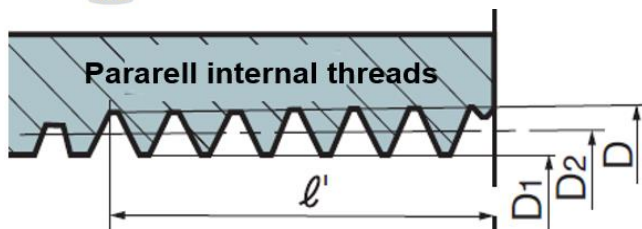
[Answer]

There is basically little difference between the internal parallel pipe threads of a "Rp" and a "PS". You might think there is a size change from the "PS" to "Rp" but the difference is so slight, you can use the same tap to produce either a "PS" or a "Rp" parallel pipe thread. The length of the Yamawa parallel pipe "PS taps" and "Rp taps" are different from the length of the components parallel pipe thread but the tap limits are the same, so either the "PS" or a "Rp" parallel pipe tap can be used to create an internal parallel pipe thread.



[Description]

"PS" is the nomenclature for the old JIS standard of parallel pipe internal threads. In the current JIS standard, it is referred to as a "Rp" thread. For reference, the standard dimensions of the internal "PS 1/2 - 14" and the "Rp 1/2 - 14" are listed in the table below. They both have the same diameter values.

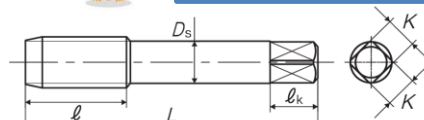


Unit: mm

Internal Thread Standard	Old JIS PS 1 / 2-14		Current JIS Rp 1 / 2-14	
	Reference Diameter	Tolerance	Reference Diameter	Tolerance
Major Diameter D	20.955	±0.142	20.955	±0.142
D2 Pitch Diameter	19.793		19.793	
Minor Diameter D1	18.631		18.631	



YAMAWA: The "PS taps" and the "Rp taps" for parallel pipe threads have different overall lengths and thread lengths, but the thread limit accuracy is the same for "II (second grade) threads". For reference, please compare the tap's shape and grade accuracy of "1 / 2-14" in the table below.



Product	Size	Full Length (L)	Thread Length (ℓ)	Shank Diameter (D _s)	Width of Square (k)	Length of Square (ℓ _k)	OD		Effective Diameter		Minor Diameter	
							Reference Dimension	Tolerance	Reference Dimension	Tolerance	Reference Dimension	Tolerance
Hand tap	PS1/2-14	80	35	18	14	17	20.955	-0.025 -0.115	19.793	-0.085 -0.115	18.631	-0.025 -0.115
Hand tap	Rp1/2-14	87	26	18	14	17	20.955	-0.025 -0.115	19.793	-0.085 -0.115	18.631	-0.025 -0.115

[Tapping Tips]



In this Bags of Wisdom, these pipe threads are shown as a "parallel pipe internal thread". They were originally referred to as a "parallel pipe tapered pipe internal thread". Parallel threads for pipes "PS" and "Rp" are used in combination with external taper pipe threads. There are no rules or regulations for the combination use of an external tapered pipe threads with an "internal parallel pipe thread". Therefore, the standard "parallel pipe external thread" is not created today. But, there was a standard in the past, so "PS die" is still in the market. Did you know that parallel pipe threads "PS" and "Rp" are checked with tapered pipe thread gauges. "PS" and "Rp" threads can be quite confusing ~.