



## GRAPHICAL INTERFACE

**KORF** has a clear, uncluttered and advanced graphical interface. Equipment is selected from a palette, placed on the screen and connected with pipes using the mouse. The drawing resembles a simplified PFD, including a title block.



## PROFESSIONAL REPORTS

Results can be shown on the drawing, viewed on equipment dialogs or saved in a report file. The report file is presented in a professional format for review, approval and documentation purposes.

# KORF Hydraulics

Version 3.5

**KORF Hydraulics** is an *advanced fluid flow application* that is suitable for hydraulic calculations ranging from a single pipe to multi-case, two-phase piping networks. It can significantly improve the efficiency and quality of fluid flow calculations, while ensuring an uniform and consistent approach.



## HYDRAULIC CAPABILITIES

### Multiphase calculations

- Liquid phase flow
- Compressible flow, including choked flow
- Several two-phase flow methods and flow regime maps
- Omega HEM & HNE methods (mod API 521)

### Pipe sizing/databases

- Three pipe databases are included and others can be added
- Non-cylindrical flow sections
- Flexible pipe sizing routine to determine the NPS or ID

### Equipment & Instrument Calculations

- Instrument sizes can be specified
- Preliminary sizing of all instruments
- Two-phase flow, valve characteristics, perforated plates, different orifice types, etc.
- Vessels, pumps, compressors and T-pieces
- Support for different vessel elevations, fluid levels and densities, relative nozzle elevations and internal pressure drops.
- Pump/compressor curves and NPSH calculations
- Semi-rigorous approach for T-pieces to account for branch areas and relative velocities

# KORF Technology

Engineered with passion



## METHODOLOGY

**KORF** is based on a very flexible methodology and only requires the user to specify sufficient flow rates, pressures, pressure drops and/or sizes (Cv's, Beta ratios, etc) so that a unique solution is possible.

*For example, a single pipe has 3 possible specifications (pressure in, flow, pressure out), and the user can specify any 2. This same methodology applies to complex networks of pumps, pipes, valves and other equipment, enabling **KORF** to accurately simulate most hydraulic problems.*



## CASE MANAGEMENT

**KORF** supports a flexible and logical case management philosophy that allows all cases required for pump and instrument datasheets to be incorporated into a single Korf simulation.

For multiple cases, the user simply enters a semi-colon separated list of specifications, and indicates:

- Which cases to run
- Order in which cases are run
- Extent of reporting required for each case



## SIMULATION CAPABILITIES

- Includes pure component database
- Supports multi-component, 3-phase flash calculations
- Equation based mole and heat balance (HMB) for compositions and properties in complex piping networks
- Import stream properties from Aspen Hysys, Aspen Plus or a Text file
- Hydraulics and HMB can be run simultaneously or separately to improve convergence for difficult systems

## APPLICATION MATRIX

	SPD	KORF	SIM
Small system (non-flashing)	++	++	+
Multiple cases	+	++	
Complex piping networks		++	
Built-in flash calcs		+	++
Flashing flow		+	++
Specialty (non-newtonian, etc.)	+		++

SPD: spreadsheets / SIM: simulators  
 ++ Preferred + Possible

## CONTACT US

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