



Instrumentation Design Office



Introduction:

Instrumentation Design Office (IDO) is software for creating and managing industrial instrumentation design data and documentation including instrument datasheets, loop diagrams, termination diagrams, hookup drawings, I/O lists, instrument index and cable schedules etc.

IDO consists of an integrated suite of software applications using advanced graphical user interfaces to a shared project or plant relational database. The user interface is intuitive and includes online help.

Much of the data is created through automated functions & design rules, picklists and use of catalogue data and data importation. IDO essentially automates production of design documentation from the database ensuring superior design integrity and significant reduction in manual data entry. Current users have stated IDO is the most efficient and cost effective software for instrumentation engineering available today!

Unlike competitive products in the marketplace documents and reports are created in industry standard formats such as Autodesk AutoCAD® DWG, Microsoft Excel® spreadsheet XLS (& Microsoft Access® Reports) and Adobe Acrobat® PDF. Your documents are never locked in proprietary systems requiring expensive ongoing software licenses.

Functionality:

IDO is ideal for fast-track or fixed priced projects due to its productivity & ease of use and can be applied in many industries:

Oil & Gas	Mining	Pharmaceutical
Food/Beverage	Petrochemical	Pulp & Paper
Water Treatment	Materials Handling	Power

- Manage Instrument data (typical Instrument Index & Loop Index) more easily
 - Produce Instrument datasheets (fully user definable) faster
 - Manage project cables, equipment terminal arrangements and wire terminations with ease
 - Automate production of loop diagrams, junction box & marshalling cabinet termination diagrams in AutoCAD® format or produce non-CAD reports instantly!
 - Automate hook-up (installation) drawings and Bill of Materials (BOM)/Material Take Offs (MTO)
 - Report changes to easily view new or deleted instruments, equipment, cables, drawings etc and show changes in detail such as model number, size, size/length etc.
 - Produce many user definable reports including instrument index, cable schedules, Bill of Materials (BOMs)/Material take offs (MTOs), drawing list, changes etc.
 - Provide 'As built' data online to enable easy access to up to date design information during plant construction, operation, scheduled maintenance or fault/equipment failure scenarios
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Benefits:

Your projects will be completed on a shortened schedule, consuming fewer man-hours:

- More efficient data entry than conventional practice (e.g. Stand-alone drawings, documents, and databases/ spreadsheets versus integrated database system). In many cases the data is automatically created from catalogue data & "rules"
- Design documents are auto-generated from the database - resulting in major productivity gains
- Easier to produce large (or small) scale design changes
- Construction and commissioning time is reduced through improved design accuracy

Your project is less error prone than conventional design methods:

- Data is checked and validated by the database system enforcing data consistency
- Data is electronically transferred to documents - reducing errors and associated checking
- Data is shared between documents ensuring consistency - Use of a relational database means "change once - change everywhere"
- Information is accurate and reliable (and self-checking)

IDO is more cost effective & productive than competitor software (spend less and achieve more!):

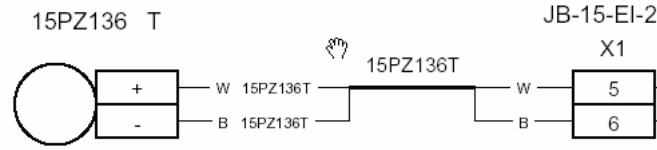
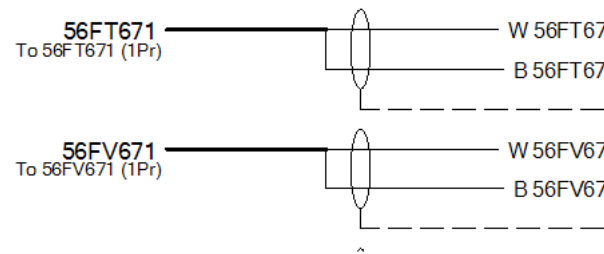
- Easier to learn and use than competitors
- Lower cost of ownership & more flexible licensing including short/long term rental
- More productive and efficient

Unlike competitive products, on project completion documents & database are stand-alone (and editable) and do not require IDO software for delivery to the client (unless, of course, specifically requested by the client). You can easily provide individual documents if required. You or your clients are not locked into ongoing licensing fees just to access data you own!

