



## OIL&GAS Series

Tubi Termoplastici per il settore Oil&Gas e Offshore  
*Oil&Gas and Offshore thermoplastic hoses*





## La soluzione Offshore ZEC

**CARATTERISTICHE** La serie di **tubi termoplastici O&G** è stata creata per rispondere alle esigenze delle applicazioni legate al mondo della **perforazione ed estrazione di idrocarburi (off-shore) e navale**. In ogni caso ne viene suggerito l'uso laddove fattori come **leggerezza, compattezza, compatibilità chimica e durata di vita** sono particolarmente importanti, soprattutto quando in combinazione con **condizioni ambientali estreme**.

**NORMATIVA** La serie O&G risponde ai requisiti ed alle normative **API 17E** ed **ISO 13628-5** (Tubi Ombelicali).

**APPLICAZIONI** Può essere utilizzata per Circuiti Idraulici su piattaforme o sottomarini, Iniezione di Metanolo, Attrezzature di Sicurezza per l'estrazione (BOP), Veicoli Sottomarini a comando remoto, oltre alla gestione, bordo nave o piattaforma, di Gas compatibili (Aria, O<sub>2</sub>, Nitrox).

**PRESSIONE** La soluzione O&G parte dal diametro 3/16" (Pilot) fino ad 1", con pressioni anche diversificate sullo stesso diametro di **5.000, 10.000, 15.000 PSI** realizzabili in lunghezze importanti in pezzatura unica.

## ZEC Offshore solution

**FEATURES** *O&G series has been created to fulfill the requirements of Oil&Gas, Offshore, Marine applications where light weight, fluid compatibility, compactness and lifetime are important; especially in combination with very severe or extreme environmental conditions.*

**STANDARD** *Designed, manufactured and qualified in accordance with API 17E and ISO 13628-5 (Umbilical).*

**APPLICATIONS** *O&G series can be applied to Subsea Hydraulic Circuits, General Injections and Controls (Methanol injection), BOP controls, ROV connection, compatible gases handling, subsea and onto rigs/ vessels (Air, O<sub>2</sub>, Nitrox).*

**PRESSURE** *Complete range of long lengths solutions from 3/16" (Pilot Lines) to 1" ID – 5.000, 10.000 and 15.000 PSI working pressure.*



## Specifiche tecniche

- **Costruzione**  
anima interna in PA12/PA11, rinforzo con trecce in fibra aramidica, ricopertura in PU anti abrasione micro-forato.
- **Applicazione**  
le tubazioni della serie O&G sono state sviluppate per la conduzione ad alta pressione di polioli, solventi, vernici, aria, metanolo e tutti i gas compatibili.
- **Temperature di utilizzo**  
da -40°C a +100°C. Per aria, acqua e fluidi a base acquosa la temperatura massima di esercizio è +70°C.
- **Valore max. di vuoto**  
0.93 bar; 700 mm Hg
- **Pressioni d'esercizio**  
Rapporto di sicurezza 1:4, tubazioni consigliate per applicazioni dinamiche  
(\*) Rapporto di sicurezza 1:3, tubazioni adatte per applicazioni statiche e con ridotti impulsi di pressione
- **Specifiche:**
  - Conforme a ISO 13628-5 ed API 17E ad eccezione di 3/16" e 1/2" 10.000 psi
  - (Δ) conforme o superiore a SAE J1517 sez. 100R8 – ISO3949
  - (\*\*) con pressioni superiori alla norma SAE J517 100R8
- **Raccordi**  
Raccordi in acciaio AISI 316L.

