



PRODUCT & SOLUTIONS CATALOGUE

Industrial Automation • Monitoring • Control • Technical Services

Mozambique & SADC | 2026

Purpose of this catalogue

A practical guide to ARF Services product focus, integrated solution architectures, applications, benefits, project configuration and customer information requirements. Exact product selection is confirmed per project.

COMPANY OVERVIEW

About ARF Services

Industrial automation and technical services developed for practical factory, utility and process-industry requirements.



Illustrative SCADA / operations dashboard environment.

What we do	Customer value
Industrial monitoring & control	See machine/process status, alarms, trends and operating information from a central screen.
Motor control & VFD applications	Improve motor control, starting, speed regulation and process response.
Pneumatics & compressed-air systems	Support cylinders, valves, air preparation, sensors and machine movement.
Project integration & technical support	Site information collection, application selection, commissioning support, troubleshooting and first-line after-sales coordination.

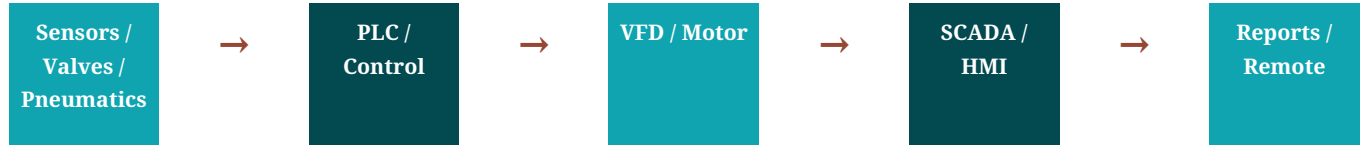
Technology positioning

ARF Services presents INVT, Adroit and SMC technologies as current product/solution focus areas. Formal manufacturer authorization or distributor status is only claimed when supported by written documentation.

HOW THE STACK FITS TOGETHER

Portfolio Map

From field devices and motor drives to SCADA, dashboards and remote monitoring.



A typical industrial project combines several layers. ARF Services can start from one problem - for example a pump that needs speed control - and expand to plant-wide monitoring when the customer requires it.

Layer	Typical products / functions	Typical customer question
Field	Sensors, switches, flow/pressure devices, pneumatic valves, cylinders	What is happening at the machine?
Control	PLC, digital/analog I/O, control logic, HMI	What should the machine do automatically?
Drive	INVT GD200A / GD350A VFDs	How fast should the motor run?
Supervisory	Adroit SCADA, alarms, trends, reports, remote visualisation	How can operators see and control the whole process?
Connectivity	Industrial Ethernet, Modbus, remote I/O, edge/gateway options	How do we connect different devices and sites?



Illustrative industrial connectivity architecture.

INVT FOCUS

Drives & Motor Control

Industrial VFD solutions for pumps, fans, conveyors, compressors, mixers and general machinery.



Illustrative VFD and motor-control application.

Series	Positioning	Typical applications
GD200A	General-purpose VFD	Pumps, fans, conveyors, mixers, compressors, general industrial motors
GD350A	High-performance general VFD	More demanding machinery, advanced motor control, encoder/communication/expansion needs

- Application assessment and motor-data review
- Drive sizing by voltage, kW and rated current
- Commissioning support: motor data, control mode, autotuning, ACC/DEC, jog/direction and full operation
- Local first-line troubleshooting and escalation using technical manuals / engineering support

DRIVE PRODUCT FOCUS

INVT GD200A - General Purpose VFD

A practical workhorse for common industrial motor-control applications.

Key point	Practical meaning
General-purpose platform	Suitable starting point for many standard induction-motor applications.
Broad power range	INVT lists 380 V models from 0.75 kW to 3000 kW in its 2026 industrial automation catalogue.
Mounting options	Official product information includes wall, flange and floor mounting options depending on frame.
Application functions	Simple PLC, speed tracking and dedicated water-supply functions are available within the platform.
Project integration	Can be controlled locally, through terminals/analog reference, or via communications depending on project design.

Typical configuration

3-phase supply → protection/isolation → GD200A VFD → 3-phase motor. Run command may come from keypad, digital terminal or PLC; speed reference may come from keypad, analog input, PID/sensor signal or communications.



