

Integrated Solutions

explorer™ G3 workstation

iPS Cell Culture & CRISPR Genome Editing

Human induced pluripotent stem cells (hiPSC) are a research tool that can be generated from adult human cells. hiPCs can be converted into any type of cell in the human body thereby enabling research into multiple human organ systems. The CRISPR-Cas9 System is a versatile and highly accurate gene-editing technology allowing researchers to modify specific parts of an organism's genome. The applications of these two relatively recent technologies are facilitating research at the genome level, with significant potential to understand disease and to develop novel therapies.

Customer Request

A workstation automating hiPS cell generation, CRISPR/CAS-9 aided genome editing, and phenotypic screening.

Requirements

- Walk-away solution to automate stem cell production, CRISPR/CAS-9 genome editing and screening
- Integrated JANUS® G3 Standard 8-tip/MDT Liquid Handler for cell seeding, media exchange, hit picking and to add reagents for transfection, selection and screening
- Fully enclosed workstation with a HEPA filter to support processes lasting multiple days without risking contamination
- Flexible scheduling software enabling customer to program own workflows
- Cell cultivation and screening in 6-well to 384-well plates
- Diluting populations of cells down to single cells confirmed by imaging



Figure 1. explorer™ G3 Integrated Workstation

eEXPLORER™ G3 INTEGRATED WORKSTATION CONFIGURATION

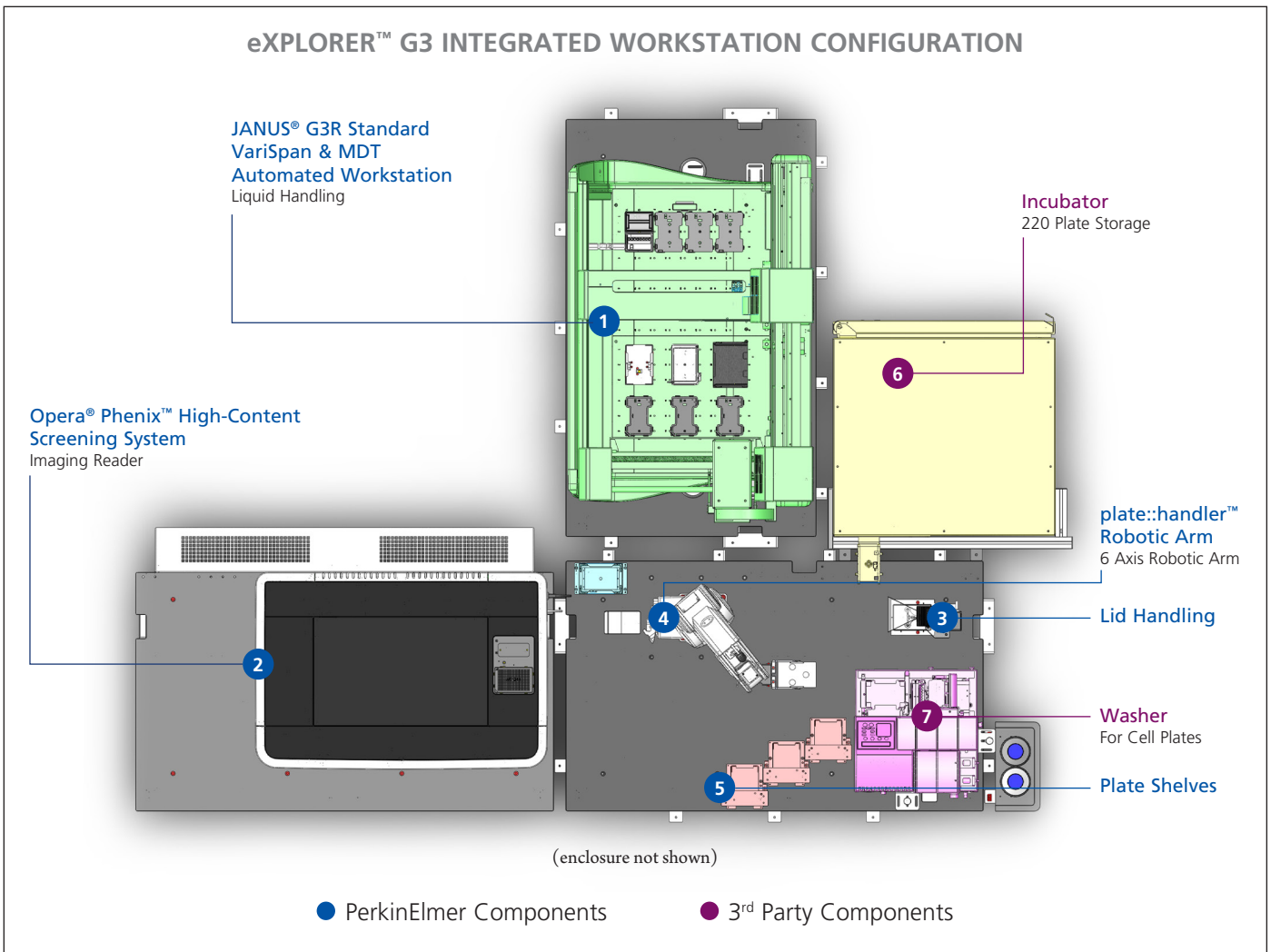


Figure 2. explorer™ workstation for iPS cells and CRISPR top view.



Figure 3. explorer™ workstation workflow for iPS cells and CRISPR.

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