



Operation and Maintenance Manual – KA22SV-GL225 v1.0

10 – Performance Certificates
NEF10109 – Ayalon WWTP

Project: NEF10109 Ayalon WWTP
Serial No.: 10109, 10110, 10111, 10112

Our reference: LSC
Date: March 2020

Howden Turbo, Allégade 4, DK-3000 Helsingør, Denmark.

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Performance Certificate for HV-TURBO Environmental Compressor

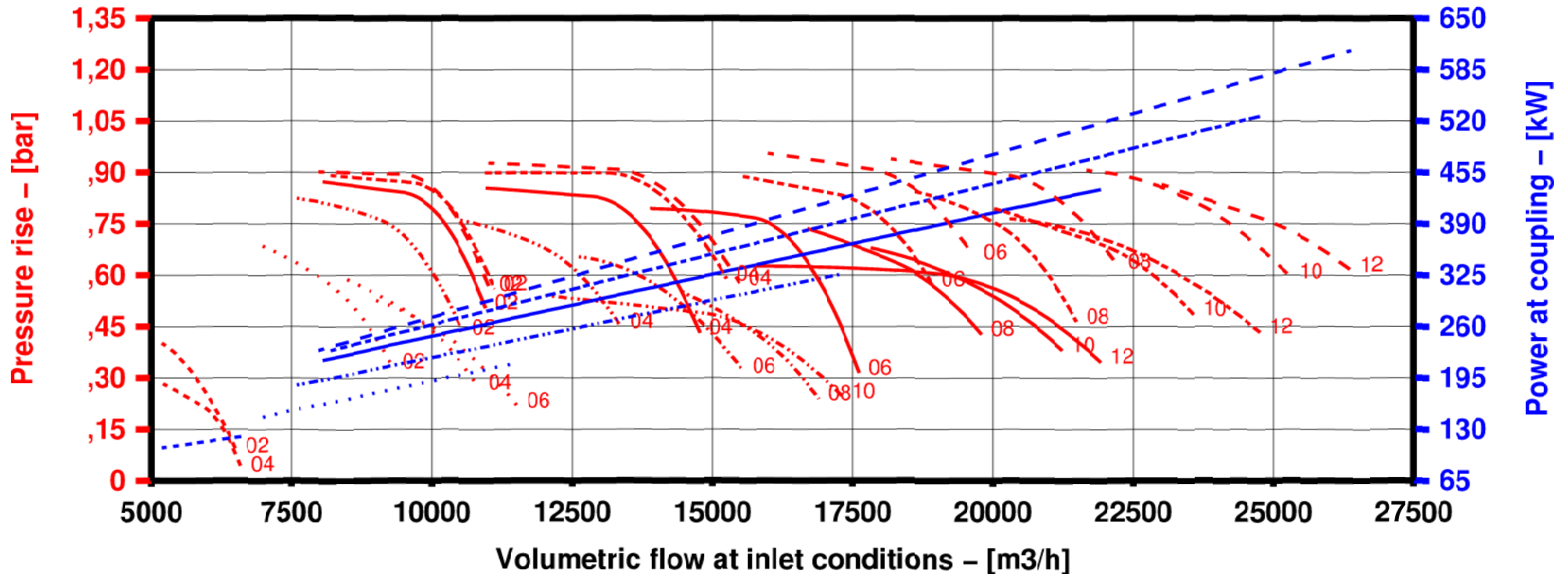
Compressor type: KA22-SV-GL225
 Build number: 10109
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemens
 Type of test motor: 3-MOT.1CV3-403A !LE5
 Serial number of test motor: ZNON LD1585716010003

Explanation of line types

IGV:00 - - - - -
 IGV:02 ······
 IGV:04 ······
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:

Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 0,00 [C]
 Relative Humidity: 36,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition

Inlet Pressure: 1,01051 [bar]
 Inlet Temperature: 22,06 [C]
 Relative Humidity: 26,8 [%]
 Motor Speed: 2987, [1/min]

Used evaluation standards for Compressor:

ISO5389/VDI2045

Used evaluation standards for Volumeflow:

ISO 5167-1:1991/Amd.1:1998(E)

Accepted by: NOACKCH

Test day: 27-01-2020

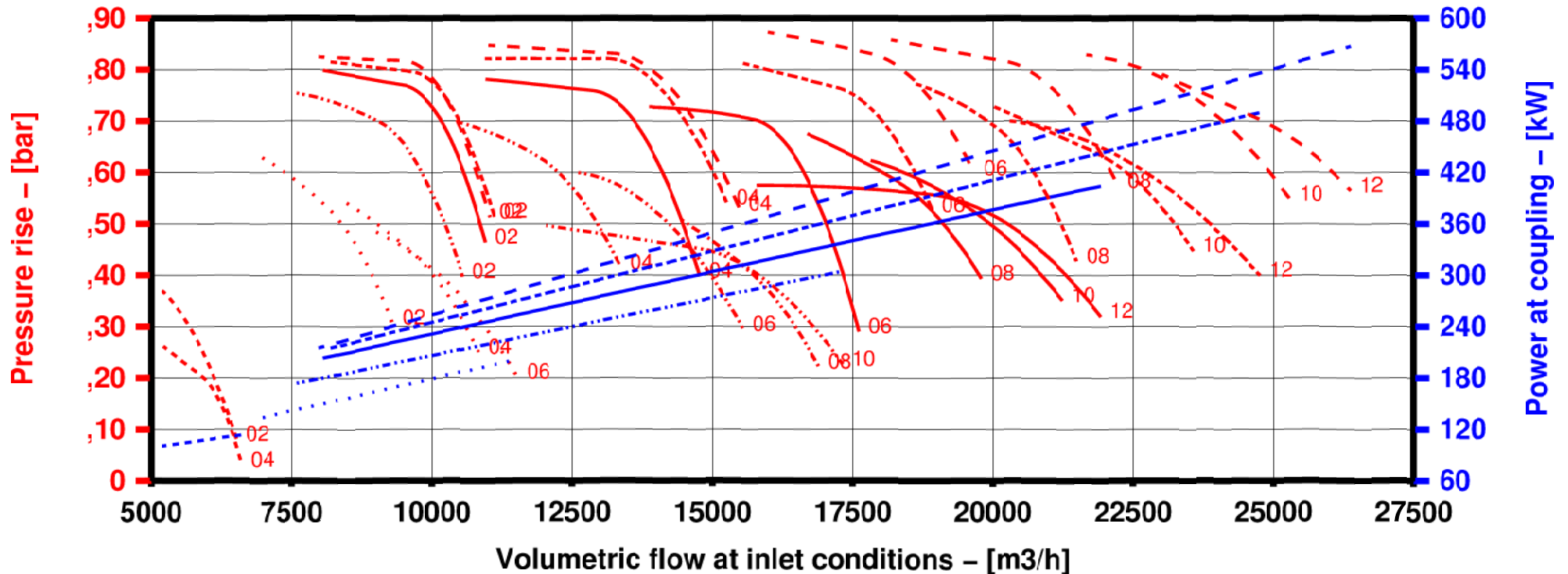
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 Order Number: 62010109
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 Serial number of test motor: ZNON LD1585716010003