Accurate engineering documents are available instantly online for plant operations and maintenance personnel if IDO is utilised onsite.

Visit our website:

www.iDesignOffice.com

DSS2060D

Instrument Datasheet		
1	Tag No.	33-XV-3401
2	P&ID No	A1-70031
3	Line Number	33-P5600-C6A-150
4	Application	Shutdown
5		
6	Process Conditions	Case
7	Required Capacity	Maximum
8	Upstream Pressure	Normal
9	Flowing Temperature	Normal
10	Flowing Differential Pressure	Normal
11	Flowing Viscosity	Maximum
12	Shutoff DP for Actuator Design	Maximum
13	Design Pressure	Max
14	Design Temperature	Max / Min

Process Data - View: IDODefault

Tools Data Reports

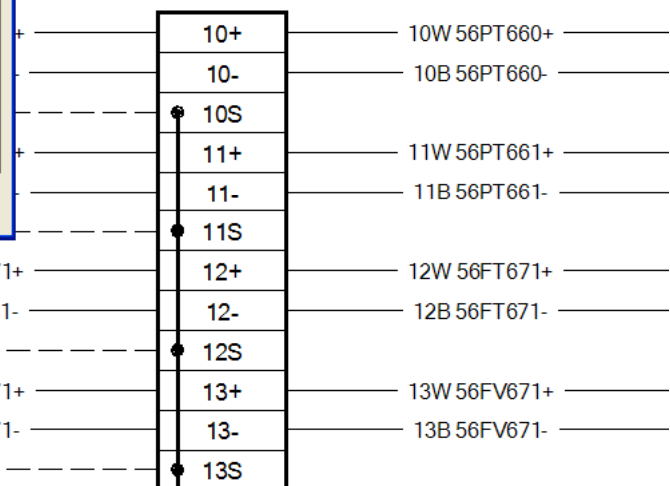
Edit Find Filter Refresh

Display by Area: 61

Default Project Process Units: Temperature: °C Pressure: bar

Area	Tag No	P&ID No	FluidName	FluidState	TempDesign	DensityN
61	61-FE-601	A1-100-406	Hydrocarbons	Liquid	121 °C	796 kg/m³
61	61-FE-610	A1-100-400	HC (diesel)/HO feed	Liquid	65 °C	846 kg/m³
61	61-FE-615	A1-100-400	Hydrogen & HC	Vapour	120 °C	12 kg/m³
61	61-FE-616	A1-100-400	Hydrogen & HC	Vapour	120 °C	12 kg/m³
61	61-FE-617	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.26 kg/m³
61	61-FE-619	A1-100-404	Hydrogen & HC	Vapour	65 °C	1.97 kg/m³
61	61-FE-620	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.07 kg/m³
61	61-FE-621	A1-100-403	Hydrogen & HC	Vapour	65 °C	2.05 kg/m³
61	61-FE-626	A1-100-407	Steam	Vapour	232 °C	5.38 kg/m³
61	61-FE-627	A1-100-425	Hydrogen & HC	Vapour	65 °C	1.97 kg/m³
61	61-FE-628	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.07 kg/m³
61	61-FE-633	A1-100-405	Hydrogen & HC	Vapour	65 °C	1.97 kg/m³
61	61-FE-634	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.07 kg/m³
61	61-FE-670	A1-100-400	HC (diesel feed)	Liquid	65 °C	845.7 kg/m³
61	61-FE-671	A1-100-401	Hydrogen & HC	Vapour	120 °C	12.09 kg/m³
61	61-FE-672	A1-100-401	HC (diesel feed)	Liquid	65 °C	852.5 kg/m³
61	61-FE-673	A1-100-401	HC (diesel feed)	Liquid	65 °C	852.5 kg/m³
61	61-FE-674	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.26 kg/m³
61	61-FE-675	A1-100-403	Hydrogen & HC	Vapour	121 °C	10.26 kg/m³

56-SJB-002



ACTUATED BLOCK

Service	STEAM
Fluid	HP steam to 33-E-300
Fluid State	Vapour
Fluid Nature	Steam

PROCESS CONDITIONS

Value
2700 kPag
320 °C
3550 kPa
3450 kPag
400 °C

Licensing:

Instrumentation Design Office (IDO) is licensed per application (module) per workstation. Licenses can be purchased outright or rented on a monthly basis (conditions apply).