- Pumps and booster systems
- Fans and blowers
- Conveyors and material handling
- Mixers and process machinery
- HVAC and utility applications

DRIVE PRODUCT FOCUS

INVT GD350A - High-Performance General VFD

For applications requiring more advanced drive capability and integration flexibility.

Capability area	Use in projects
Advanced motor control	Suitable where application performance requires more than a basic speed-control function.
Multiple motor types	User manual supports asynchronous and selected synchronous motor control modes.
Communication / expansion	Suitable for automation projects that need richer industrial-network or expansion options.
Machine integration	Useful for complex machinery, production lines and higher-performance process control.
When ARF would consider GD350A When the machine requires more advanced control, encoder/feedback, special motor types, richer communication or a higher-performance automation architecture than a basic general-purpose drive.	

- High-performance conveyors
- Machine/process equipment with tighter control
- Advanced pump/fan systems
- Production machinery requiring automation-network integration
- Retrofit where performance or connectivity is the key driver

Factory Monitoring & Control

Central visibility for machines, utilities and processes.



Illustrative SCADA dashboard - actual project screens are configured to the customer process.

- Live plant overview screens
- Equipment running / stopped / fault status
- Alarm and event management
- Historical trends and process graphs
- Reporting and performance visibility
- Remote monitoring options
- Integration with existing PLCs / RTUs / data sources subject to supported drivers and architecture

Simple customer explanation

SCADA is the plant's central monitoring and control layer: operators can see what is happening, receive alarms, analyse history and control permitted equipment from designed operator screens.

SOFTWARE PRODUCT FOCUS

Adroit Technology Stack

Select only the modules needed for the customer's actual requirement.

Product / capability	Purpose
Adroit SCADA	Core real-time supervisory monitoring and control platform.
Adroit Lite	Smaller / cost-sensitive applications where a compact SCADA deployment is appropriate.
Adroit Air	Mobile access / notification capability for selected applications.
Performance Anywhere / Secure Mobile Gateway	Remote visualisation and browser/mobile access options.
Adroit Alarm Management	Alarm analysis and management support.
Adroit Report Suite	Historical / operational reporting and decision-support outputs.
Adroit Edge Gateway / Cloud	OT-to-IT / edge and higher-level data integration options.
OEE / performance tools	Production efficiency, downtime and equipment performance analysis where required.
Project rule ARF Services does not automatically specify the full software stack. The project I/O list, P&ID, scope of work, reporting needs and integration requirements determine which modules are appropriate.	

SYSTEM CONFIGURATION

SCADA Reference Configuration

A practical architecture for an existing plant that needs better visibility.

