

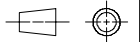
Available executions

| Execution No. | Material ID | Attribute 1: Emission class (Tier) | | | |
|---------------|-------------|---------------------------------------|------------------------------|-------------------------------|-------------------------------|
| | | Tier II without SCR | Tier III HP-SCR on-engine | Tier III HP-SCR off-engine | Tier III LP-SCR off-engine |
| 1 | PAAD177959 | X | | X | X |
| 2 | PTAA038729 | | X | | |

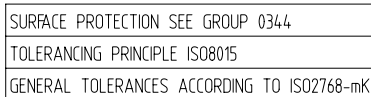
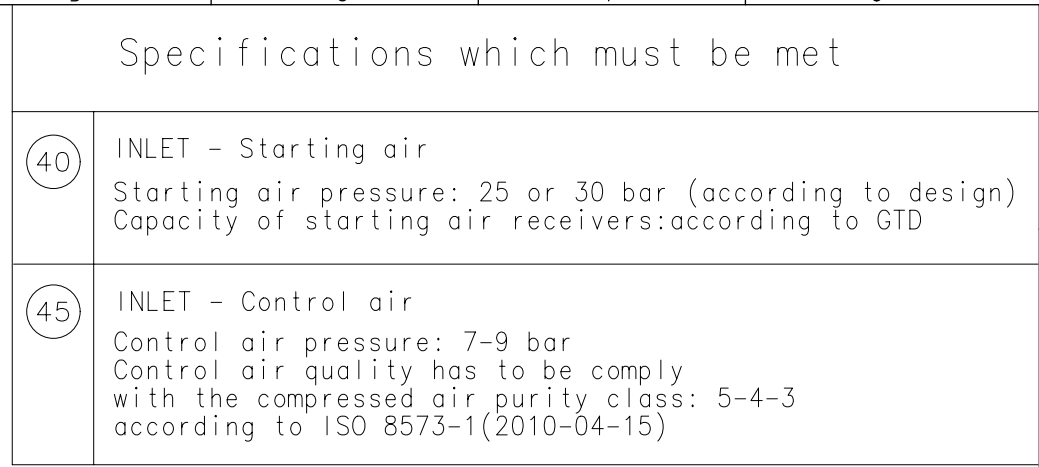
NOTE

The above executions can be configured using the Engine Configurator.
Detailed guidance for the executions is provided within the Marine Installation Manual (MIM). If a specific execution of interest is not shown in the above table, then it may still be under development or not available. For further information or in case of a project-specific request, WinGD must be contacted directly.

