

# Constants Managing

## ISSUES

- lack of homogeneity among the *constant sets* of the *engine configurations*
- poor readability and comparability of the *constants sets*
- poor efficiency in the switch among *engine configurations*

## SOLUTIONS

➤ Standardization of name, number and ordering of the *constants*

➤ Smart user management for selecting the *constants sets* to be used in the test bench, without direct interaction with the file system

### Standardization of existing constants sets

▪ same name and number of **bench constants** for each test bench



▪ same name and number of **engine constants** for each engine configuration and for each test bench



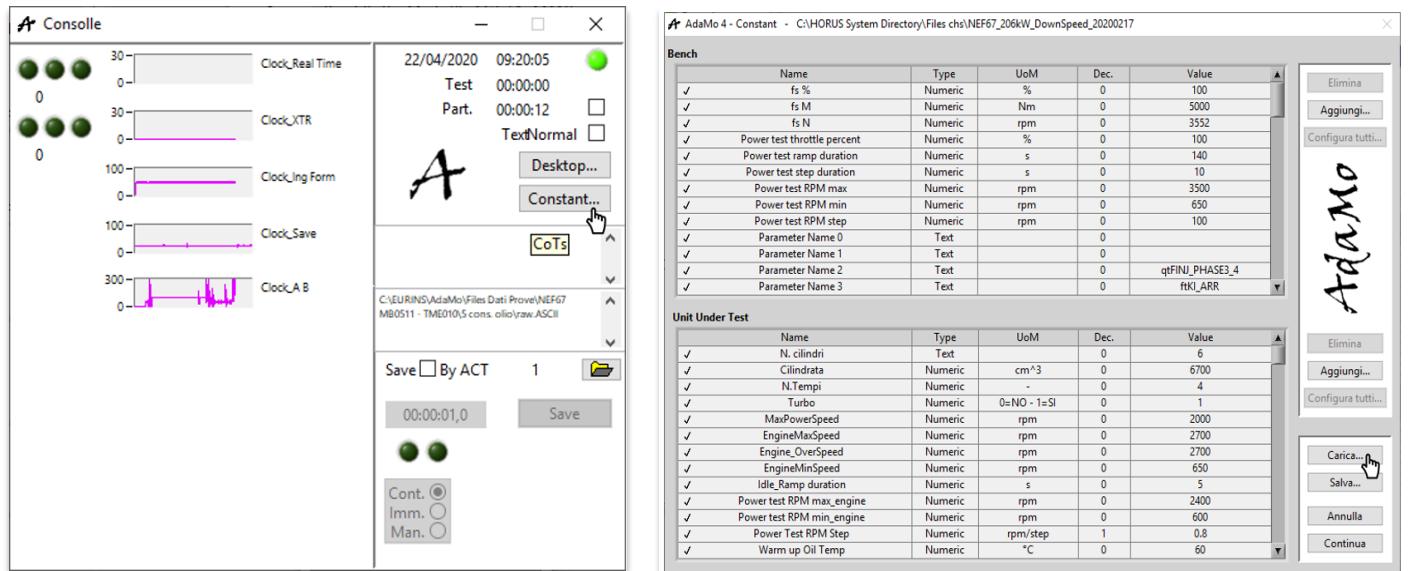
▪ new alphabetical ordering of the *constants* of each set



▪ new smart user management for selecting the *constants sets* to be used in the test bench, without direct interaction with the file system