Explanation of line types
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Used evaluation standards for Compressor:
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Used evaluation standards for Volumeflow:
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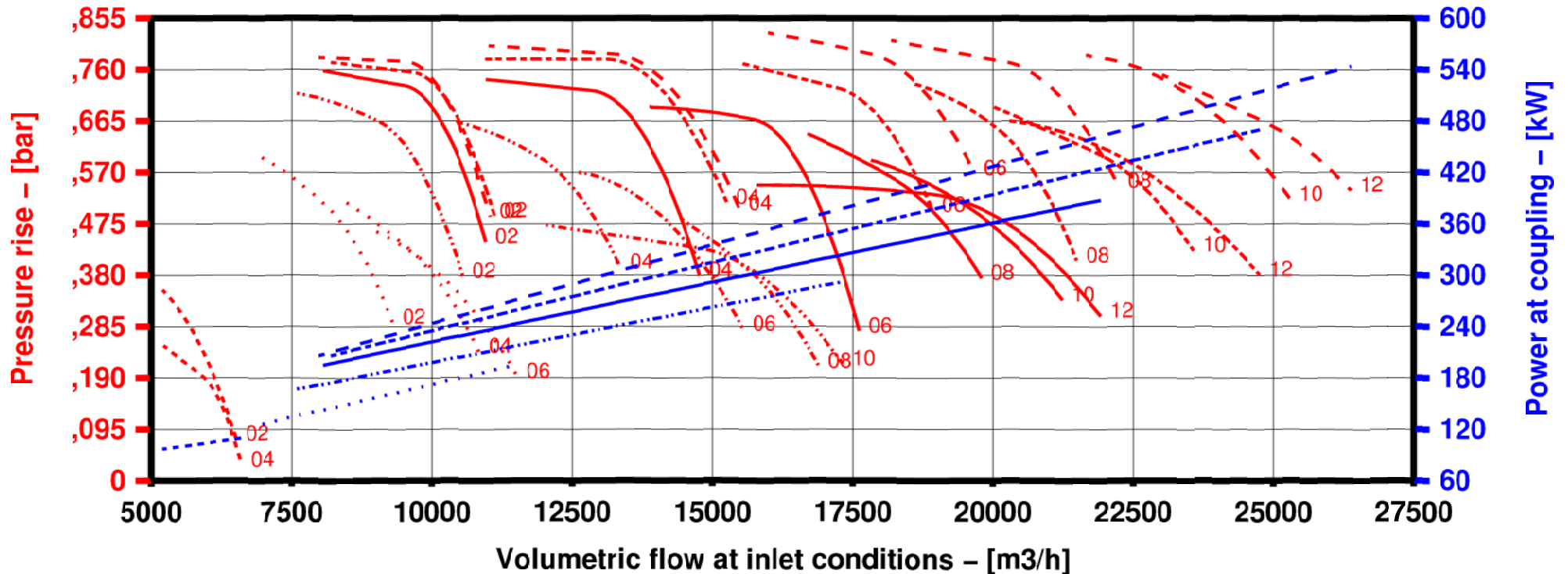
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 Serial number of test motor: ZNON LD1585716010003

Explanation of line types
 IGV:00 - - - - -
 IGV:02 ······
 IGV:04 -·-·-·-
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:
 Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 30,00 [C]
 Relative Humidity: 80,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition
 Inlet Pressure: 1,01051 [bar]
 Inlet Temperature: 22,06 [C]
 Relative Humidity: 26,8 [%]
 Motor Speed: 2987, [1/min]

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Used evaluation standards for Volumeflow:
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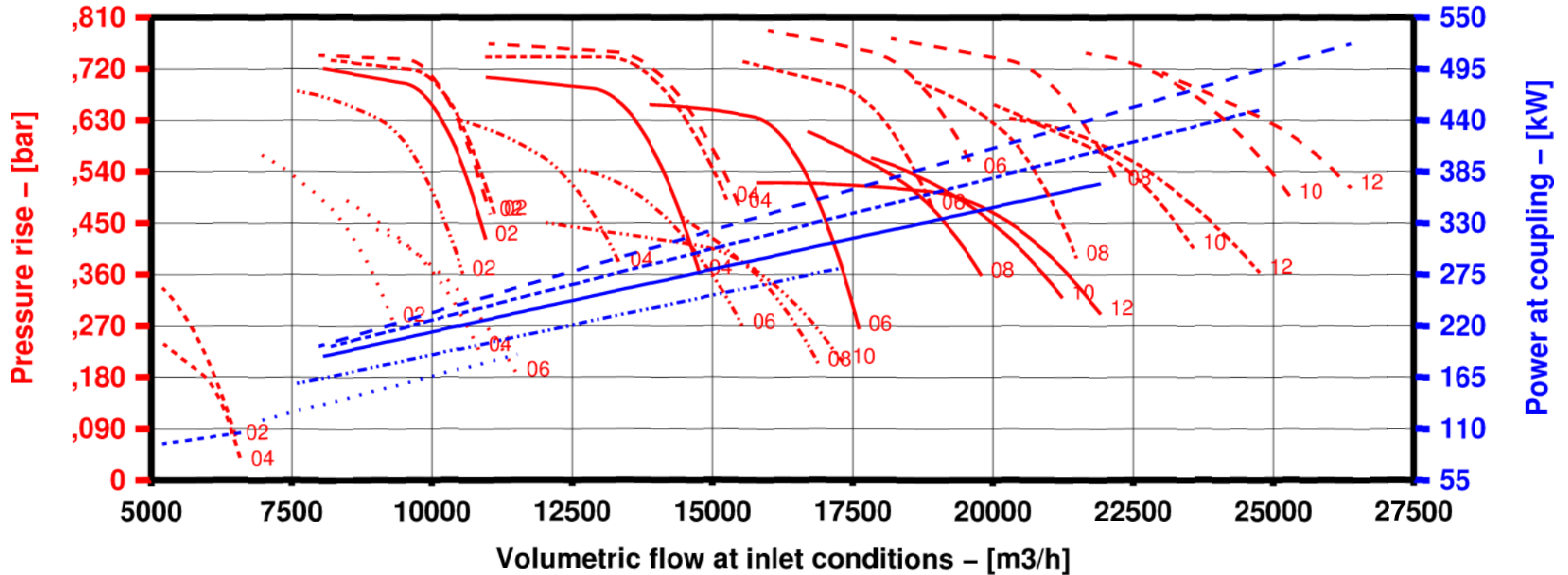
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Explanation of line types
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 IGV:02 ······
 IGV:04 -·-·-·-
 IGV:06 —————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:
 Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 40,00 [C]
 Relative Humidity: 80,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition
 Inlet Pressure: 1,01051 [bar]
 Inlet Temperature: 22,06 [C]
 Relative Humidity: 26,8 [%]
 Motor Speed: 2987, [1/min]

