Continental
The Future in Motion

Technical Information
Teknisk information

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1 • Guide til slangevalg

For at få det største udbytte af en slange, skal slangen såvel som tilbehøret dertil vælges omhyggeligt ud fra kravene, der stilles til arbejdsopgaven. Dette gælder også dimensionen, typen og kvaliteten af slangen.
Før man vælger en slange, bør følgende ting overvejes:
a) Et perfekt kendskab til det materiale, der skal igennem slangen
b) Verifikation af kompatibiliteten med studse/rør
c) Klarlægge den perfekte dimension, længde og tolerancer for samling.
Vær extra opmærksom på et øget faremoment når produktet er i brug, specielt for børn og ældre mennesker.

2 • Generel information

Plastikmaterialers fysiske egenskaber ændrer sig imens de ligger på lager såvel som, når de er i brug. Denne process, der normalt sker over tid, kan accelerere ved påvirkning af andre faktorer.
De forstærkede materialer kan blive skadet af uhensigtsmæssig brug, eller forkert opbevaring.
Derfor anbefales det, at sollys og anden atmosfærisk påvirkning undgås. Det anbefales i øvrigt at opbevare PVC-materialet væk fra udstyr, der udleder ozon.

3 • Opbevaring

3.1 Anbefalinger til korrekt opbevaring
Følgende råd indeholder forholdsregler, der bør tages for at minimere nedbrydningen af produktet.

3.2 Opbevaringsperiode
Det anbefales generelt at opbevaringstiden er kortest mulig. Hvis forlænget lagertid ikke kan undgås og de følgende forholdsregler ikke tages, bør slangen testes inden brug.

3.3 Temperatur og luftfugtighed
Den ideelle temperatur for opbevaring af PVC-slanger er 10°C-25°C. Slangerne bør ikke opbevares i temperaturer over 40°C, eller under 10°C. Hvis temperaturen er under -5°C, bør der tages særlige forholdsregler, når slangerne håndteres/flyttes.
Slangerne må ikke placeres i nærheden af en varmekilde og luftfugtigheden må hverken være for lav eller høj. Den anbefalede luftfugtighed til opbevaring af PVC-slanger er maksimum 65%.

3.4 Kontakt med andre materialer
Slangerne må ikke komme i kontakt med kemiske produkter såsom; opløsningsmidler, brændstof, olie, fedt, syre, bakteriedræbende midler m.m., der kan ændre de fysisk-mekaniske egenskaber.

3.5 Varmekilder
De under punkt 3.3 angivne temperaturgrænser bør overholdes. Når dette ikke er muligt bruges termobeskyttelse.

3.6 Opbevaringsforhold
Slangerne bør opbevares under passende forhold fri for ydre

1 • Choosing a hose

To obtain an optimum yield, a hose as well as an accessory, must be chosen depending on the conditions of service in which it will be used and before deciding on the diameter, type and quality of the hose information on the real conditions of service must be looked into carefully.
In choosing the hose and/or aCaoutchoucessories to be used, the following must always be considered:
a) a perfect knowledge of the nature of the material to be conveyed
b) verification of compatibility with any connections
c) determining the size, length and tolerance limits suitable for use and assembly.
Be aware of increased dangerous conditions when using a product especially in presence of children and elderly people.

2 • General Information

The physical properties of plastic materials are subject by nature to changes both during the storage and while being used. These changes, which oCaoutchoucur normally over time depending on the type of material that is used, can be aCaoutchoucelerated by a particular factor or by a combination of factor.
The reinforcement materials can be damaged by an inadequate use and/or by inadequate storage condition, therefore it is recommended that prolonged exposure to sunlight and atmospheric agents in general must be avoided.
It is recommended to avoid storage near equipment which may promote development of ozone.

3 • Storage

3.1 Recommendations for a correct storage
The following advice contains some precautions that need to be taken to ensure minimum deterioration of the stored goods.

3.2 Storage times
Storage times should be reduced to a minimum by means of a programmed rotation. When it is not possible to avoid a long time in storage and when the following recommendations are not observed the hose must be checked thoroughly before use.

3.3 Temperature and humidity
The optimum temperature for storage of plastic hoses is from 10 to 25 degrees centigrade. The hoses should not be stored in temperatures over 40°C or below 0°C. When the temperature is below -5°C precautions must be taken when moving the hoses.
The hoses must not be stored near heat sources not must they be stored in the presence of high or low levels of humidity. The recommended level of humidity is a maximum of 65%.