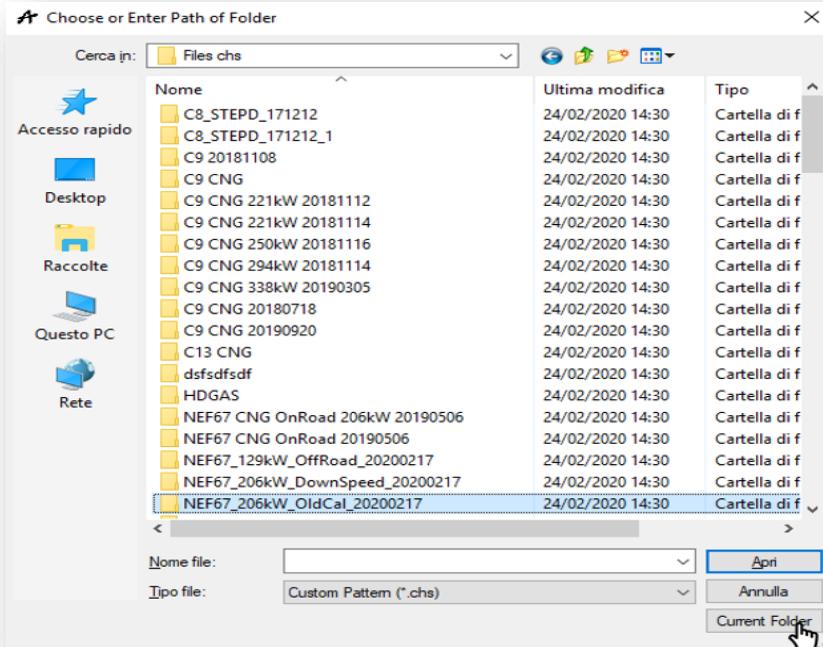
## AS IS

Select the specific folder containing the constants set to be used



The image shows two windows from the AdaMo 4 software:

- Consolle** window: Displays various clock signals (Clock\_Real Time, Clock\_XTR, Clock\_Ing Form, Clock\_Save, Clock\_A\_B) and a status bar showing the date (22/04/2020), time (09:20:05), and test parameters (Test: 00:00:00, Part: 00:00:12, TextNormal). A button labeled "Constant..." is highlighted with a cursor.
- AdaMo 4 - Constant** window: Shows a table of constants for a "Bench" unit. The table includes columns for Name, Type, UoM, Dec., and Value. Constants listed include fs %, fs M, fs N, Power test throttle percent, Power test ramp duration, Power test step duration, Power test RPM max, Power test RPM min, Power test RPM step, Parameter Name 0, Parameter Name 1, Parameter Name 2, and Parameter Name 3. The "Value" column for Parameter Name 3 contains the string "qtFINI\_PHASE3\_4 ftK1\_ARR".

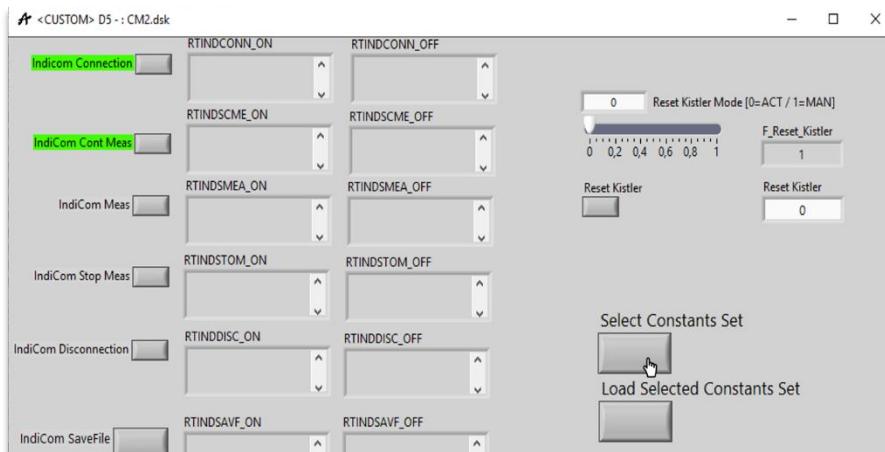


The image shows a "Choose or Enter Path of Folder" dialog box:

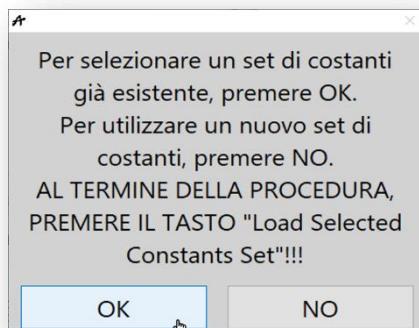
- Path:** C:\HORUS System Directory\Files chs\NEF67\_206kW\_DownSpeed\_20200217
- Content:** A list of folder names:
  - Accesso rapido: C8\_STEPD\_171212, C8\_STEPD\_171212\_1
  - Desktop: C9 20181108, C9 CNG, C9 CNG 221kW 20181112, C9 CNG 221kW 20181114, C9 CNG 250kW 20181116, C9 CNG 294kW 20181114, C9 CNG 338kW 20190305, C9 CNG 20180718, C9 CNG 20190920, C13 CNG, dtsdfsd, HDGAS
  - Raccolte: NEF67 CNG OnRoad 206kW 20190506, NEF67 CNG OnRoad 20190506, NEF67\_129kW\_OffRoad\_20200217, NEF67\_206kW\_DownSpeed\_20200217, NEF67\_206kW\_OldCal\_20200217
  - Questo PC: C9 20181108, C9 CNG, C9 CNG 221kW 20181112, C9 CNG 221kW 20181114, C9 CNG 250kW 20181116, C9 CNG 294kW 20181114, C9 CNG 338kW 20190305, C9 CNG 20180718, C9 CNG 20190920, C13 CNG, dtsdfsd, HDGAS
  - Rete: NEF67 CNG OnRoad 206kW 20190506, NEF67 CNG OnRoad 20190506, NEF67\_129kW\_OffRoad\_20200217, NEF67\_206kW\_DownSpeed\_20200217, NEF67\_206kW\_OldCal\_20200217
- Buttons:** Nome file: (dropdown), Apri (button), Annula (button), Current Folder (button).

