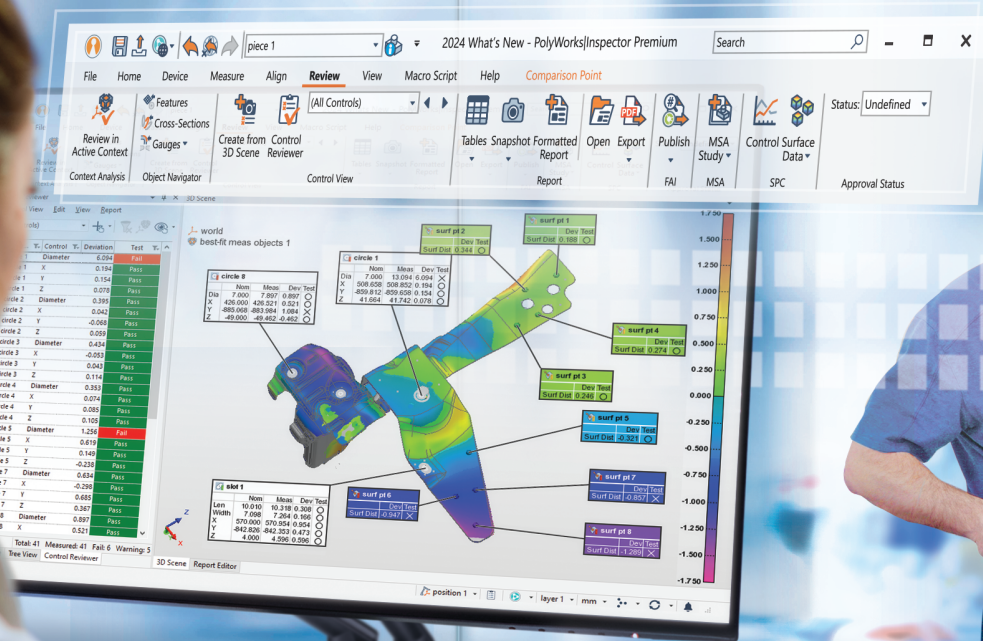


What's new in

PolyWorks® 2024

Dimensional Analysis &
Quality Control Solutions



Improve 3D Measurement Efficiency with our Re-Engineered User Interfaces

Our significant investments in improving software usability year after year directly reflect our core value of ensuring customer success. PolyWorks|Inspector™ 2024 delivers major gains in efficiency through its re-engineered user interfaces.

- ▶ Perform inspection tasks and discover new tools intuitively as we have merged all toolbars and the main menu bar into a new ribbon menu and adjusted the appearance and organization of interface widgets to offer a more logical workflow
- ▶ Access frequently used tools more directly, thereby reducing mouse movements and clicks
- ▶ Quickly find the functionalities that apply to selected objects by accessing a contextual tab or a simplified contextual menu
- ▶ Customize the ribbon menu by repositioning tools or integrating macro scripts

With PolyWorks|Inspector 2024, users are able to:

- ▶ Learn and master basic workflows more easily
- ▶ Retrieve their favorite tools more quickly
- ▶ Strengthen their skills by exploring various new tools at their fingertips

Empower Datum Reference Frames with Surface Features

Surface datum features allow evaluating GD&T in the optimized alignment required by the assembly, with all of the constraints and mobility intended. With PolyWorks|Inspector 2024:

