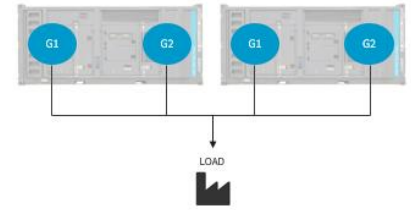# PLANT SETUP
QAC TWIN POWER

José Javier Sánchez Saz

QAC TWINPOWER (MULTI GENSETS)

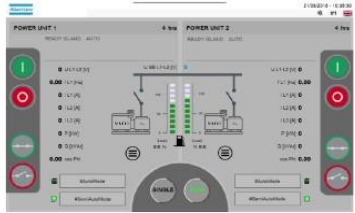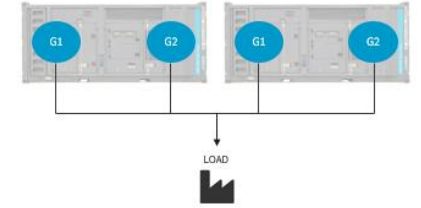**HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER**

- This document explains how to setup a plant with several QAC TWINPOWER running in parallel

- All the steps are done from the HMI panel Qd1001

- Qc4004 firmware should be 4.74.1 or newer

- Qd1001 should be 1.2.0.2 or newer

- The process to setup the plant will be done by means of Easy Connect function

- Every QAC Twinpower includes 2 generator sets (G1 and G2)

- This example shows how to setup a plant with 2 pcs QAC TWINPOWER (UNIT 1 and UNIT 2)

INTRODUCTION

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

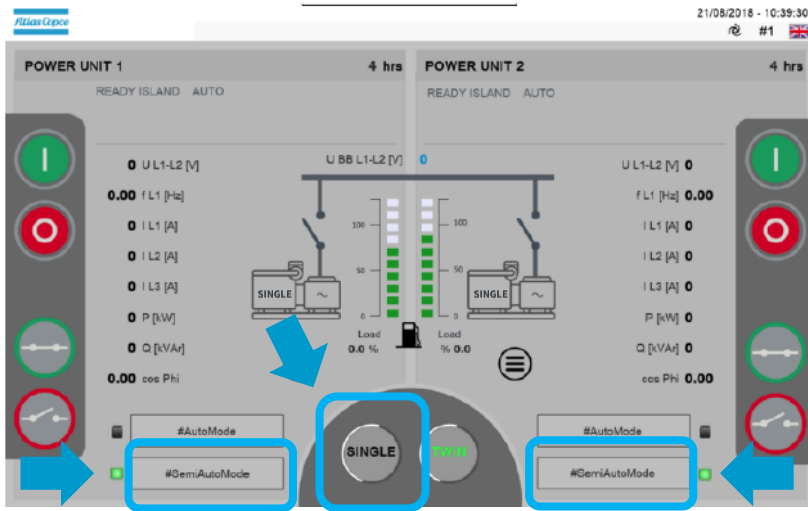## HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER
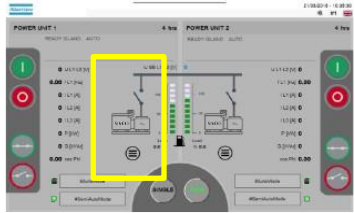
ALL UNIT

ALL UNITS

STEP 1

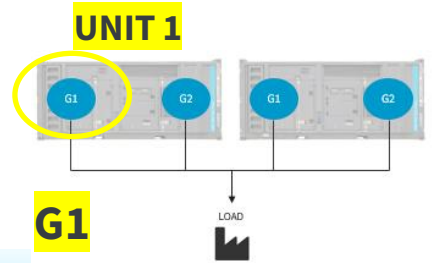### SELECT SEMI-AUTO (ALL CONTROLLERS) & SINGLE

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

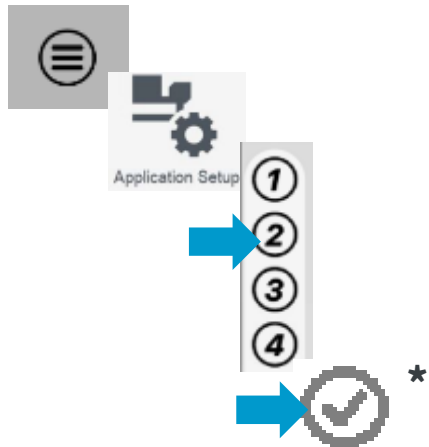## HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER

GO TO UNIT 1 G1

During the process, some messages could promp in the touchscreen. If the message "Receiving Application" or "Checking PM CAN" promps, do not pay attention or press any button, just wait the message is removed. If the message "Start New Plant" or "DG Ready to be added" promps before the moment indicated in this guide, press the cancel button.
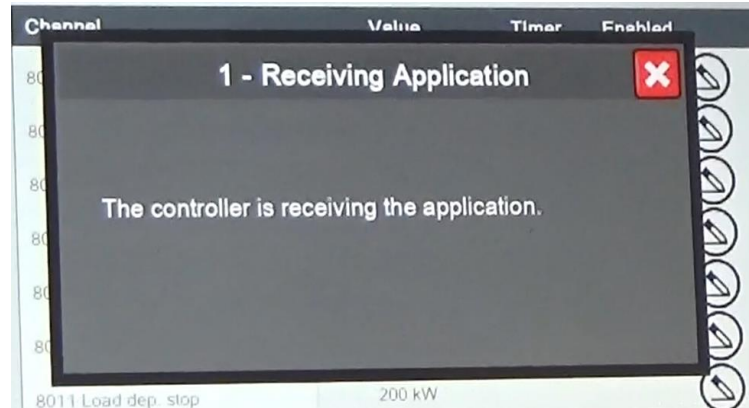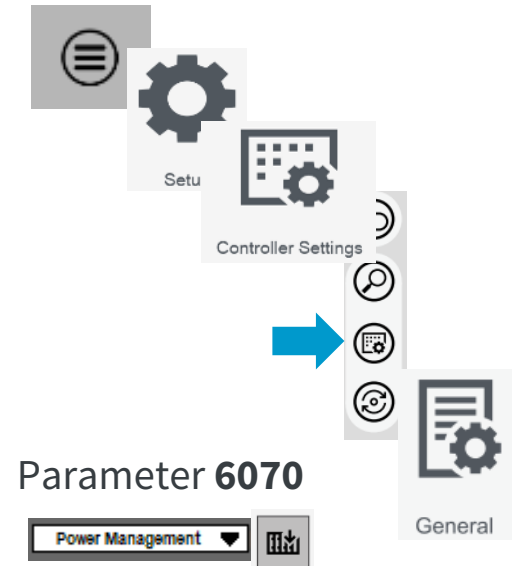
STEP 2

