

How to Select Cylinder Valves

1. Valve Series	Select the suitable series based on design/materials/orientation/flow requirement/operating device/pressure rating etc. for your application from 'Series Selection Table'. Refer 'Detailed Series Catalogue' of the selected series & ensure gases for which the valve shall be used are included in the 'List of approved gases'. Refer 'Product Selection Guide' to choose the appropriate three-digit combination to reflect in the item code.
2. Valve Body	Select from the different grades of material offered in the 'Product Selection Guide'. Typically, brass & stainless-steel valve body have different choice of grades depending upon on severity of application & cost. Choose code for chrome plating, if required. Select the applicable two-digit combination.
3. Valve Inlet	Specific inlet connection is required to match the cylinder neck thread. Distinguish clearly between taper & parallel threads & their respective thread types as they differ significantly in sealing from each other. Taper threads seal is created by a combination of thread sealant & metal deformation. Parallel thread seal is created by O-ring compression wherein the O-ring material, size / tolerance & hardness are critical for proper seal. Select the applicable three-digit combination from the options. Customer specific inlet size / respective oversize may be offered on request.
4. Dip Tube Thread	Check whether dip tube thread is needed on inlet connection to fit dip tube for quick withdrawal of the liquid content of the cylinder. If required, select the corresponding single-digit for the dip tube thread. Choose "X" if dip tube thread is not required. Customer specific dip tube thread may be offered on request.
5. Valve Outlet	Specific outlet connection is required based on the gas service / pressure rating according to the outlet connection standard (e.g. CGA/BS/DIN/AFNOR/UNI/AS/IS/ISO) depending upon the country of use. Select the applicable three-digit combination.
6. Gas Service	Select the applicable two-digit combination for the intended gas.
7. Pressure Relief Device (PRD)	Valves may be offered with PRDs. Select the applicable single digit for the PRD type & /or material of the burst disc (Nickel / Copper). Choose "X" if PRD is not required.
8. PRD Rating	Select the PRD rating (temperature &/or pressure) from the applicable two-digit combination. Choose "X" if PRD is not required.
9. Specification	Select the single-digit for the type testing standard/s (e.g. ISO 10297/ CGA V-9/IS 3224) to which certification is required. <i>Note - With the exception of post-type medical valves, CGA V-9-2012 does not prejudice the use of valves that are in compliance with both ISO 10297 & ISO 14246.</i>
10. Inspection	Select the single digit for the inspection requirement (e.g. In-house/third party).
11. Seating	Select the single digit for the soft seat option ensuring the selection is compatible with the gas (refer list of approved gases).
12. Valve Pressure Rating Nomenclature	Select "WP" (Working pressure) or "TP" (Test pressure) to reflect in the item code. WP is the settled pressure of a compressed gas at 15 °C in a full gas cylinder. <i>Note 1) As per ISO 10297, the term WP is only applicable for compressed gases* & does not apply to liquefied** or dissolved gases**.</i> TP is the minimum pressure applied to a valve during testing. * TP = 1.2 x WP **TP shall be at least equal to the minimum test pressure given in ADR. <i>Note 2) As per CGA V-9-2012, the working/service pressure is based on the DOT cylinder rating. However, design qualification is carried out at the maximum pressure rating of the outlet connection given in CGA V-1.</i>
13. WP / TP Rating	Select the three-digit combination for the maximum pressure to which the valve is required against the selected "WP" or "TP"
14. Drawing Number	Four-digit number following the item code is the drawing number & marked on the valve body representing the unique combination of selected technical parameters from 1-13

Options

Handwheel material & colour, filter, seal nut, gasket, dip tube, chain & keeper ring, EFV- are not unique to the item code & need to be specified separately. The options selected shall be captured in the drawing & / or order document.

Note – If any technical parameter is not offered for selection in the 'Detailed Series Catalogue', it implies that the design does not provide any option for that parameter currently, but may be accommodated upon request. Refer to "features & benefit page" for details.

Sample Item Code Matrix