3.4 Contact with other materials
The hoses must not come into contact with chemical products such as solvents, fuel, oil, grease, acids, disinfectants, etc., which may alter the physical-mechanical characteristics.

3.5 Heat sources
The temperature limit indicated in item 3.3 must be observed. When this is not possible, thermal protection must be used.

3.6 Storage conditions
The hoses must be stored in proper conditions, free from stress,

påvirkninger som vrid, tryk og anden fysisk påvirkning, ligesom opbevaring sammen med skarpe/spidse objekter bør undgås. Slangerne skal opbevares på specielle hylder, eller på en tør overflade.
De indpakkede slanger opbevares horisontalt, enkeltvis. Hvis man lægger slangerne ovenpå hinanden, må de kun stables så højt, at de slanger, der ligger nederst i stakken ikke mister formen permanent.
Den indre diameter på slangerullen må aldrig være mindre en 2x slangens bøjningsradius, som noteret på databladet.
Det anbefales, at slangerne ikke hænges op på en krog eller stok og at slanger, der leveres i rette længder, opbevares lige, fladt og ikke rulles op.

3.7 Gnavere og insekter
Slangerne skal beskyttes imod gnavere og insekter.
Hvis der er en sandsynlighed for angreb, bør der tages forholdsregler.

3.8 Opmærkning af emballage
Det anbefales, at slangerne altid er lette at identificere, uanset om de er emballeret eller ej.
For at kunne spore slangen, er det vigtigt, at mærkaten fra rullen opbevares.

3.9 Afhentning fra lager
Før levering bør slangerne undergå en komplet inspektion.

3.10 Tilbage på lager
Slanger, der har været i brug, skal rengøres inden de kommer tilbage på lager. Specielt slanger, der har været i kontakt med kemiske, eksplosive, brandfarlige, slidende eller ætsende stoffer. Efter endt rengøring undersøges om slangen stadig er brugbar.

4 • Normer og brugsmetoder
Når det er besluttet, hvilken slangen man ønsker at bruge, bør brugeren overveje de følgende installationskriterier:

4.1 Åbning af emballage
Emballagen bør åbnes med stor forsigtighed – specielt ved brug af kniv eller cutter.

4.2 Klargøring inden installation
Før installation er det vigtigt at undersøge om slangens egenskaber, dimension, længde og type stemmer overens med de ønskede specifikationer.
Desuden udføres en visuel inspektion for at sikre at slangen er i perfekt stand.

4.3 Håndtering
Slangerne håndteres med forsigtighed og det bør undgås at støde, trykke og trække slangerne hen over ru overflader.
Der må ikke trækkes hårdt i slangerne, når de bøjes eller knækkes.
Tunge slanger, som leveres i lige længder, bør transporteres på specielle støtter. Disse støtter må ikke være behandlet med produkter, der kan skade slangerne.

4.4 Tryk- og tæthedstest
Det arbejdstryk, der en angivet på slangen, bør ikke overskrides.
Efter installation, når de første bobler er væk, øges trykket langsomt for at teste installationen og utætheder. Dette udføres un-

compressions, or other deformations and contact with objects which may perforate or cut them must be avoided. The hoses should be stored on special shelves or on dry surfaces.
The packaged hoses must be stored horizontally and not piled up. If this is not possible the height of the pile must be so that permanent deformation of the hoses on the bottom or near it is avoided.
The internal diameter of the coil must never be less than double the bending radius declared by the manufacturer in aCaoutchoucordance with the technical standards. It is recommended that the hoses are not stored on shafts or hooks. It is also recommended that the hoses, which are delivered straight, are stored horizontally without bending them.

3.7 Rodents and insects
The hoses must be protected from rodents and insects.
If there is probable risk, adequate precautions must be taken.

3.8 Marking the packages
It is recommended that the hoses are always easily identifiable whether they are packaged or not.
To allow traceability the label of a product is needed.

3.9 Collection from storage
Before delivery their must be controlled in their entirety.

3.10 Return to storage
The hoses which have been used must be cleaned, before storage, from all the conveyed substances. Particular attention must be paid when chemical, explosive, inflammable, abrasive and corrosive substances have been used. After cleaning, check that the hose can be re-used.

4 • Norms and methods of use
After having chosen the type of hose, the user must take into consideration the following criteria for installation:

4.1 Opening the package
Pay attention when opening the packaging that the hose is not damaged due to the use of knives or cutters.

4.2 Pre-assembly checks
Before installation it is necessary the carefully check the characteristics of the hose to verify that the type, diameter and length conform to the requested specifications. A visual control must also be carried out to ensure that there are no obstructions, cuts, damaged cover or any other evident imperfection.