SELECT APPLICATION 2

Application Setup

① ② ③ ④

✓ *

* ✓ **Active Plant**

STEP 3

SELECT POWER MANAGEMENT

Setu

Controller Settings

Parameter **6070**

Power Management

General

Channel	Value	Timer	Enabled

1 - Receiving Application

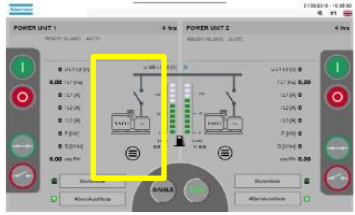The controller is receiving the application.

8011 Load dep. stop   200 kW

Wait until it disappears

QAC TWINPOWER (MULTI GENSETS)

HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER

UNIT 1

G1

LOAD

GO TO UNIT 1 G1

STEP 4

ACTIVATE EASY-CONNECT
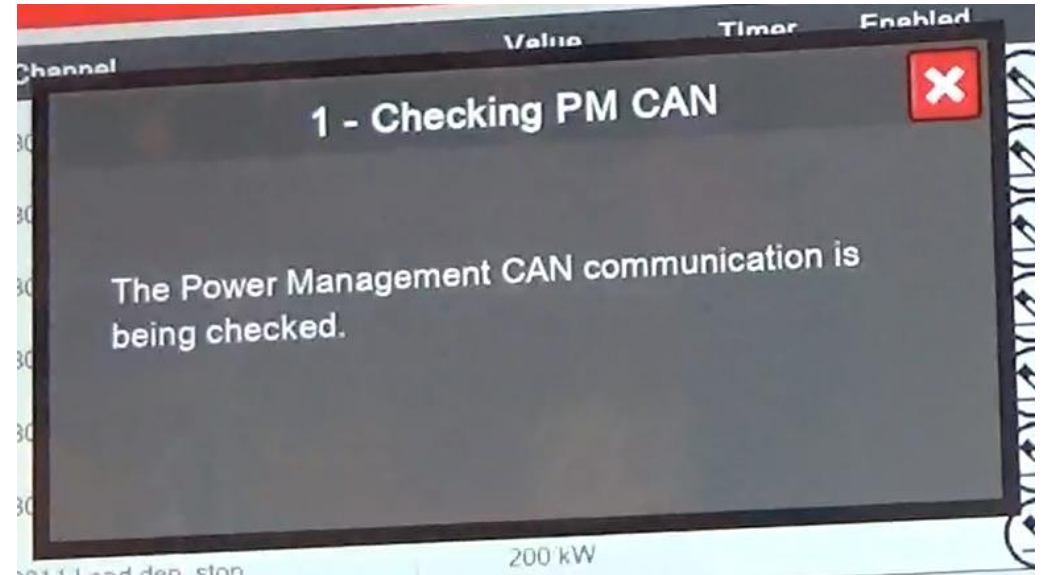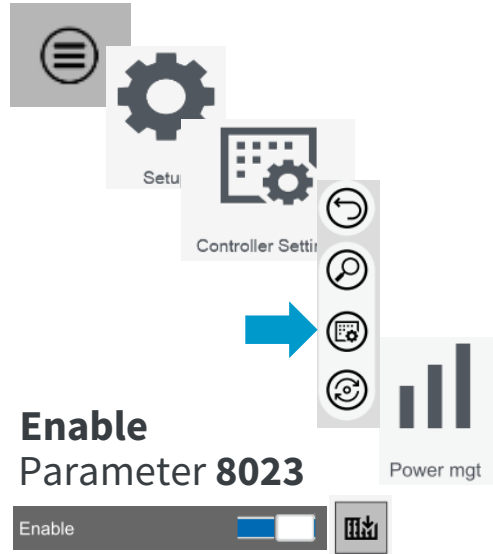
Setup

Controller Setting

Power mgt

Enable
Parameter **8023**

Enable

1 - Checking PM CAN

The Power Management CAN communication is being checked.

200 kW

Wait until it disappears

Atlas Copco
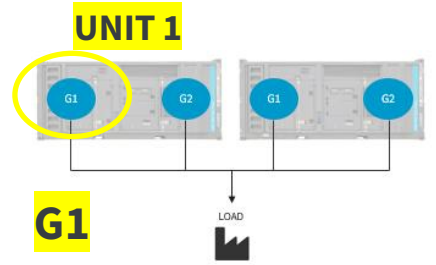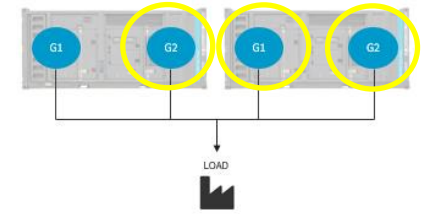
QAC TWINPOWER (MULTI GENSETS)

HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER

- Repeat previous steps on:

  - UNIT 1 G2
  - UNIT 2 G1
  - UNIT 2 G2

> During the process, if the message Start New Plant promps before configuring the last unit, press the cancel button and wait for untill the Receiving Application message is removed. If the message DG Ready to be added promps, just press the cancel button. if the message Start New Plant promps once configured the last unit, then do not pay attention or press any button and connect the PMS communication cables

- CONNECT ALL THE CABLES PMS COMMUNICATION CABLES WITH END RESISTORS ON BOTH SIDES OF THE COMMUNICATION BUS

- Follow next step on the display
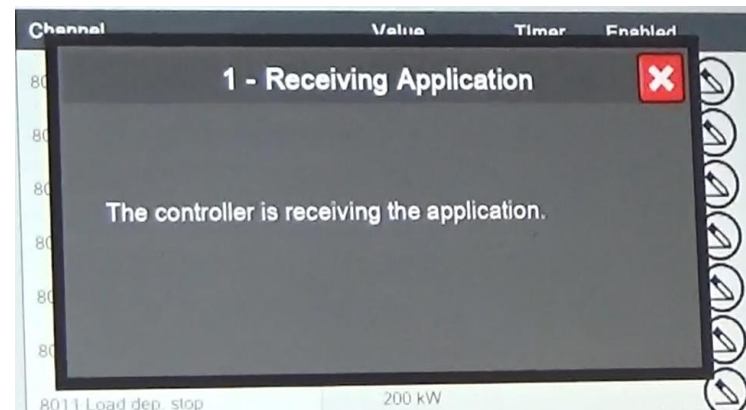
QAC TWINPOWER (MULTI GENSETS)

HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER
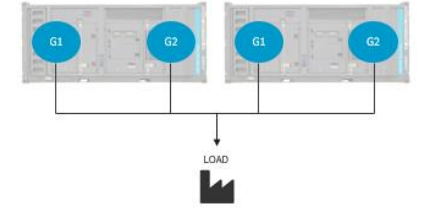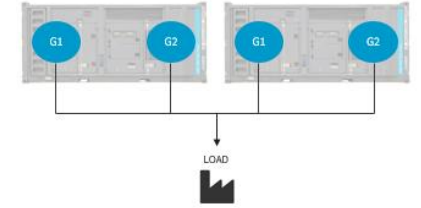
STEP 5

POP UP WINDOW on some unit :

- G1   START NEW PLANT   >> YES

- G1   RECEIVING APPLICATION   Wait until dissapear.

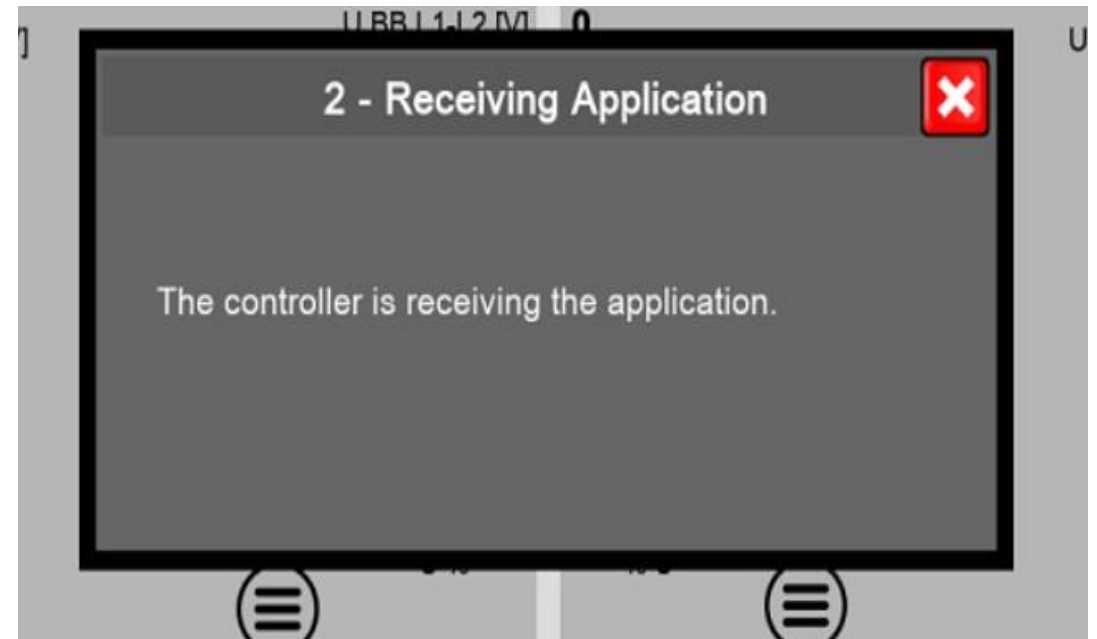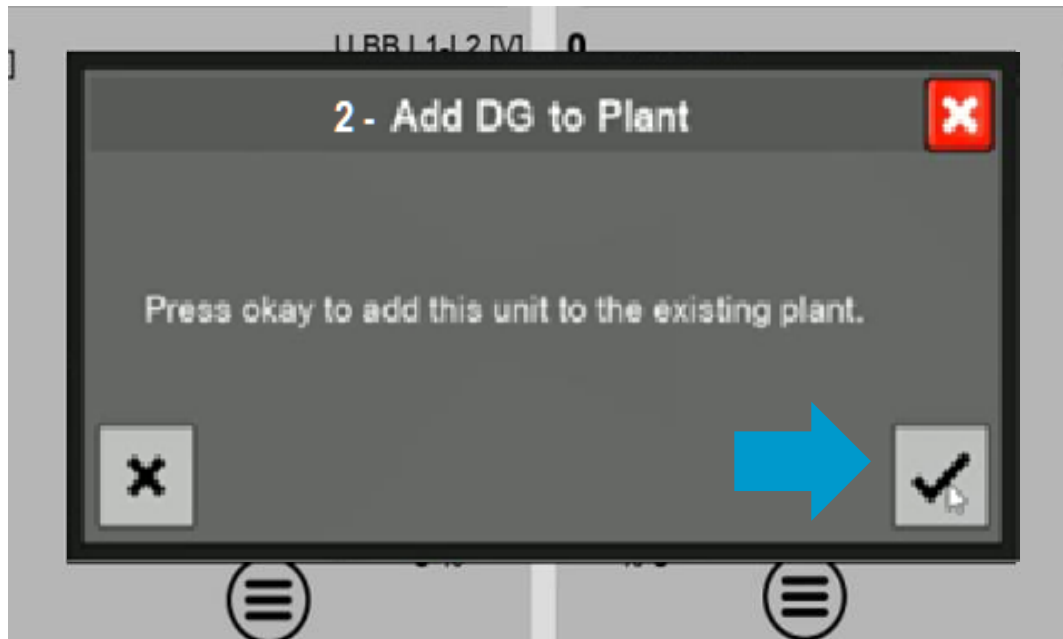Wait until it disappears

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QAC TWINPOWER (MULTI GENSETS)

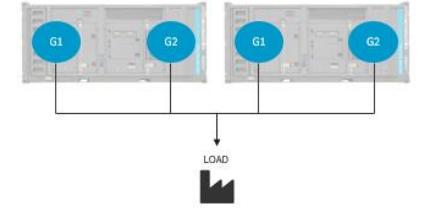**HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER**