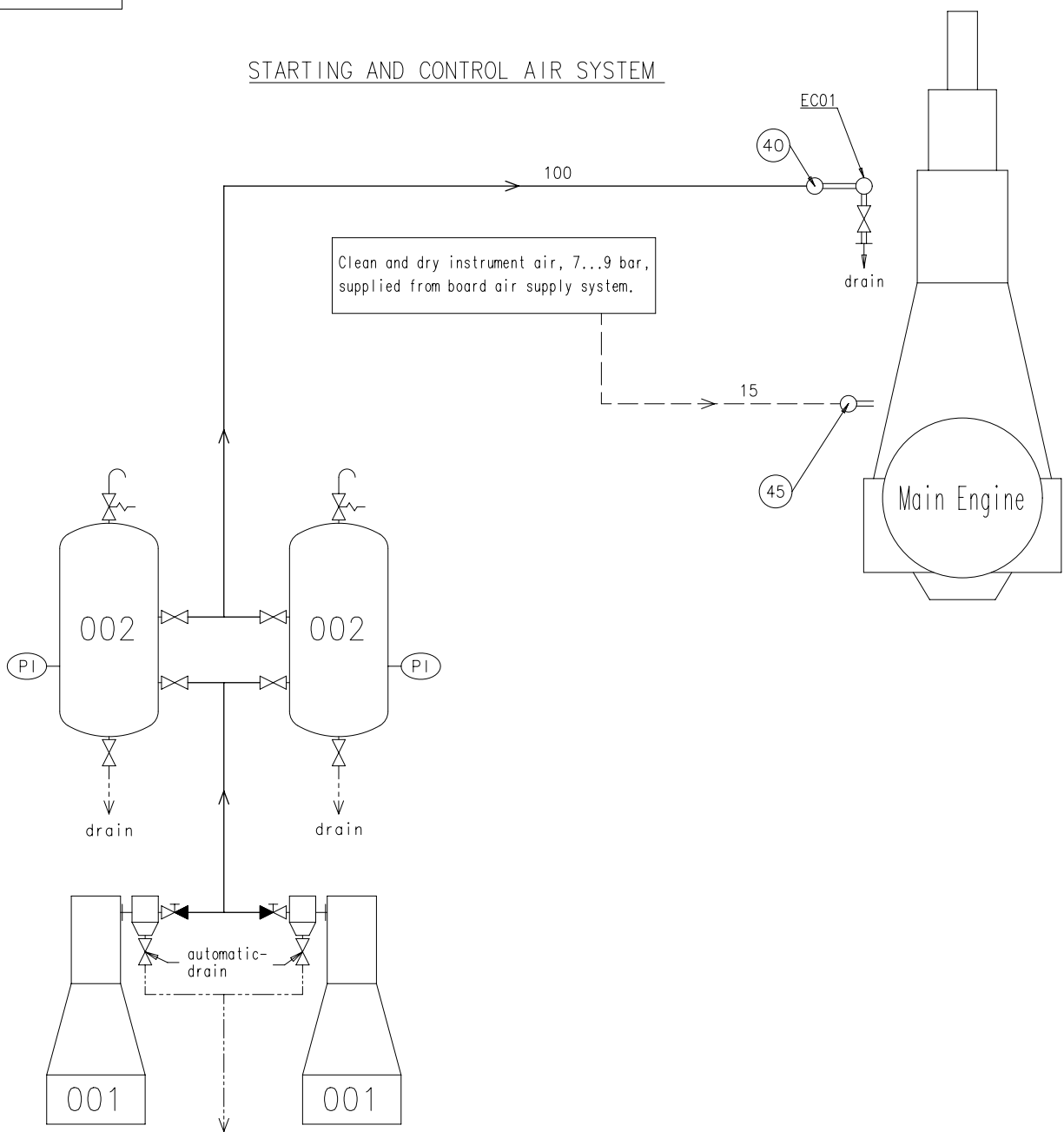
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| | | | | | | | | | | | | | |
|--|------|---|----------|--|------------|-----------------|---------|------|------------------|---------------|----------------|----------|-----|
| Prod. | X52 | | | | | | | | | | | | |
| Change History | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | A | sde101 | mhu019 | 24.05.2023 | CNAA003753 | new Design | | | 4 | 3 | | | |
| | - | sde101 | mhu019 | 29.10.2021 | CNAA000922 | new Design | | | - | - | | | |
| | Rev. | Creator | Approver | Approval Date | Change ID | Change Synopsis | | | Approved | Activity Code | E | C | |
|  Winterthur Gas & Diesel | | | | AIR SUPPLY SYSTEM MIDS master drawing | | | | | | | | | |
| separate BOM available | | | | Dimension | | | | | | | | | |
| Scale | - |  | NX | Units [mm] [kg] | | Basic Material | | | Net Weight 0.001 | | | | |
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| | | | | Qty per | | A4 | Item ID | | PTAA015210 | | Drawing Page/s | | 1/1 |

| SEQ NO | QTY | Item ID | Item Name | | Dimension | Standard-ID | Basic Material | | Net Weight | | | | | |
|--|-------------|------------|-------------------|-------------------|------------|--|----------------|----------------|------------|------------|------------|-------|------------|-------|
| 1 | 1 | PTAA011904 | AIR SUPPLY SYSTEM | | | | | | 0 | | | | | |
| | | | | | | | | | | | | | | |
| Prod. | 5,6,7,8 X52 | | | | | | | | | | | | | |
| Change History | D | sde101 | dst 009 | 27.10.2021 | CNAA000871 | Main Design/Drawing Introduced | | | 4 | 3 | | | | |
| | C | sde101 | mhu019 | 27.10.2020 | EAAD092791 | Legacy information. See corresponding ChangeNotice | | | 4 | 3 | | | | |
| | B | sde101 | mhu019 | 26.03.2018 | EAAD088933 | Legacy information. See corresponding ChangeNotice | | | 4 | 3 | | | | |
| | - | wwa008 | bha009 | 16.01.2015 | | - | | | - | - | | | | |
| | Rev. | Creator | Approver | Approval Date | Change ID | Change Synopsis | Approved | Activity Code | E | C | | | | |
| <div>WIN GD</div> <div>Winterthur Gas & Diesel</div> | | | | AIR SUPPLY SYSTEM | | | | | | | | | | |
| Bill Of Material | | | | Dimension | | | | | | | | | | |
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| | | | | Main Design | | Yes | | Design Group | | 9725 | Q-Code | XXXXX | Standard | WDS |
| | | | | Qty per | | Engine | | A4 | Item ID | | PAAD177959 | | BOM Page/s | 01/01 |