4.3 Movement
The hoses must be moved carefully, avoiding all blows, dragging on abrasive surfaces and compressions. The hoses must not be violently pulled when they are warped or kinked.
Heavy hoses, normally delivered in a straight horizontal position, must be placed on special supports for transportation. If wooden supports, or supports of any other material, are used they must not be treated or painted with substances that could damage the hoses.

4.4 Pressure and tightness test
The working pressure which is generally indicated on the hose must be respected. After installation, when the air bubbles have been eliminated, gradually increase the pressure up to the work-

der sikre forhold.

4.5 Temperatur
Slangerne skal bruges indenfor det angivne temperaturområde. Hvis i tvivl – kontakt producenten.
Arbejdstrykket, som angivet i kataloget, refererer til en temperatur på 23°C ± 2°C. Temperaturudsving kan mindske eller øge arbejdsværdierne for slangen.

4.6 Materiale, der skal føres i gennem slangen
PVC-slanger bør kun benyttes til transport af materialer, som de er produceret til. Hvis der er tvivl, kan det anbefales, at kontakte producenten. Når slangen ikke benyttes, bør tryk, vrid og andre udefra påvirkninger fjernes.
Hvis materialet der arbejdes med er farligt for mennesker eller miljø, bør der tages forholdsregler, så der ingen skade sker, hvis slangen sprænger, eller bliver kvast.
Resistensangivelse refererer til slangens innerliner.

4.7 Miljø/omgivelser
Slangerne skal benyttes i det miljø/de omgivelser, som de er skabt til.

4.8 Bøjningsradius
Installation med et buk, der er mindre end bøjningsradius, reducerer levetiden af slangen væsentligt og kan beskadige slangen. Det bør undgås at bøje slangen i nærheden af samlinger.

4.9 Vridning
Slangerne er ikke egnede til at arbejde med vridning, med mindre slangen er designet specielt til det.

4.10 Vibrationer
Vibrationer kan øge presset og varmepåvirkningen på slangen, specielt omkring samlingerne, hvor uventede trykbelastninger kan opstå. Derfor er det tilrådeligt, at der til den type opgaver, vælges slanger, der kan holde til den slags påvirkninger.

4.11 Knæk
Knæk på slangen bør undgås, da slangen derved udsættes for unødigt pres på plastikmaterialet.
Nogle knækker slangen for at stoppe flowet igennem. Dette kan slangen ikke holde til, af de ovennævnte grunde.

4.12 Udvælgelse af fittings
Slange og fittings skal være kompatible i forholdet til arbejdstryk ud fra producentens instruktioner. Koblinger/fittings, der har en større diameter end slangen, kan presse slangen, så forstærkningen eller inner lineren går i stykker, hvorimod fittings, der har en mindre diameter end slangen kan give problemer med at fæstne fittings ordentligt, utætheder.
Derudover må fittings ikke have skarpe kanter, der kan ødelægge slangen.
Vand, eller sæbevand kan bruges til at få kobling/fitting på plads. Brug ikke olie, eller aggressive stoffer, med mindre slangen er beregnet til disse.

ing pressure to test assembly and check for any leaks. This test must be carried out in safe conditions.

4.5 Temperature
The hoses must be used within the temperature limits which are generally indicated. If, in doubt, contact the manufacturer.
The working pressure indicated in the catalogue refers to a temperature of 23°C ± 2°C; different temperatures can lead to a different performance of the hose.

4.6 Transported products
The hoses must be used for the passage of substances for which they have been manufactured. If in any doubt it is always wise to contact the manufacturer. As far as is possible, the hoses must not remain under mechanical stress or pressure when not in use. If substances which are dangerous to health and/or the environment are transported, take any necessary measures to work in safe conditions if the hose should burst or be crushed.
The suitability refers to the lining of the hose.

4.7 Environmental conditions
The hoses must be used exclusively in the environmental conditions for which they have been manufactured.

4.8 Bending radius
Installation beneath the minimum bending radius considerably reduces the life and resistance of the hose and can cause damage. It is also necessary to avoid bending near the connections.

4.9 Torsion
The hoses are not made for working under torsion unless specifically designed for this purpose.

4.10 Vibrations
Vibrations can cause the hoses to undergo stress and possible overheating especially around the connections where, more frequently, premature bursts can oCaoutchoucur. Therefore, it is best to verify that the hoses are made to resist this type of stress.