STEP 6

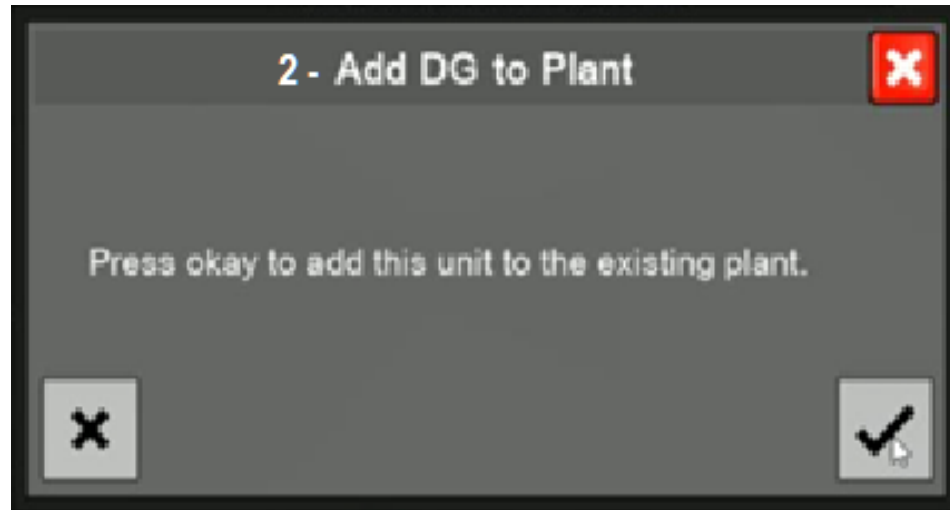POP UP WINDOW on other units– ADD DG TO PLANT

Wait until it disappears

QAC TWINPOWER (MULTI GENSETS)

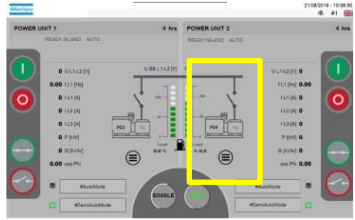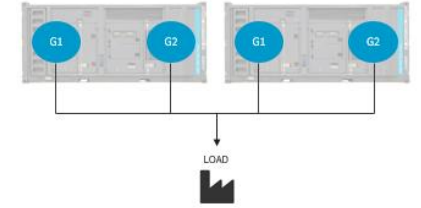## HOW TO CREATE A PLANT WITH 2 OR MORE QAC TWIN POWER

- Repeat Step 6 on the rest of the units until adding all the gensets to the plant:
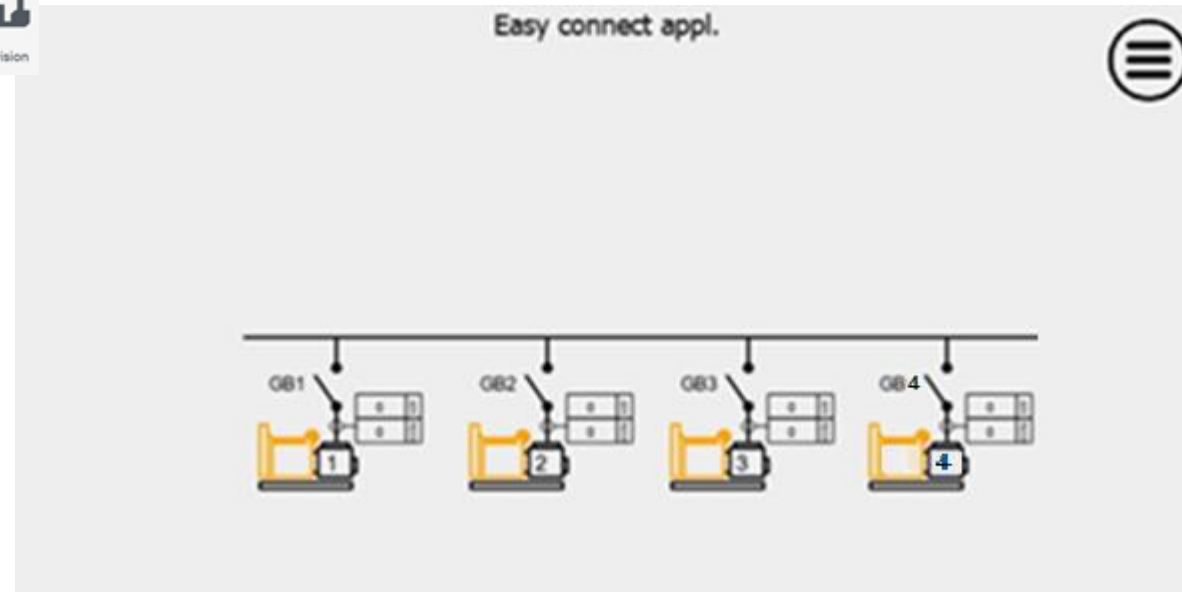

Wait until it disappears

QAC TWINPOWER (MULTI GENSETS)

## HOW TO CHECK THE GENSETS HAS BEEN ADDED TO THE PLANT?

GO TO ANY CONTROLLER

QAC TWINPOWER (MULTI GENSETS)

HOW TO CHECK THE GENSETS HAS BEEN ADDED TO THE PLANT?

- Change one of the controllers from SEMI-AUTO to AUTO, and the rest of the controllers must change automatically to AUTO as well.

- If any of the controllers doesn´t change to AUTO, it means it is not properly added to the plant. To solve it, it must be removed from the plant (removing procedure is indicated in the next pages) and add it again to the plant. Then set to SEMI-AUTO all the controllers of the plant, change to AUTO in one of them, and check that the rest of the controllers have changed now automatically to AUTO.
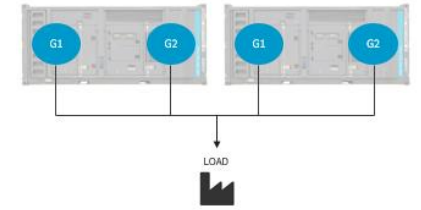
QAC TWINPOWER (MULTI GENSETS)
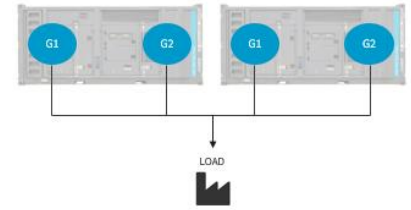
HOW TO REMOVE GENSETS FROM THE PLANT?

