

# Datasheet



## Nordbo Active Compliance NAC-S20-150

### Get to know NAC

The NAC is a solution for applications where a constant, specifiable force between tool and workpiece is required.

The NAC consists of two parts:

- **NAC Tool Unit**
- **NAC Controller** (additional purchase)

The **NAC Tool Unit** can be used with a URCap. This gives the following functionality:

- Set target force
- Angle compensation (handled in URCap)

The **NAC Controller** gives the following functionality through a web interface:

- I/O Control or Analog IO
- TCP/IP Control
- Angle compensation (independently of robot brand)



*NAC Tool Unit*



*NAC Controller*

### Key Features

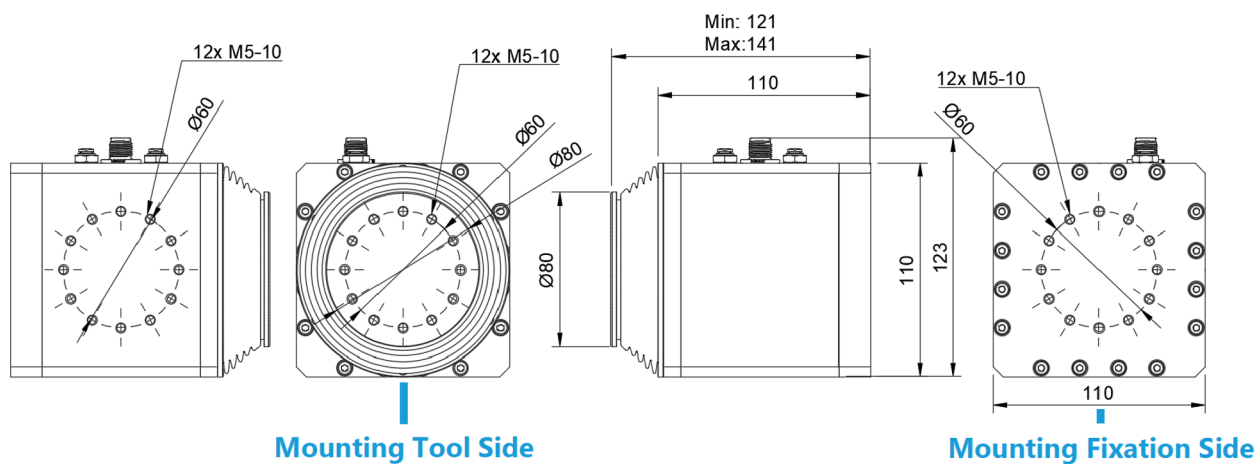
- Automatic tool weight calibration
- Configurable via web Interface
- Consistent contact force
- Controller included
- High precision
- IP 67 classified
- Programmable using IO's
- Web interface
- Soft part contact

## Technical Specifications

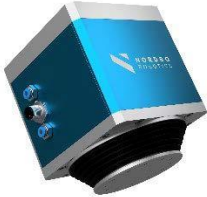
| General Specifications                                                                                                                                          |                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Maximum force (push/pull)                                                                                                                                       | 150 N / 110 N                                                               |
| Maximum allowed external moment                                                                                                                                 | 16 Nm                                                                       |
| Stroke length                                                                                                                                                   | 20 mm                                                                       |
| Control Interface                                                                                                                                               | Ethernet TCP/IP<br>Digital IO ports<br>Analog IO (only with NAC Controller) |
| Parameterization Interface                                                                                                                                      | Web interface                                                               |
| Pneumatic General Specifications                                                                                                                                |                                                                             |
| The NAC Tool Unit needs to be connected to a supply of compressed air through an air regulator to regulate push/pull force. Supplied air must be moisture free. |                                                                             |
| Maximum supply pressure                                                                                                                                         | 1.0 MPa                                                                     |
| Minimum supply pressure                                                                                                                                         | 0.1 MPa <sup>a</sup>                                                        |
| Nominal supply pressure                                                                                                                                         | 0.7 MPa                                                                     |
| Maximum flow rate                                                                                                                                               | 0.6 L/min                                                                   |
| Electrical Specifications                                                                                                                                       |                                                                             |
| Power supply voltage                                                                                                                                            | 24VDC $\pm$ 10%                                                             |
| Power supply current consumption                                                                                                                                | Typical 0.30A, Up to 2A                                                     |
| Digital IO interface<br>Switch logic<br>IO logic voltage ratings<br>Analog IO<br>Maximum output current                                                         | NPN<br>5 to 24V<br>0 – 10V<br>0.22A                                         |
| Ambient Specifications                                                                                                                                          |                                                                             |
| Operating ambient temperature                                                                                                                                   | 0° to +50°                                                                  |
| Storage ambient temperature                                                                                                                                     | -10° to +75°                                                                |
| Cooling                                                                                                                                                         | Passive                                                                     |
| Operating humidity (at 25° C)                                                                                                                                   | 0% to 85%, No condensation                                                  |
| Degree of protection                                                                                                                                            | NAC-S20-150: IP67 with full pin and fitting allocation                      |

## Mechanical Dimensions

| Unit                          | NAC-S20-150 | NAC-CTRL  |
|-------------------------------|-------------|-----------|
| <b>Weight</b>                 | 2.6 Kg      | 1.2 Kg    |
| <b>Dimensions</b>             |             |           |
| Height                        | 121-141 mm  | 56.26 mm  |
| Width                         | 110 mm      | 106.13 mm |
| Depth                         | 110 mm      | 226 mm    |
| <b>Mounting Tool Side</b>     |             | -         |
| Bolts                         | M5-10       |           |
| Flange Diameter               | Ø60mm       |           |
| <b>Mounting Fixation Site</b> |             | -         |
| Bolts                         | M5-10       |           |
| Flange Diameter               | Ø60mm       |           |



## NAC Contents

| Component                                                                                           | Referred to as      | Description                                                               |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------|
| <br>NAC Tool Unit  | NAC-S20-150         | Tool unit with a stroke of 20 mm and a maximum payload capacity of 15 kg. |
| <br>NAC Controller | NAC-CTRL            | Controller for the NAC-S20-150 controllable by IO or ethernet.            |
|                  | Ethernet cable RJ45 | Ethernet cable for connecting the NAC-CTRL.                               |
|                  | NAC Cable           | Communication cable to connect the NAC-CTRL and the NAC-S20-15.           |