



Performance! Release

December 04, 2017

Performance!Nxt Release 12.7200

Flowserve is pleased to announce the latest release of Performance!Nxt (P!Nxt), the industry's foremost Control Valve Sizing, Selection and Project Management Software. Following are details about new product, features, enhancements implemented and issues resolved in this release.

New Product: ColdFlow 041000A

Flowserve Essen GmbH is pleased to announce the availability of the new **ColdFlow - 041000A Low Temperature Standard Control Valves**. The new series is an optimized and standardized version of the proven ColdFlow - 041000 Series which had been produced by the Essen facility over decades.

Easier technology with less variances makes the **new ColdFlow - 041000A** to a very competitive product at reduced lead times. A modified trim reduces parts and material to achieve a very modular concept at better performance.

A new bonnet design with the KF Diaphragm actuator package is part of this interesting new standard valve design

Size: DN25 - DN100 (1" - 8")
Pressure Class: PN10 - PN63
Body Material: Aluminum
End Connections: Weld ends (standardized)
Bellows seal: optional
Actuator: KF Diaphragm (standard)
KP Diaphragm (optional)

The new ColdFlow - 041000A is included in the latest Performance!Nxt release 7200.

A version with stainless steel body instead of the standard Aluminum version is under development and will be released in the second quarter 2018.



For further questions, please contact:
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Experience In Motion



Performance! Release

P!Nxt Enhancement: Implementation of Stroke time calculation for all Linear Diaphragm Actuators based on code/algorithm used in FlowAct actuator

The Stroke Time calculation for the following Actuators are enabled under this part of implementation:

1. KA Diaphragm
2. KF Diaphragm
3. KP Diaphragm.

The screenshot displays the 'Stroke Time Calculator' software interface. It includes a graph of % Open vs Time (Sec), a data table for Open Data Points, and several configuration panels for actuator parameters and device Cv values.

#	Time(sec)	Displacement(in)	Top Press.(psig)	Bottom Press.(psig)	Velocity (in/sec)
1	0	0	14.703	14.703	0
2	0.127	0	14.703	16.902	0
3	0.254	0	14.703	19.102	0
4	0.381	0	14.703	21.301	0
5	0.508	0.002	14.706	23.433	0.518
6	0.635	0.069	14.711	23.635	0.526
7	0.762	0.136	14.711	23.83	0.518
8	0.889	0.201	14.71	24.023	0.511
9	1.016	0.266	14.71	24.212	0.504
10	1.143	0.329	14.71	24.4	0.497
11	1.27	0.392	14.71	24.584	0.49
12	1.397	0.454	14.71	24.766	0.484
13	1.524	0.515	14.71	24.946	0.478
14	1.651	0.575	14.709	25.124	0.472

Actuator Summary:
Type: KP Diaphragm
Stroke: 0.984
Fail Direction: Close
Packing Material: Graphite Std (S)
Spring: 6051
Size: P4

Air Supply and Temperature:
Temperature: 70 °F
Pressure: 64.01 psi (g)

Overrides and Accessories Delay:
Top Supply: 5, Exhaust: 5
Bottom Supply: 0.069, Exhaust: 0.5
Max Delay: 0, 0

Estimated Results:
Open: 2.55 Sec
Close: 2.79 Sec

Device Cv:
Top (Parallel): Supply Cv 5, Exhaust Cv 5, Max Delay 0
Bottom (Parallel): Supply Cv 0.069, Exhaust Cv 0.5, Max Delay 0
Positioner Model: Logix 500 Series (Top / Bottom): Supply Cv 0.069, Exhaust Cv 0.069, Max Delay 0
Solenoid Model: Seitz UV0532UPD-2F53024VUCE (Bott...): Supply Cv 0.5, Exhaust Cv 0.5, Max Delay 0

Accessory Cv Modification:
Solenoid Model: Seitz UV0532UPD-
Cv Values: Supply Cv 0.5, Exhaust Cv 0.5
Cv Addition Method: Top (Series), Bottom (Series), Parallel (Selected)



Performance! Release

P!Nxt Enhancement: Added 'Grid Edit' into P!Nxt

Performance! NXT is now enabled with functionality of reviewing and editing valve data before importing them. This is possible with the use of Grid Edit option in the Valve Manager. If you click this button, the Fast Grid Edit dialog is displayed. This dialog consists of a grid loaded with the valve data. The user can use this grid for reviewing or modifying the valve data before finally importing it to Performance! NXT