# TO BE

## Direct engine selection from Desktop 5 <CUSTOM>



Select an existing configuration



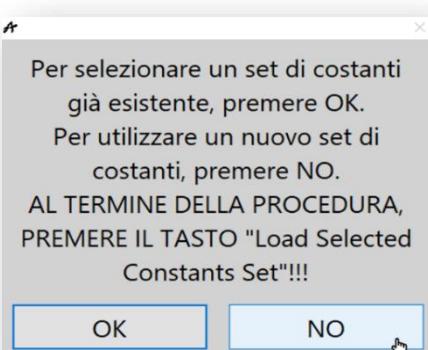
Select Constants Set

### Make your choice

Please select the engine name/configuration:

F1C\_100kW  
F1C\_125kW  
NEF67\_210kW

**SUBMIT** **CLOSE**



New Constants Set

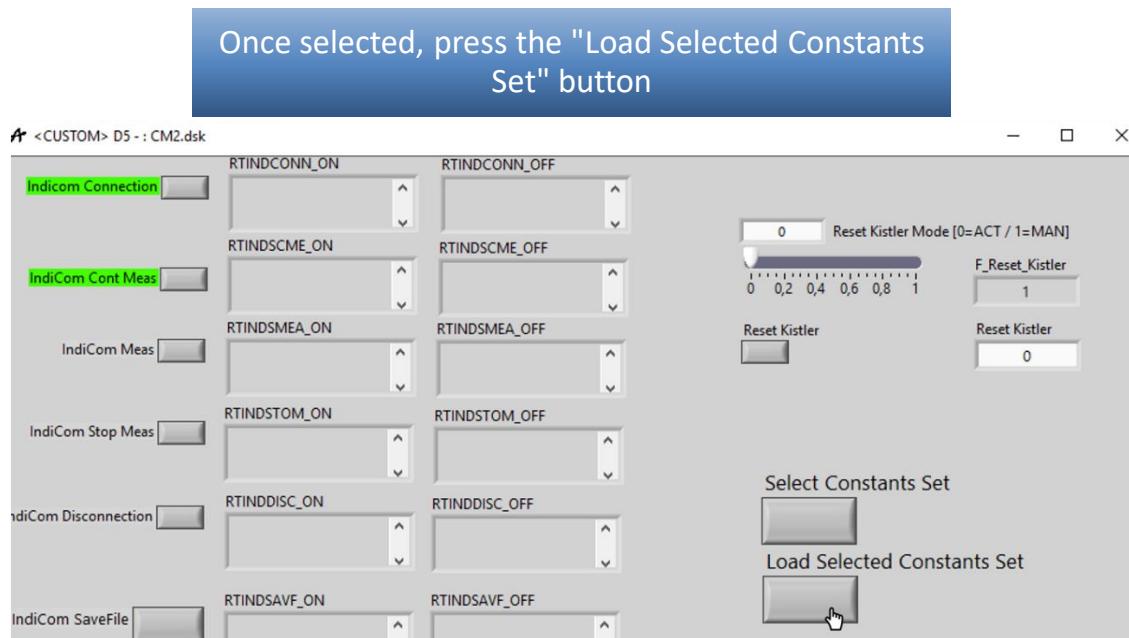
### Enter new engine name/configuration:

[Use the format "NAME\_kw\_Calibration", e.g.:

NEF67\_206kW\_DownSpeed]

**SUBMIT**

Enter the name of the constant set, containing the new values set



## BENEFITS

- elimination of automation errors caused by the lack of homogeneity among the *constants sets*
- greater readability of the values of the *constants*
- greater agility in the switch between engine *configurations*