4.11 Kinks
Kinks are to be avoided as the reinforcement and the plastic materials are subjected to excessive stress which could cause a burst or reduce the hose performance.
Some users tend to obstruct the passage of fluids by kinking the hose. This is to be avoided because of the a.m. reasons.

4.12 Choosing and assembling the fittings
As long as the manufacturer's instructions are carried out, compatibility between the working pressure of the connections and the hoses must always be checked. Fittings with a bigger diameter than the hose can cause abnormal stress that can break the hose reinforcement, or damage the inner layer, whilst the use of fittings with a smaller diameter can result in difficulties when tightening the hose, cause leakages, or in case of multi-layer hoses, cause infiltrations between the layers. Moreover the connections must not have sharp or cutting protuberances which could damage the hose. Water or soap and water can be used to insert the connections. Do not use products which contain oils or other aggressive products, unless they are the types of

Der bør ikke bruges vold ved påsætning af koblinger og fittings, da dette også kan ødelægge slangen.

4.13 Spredning af elektricitet
Hvis en konstant elektricitet ønskes skal producentens instruktioner overholdes; tests skal udføres for at måle og bekræfte konstant elektricitet. Strømstyrken måles med en almindelig strømmåler.

4.14 Permanent installation
Slangen skal være tilstrækkeligt understøttet, således at slangen under tryk kan flyttes normalt (forskellige længder, dimensioner, vrid etc.).

4.15 Bevægelig installation
For slanger der sidder fast på bevægelige installationer, kræves det at slangen er lang nok og at bevægelserne ikke slider eller vrider slangen mere, end den er skabt til, da dette vil skade slangen.

4.16 Identifikation
Selvklæbende tape kan benyttes, hvis yderligere opmærkning kræves. Ved brug af maling, bør det undersøges om denne er kompatibel med slangens specifikationer.

5 • Vedligehold
5.1 Vedligehold
Udover korrekt valg, lagring og installation af slangen, er regelmæssig korrekt vedligehold af slangen ligeså vigtigt.
Intervallet for hvornår vedligehold udføres er afhængigt af brugen af slangen. Der bør lægges ekstra vægt på samlinger og uregelmæssigheder, der kunne indikere en forringelse af slangen.
Herunder er listet nogle punkter over mulige uregelmæssigheder:
• Flænger, sprækker, slidmærker, ødelagt indpakning, rifter i inner- eller yderlineren, synlig tekstilarmering;
• Hvis slangen er deform, har bobler eller lokale udposninger under tryk;
• Hvis slangen er for blød eller for hård på specifikke steder;
• Hvis slangen lækker.
Disse uregelmæssigheder bør føre til udskiftning af slangen. Hvis der er en synlig udløbsdato på ydersiden af slangen, bør man rette sig efter denne – også selvom slangen ikke viser tegn på brug.

5.2 Reparationer
Hvis der er tegn på forringelse af slangen i enden, kan man nøjes med at klippe enden af.

5.3 Rengøring
Hvis producenten ikke har medsendt rengøringsinstruktioner, rengøres med vand og sæbe. Brug ikke opløsningsmidler (terpentin, paraffin, petroleum, etc.) eller kraftige rengøringsmidler. Brug ikke slidende materialer som metalbørster og sandpapir til at rengøre slangerne med.

6 • Bortskaffelse
Ved bortskaffelse af brugte slanger, skal lovene på affaldsområdet overholdes. Pas på miljøet.

hoses destined to be used with these. It is forbidden to force the hoses with wood hammers or similar tools. Avoid external collars or other tightening tools. The use of improvised collars (for example metal wire) with sharp ends or fixing ties which are too tight cause damage to the cover and the reinforcement.

4.13 Dissipation of static electricity
When electric continuity is required, the manufacturer's instructions must be observed; tests must be carried out to verify continuity between the connection and assembly. Check continuity with a normal tester.

4.14 Permanent installation
The hose must be adequately supported so that the pressurised hose can be moved normally (variations in length, diameter, torsion, etc.).

4.15 Moving installation
When the hose connects moving plants, it is necessary to check that the hose is long enough, that the movement does not cause the hose to undergo excessive strain and rubbing and that there is no stress, bending, traction or abnormal torsion.