- All the steps are done from the HMI panel Qd1001.

- Qc4004 firmware should be 4.74.1 or newer.

- Qd1001 should be 1.2.0.2 or newer.

- This is only possible when plant is created with Easy Connect function.

- This example remove UNIT 2 G1 and UNIT 2 G2
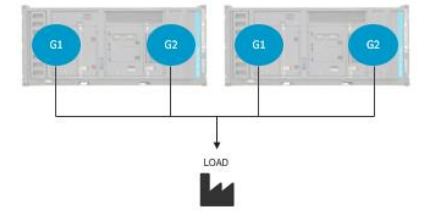
INTRODUCTION

⚠️ It is mandatory to follow the next process to remove the gensets from the plant. If any other removal process is used, then problems will rise when trying to create a new plant in the future

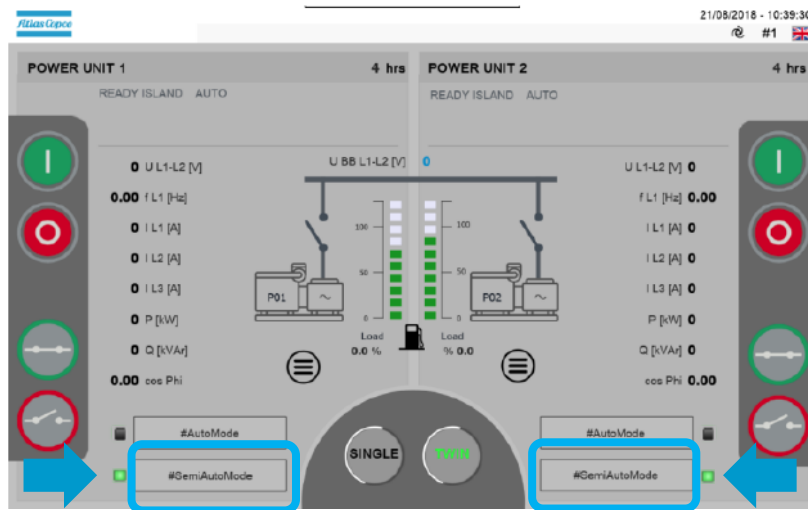# QAC TWINPOWER (MULTI GENSETS)

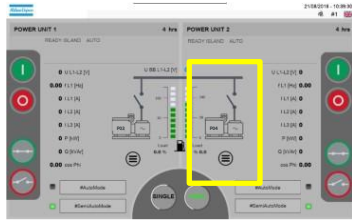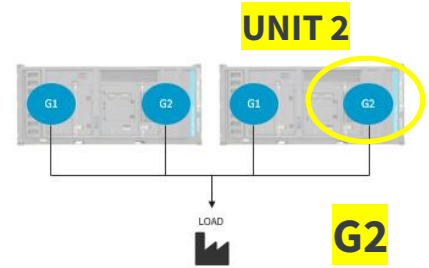## HOW TO REMOVE GENSETS FROM THE PLANT?

ALL UNITS

STEP 1

SELECT SEMI-AUTO (ALL CONTROLLERS)

The following procedure explains how to remove all the gensets from a plant. If you want to remove only one, then apply the following instructions only to it.

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

G2

GO TO UNIT 2 G2

During the process, some alarms and messages could promp in the touchscreen. If the message Receiving Application promps, do not pay attention or press any button, just wait the message is removed The alarms can be acknowledged. If the message DG Ready to be added or Start New Plant promps, just press the cancel button.

STEP 2

GO TO APPLICATION 2 AND REMOVE

Application Setup

07/08/2019 - 09:22:35
#4

3: Easy connect appl

EASYCONNECT - REMOVE UNIT ✕

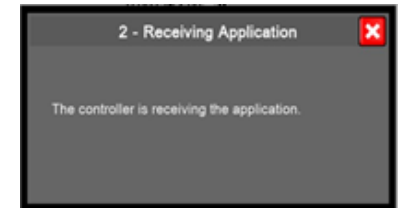This unit will be removed from the EasyConnect system.

2 - Receiving Application ✕

The controller is receiving the application.
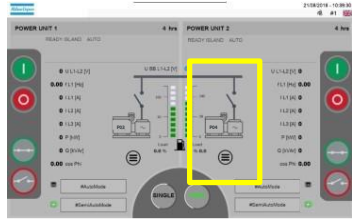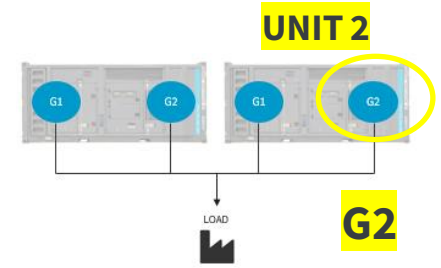
Wait until it disappears

STEP 3

REMOVE PMS COMMUNICATION CABLE, ISOLATING THE CONTROLLER FROM THE COMMUNICATION BUS

2 - Receiving Application ✕

The controller is receiving the application.

Wait until it disappears

14

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

UNIT 2

G2

GO TO UNIT 2 G2

STEP 4

DEACTIVATE EASY-CONNECT
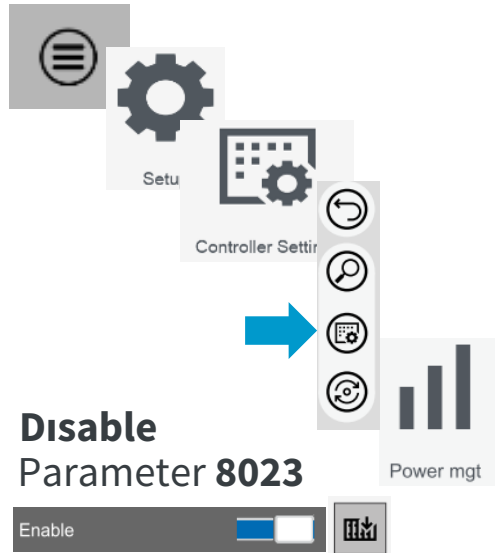
Disable
Parameter **8023**