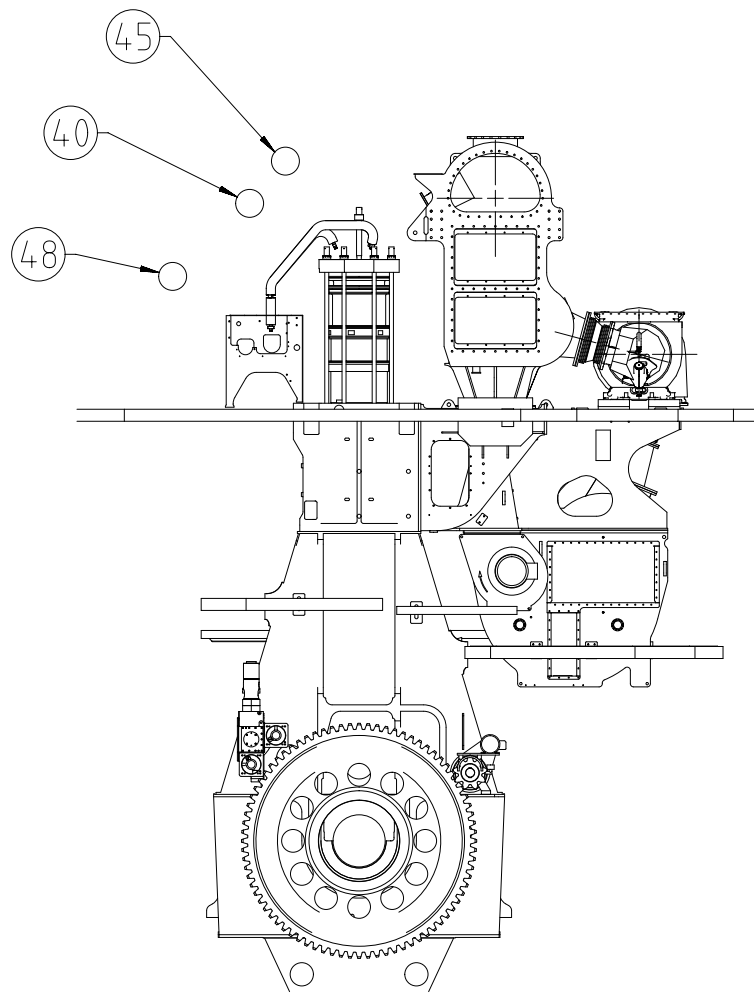


STARTING AND CONTROL AIR SYSTEM




| | |
|---|---|
| Pos | System Components *1) |
| 001 | Starting air compressor 25/30 bar (capacity according to GTD) |
| 002 | Starting air receiver 25/30 bar (capacity according to GTD) |
| Pos | Engine Connections *2) |
| (40) | INLET - Starting air |
| (45) | INLET - Control air (for control system and air spring) |
| Pos | Engine Components *3) |
| EC01 | Distribution pipe with automatic starting air shut-off valve |
| Remarks: | |
| - Drain plugs and drain cocks to be installed where necessary. | |
| - Pipe diameters for starting air compressors and auxiliary equipment according to suppliers recommendations. | |
| *1) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections. | |
| *2) To be delivered by external supplier and to be installed by the shipyard. | |
| *3) To be delivered by the engine builder, i.e. already equipped on engine side | |
| — Starting air feed pipes | |
| - - - Control air pipes | |
| — Ancillary equipment pipes | |
| Drain pipes | |
| == Pipes on engine | |
| ○ Pipe connections | |