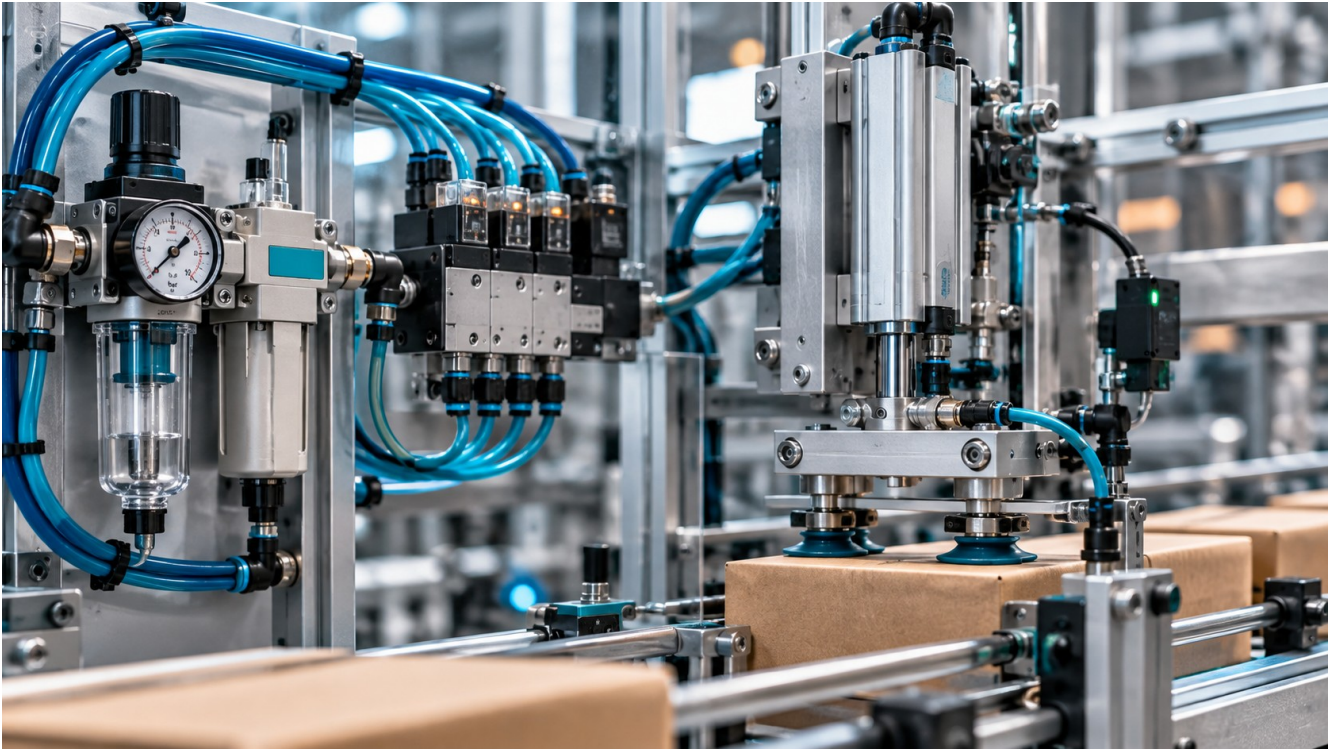
Sensors / Machines	→	PLC / RTU	→	Industrial Network	→	Adroit SCADA	→	Operator / Remote
Input information				Why it matters				
I/O list				Defines the points to be monitored or controlled.				
P&ID / process drawing				Shows how process equipment, instruments and flows relate.				
PLC make/model / protocols				Determines communications and driver requirements.				
Operator requirements				Defines screens, commands, alarms and access levels.				
Reporting / historian needs				Defines data retention, trends, reports and management outputs.				
Remote access requirement				Determines mobile/browser/remote architecture and security design.				

- Possible deliverables: process graphics, alarm pages, trends, reports, dashboards, remote access and commissioning support.
- Initial projects can be developed with specialist engineering support while ARF progressively builds local capability.

SMC PRODUCT FAMILIES

Pneumatics & Compressed Air

Machine movement, air preparation, valve control and compressed-air efficiency.



Illustrative pneumatic machine application.

Product family	Examples of use
Pneumatic actuators	Linear cylinders, guided actuators, grippers, rotary / rodless / clamp applications.
Directional control valves	3/2, 5/2, 5/3 and manifold-based machine control depending on design.
Airline equipment	Filters, regulators, FRL combinations, soft-start, dryers, drains and air-management functions.
Fittings & tubing	Machine air distribution, flow control, quick couplers and manifolds.
Sensors & switches	Pressure, flow, position and machine-status information.
Vacuum products	Vacuum pads, ejectors, filters, switches and material-handling applications.
Fluid control equipment	Process valves, pumps, filters and water-related components.

ENERGY EFFICIENCY

Compressed-Air Management

Make invisible air consumption visible and reduce unnecessary use.



- Monitor pressure, flow and selected air-system data
- Identify excessive consumption or abnormal usage patterns
- Reduce pressure / isolate sections during standby where project design supports it
- Combine SMC field devices with SCADA / reporting for plant-wide visibility
- Support maintenance teams with clearer utility information

Best-fit customers

Factories with high compressed-air consumption, multiple production machines, packaging lines, food / beverage plants and sites where energy cost or leakage is a concern.

FLAGSHIP SOLUTION

Water & Wastewater Automation

Integrated monitoring and control for treatment plants, pump stations, reservoirs and industrial water systems.



Illustrative water/wastewater automation application.

Plant area	What can be monitored / controlled
Pumps / blowers	Run status, fault, speed, current, start/stop and VFD reference where permitted.
Tanks / reservoirs	Level, high/low alarms and trend history.
Flow / pressure	Process performance, distribution pressure and flow conditions.
Valves	Open/closed status, command and position feedback depending on instrumentation.
Treatment process	Selected dosing, filtration, aeration, clarifier/sludge or other process points according to P&ID.
Control room	SCADA overview, alarms, trends, reports and remote visibility options.