Enable

Power mgt

STEP 5

SELECT ISLAND MODE
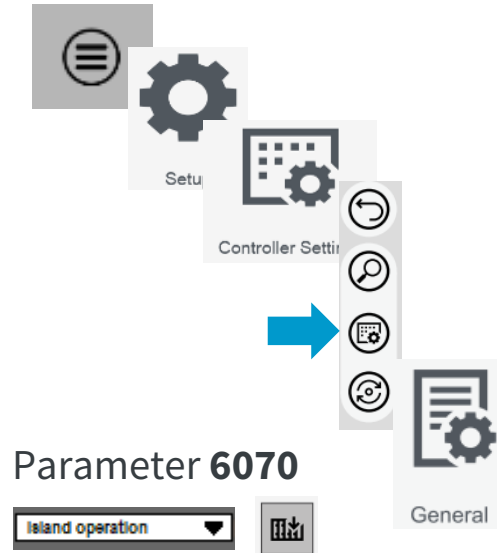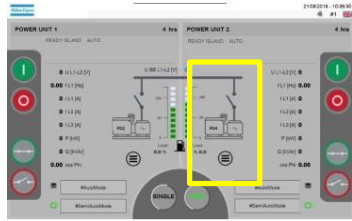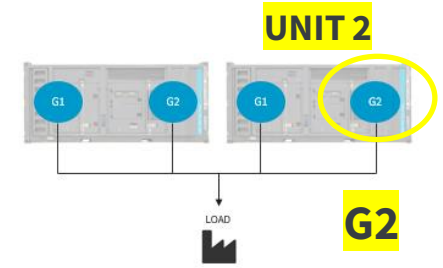
Parameter **6070**

Island operation

General

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

UNIT 2

G2

GO TO UNIT 2 G2

STEP 6

STEP 7

SELECT APPLICATION 1

RESTART Int. Comm ID   2

Double check the right value of Int. Comm ID   has been recorded
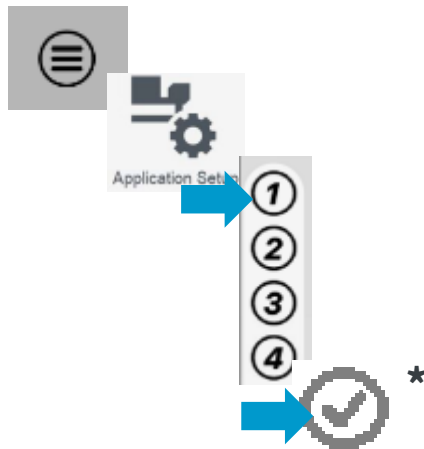
* Active Plant
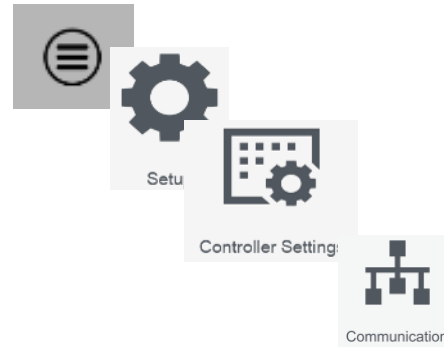
Parameter **7531**

Value
2

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

G1

GO TO UNIT 2 G1

Supervision

Easy connect appl.
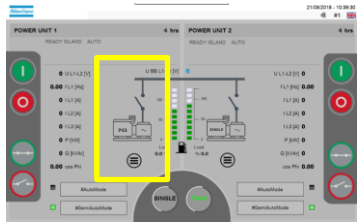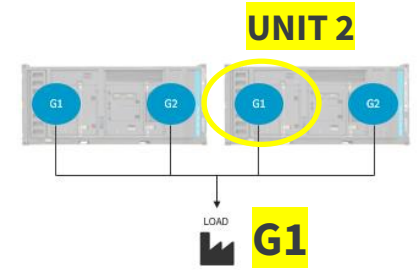
✓ Fourth unit removed from the plant

QAC TWINPOWER (MULTI GENSETS)

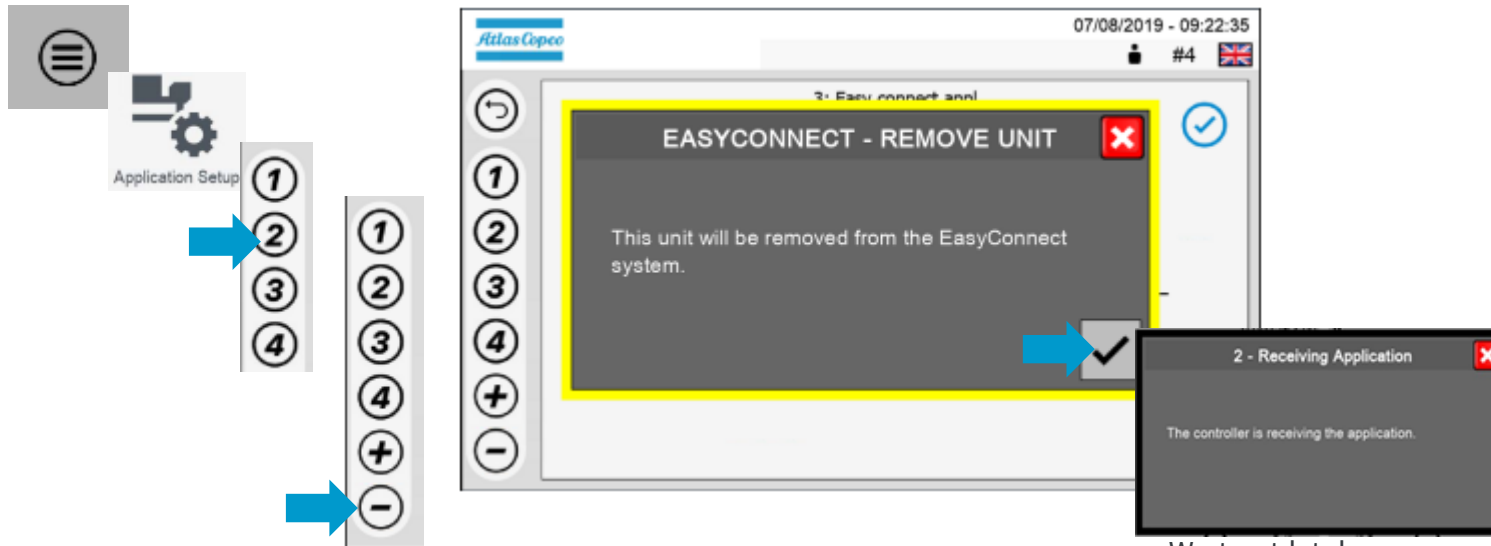## HOW TO REMOVE GENSETS FROM THE PLANT?