## Technical Features

- **Construction**  
*Inside core in PA12/PA11, reinforcement with aramid fiber braids, anti-abrasion micro perforated urethane jacket.*
- **Application**  
*The O&G series hoses have been developed for the very high pressure conveying of polyols, solvents, paints, air, methanol and compatible gases.*
- **Temperature range**  
*-40°C to +100°C (-40°F to +212°F). Max working temperature in case of air, water and water based fluids is +70°C (+158°F).*
- **Vacuum rating**  
*0.93 bar; 700 mm Hg*
- **Working pressure**  
*Safety ratio 1:4, hoses suitable for dynamic application. (\*) Safety ratio 1:3, hoses suitable for static application with reduced pressure impulse*
- **Specifications:**
  - *meets standard ISO 13628-5 and API 17E except for 3/16" and 1/2" 10.000 psi*
  - *(Δ) meets or exceed standard SAE J517 sec. 100R8 – ISO 3949*
  - *(\*\*) exceeds SAE J517 100R8 pressure*
- **Fittings**  
*AISI 316L steel fittings*

## Scheda tecnica - Data Sheet



| CODE             | inch  | -dash | mm   | DN | inch  | mm   | bar   | psi   | mm  | inch | g/m | lbs/ft | FERRULE CODE   |
|------------------|-------|-------|------|----|-------|------|-------|-------|-----|------|-----|--------|----------------|
| HOG827100 (Δ)    | 3/16" | -3    | 4.8  | 5  | 0.394 | 10.0 | 345   | 5000  | 35  | 1.38 | 72  | 0.048  | BPI316R7       |
| HOG837100 (Δ)    | 1/4"  | -4    | 6.4  | 6  | 0.465 | 11.8 | 345   | 5000  | 50  | 1.97 | 84  | 0.056  | BPI14R7        |
| HOG8M37100 (**)  | 1/4"  | -4    | 6.4  | 6  | 0.583 | 14.8 | 689   | 10000 | 50  | 1.97 | 152 | 0.102  | BPI14R9R (1)   |
| HOG8M37100K3 (*) | 1/4"  | -4    | 6.4  | 6  | 0.583 | 14.8 | 1.034 | 15000 | 50  | 1.97 | 152 | 0.102  | BPI14R9R (1)   |
| HOG857100 (Δ)    | 3/8"  | -6    | 9.7  | 10 | 0.630 | 16.0 | 345   | 5000  | 80  | 3.15 | 139 | 0.093  | BPI38R7V       |
| HOG8M57100 (**)  | 3/8"  | -6    | 9.7  | 10 | 0.709 | 18.0 | 689   | 10000 | 90  | 3.54 | 197 | 0.132  | BPI38R9R (1)   |
| HOG867100 (Δ)    | 1/2"  | -8    | 13.0 | 12 | 0.866 | 22.0 | 345   | 5000  | 100 | 3.94 | 274 | 0.184  | BPI12R9R (1)   |
| HOG8M67100K3 (*) | 1/2"  | -8    | 13.0 | 12 | 0.945 | 24.0 | 689   | 10000 | 110 | 3.94 | 348 | 0.234  | BPI12HOG8M (1) |
| HOG877100 (**)   | 5/8"  | -10   | 16.0 | 16 | 1.004 | 25.5 | 345   | 5000  | 180 | 7.09 | 350 | 0.235  | BPI58MTKM (1)  |
| HOG887100 (**)   | 3/4"  | -12   | 19.1 | 19 | 1.134 | 28.8 | 345   | 5000  | 210 | 8.27 | 420 | 0.282  | BPI34R9R (1)   |
| HOG897100 (**)   | 1"    | -16   | 25.4 | 25 | 1.465 | 37.2 | 345   | 5000  | 230 | 9.06 | 587 | 0.394  | BPI1MTKM (1)   |

(1) Raccomandato l'utilizzo di raccordi tipo ZEC Multispiral / ZEC Multispiral fitting series recommended.