SYSTEM CONFIGURATION

Water / Wastewater Reference Architecture

A scalable design from field instruments to remote operations.

Level / Flow / Pressure	→	PLC / RTU	→	INVT VFD + Valves	→	Adroit SCADA	→	Reports / Remote
Use case				Possible configuration				
Pump station				Level sensor + pressure transmitter + PLC/RTU + VFD + SCADA / remote alarms				
Reservoir				Level instruments + RTU/PLC + telemetry/network + central SCADA				
Wastewater aeration				DO/process sensors + PLC + blower VFD + SCADA trends / alarms				
Treatment plant				Distributed sensors/valves + PLCs + SCADA + historian/reporting + remote access as required				
Customer information to collect Site location, process description, I/O list, P&ID, pump/motor nameplates, existing PLC/SCADA details, communications, power supply, remote-access requirement and reporting needs.								

FLAGSHIP SOLUTION

Mining, Coal & Heavy Industry

Plant monitoring, motor control, utilities and central operational visibility for harsh industrial environments.



Illustrative mining and bulk-material processing application.

- Conveyor and material-handling monitoring
- Crusher / feeder status and alarms
- Dewatering and pumping systems
- Ventilation and fan drives
- Compressed-air and utility systems
- Motor / VFD monitoring
- Central SCADA and remote operational visibility
- Environmental / safety information integration where project scope and instrumentation require it

SYSTEM CONFIGURATION

Mining / Coal Reference Architecture

Centralise distributed equipment status without forcing unnecessary replacement of working plant assets.

Field Sensors	→	PLC / Local Panels	→	VFD / Motor / Valves	→	Industrial Network	→	SCADA / Control Room
Area				Typical signals / functions				
Conveyors				Run, stop, trip, speed, pull-cord / interlock status, motor current and VFD status where available.				
Pumps				Level, pressure, run/fault, speed and duty/standby control.				
Ventilation				Fan status, VFD speed, pressure/airflow and alarms depending on instrumentation.				
Process equipment				Equipment status, permissives, selected measurements and alarms from PLC/control system.				
Control room				Plant mimic, alarms, trends, historical events, reports and dashboards.				
Important Mine safety systems may have specific statutory, certification and functional-safety requirements. ARF will define scope with the customer and relevant technology/engineering providers; the catalogue does not claim certified safety-system supply by default.								

INDUSTRY SOLUTION

Food, Beverage & Packaging Automation

Improve machine movement, motor control, operator visibility and utility monitoring.



Illustrative food and packaging automation application.

Application	Possible technology
Conveying	VFD motor control + sensors + PLC/HMI
Pneumatic machine movement	Cylinders + valves + air preparation + sensors
Filling / packaging process	PLC/HMI + pneumatic components + sensors + motor drives
Utility monitoring	Compressed-air flow/pressure + energy data + SCADA reporting
Production visibility	SCADA / OEE / reports where required

- Faster fault visibility
- Consistent machine operation
- Better operator information
- Reduced pneumatic and electrical waste where monitoring/control is applied
- Scalable from one machine to a production area

EFFICIENCY SOLUTION

Energy & Utility Monitoring

Turn electrical and compressed-air usage into actionable operating information.



Illustrative industrial energy-monitoring application.

Utility	What can be tracked
Electricity	Demand, selected meter values, equipment loading and trends where suitable metering exists.
Compressed air	Flow, pressure, selected consumption patterns and standby/waste conditions.
Pumps / fans	Speed, run time, VFD reference and process demand.
Water	Flow and pressure trends, pump performance and selected balance information.

Business value

Energy monitoring is most useful when it links consumption to operating conditions. The goal is not only to display numbers, but to identify where operating changes or equipment control can reduce waste.

DIGITALISATION SOLUTION

Industrial IoT, Edge & Connectivity

Connect existing equipment to dashboards, reports and remote information systems.



Illustrative connected-factory and edge-monitoring environment.

- Industrial Ethernet and fieldbus integration
- Modbus / OPC UA / supported protocol connectivity depending on device and project
- Remote I/O and distributed data collection
- Edge / gateway architectures for OT-to-IT data flow
- Remote dashboards and selected mobile access
- Legacy machine visibility without replacing every machine controller



Technical Services

Local customer engagement with structured engineering support.