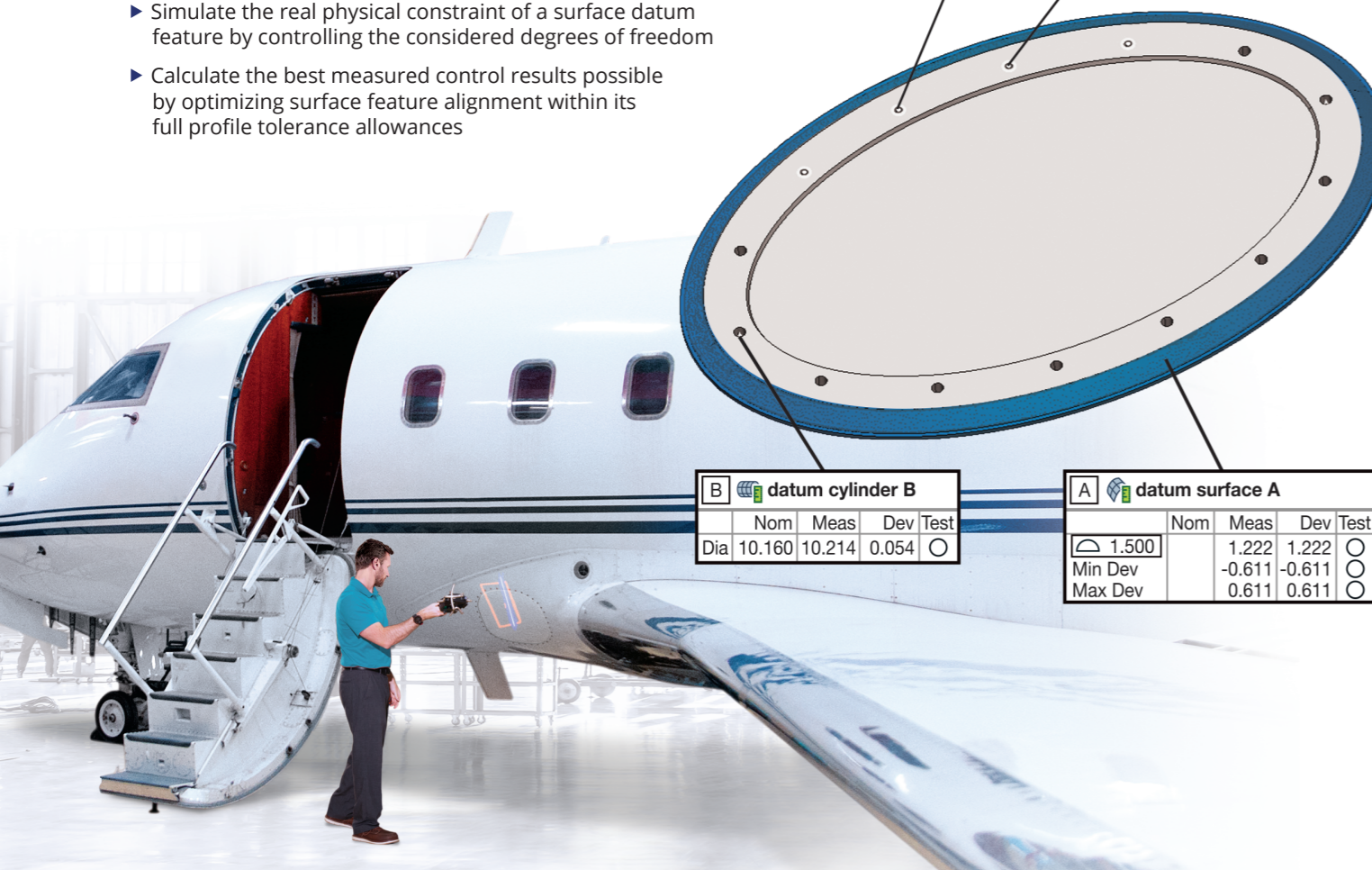
- ▶ Simulate the real physical constraint of a surface datum feature by controlling the considered degrees of freedom
- ▶ Calculate the best measured control results possible by optimizing surface feature alignment within its full profile tolerance allowances

circle 2				Nom	Meas	Dev	Test	
⊕	∅ 0.200	A [y, u, w]	B [x, z]	[world]	10.160	10.096	-0.064	○
Dia								○

circle 3				Nom	Meas	Dev	Test	
⊕	∅ 0.200	A [y, u, w]	B [x, z]	[world]	10.160	10.102	-0.058	○
Dia								○

datum cylinder B				Nom	Meas	Dev	Test
Dia	10.160	10.214	0.054	○			

datum surface A				Nom	Meas	Dev	Test
⌒	1.500	1.222	1.222	○			
Min Dev		-0.611	-0.611	○			
Max Dev		0.611	0.611	○			



Control the Fit of Probed Features

With this new release, PolyWorks|Inspector now offers direct control over the fitting parameters of probed features, which enables users to:

- ▶ Predefine the fit type and constraints prior to probing to directly get the desired result
- ▶ Modify the fit type and constraints after probing and automatically update the result

cylinder 5				Nom	Meas	Dev	Test
Dia	72.000	71.926	-0.074	○			
Len	72.300	24.243	-0.057	○			