## Opzioni - Options

 Microforatura - Micro perforated

 Ricopertura - Cover

 Imballo - Packing

 Colore - Colors

 Multitubo - Multi hose

 Pezzature lunghe - Long length

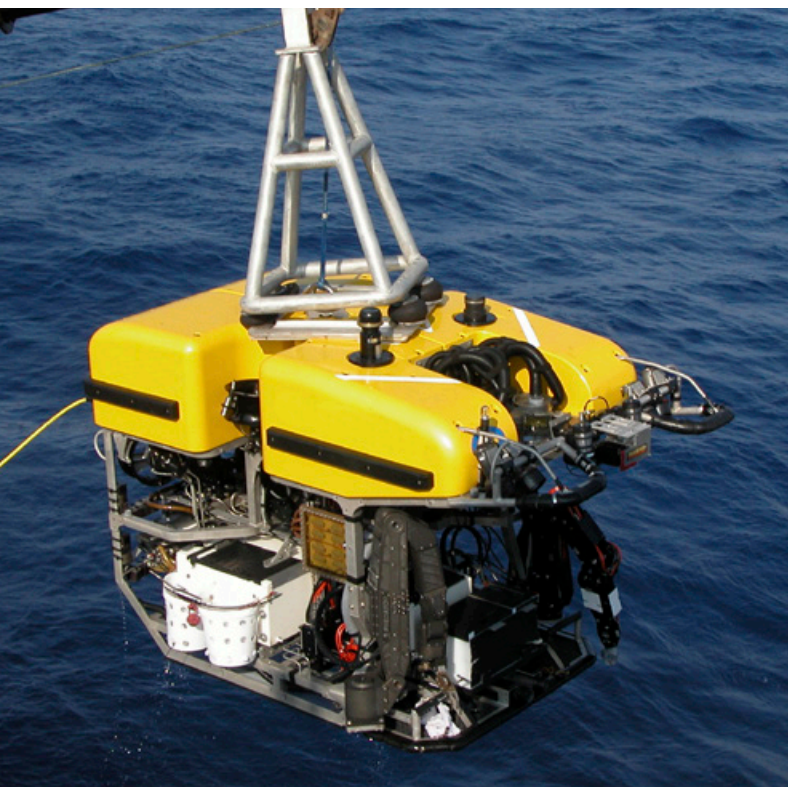


## OIL&GAS Series

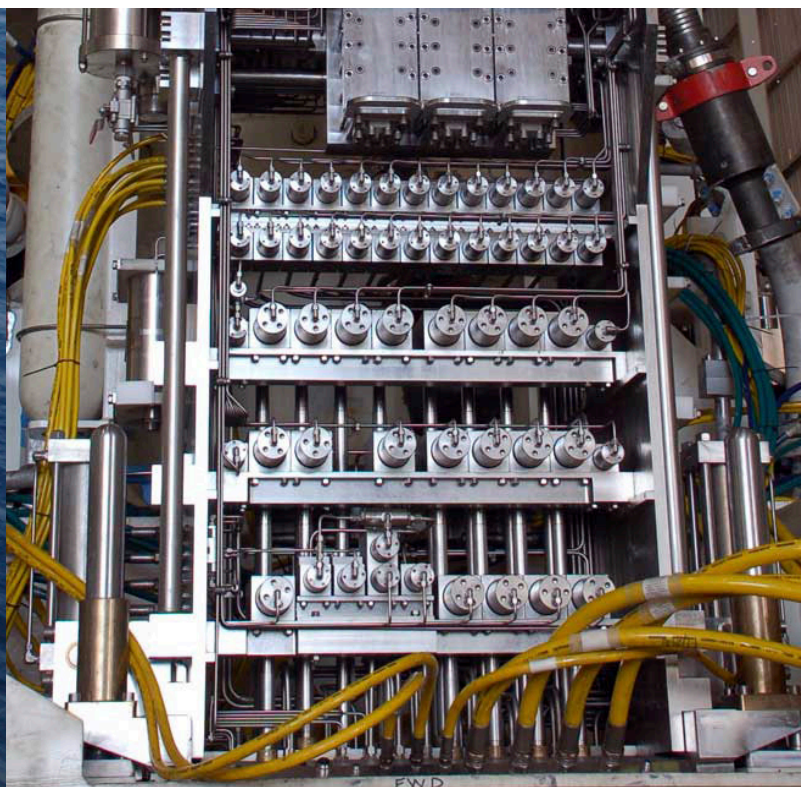


Ombelicali offshore - *Offshore umbilical bundle*

Connessioni veicolari a controllo remoto  
*Remote operating vehicle connection*

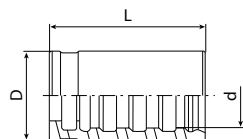


Sistemi BOP  
*BOP System*



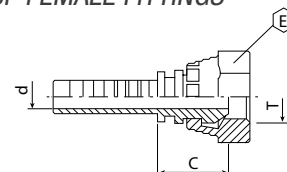
## Raccordi a pressione AISI316L - AISI316L Swaged Fittings