Service	Scope
Site assessment	Understand the machine, process, utility or plant requirement.
Requirement gathering	Collect I/O list, P&ID, motor nameplates, PLC details, network information and customer expectations.
Product selection support	Match drives, pneumatic components, sensors or software modules to the application.
Installation / commissioning support	Coordinate practical installation checks and support commissioning workflow.
Troubleshooting	Fault information collection, parameter review, wiring/signal checks and structured escalation.
After-sales support	First-line customer communication, documentation and technical escalation as capability develops.
Preventive maintenance support	Inspection-oriented support for relevant installed automation components and system health.

HOW WE WORK

Project Workflow

A disciplined path from customer problem to operating solution.

1. Customer discussion and site/application understanding
2. Collect technical information: drawings, I/O, nameplates, existing automation and process requirements
3. Define concept architecture and suitable product family
4. Prepare commercial/technical proposal with relevant engineering support
5. Order / supply according to confirmed scope
6. Installation and commissioning
7. Customer handover and documentation
8. After-sales support and improvement opportunities



Project-based model

ARF Services can develop projects without requiring the customer to buy a complete technology stack. The solution can begin with a single VFD, pneumatic component or monitoring requirement and expand when value is proven.

BEFORE WE QUOTE

Customer Information Checklist

The right information produces faster selection, fewer quotation changes and better engineering.

For VFD / motor projects	For SCADA / automation projects
Motor nameplate: kW, voltage, current, frequency, RPM	I/O list / tag list
Application / load type	P&ID or process drawing
Existing starter/VFD and wiring	PLC/RTU make, model and protocol
Required speed range and control source	Required screens, alarms, reports and users
Environment: heat, dust, humidity, enclosure	Remote access / networking / cybersecurity constraints
Cable length and braking/deceleration needs	Existing SCADA/HMI and integration requirement
For pneumatics	For water / mining / plant systems
Cylinder bore/stroke/load/speed	Process description and equipment list
Valve function / port size / voltage	Site layout / network / remote sites
Air pressure and quality	Critical alarms and operating philosophy
Tubing/fitting sizes and environment	Motor/pump/valve/sensor information
Sensor / position feedback need	Availability, redundancy and reporting expectations

DECISION GUIDE

Quick Solution Selection Guide

Start with the customer's problem, then choose the technology.

Customer says...	Likely starting point
"I need to control motor speed."	INVT VFD / motor-control solution
"I need to see the whole plant on one screen."	SCADA / HMI / PLC integration
"I need alarms and history."	SCADA alarm / historian / reporting solution
"My pneumatic machine is unreliable / wasting air."	SMC pneumatic + air-management review
"I need automatic pump/tank operation."	Sensors + PLC + VFD + SCADA as required
"I need remote visibility."	SCADA remote/mobile/edge architecture
"I want production and downtime data."	SCADA + OEE/reporting
"I have an old machine but want digital data."	Gateway / PLC interface + SCADA/edge solution

CUSTOMER ADVANTAGES

Why This Integrated Approach Works

A single customer problem can be solved across field, control and supervisory layers.

Advantage	Customer benefit
One solution view	Less fragmentation between field devices, drives, PLC control and SCADA.
Project-based selection	Buy what the application needs rather than an unnecessary full stack.
Existing-system integration	Where technically possible, keep working PLCs/machines and add visibility around them.
Local customer interface	A Mozambique-based point of contact for site information, follow-up and first-line support.
Structured technical escalation	Use manufacturer/engineering resources for advanced selection and project support.
Scalable architecture	Start small and expand to more equipment, reports, dashboards or remote sites.



Industrial monitoring and control - illustrative application visual.

CATALOGUE REFERENCE

Technical References & Contact

Product capabilities change over time; final engineering uses current official documentation.

- INVT Electric Global - 2026 Industrial Automation Product Catalogue; GD200A official product page; GD350A catalogue / manual.
- SMC South Africa - product and solutions portfolio: pneumatic actuators, electric actuators, directional valves, airline equipment, fittings/tubing, vacuum, fluid control and sensors/switches.
- Adroit Technologies - Adroit SCADA, mobility, alarm/reporting, edge/cloud, OEE/performance and industry-reference portfolio.

Document note

This catalogue is a marketing and solution guide, not a final engineering specification. Exact model numbers, ratings, network architecture, functional safety, cybersecurity and installation details must be confirmed for each project against current manufacturer documentation and site conditions.



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