4.16 Identification
If further marking is needed, self-adhesive tapes can be used.
When the use of paint is necessary, consult the manufacturer to verify compatibility with the hose cover. After having chosen the type of hose, the user must take into consideration the following criteria for installation:

5 • Maintenance
5.1 Maintenance
Even if the choice, storage and installation have been carried out correctly, regular maintenance is also necessary.
The frequency of the last is determined by the use of the hose. In normal controls particular attention must be paid to what regards connections and the presence of irregularities which indicate deterioration of the hose.
Here below a non-exhaustive list of the possible irregularities:
- slits, cracks, cuts, abrasions, ungluing, tears of the cover (or of the inner part) which let the reinforcement show through.
- Deformations, bubbles, local swelling under pressure.
- Too soft or too hard parts.
- Leaks.
These irregularities justify replacement of the hose. When the cover shows an expiry date this must be observed even if the hose does not show any clear use signs.

5.2 Repairs
Repairs are not recommended. If, however, deterioration is at one end of the hose, this end can be cut off.

5.3 Cleaning
If the hose manufacturer has not provided clear cleaning instructions, otherwise if necessary clean with soap water avoiding use of solvents (as petroleum, paraffin, other) and other cleaning solutions, that might damage the hose, harm people and or the environment. Never use abrasive, pointed or cutting tools for cleaning (metal brushes, sandpaper, etc.).

6 • Disposal
For a product's disposal the laws in force are to be respected. Do not pollute the environment.

7 • Håndtering af slanger med PVC-spiral

Læsningen er optimeret til transport. Ved modtagelse af godset, følges disse instruktioner.

Anbefaling til pallens overflade.

Ikke passende Not suitable

Passende Suitable

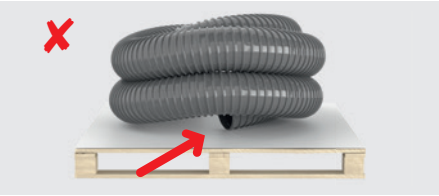
Bedste løsning Best Solution

For at øge levetiden af slanger med en stiv PVC-spiral, må de ikke ligge ud over pallens sider.
Læg gerne et stykke pap eller lignende i mellem pallen og slangen.

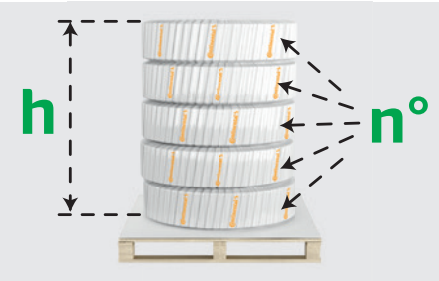
Hvis man ikke har en passende palle, bør slangen lægges direkte fladt på gulvet.

Håndter rullerne uden at støde eller skrabe dem imod gulv eller lignende.
Læg gerne et stykke pap eller lignende i mellem pallen og slangen.

Læg rullen på pallen med begge ender vendende opad.



Generelle instruktioner i max. højde og mængde af slanger på pallen.



Arizona Nevada Medium		Oregon		Luisiana California etc.	
Ø 25 ÷ Ø 89	h = 160 cm màx	Ø 20 ÷ Ø 90	h = 160 cm màx	Ø 25 ÷ Ø 90	h = 160 cm màx
Ø 90 ÷ Ø 120	n° = 4	Ø 100 ÷ Ø 130	n° = 5	Ø 100 ÷ Ø 120	n° = 5
Ø 125 ÷ Ø 152	n° = 3	Ø 140 ÷ Ø 200	n° = 4	Ø 125 ÷ Ø 152	n° = 4
> Ø 152	n° = 2	> Ø 200	n° = 3	> Ø 152	n° = 3

Special indpakning kan aftales i mellem kunde og sælger.

Hvis slangerne skal lagerføres over en længere periode bør mængden af slanger på pallen reduceres.

Man bør ikke lægge andre materialer på slangerne og de bør opbevares væk fra varmekilder der kan ødelægge dem.

7 • Preserve the hoses with PVC spiral

The loading is optimized for the transport.
On receipt of goods follow these instructions.

Recommendations for the structure of the pallet surface.

To improve the preservation and the life of the rigid PVC spiral the coils MUST NOT exceed the borders of the pallet.
Between the pallet and the coil put a cardboard sheet or something similar.

It's preferable to put the coils on the floor if the suitable pallets are not available.

Handle the coils avoiding shocks and scraping.
Between the surface of pallet and the first coil put a cardboard sheet or something similar.

Put the coils on the pallet with both hose ends facing upwards.

General indications how and how many coils to pile up ACCORDING to the structure.

Special packaging is to be agreed between the customer and the sales service.

If the goods are stocked for a longtime, the height or the number of coils is to be reduced.

You must not put other material on the coils and the hoses must not be exposed to heat which can deform them.