Tag Number	Model	Actuator Type	Fluid Name	Fluid State(Cl)	UOM-Pipe Size	Pipe Size Upstream	Pipe Sch Upstream	UOM-Pipe Size	Pipe Size Downstream	Pipe Sch Downstream	UOM - Des
Case1	Mark One	VL-ES Cylinder	F4246 Post Frac Heater Feed	Liquid	in	6.000	40	in	6.000	40	psi (g)
Case2	Mark One	VL-ES Cylinder	F4246 Post Frac Heater Feed	Liquid	in	6.000	40	in	6.000	40	psi (g)
Case3	Mark One	VL-ES Cylinder	F4246 Post Frac Heater Feed	Liquid	in	6.000	40	in	6.000	40	psi (g)
Case4	Mark One	VL-ES Cylinder	F4246 Post Frac Heater Feed	Liquid	in	6.000	40	in	6.000	40	psi (g)
20	Mark 100	VL Cylinder	Unknown Media	Liquid	in	1.000	40	in	1.000	40	psi (a)
21	Mark 100	VL Cylinder	Unknown Media	Liquid	in	1.000	40	in	1.000	40	psi (a)
22	Mark 200	VL Cylinder	Unknown Media	Liquid	in	1.000	40	in	1.000	40	psi (a)
23	Mark 200	VL Cylinder	Unknown Media	Liquid	in	1.000	40	in	1.000	40	psi (a)

Fast Grid Edit (Create Records...)

Load File No of Row Headers: 0 Insert Load Templa... Save Save As Cancel Import Exit

The source of the valve data populated or displayed in the 'Fast Grid Edit' can be specified in the same dialog or by using the Custom Import/Export dialog. If you want to specify valve data by using Fast Quote dialog, click Open button. On doing so, the Open dialog is displayed. Specify required file in File name edit box and then click Open button; the valve information is uploaded into the grid. The file formats that can be opened are CSV, TAB or PRB. Note that you need to put valid number of rows (0, 1 or 2) in the 'No. of Row Headers' edit box to open the file. In this dialog (grid) you can view and edit the valve data. This data includes valve size, actuator size, specification, process conditions, materials etc. You can change the valve record information except the Header Information in this grid. The changes done, can be saved by clicking the Save button. If you do not want any changes, then click Cancel button. To exit this dialog, click Exit button.



Performance! Release

Summary of resolutions covered under 7200 release

Related to Linear Product line

24192: New Product 'ColdFlow 041000A' is now available for sizing & selection in P!Nxt.

24828: Users can now quote FlowAct actuator sub-assembly for Mark One. The necessary selections are available under 'FlowAct-Lin Act Sub Mk1' product.

24741: Stroke time calculation has been implemented for KA Diaphragm, KF Diaphragm & KP Diaphragm Actuators.

25813: Updated rules for A216 WCB body material for Villach site while using Mark One with standard applications.

25570: The existing Aerodynamic noise calculation in P!Nxt is based on standard IEC 60534-8-3-(1995-08), which does not consider compressibility factor (Z) for the calculation of outlet density. The outlet density is used for the calculation of outlet velocity / Mach Number (Mo/M2). Based on advice from Product Manager/Subject Matter Experts, now the effect of Z factor is incorporated into outlet density and hence the outlet velocity / Mach number will be predicted more accurately.

25430: The trim sizes for Multi-Z valve were reordered to improve sizing & selection.

21777: Modified Valve size "Other" calculation for Multi-Z valve. Now particle size value will be correctly used while sizing such custom specifications.

26571: The logic to display the Body form for Multi-Z under BGL site with DIN standards has been corrected.

26015: Minimum and Maximum Temperature limits have been added for P/B O-Ring materials now. Users will see P/B Seal Materials being rule blocked based on these temperature limits.

26240: For Mark One valves, "Other" value was added back under body, trim and bonnet materials for VIL site.

26041: Material option "410 SS" has been removed from P!Nxt. Users should be using other 410 options already available for selection.



Performance! Release

24502: A correction has been made in Body Bolting Material rule. With this fix, more restrictions have been placed on selection of B8-8 body bolting material.

26380: For CavControl and P/B Standard retainers, rules have been placed such that Sleeve and Seat retainer materials are always the same, indicating it's a 1-piece design.

26112: For Multi-Z product, the Seat and Plug Material selection has been removed from the Sizing screen. Users are expected to select it from specification screen from here on.

25607: A refresh issue while selecting two trims having same trim no. & cv but different stages, has been fixed for Multistream trim under FlowTop valve.

25551: Bonnet selection rules (Cryogenic Extensions) for 0.5" & 0.75" has been modified to match that of a 1" Mark One valve.

25670: A rule has been added on Venturi seat selection. With this fix, seat ring material '316 SS w/ss Alloy 6' will show only with Venturi seat and material '316H SS w/ss Alloy6' will no longer be available for selection.

25933: A rule has been added on fluted trim selection. With this fix, fluted trims will always default to hardened plug & seat ring facing with 300 series materials.

24996: P/B seal material rules have been modified to show O-Ring materials only if P/B O-Ring balancing type is selected by user on sizing screen. Rest all balancing types will default to blank for now and user will have to pick the right seal material under specification screen. Future releases will have more improvements on these selections.

25616 & 25560: A correction has been made on the printed value of 'Available Air Supply'. With this fix, the printed value would match with user entry on sizing screen.

25806: A correction has been made on Oxygen service rules for Mark 100, Mark 200 & Mark Six valves. With this fix, invalid user overrides under specific attributes will get reset based on oxygen service rules.

22004: A correction has been made for stem diameter usage in Mutli-Z valves. With this fix, stem diameter will be fetched correctly from database based on strong/weak materials.

25632: A correction has been made on 'Actuator Type' rules for ColdFlow 341000. With this fix, correct actuator type gets set based on selected valve size.