| SEQ NO | QTY | Item ID | Item Name | Dimension | Standard-ID | Basic Material | Net Weight |
|--|-----------|------------|--------------------------------|---------------|-------------|--------------------------------|-------------------------------------|
| 1 | 1 | PTAA038718 | AIR SUPPLY SYSTEM | | | | 0.001 |
| | | | | | | | |
| Prod. | 5,6,7 X52 | | | | | | |
| Change History | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | - | sde101 | mhu019 | 29.07.2022 | CNAA002265 | Main Design/Drawing Introduced | - - |
| | Rev. | Creator | Approver | Approval Date | Change ID | Change Synopsis | Activity Code E C |
| <div>WIN GD</div> <div>Winterthur Gas & Diesel</div> | | | AIR SUPPLY SYSTEM with iSCR | | | | |
| Bill Of Material | | | Dimension | | | | |
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| | | | | Main Design | Yes | Design Group 9725 | Q-Code XXXXX Standard WDS |
| | | | | Qty per | Engine | A4 | Item ID PTAA038729 BOM Page/s 01/01 |



SPECIFICATIONS which must be met:

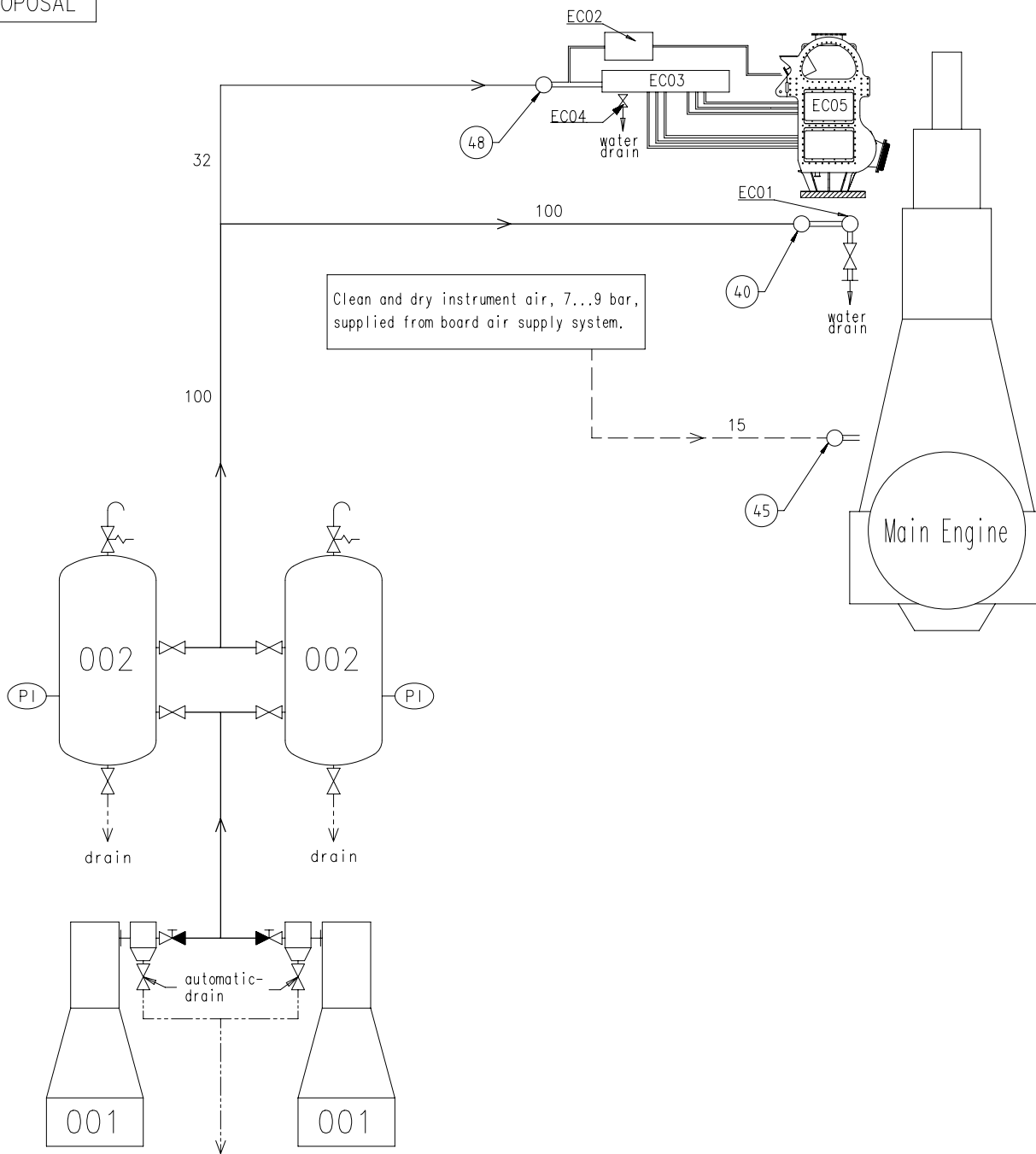
| | |
|----|--|
| 40 | INLET - Starting air Starting air pressure: 25 or 30 bar (according to design) |
| 45 | INLET - Control air Control air pressure: 7-9 bar Control air quality: In compliance with the compressed air purity class: 5-4-3 according to ISO 8573-1 (2010-04-15) |
| 48 | INLET - Air supply urea dosing unit and SCR air rail pipe Air pressure: 10-12 bar Air quality: In compliance with the compressed air purity class: 6-8-4 according to ISO 8573-1 (2010-04-15) |