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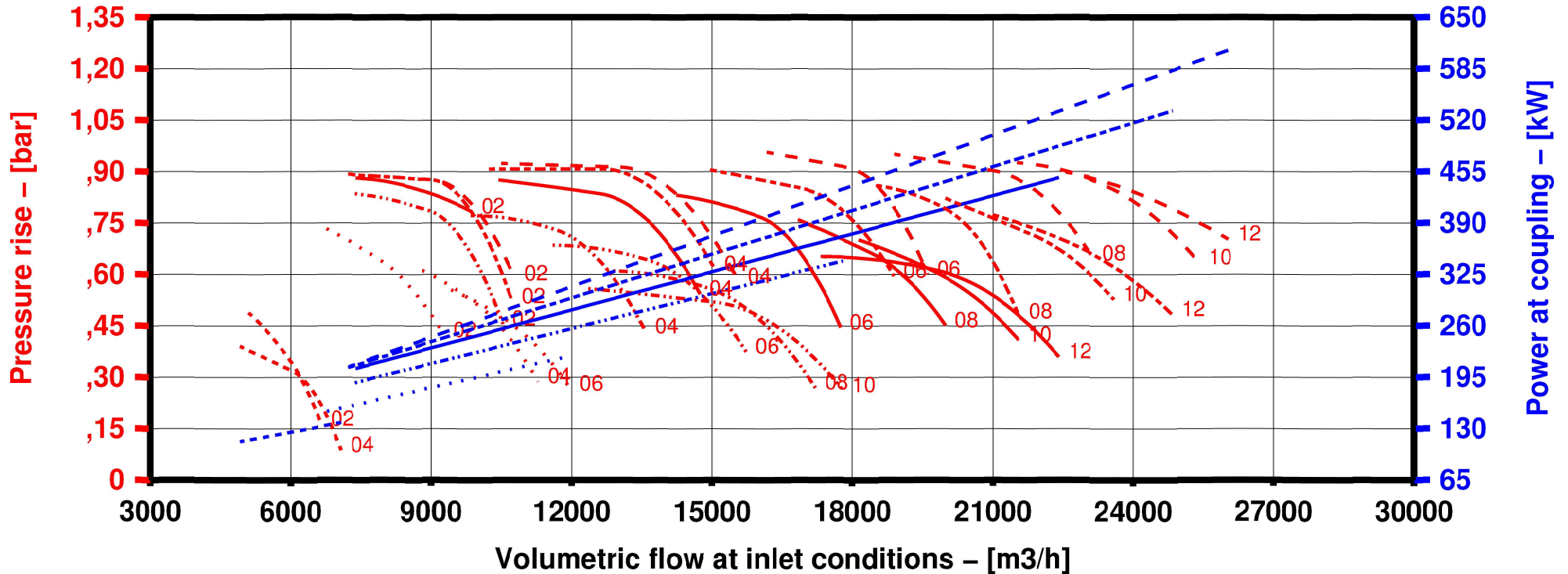
Compressor type: KA22-SV-GL225
 Build number: 10110
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemens
 Type of test motor: 3-Mot.1CV3-403A
 Serial number of test motor: ZNONLD1585716010001

Explanation of line types

IGV:00 - - - - -
 IGV:02 ······
 IGV:04 -·-·-·-
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:

Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 0,00 [C]
 Relative Humidity: 36,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition

Inlet Pressure: 1,02284 [bar]
 Inlet Temperature: 20,77 [C]
 Relative Humidity: 25,3 [%]
 Motor Speed: 2987, [1/min]

Used evaluation standards for Compressor:

ISO5389/VDI2045

Used evaluation standards for Volumeflow:

ISO 5167-1:1991/Amd.1:1998(E)

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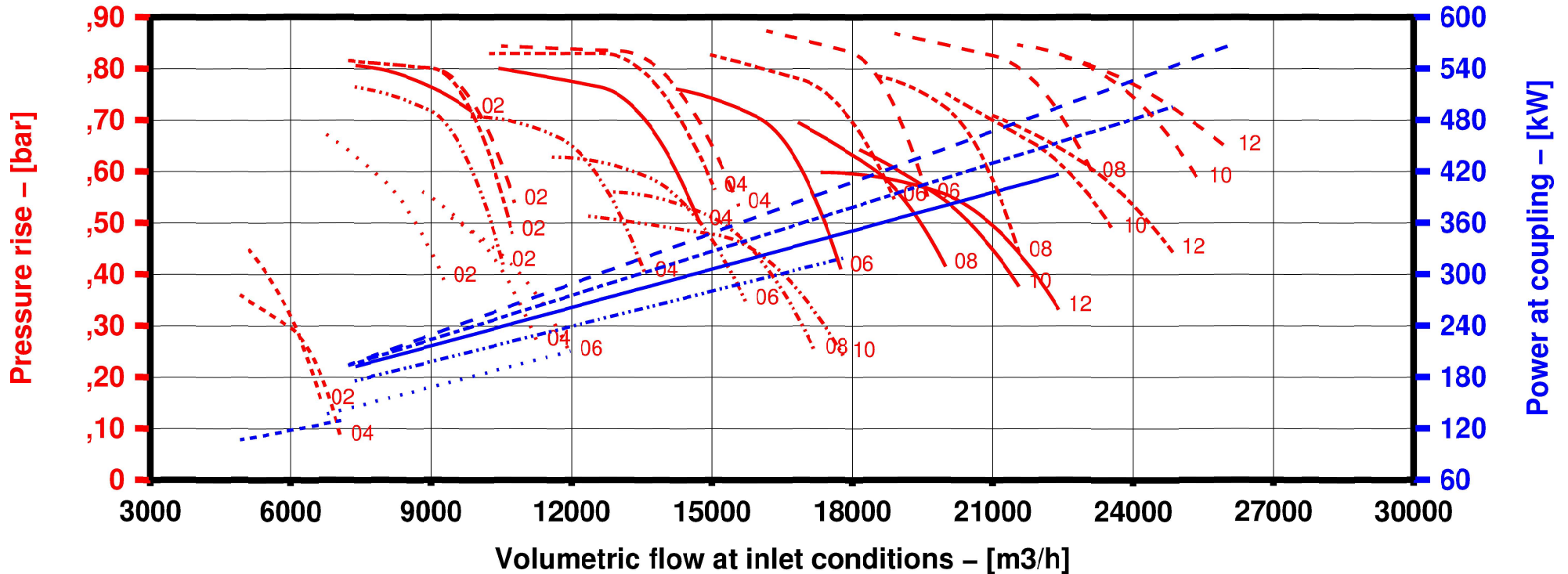
Compressor type: KA22-SV-GL225
 Build number: 10110
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemens
 Type of test motor: 3-Mot.1CV3-403A
 Serial number of test motor: ZNONLD1585716010001