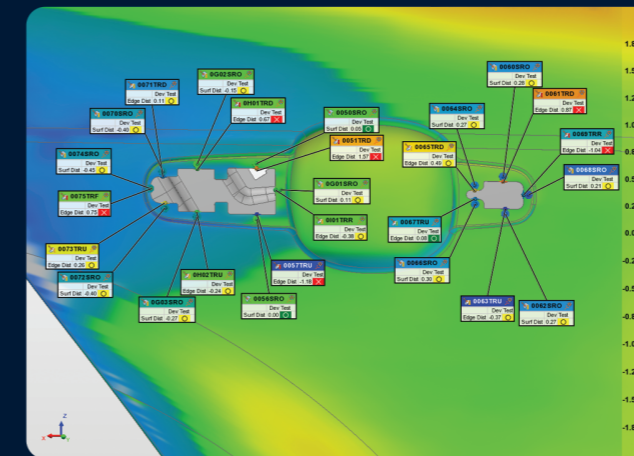
Intake Mating Plane				Nom	Meas	Dev	Test
Char No.	8	10.250	0.208	0.208	○		

Improve Result Analysis and Reporting with Contextual Control Views

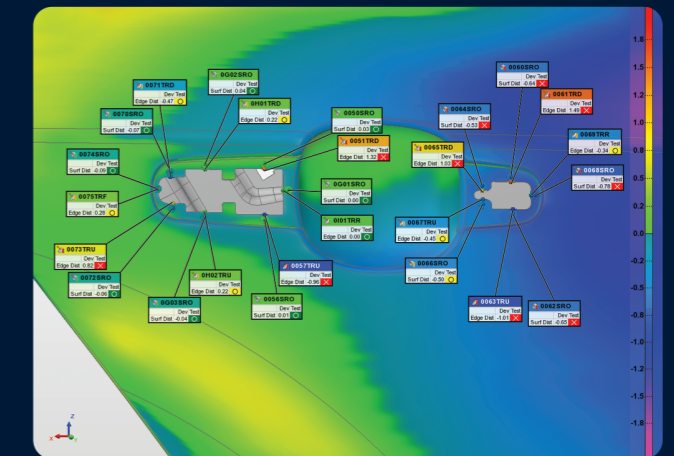
PolyWorks|Inspector already allows users to report 3D measurement results in multiple contexts using tables and snapshots. Version 2024 extends this capability to control views. Users can now select a set of dimensional controls, choose a data alignment as well as a coordinate system, and create a contextual control view to:

- ▶ Analyze surface deviations in multiple alignments

With body alignment



With handle alignment



- ▶ Inspect dimensional controls in the tooling and assembly coordinate systems

With car body coordinate system

Intake - Car Csys
Car Body Cord System
drf - A B C

Intake mating circle 1				Nom	Meas	Dev	Test
Char No.	X	16.646	17.020	0.374	○		
	Y	100.806	100.939	0.133	○		
	Z	0.000	-0.007	-0.007	○		

Intake mating circle 2				Nom	Meas	Dev	Test
Char No.	X	78.223	78.270	0.047	○		
	Y	121.552	121.471	-0.081	○		
	Z	0.000	-0.027	-0.027	○		

Intake Mating Plane				Nom	Meas	Dev	Test
Char No.	8	10.250	0.208	0.208	○		

Intake mating circle 3				Nom	Meas	Dev	Test
Char No.	X	81.791	82.319	0.528	○		
	Y	44.721	44.600	-0.121	○		
	Z	0.000	0.004	0.004	○		

With intake part coordinate system

Intake - Local Csys
Local Part Csys
drf - A B C

Intake mating circle 1				Nom	Meas	Dev	Test
Char No.	X	-43.354	-42.980	0.374	○		
	Y	20.806	20.939	0.133	○		
	Z	0.000	-0.007	-0.007	○		

Intake mating circle 2				Nom	Meas	Dev	Test
Char No.	X	18.223	18.270	0.047	○		
	Y	41.552	41.471	-0.081	○		
	Z	0.000	-0.027	-0.027	○		

Intake Mating Plane				Nom	Meas	Dev	Test
Char No.	8	10.250	0.208	0.208	○		

Intake mating circle 3				Nom	Meas	Dev	Test
Char No.	X	21.791	22.319	0.528	○		
	Y	-35.279	-35.400	-0.121	○		
	Z	0.000	0.004	0.004	○		

Perform CADless Inspection Workflows on CNC CMMs

CNC CMM operators can now create measurement sequences without any CAD data:

- ▶ Prepare a CNC sequence easily by leveraging a new teach mode that records manually probed points and Go To points
- ▶ Automate multipiece measurement by converting probed features from the first piece into measurement guides for subsequent pieces
- ▶ Improve measurement repeatability by resampling measurement guides and generating uniformly distributed measurement points



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