

Mondi Štětí a.s.

STANDARD

Part 13.01.08

HOSES FOR STEAMS AND CHEMICALS

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STANDARD

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HOSES FOR STEAMS AND CHEMICALS

Worked out by:
Name:
Position:

Signed by:
in her own hand

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Name:
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Position:

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1 Steam hoses

Long steam hoses shall be avoided in general. Only one 90° elbow is allowed in the same hose.

For necessary steam applications the following hoses shall be used:

- Hose type DS 3 Sempersteam 6, T max. 165 °C and pressure 6 bar
- Dimensions DN 13, DN 25 and DN 50

The hose connector shall include reducer (only one screw coupling).

Hose sizes and corresponding tread sizes and types are as follows:

| Hose size | Thread | Type |
|-----------|--------|------|
| DN 13 | G½" | Male |
| DN 25 | G1" | Male |
| DN 50 | G2" | Male |

2 Hoses for chemicals

Corrugated PTFE hoses, e.g. type PTFE-NDL by Haberkorn, can be used for many chemical applications.

The hose materials for different chemicals / supplier are presented on the following pages.

| Medium | Concentration %ig | Temp. [°C] | Press [bar] | Fa. Schöffel | | Fa. Haberkorn | | Fa. Funke | | Fa. Markert | | Fa. Angst & Pfister | |
|---------------------------|----------------------|---------------|----------------|---|-----------------------------|-----------------|-----------------------------|---------------|-----------------------------|---|-----------------------------|---------------------|-----------------------------|
| | | | | Hose type | Range of nominal dimensions | Hose type | Range of nominal dimensions | Hose type | Range of nominal dimensions | Hose type | Range of nominal dimensions | Hose type | Range of nominal dimensions |
| Sulphur acid H_2SO_4 | 98 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | FPM Solvent | DN 25 – DN 75 | MARSOFLEX(R)- FEP Chemical hose 44 HW | DN 25 – DN 75 | POLYPAL-PLUS | DN 20 – DN 100 |
| Caustic soda | 50 | 20 - 70 | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | CSM RESIST-B | DN 25 – DN 75 | MARSOFLEX(R) Acid hose 41 HW | DN 25 – DN 100 | POLYPAL-PLUS | DN 20 – DN 100 |
| Hydrochloric acid HCl | 38 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R) Chemical hose 45 HW | DN 19 – DN 100 | POLYPAL-PLUS | DN 20 – DN 100 |
| Ferric chloride $FeCl_3$ | 42 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R) Chemical hose 45 HW | DN 19 – DN100 | POLYPAL-PLUS | DN 20 – DN 100 |
| Ammonia NH_3 | 25 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R) Chemical hose 45 HW | DN 19 – DN100 | POLYPAL-PLUS | DN 20 – DN 100 |

| | | | | | | | | | | | | | |
|---|--------|------------|-------|--|-------------------|------------------------|-------------------|---------------|------------------|---|-------------------|------------------------------|-------------------|
| Nitric acid HNO ₃ | 53 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | — | — | MARSOFLEX(R)- FEP Chemical hose 44 HW | DN 25 – DN 75 | POLYPAL-PLUS | DN 20 – DN 100 |
| Lexygen O ₂ | 99 | -170 | PN 25 | Teflon-hose | Na požiadanie | Steel house SPT9600 | DN 10 – DN 150 | — | — | Corrugated stainless braided hose | Na požiadanie | Corrugated stainless hose | Na požiadanie |
| Phosphoric acid H ₃ PO ₄ | 75 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R)- Chemical hose 45 HW | DN 19 – DN 100 | POLYPAL-PLUS | DN 20 – DN 100 |
| Hydrogen peroxide H ₂ O ₂ | 50, 35 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R)- Chemical hose 45 HW | DN 19 – DN100 | POLYPAL-PLUS | DN 20 – DN 100 |
| Urea (organic) | 40 | Day- temp. | PN 10 | Chemical hose Orlando alebo Everest (Vacuum) | DN 19 – DN 100 | Semperit UPEL-P | DN19 – DN100 | PE-X RESIST-X | DN 25 – DN 75 | MARSOFLEX(R)- Chemical hose 45 HW | DN 19 – DN100 | POLYPAL-PLUS | DN 20 – DN 100 |
| SO ₂ -liquid | 100 | Day- temp. | PN 10 | Chemical hose Orlando or Everest (Vacuum) | DN 19 – DN 100 | — | — | CSM RESIST-B | DN 25 – DN 75 | MARSOFLEX(R)- Chemical hose 41 HW | DN 25 – DN100 | POLYPAL-PLUS | DN 20 – DN 100 |
| CO ₂ | 100 | Day- temp. | PN25 | — | — | Semperit UPEL-P | DN19 – DN100 | — | — | — | — | — | — |

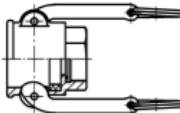

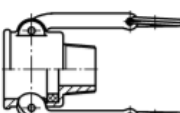

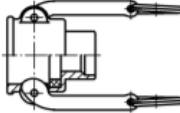

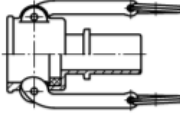
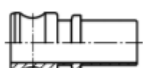
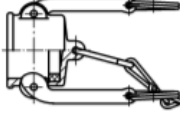
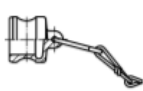
3 Types and dimensions of the house couplings

Cam lock type couplings shall be used according to EN 14420-7.

Different types of hose coupling connections are presented in the following Table.

Table Extract of standard 14420-7

Table 2 — Types of connection

| Coupler | | | Adapter | | | Kind of connection | DN | Thread |
|---|-----------------|----------------|---|-----------------|----------------|--|---|--|
| Figure | Type | For detail see | Figure | Type | For detail see | | | |
|  | DF | 8.2.1 |  | AF | 8.8.1 | internal thread according to EN ISO 228-1 flat-faced with thread gasket according to EN 14420-5 | 20 25 32 40 50 65 80 100 | G ¾ G 1 G 1 ¼ G 1 ½ G 2 G 2 ½ G 3 G 4 |
|  | BF ^a | 8.2.2 |  | FF ^a | 8.8.2 | external thread according to EN 10226-1 | 20 25 32 40 50 65 80 100 | R ¾ R 1 R 1 ¼ R 1 ½ R 2 R 2 ½ R 3 R 4 |
|  | DW | 8.2.3 |  | AW | 8.8.3 | welding connection | 20 25 32 40 50 65 80 100 | — |
|  | CC | 8.2.4 |  | EC | 8.8.4 | hose tail | 20 25 32 40 50 65 80 100 | — |
|  | DC | 8.2.5 |  | DP | 8.8.5 | dust cap, dust plug | 20 25 32 40 50 65 80 100 | — |

^a Prepared for flat face connections.

Note: Also hose size DN 13 with connection DN 15 will be used.

The material of the coupling depends on the flow substances.

The nominal diameter DN shall be selected to correspond the container system used.