Explanation of line types

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 IGV:04 -·-·-·-
 IGV:06 —————
 IGV:08 - - - - -
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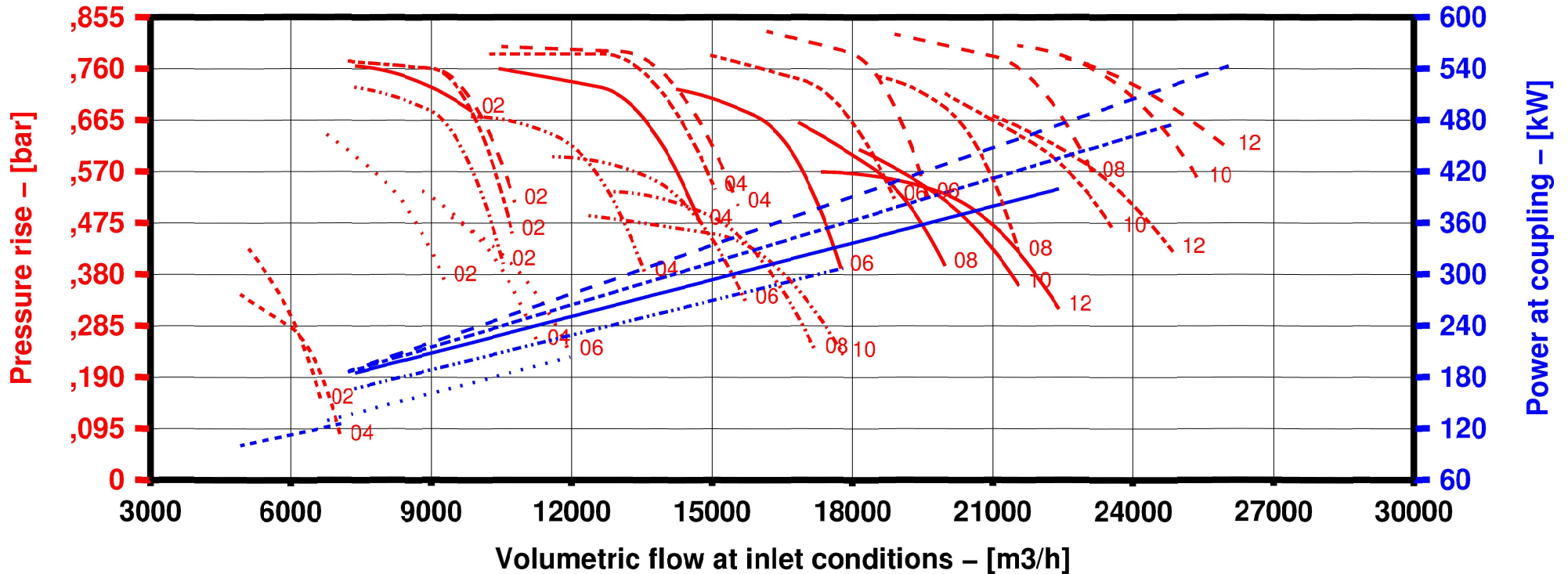
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 Order Number: 62010109
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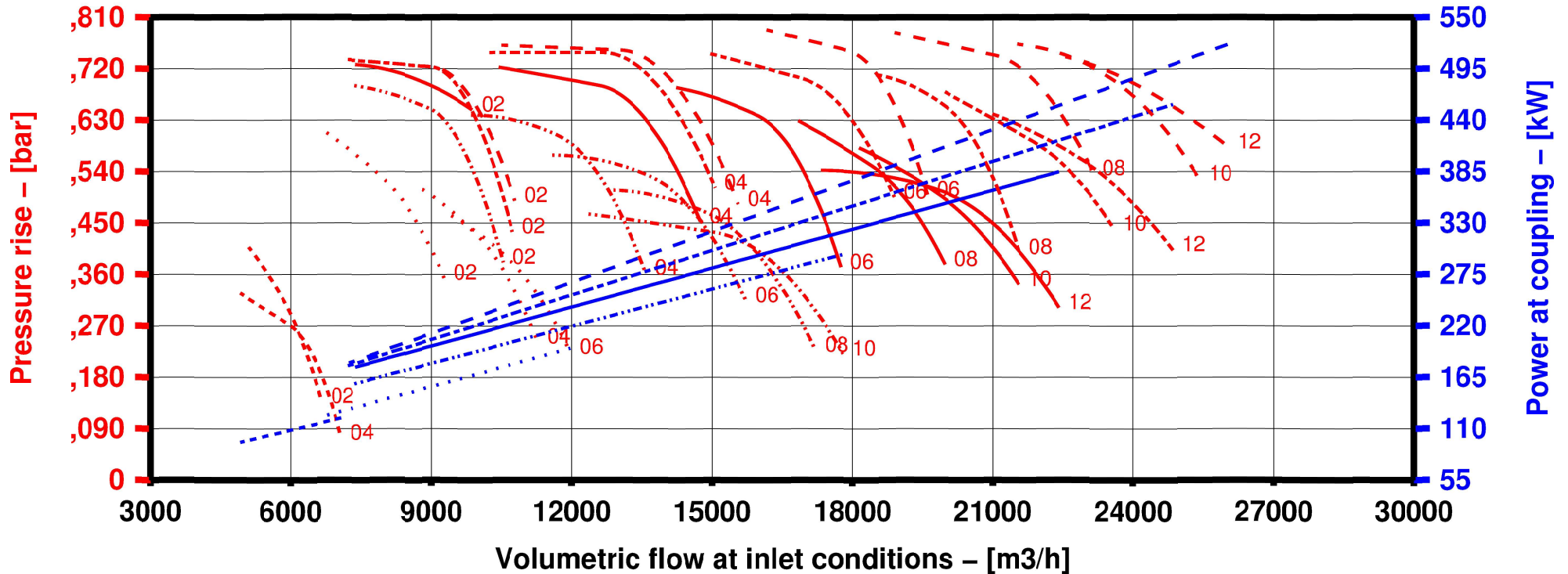
Compressor type: KA22-SV-GL225
 Build number: 10110
 Order Number: 62010109
 Order Name: Ayalon
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 Serial number of test motor: ZNONLD1585716010001