IDO consists of three integrated application modules that share design and 'As built' data:

Instrument Engineer:

Manages all tasks typically handled by an instrument engineer during a project lifecycle including instrument index data entry and reports; instrument datasheets (specification sheets) including process data import/entry and document management (revision control, batch printing etc)

Instrument Designer:

Manages all tasks typically handled by an instrument designer during a project lifecycle including AutoCAD® drawing generation, drawing list management, updating of revisions and printing of CAD files for loop diagrams, termination diagrams, Hookups etc.

Wiring Manager:

Handles all tasks typically carried out by an instrument designer related to detail cable, wiring and termination design. This includes definition of equipment terminal arrangements (field devices, junction boxes and cabinet devices such as relays, IS barriers & I/O modules), cable creation and termination, cross-patch wiring etc., Generation of Cable Schedules and cable, cable gland and cable gland adapter Bill of Materials, cable drum schedules and cable block diagrams.

Document Formats:

IDO utilises Microsoft Windows® COM technology to create:

- All drawings in AutoDesk AutoCAD® DWG format (Release 2000 to 2007 supported) - AutoCAD license required
- Datasheets in Microsoft Excel® XLS format (Office 2000, Xp, 2003, 2007 supported) - Excel license required
- Loop diagrams & termination diagrams can be created in Adobe Acrobat® PDF (AutoCAD not required)

All project data is stored in Microsoft Access® or SQL Server 2000 or 2005 databases. New report layouts can be user created with IDO Report Manager and can be exported to Excel® and/or PDF files.

All document layouts, symbols etc are totally user definable. Datasheets use Excel templates which are fully user definable or users can import existing Excel based datasheets for use within IDO.

iDesignOffice Pty Limited

Instrumentation Design Office software is 100% Australian owned and is developed/supported from Melbourne, Australia by iDesignOffice Pty Limited. iDesignOffice Pty Ltd is a member of the Autodesk® Developer Network and is an Authorised Autodesk Developer. IDO software has been developed after many years experience in instrumentation design and software development in the oil & gas, petrochemical & mining industries to provide a more productive software solution for instrumentation and control systems professionals.

iDesignOffice Pty Ltd also offers IDO training, expert support, customisation and project specific development/programming for our clients if required. For example we have recently worked on:

- Program to create intelligent AutoCAD® P&IDs (bi-directional to/from database) from existing P&IDs (no redrawing required!)
- Feed study data import & import of data from other plant design software into IDO
- Smart PLC/DCS I/O allocations (over 12,000 I/O points) for a large materials handling project
- Integration of Excel®, Access® and Foxpro® databases into a single Access project database and other data migration projects

For more information contact iDesignOffice via email at: Info@iDesignOffice.com

System Requirements:

To run *Instrumentation Design Office* you will need the following minimum system configuration:

Hardware

The minimum hardware requirements are:

CPU:	Pentium III or later
Memory:	256MB or greater
Available disk space:	50Mb to 150Mb per project database (approx)

Software

The minimum software requirements are:

Operating System:	Windows® 2000 or Xp Pro (Vista coming soon)
Other software:	Optional SQL Server® 2000/2005 or SQL Server Express
	AutoCAD® 2000 or later (for CAD drawing creation only)
	Microsoft Excel® 2000, Xp (2002), 2003 or 2007

iDesignOffice Pty Limited recommends the following configuration:

- Pentium IV (or equivalent) based processor (2.8 GHz+) or any Intel Core2 processor
- 1Gb RAM minimum
- Windows® Xp Pro

For large projects (4+ users): SQL Server® 2000/2005 database (or SQL Server® Express 2005 — a free client-server database system from Microsoft)

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