| | | | | | | | | | | | | | |
|--|---------|---|---------------|-----------------|--------------------------------|------------|------------|--|------------|---------------|-------------------|----------|-----|
| Prod. | X52 | | | | | | | | | | | | |
| Change History | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | - | sde101 | mhu019 | 29.07.2022 | CNAA002265 | new Design | | | | - | - | | |
| Rev. | Creator | Approver | Approval Date | Change ID | Change Synopsis | | | | Approved | Activity Code | E | C | |
| <div>WIN GD Winterthur Gas & Diesel</div> | | | | | AIR SUPPLY SYSTEM with iSCR | | | | | | | | |
| | | | | | Dimension | | | | | | | | |
| Scale | - |  | NX | Units [mm] [kg] | Basic Material | | | | Net Weight | | 0.001 | | |
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| | | | | Qty per | A3 | | Item ID | | PTAA038718 | | Drawing Page/s | | 1/2 |

SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

SYSTEM PROPOSAL



| | |
|---|---|
| Pos | System Components *1) |
| 001 | Starting air compressor 25/30 bar (capacity according to GTD) |
| 002 | Starting air receiver 25/30 bar (capacity according to GTD) |
| Pos | Engine Connections *2) |
| ④0 | INLET - Starting air |
| ④5 | INLET - Control air (for control system and air spring) |
| ④8 | INLET - Air urea dosing unit and SCR air rail pipe |
| Pos | Engine Components *3) |
| EC01 | Distribution pipe with automatic starting air shut-off valve |
| EC02 | Urea dosing unit |
| EC03 | Air rail pipe SCR soot blowing system |
| EC04 | Water drain valve, air rail pipe SCR soot blowing system |
| EC05 | SCR reactor |
| Remarks | |
| -Drain plugs and drain cocks to be installed where necessary. -Pipe diameters for starting air compressors and auxiliary equipment according to suppliers recommendations. | |
| *1) Refer to the "Pipe Connection Plan" for the execution and location of the engine pipe connections. | |
| *2) To be delivered by external supplier and to be installed by the shipyard. | |
| *3) To be delivered by the engine builder, i.e. already equipoped on engine side | |


- Starting air feed pipes
- - - - Control air pipes
- Ancillary equipment pipes
- - - - Drain pipes
- ===== Pipes on engine
- Pipe connections

[illegible]

SURFACE PROTECTION SEE GROUP 0344

TOLERANCING PRINCIPLE ISO8015

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| | | |
|---|----|----|
| [mm] [kg] | - | A2 |
|  | NX | |

| | |
|---------|------------|
| Item ID | PTAA038718 |
|---------|------------|

Drawing
Page/s 2/2

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MIDS – Air Supply System (DG9725)

WinGD X52

TRACK CHANGES

| DATE | SUBJECT | DESCRIPTION |
|------------|--------------------------|---|
| 2017-02-15 | DRAWING SET | First web upload |
| 2018-03-26 | DAAD056647 | System drg. – new drawing revision |
| 2020-11-25 | DAAD056647 | System drg. – new drawing revision |
| 2021-11-03 | DAAD056647 PTAA011904 | Main and system drg. – new drawing revision |
| 2023-01-12 | PTAA038729 PTAA038718 | Main and system drg. – new drawing revision |
| 2023-05-26 | PAAD177959 PAAD038729 | Main and system drg. – new drawing revision |

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