Explanation of line types

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 IGV:08 - - - - -
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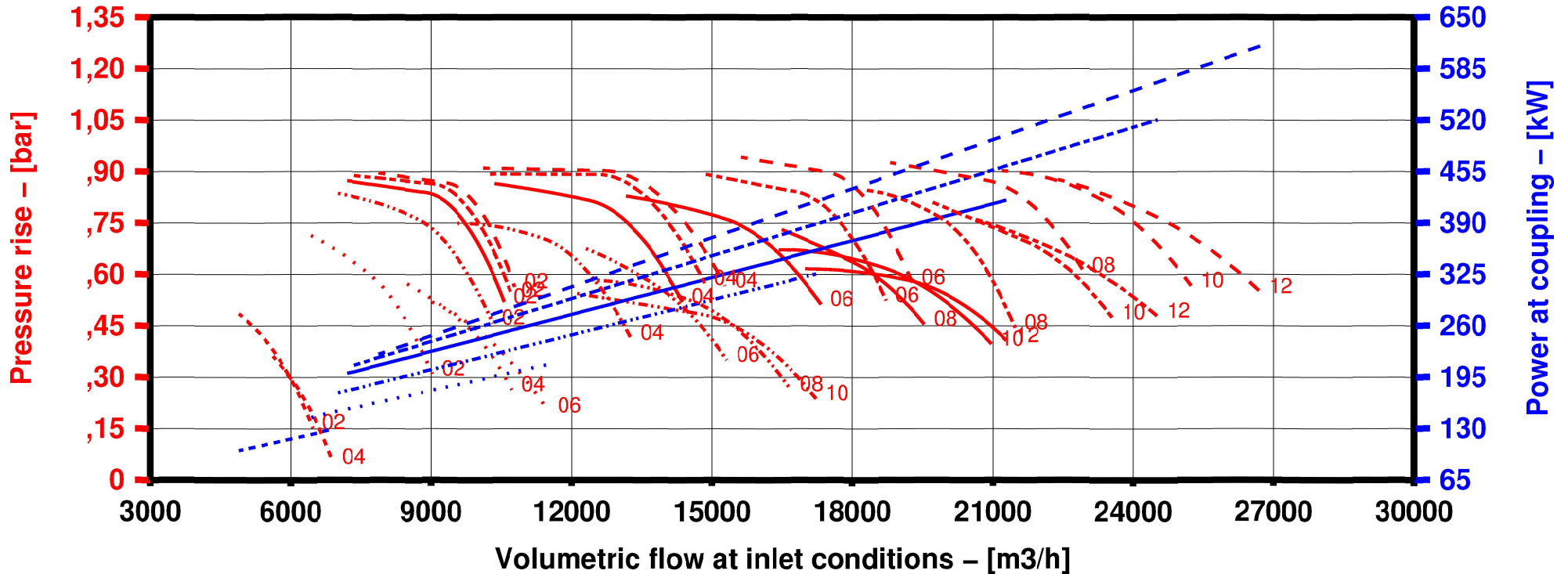
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Performance Certificate for HV-TURBO Environmental Compressor

Compressor type: KA22-SV-GL225
 Build number: 10111
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemes
 Type of test motor: 3-Mot.1CV3-403A
 Serial number of test motor: 1LE5334AA334AC3

Explanation of line types
 IGV:00 - - - - -
 IGV:02 ······
 IGV:04 -·-·-·-
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:
 Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 0,00 [C]
 Relative Humidity: 36,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition
 Inlet Pressure: 1,00110 [bar]
 Inlet Temperature: 25,58 [C]
 Relative Humidity: 39,8 [%]
 Motor Speed: 2987, [1/min]

Used evaluation standards for Compressor:
 ISO5389/VDI2045
Used evaluation standards for Volumeflow:
 ISO 5167-1:1991/Amd.1:1998(E)

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Test day: 31-01-2020

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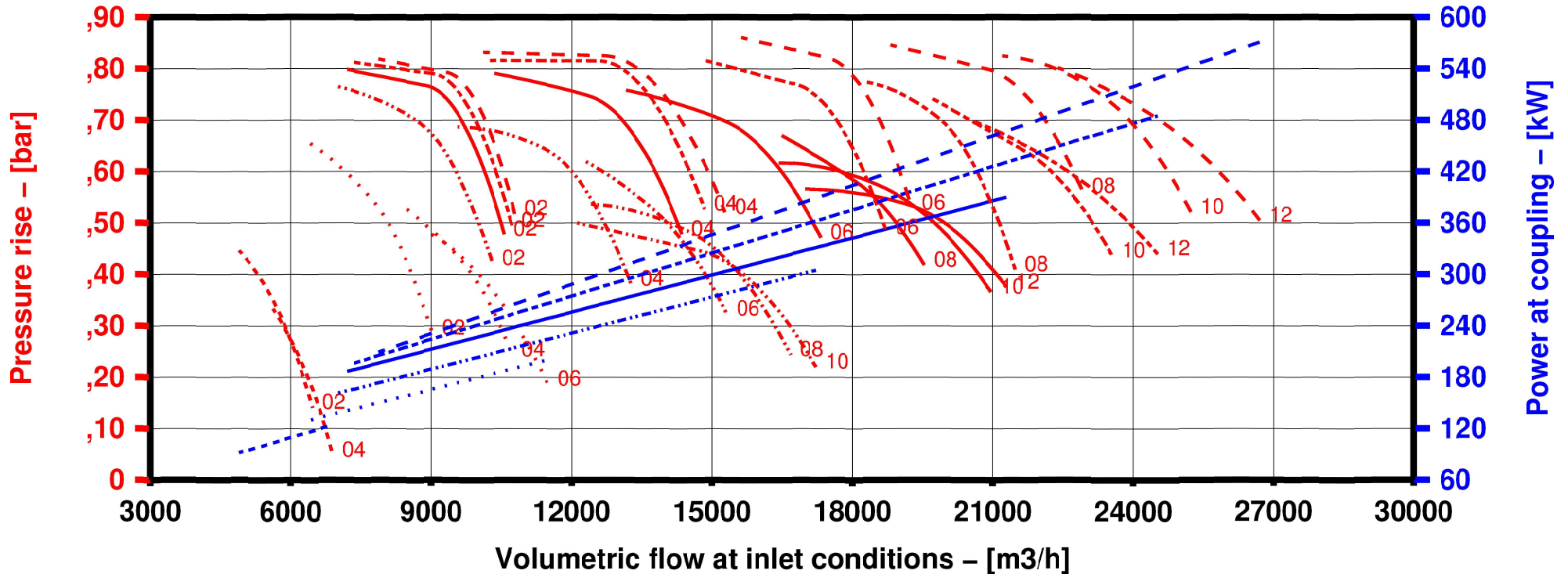
Compressor type: KA22-SV-GL225
 Build number: 10111
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemes
 Type of test motor: 3-Mot.1CV3-403A
 Serial number of test motor: 1LE5334AA334AC3