LOAD **G1**
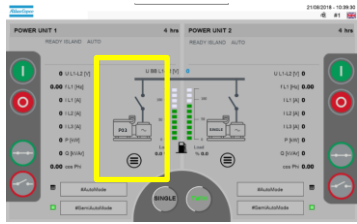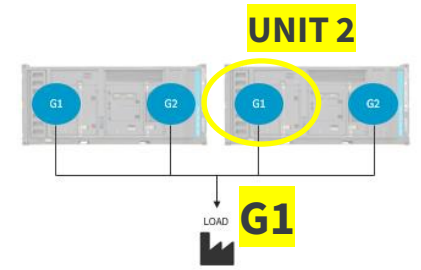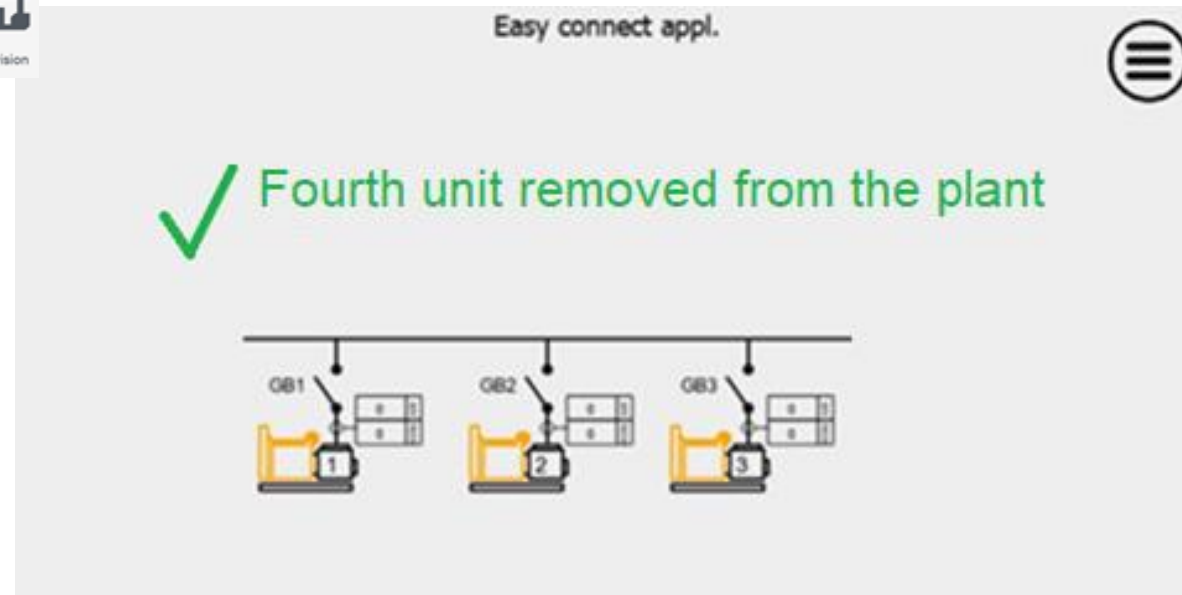
GO TO UNIT 2 G1

During the process, some alarms and messages could promp in the touchscreen. The alarms can be acknowledged. If the message DG Ready to be added or Start New Plant promps, just press the cancel button.

STEP 1

GO TO APPLICATION 2 AND REMOVE

Application Setup
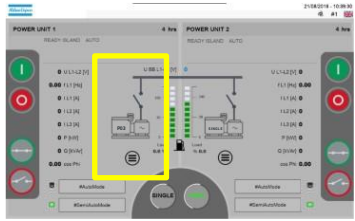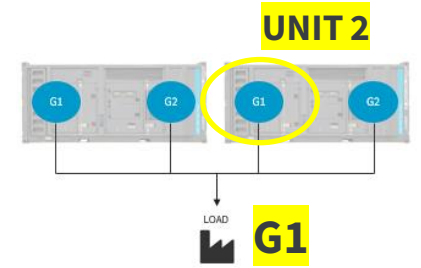
07/08/2019 - 09:22:35 #4

3: Easy connect appl

EASYCONNECT - REMOVE UNIT

This unit will be removed from the EasyConnect system.

2 - Receiving Application

The controller is receiving the application.

Wait until it disappears

STEP 2

REMOVE PMS COMMUNICATION CABLE, ISOLATING THE CONTROLLER FROM THE COMMUNICATION BUS

2 - Receiving Application

The controller is receiving the application.

Wait until it disappears

18

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

UNIT 2

HOW TO REMOVE GENSETS FROM THE PLANT?