Performance! Release

23563: Added selection rules for Mark One and Tek-Check valves under specific attributes for EDM site.

22223: A refresh issue for Pressure Rating on Valve Manager screen was fixed for SmallFlow valves.

20212: The logic to round the rated Cv values that display on sizing screen, has been modified for Kammer valves with small cv.

23483: A refresh issue while selecting NACE options, has been fixed for Multi-Z valves.

25812: Modifications were made in dependencies of table that stores sizing rules for ColdFlow 041000A.

26251: New body material A105 has been added for Mark One. This option will be available only with Fabricated design.

25825: NACE certification check has been enabled for Kammer Products now.

Related to Rotary Product line

24754: Shearstream HP & Valdisk are now capable of using O2 & BAM materials for following attributes - Packing Material, End Seal, Soft Seat Material, Seal Retainer Material* & Gaskets* (*wherever applicable). Users will see O2 and BAM suffixed materials under mentioned attributes based on the selections of Oxygen Service attribute on sizing screen. In previous release, Mark series was enabled with these options.

24301 & 25613: Supernova actuator sizing on Shearstream HP valves has been corrected to match the torque values in technical bulletin.

25344: A correction has been made to the NR actuator sizing with Maxflo4. With this fix, process and shutoff safety factors get used in calculations accurately.

26253: A correction has been made on printout for Shearstream HP. With this fix, Tag Supplement page gets printed correctly for this valve now.

26427: A refresh issue has been fixed for Duball DL. With this fix, Seat configuration shows correct value under actuator sizing screen.

25675: Modified the available actuator sizes for Supernova actuator with Valdisk TX3. Sizes 250 & 300 are no longer available for selection.



Performance! Release

26379: Modified a warning message for TMCBV. This warning is shown to user if pressure rating is 600# and ball material is A182 F316L.

26084: A correction has been made on dimensional drawing prints for Valdisk. With this fix, flow direction arrow would show at the right region on the drawing printouts.

26340: A correction has been made to set proper positioner specification for Supernova actuators. With this fix, expected positioner specifications would reset while toggling between various rotary actuators on Valdisk valve.

Related to Accessories

24785: A correction has been made to B.o.M. certification code on Logix positioners. With this fix, model code generates correctly with KOSHA certification.

26411 & 25824: A correction has been made to Model code generated for Logix 3400 positioner. With this fix, Model code matches the technical bulletin changed recently.

26047: A rule related to ITK Version was modified for Logix 3200MD. ITK version has been disabled for Logix 3200MD now.

25438: Modified rules related to Air Filter Regulators on Kammer valves. With this fix, the regulator option will not set by default anymore. User is expected to make the selection on sizing screen manually, based on quotation requirement.

24523: The default positioner on all Kammer valves quoted from PAS & PQR sites, has been changed to Logix 500+ series.

23368: Modified rules for Logix 500+ series positioner for ESS site such that correct B.o.M. certification code gets used for specific configuration.

Related to P!Nxt Application features

25786: 'Grid Edit' feature has been enabled in P!Nxt. With this implementation, users can mass import Tags created in excel files and edit them in P!Nxt before final push. After using this feature, all imported details will auto-populate on various screens in P!Nxt.

20003: A correction has been made on 'Export to SAP' logic for ESS site with CF pricing. Now users will be able to Export to SAP seamlessly.



Performance! Release

25357: A correction has been made to fetch certification data, after checking all the dependencies from Certification table in P!Nxt. One of the columns which is rarely used, was not being read correctly. This has been fixed now.

26519: Current Stroke support table in P!Nxt database is only having accessory cv values based on limited tubing sizes - 1/4 in & 3/8 in (Imperial) and 6 mm & 10 mm (Metric). With this fix, the existing accessory Cvs are extended to cover more tubing sizes.

26052: A correction has been made to Grid update feature. With this fix, the newer revisions don't affect previous revisions anymore while using this feature.

26074: A correction has been made on usage on "other" text box on specification screen. With this fix, "other" text box can only be used if user selects "Other" value in pick-list.

25069: A correction has been made for printing remarks/notes. With this fix, the spaces/tabs/enter key press gets considered correctly while printing remarks/notes.

22193: A correction has been made to import logic for tags having fluid as "unknown Media". With this fix, PED Group will reset to 1 for imported files with this fluid name.

21866: Modified the logic to display velocity units on sizing screen and prints. With this fix, the velocity value & unit will show specific to each process condition based on whether it is in liquid or gaseous state.

25811: A correction has been done to display proper color coded warnings for actuator sizing with custom valves.

26429: A refresh issue while printing 'TR CU – Russia' certification on spec sheet is fixed.

Thanks to all who contributed to this release.

Please continue to report all issues in our tracker:

<http://www.flowserveperformance.com/performtracker>

Flowserve - Performance! Team
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Disclaimer: Flowserve's audit of Performance!Nxt Version 12.7200 determined that the resulting software output is consistent with industry standard calculations and Flowserve product design data. Flowserve welcomes reports of any error that might be discovered in the software and will promptly address each issue.

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