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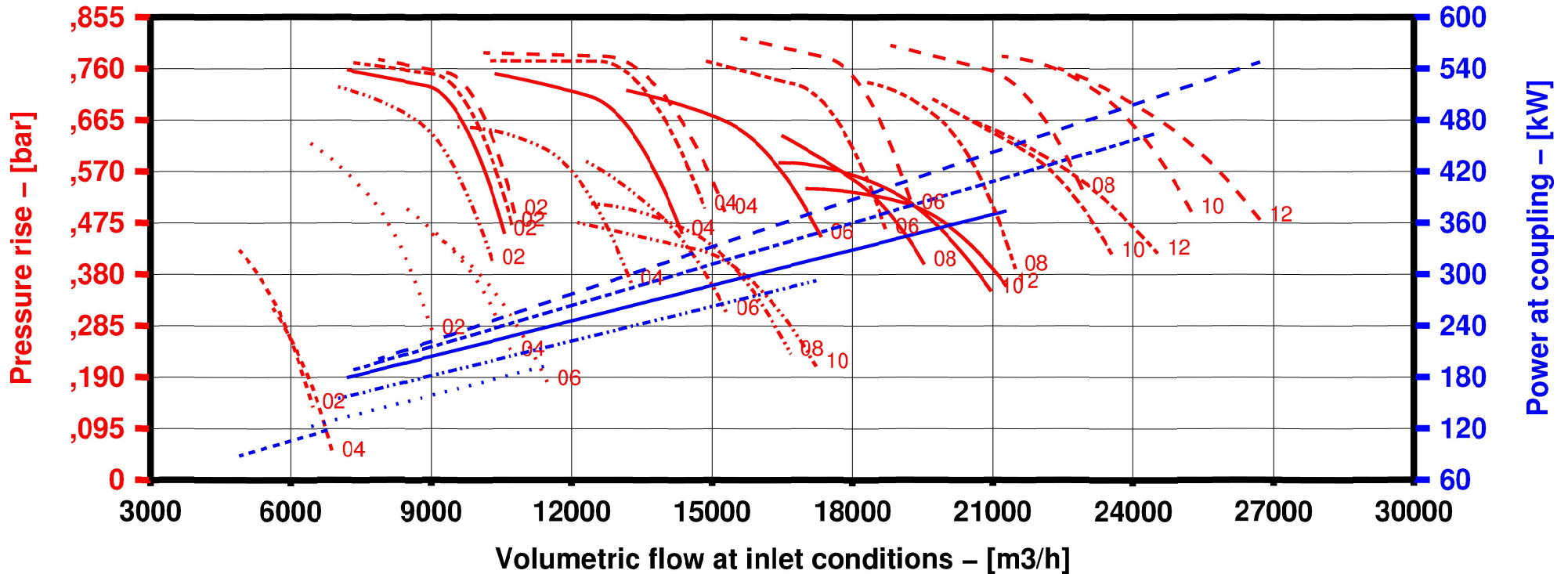
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 Build number: 10111
 Order Number: 62010109
 Order Name: Ayalon
 Testmotor: Siemes
 Type of test motor: 3-Mot.1CV3-403A
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Explanation of line types

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 IGV:02 ······
 IGV:04 ······
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:

Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 30,00 [C]
 Relative Humidity: 80,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition

Inlet Pressure: 1,00110 [bar]
 Inlet Temperature: 25,58 [C]
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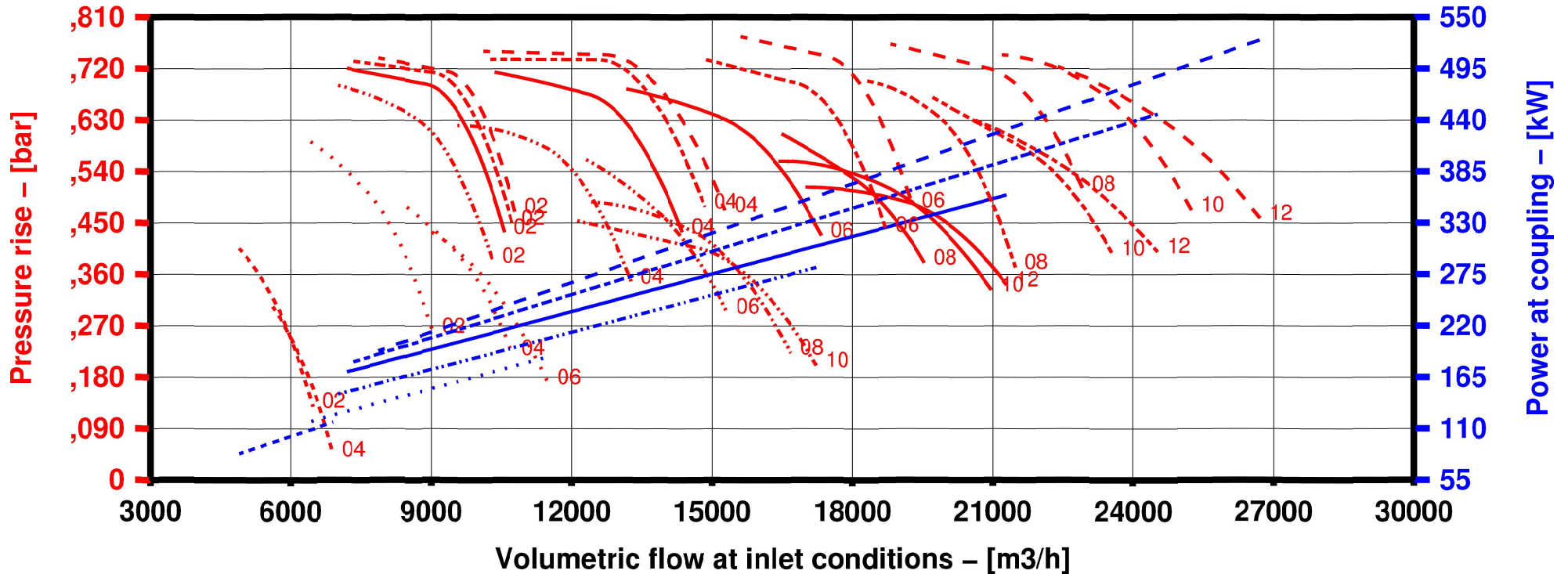
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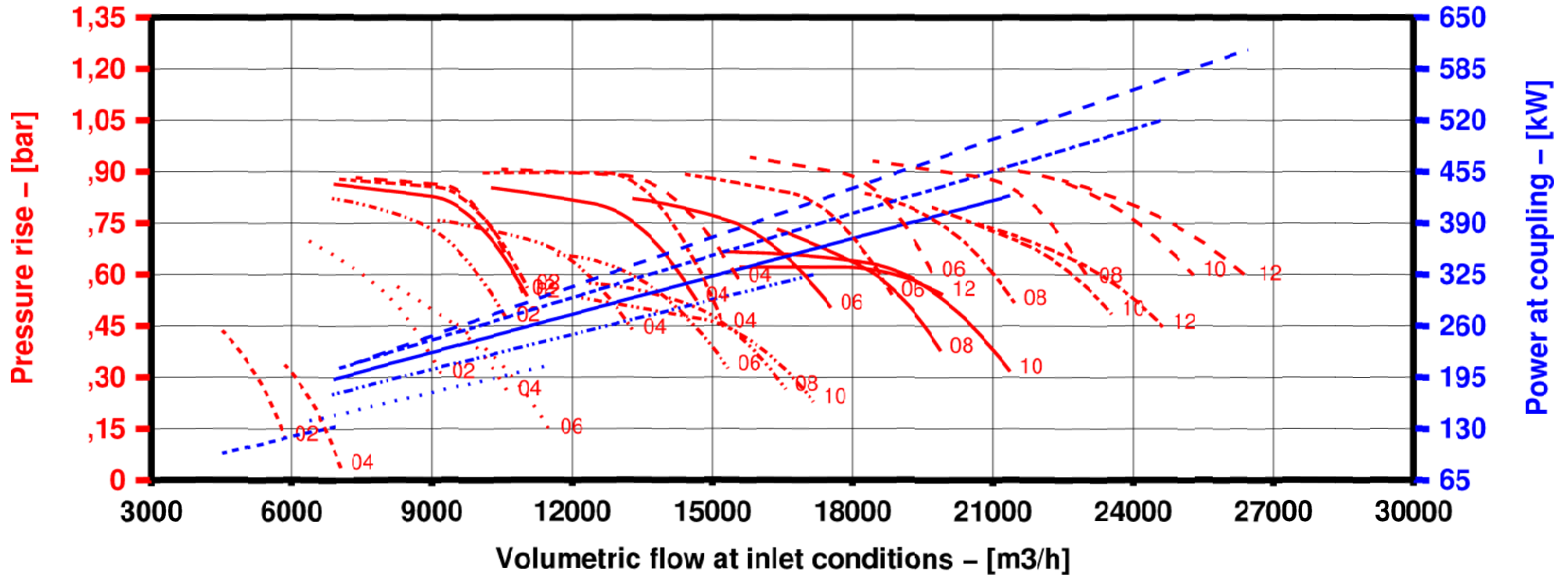
Compressor type: KA22-SV-GL225
Build number: 10112
Order Number: 62010109
Order Name: Ayalon
Testmotor: Siemens
Type of test motor: 3-MOT.1CV3-403A 1LE5
Serial number of test motor: Z NON LD 15857160 10

Explanation of line types

IGV:00 - - - - -
 IGV:02 ······
 IGV:04 -·-·-·-
 IGV:06 —————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:

Inlet Pressure: 0,99400 [bar]
Inlet Temperature: 0,00 [C]
Relative Humidity: 36,0 [%]
Motor Speed: 2986, [1/min]



Average test condition

Inlet Pressure: 0,98570 [bar]
Inlet Temperature: 24,00 [C]
Relative Humidity: 32,0 [%]
Motor Speed: 2987, [1/min]

Used evaluation standards for Compressor:

ISO5389/VDI2045

Used evaluation standards for Volumeflow:

ISO 5167-1:1991/Amd.1:1998(E)