G1 | G2 | G1 | G2

LOAD **G1**

GO TO UNIT 2 G1

STEP 3

DEACTIVATE EASY-CONNECT
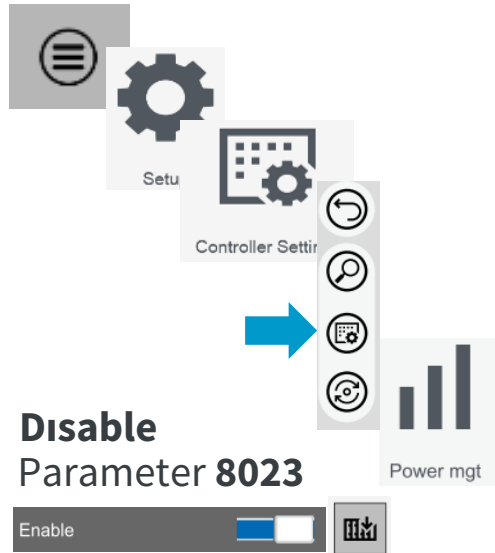
Setup

Controller Settings

Disable
Parameter **8023**

Enable

Power mgt

STEP 4

SELECT ISLAND MODE

Setup

Controller Settings

Parameter **6070**

Island operation

General

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

UNIT 2

G1
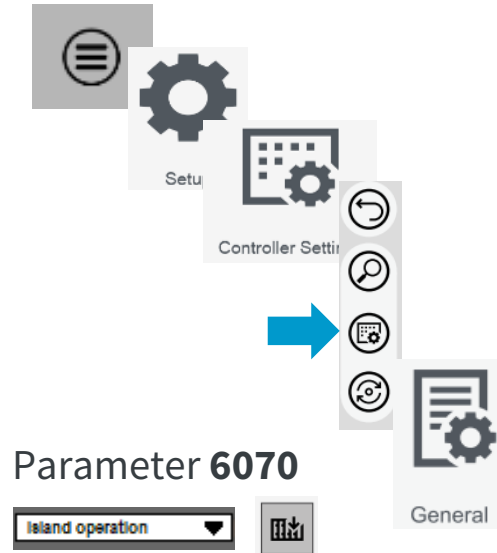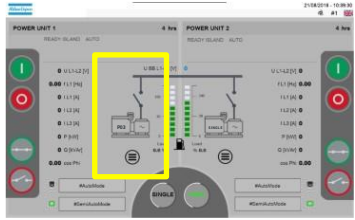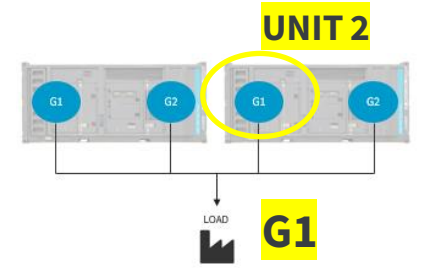
GO TO UNIT 2 G1

STEP 5

SELECT APPLICATION 1

Application Setup
1
2
3
4
*
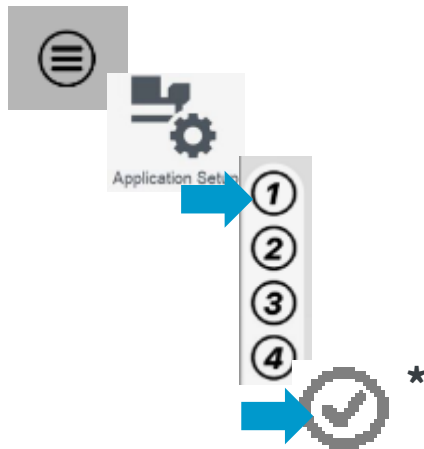
* Active Plant

STEP 6

RESTART Int. Comm ID   1

Setu
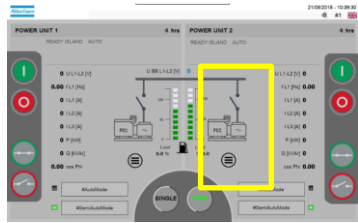Controller Setting
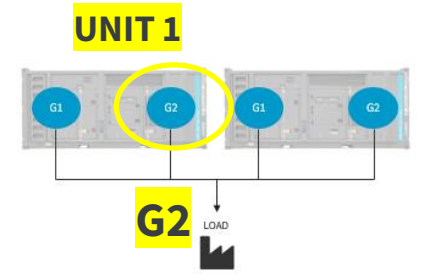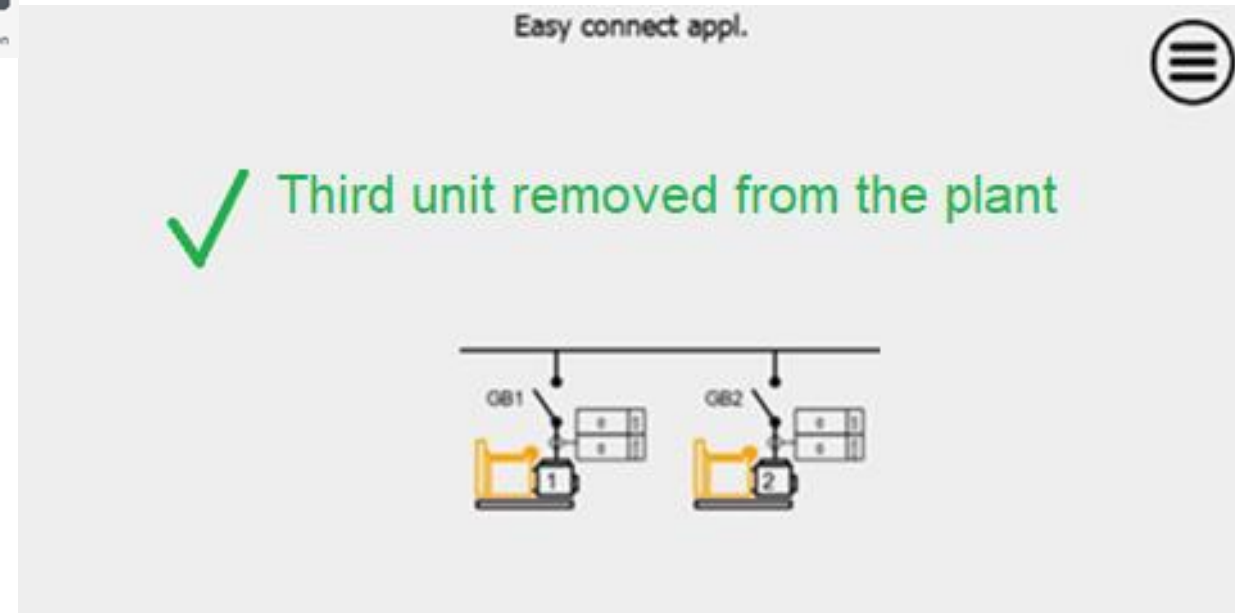Communication
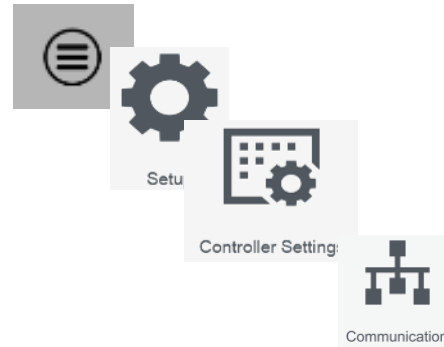
Parameter **7531**

Value

1

Double check the right value of Int. Comm ID   has been recorded

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

G2 LOAD

GO TO UNIT 1 G2

Supervision

Easy connect appl.

✓ Third unit removed from the plant

GB1   GB2

Atlas Copco

QAC TWINPOWER (MULTI GENSETS)

HOW TO REMOVE GENSETS FROM THE PLANT?

- Repeat previous steps on the rest of the units.