Accepted by: NOACKCH

Test day: 28-01-2020

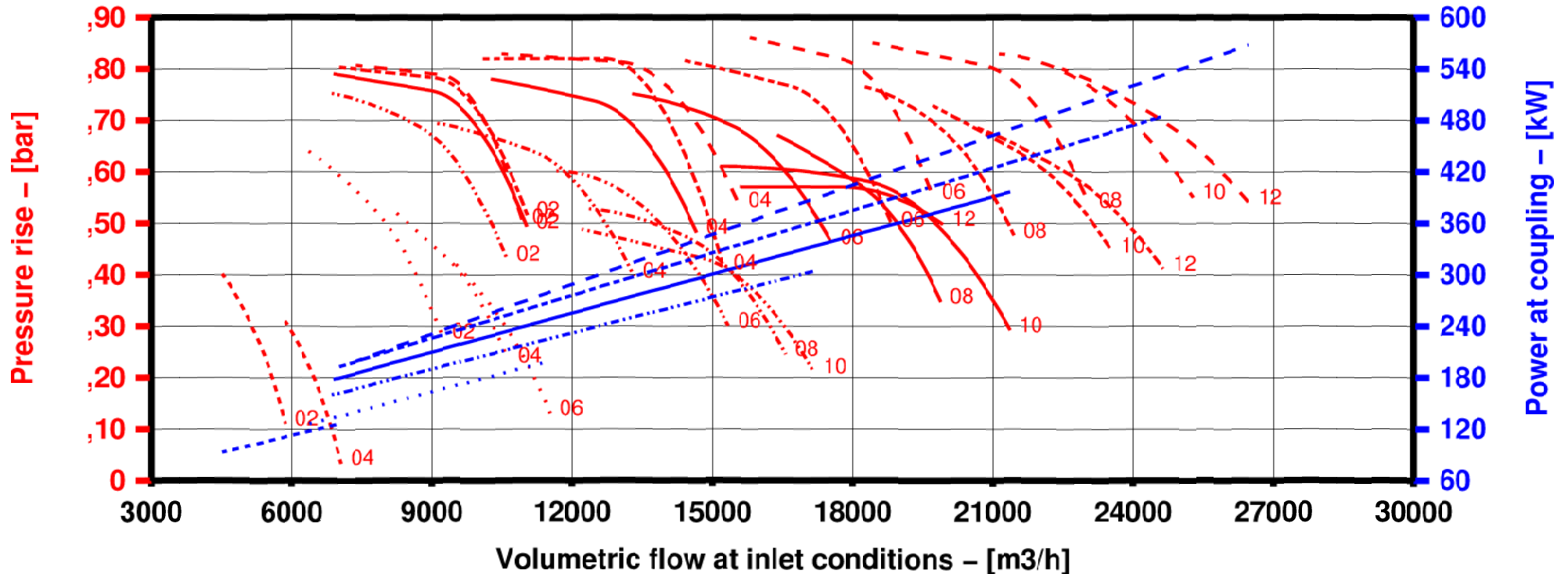
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 IGV:02 ······
 IGV:04 -·-·-·-
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 IGV:08 - - - - -
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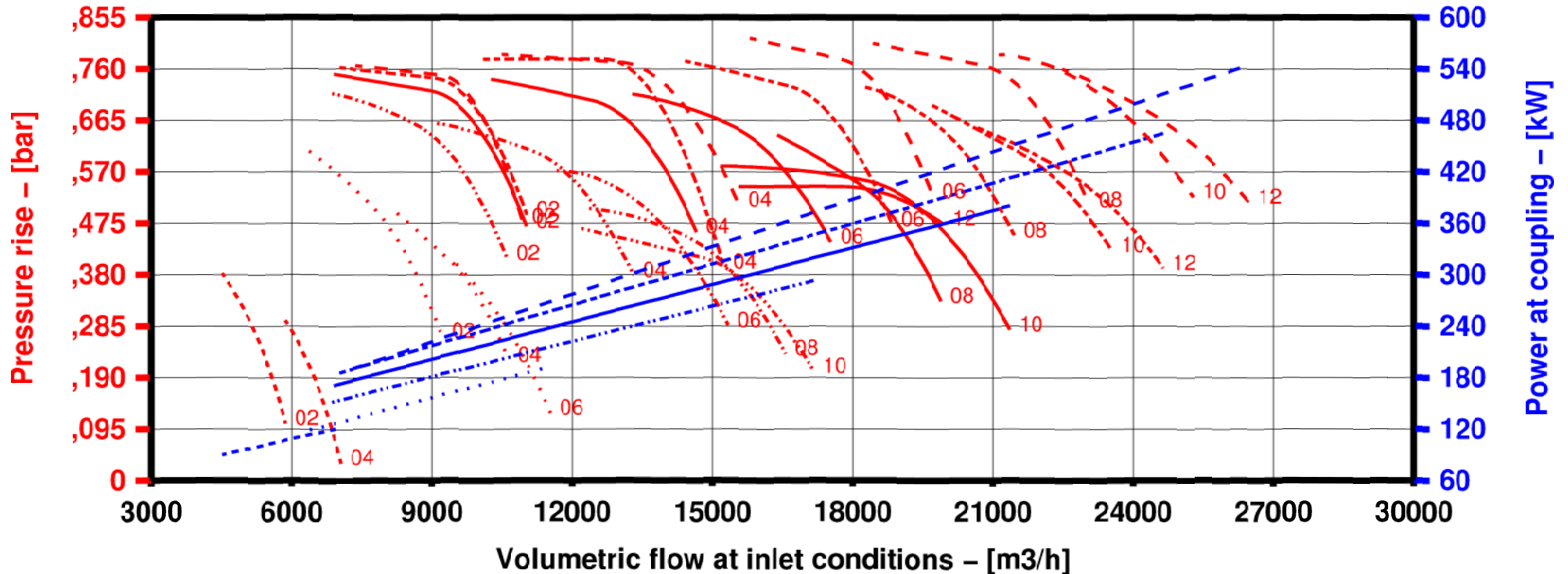
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 IGV:04 -·-·-·-
 IGV:06 ————
 IGV:08 - - - - -
 IGV:10 - - - - -

Curves valid for nominal conditions:
 Inlet Pressure: 0,99400 [bar]
 Inlet Temperature: 30,00 [C]
 Relative Humidity: 80,0 [%]
 Motor Speed: 2986, [1/min]



Average test condition
 Inlet Pressure: 0,98570 [bar]
 Inlet Temperature: 24,00 [C]
 Relative Humidity: 32,0 [%]
 Motor Speed: 2987, [1/min]

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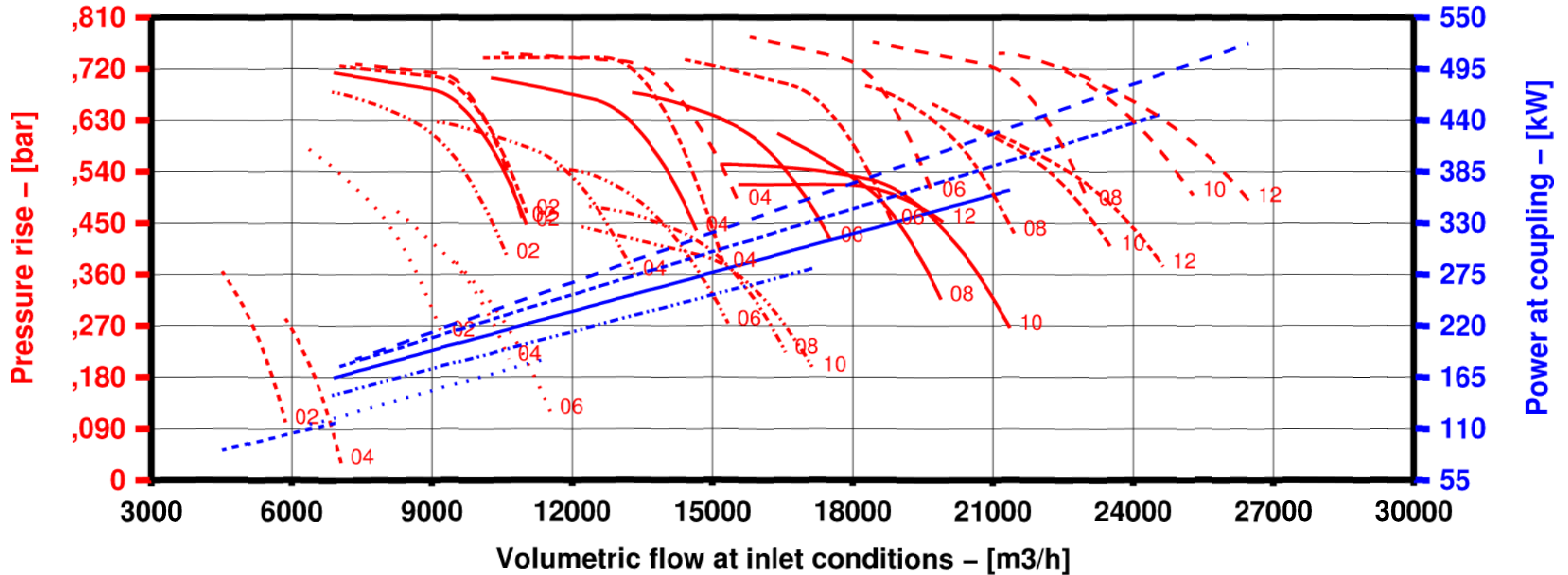
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