### BOCCOLE - FERRULE



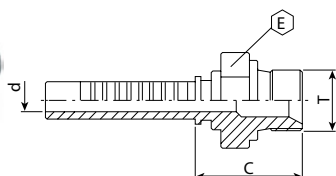
| CODE       | Hose  | D  | d    | L    | Multispiral |
|------------|-------|----|------|------|-------------|
| BPI316R7   | 3/16" | 15 | 10.7 | 27   |             |
| BPI14R7    | 1/4"  | 17 | 12.4 | 29   |             |
| BPI14R9R   | 1/4"  | 21 | 15.3 | 40   | •           |
| BPI38R7V   | 3/8"  | 22 | 17.0 | 32   |             |
| BPI38R9R   | 3/8"  | 26 | 18.7 | 43   | •           |
| BPI12R9R   | 1/2"  | 30 | 23.0 | 45   | •           |
| BPI12HOG8M | 1/2"  | 34 | 26.0 | 64.5 | •           |
| BPI58MTKM  | 5/8"  | 36 | 28.5 | 50   | •           |
| BPI34R9R   | 3/4"  | 38 | 29.4 | 55   | •           |
| BPI1MTKM   | 1"    | 50 | 40.5 | 75   | •           |

### RACCORDI FEMMINA BSP - BSP FEMALE FITTINGS



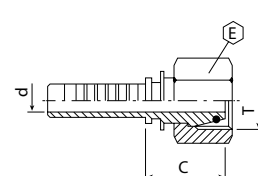
| CODE        | Hose  | T      | d   | E  | C  | Multispiral |
|-------------|-------|--------|-----|----|----|-------------|
| RPFDI14316  | 3/16" | 1/4-19 | 3   | 19 | 18 |             |
| RPFDI1414   | 1/4"  | 1/4-19 | 4   | 19 | 18 |             |
| RPFDI1414R9 | 1/4"  | 1/4-19 | 4   | 19 | 20 | •           |
| RPFDI3838   | 3/8"  | 3/8-19 | 7   | 22 | 20 |             |
| RPFDI3838R9 | 3/8"  | 3/8-19 | 7   | 22 | 21 | •           |
| RPFDI1212R9 | 1/2"  | 1/2-14 | 9.5 | 27 | 23 | •           |
| RPFDI5858R9 | 5/8"  | 5/8-14 | 12  | 30 | 23 | •           |
| RPFDI3434R9 | 3/4"  | 3/4-14 | 15  | 32 | 27 | •           |
| RPFDI11R9   | 1"    | 1-11   | 20  | 38 | 30 | •           |

### RACCORDI MASCHIO BSP - BSP MALE FITTINGS



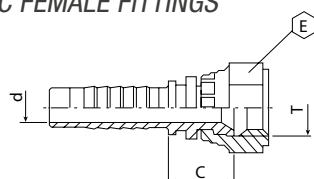
| CODE        | Hose  | T      | d   | E  | C  | Multispiral |
|-------------|-------|--------|-----|----|----|-------------|
| RPMDI14316  | 3/16" | 1/4-19 | 3   | 19 | 26 |             |
| RPMDI1414   | 1/4"  | 1/4-19 | 4   | 19 | 27 |             |
| RPMDI1414R9 | 1/4"  | 1/4-19 | 4   | 19 | 28 | •           |
| RPMDI3838   | 3/8"  | 3/8-19 | 7   | 22 | 29 |             |
| RPMDI3838R9 | 3/8"  | 3/8-19 | 7   | 22 | 30 | •           |
| RPMDI1212R9 | 1/2"  | 1/2-14 | 9.5 | 27 | 33 | •           |
| RPMDI5858R9 | 5/8"  | 5/8-14 | 12  | 30 | 35 | •           |
| RPMDI3434R9 | 3/4"  | 3/4-14 | 15  | 32 | 37 | •           |
| RPMDI11R9   | 1"    | 1-11   | 20  | 38 | 42 | •           |

### RACCORDI FEMMINA DKOS - DKOS FEMALE FITTINGS



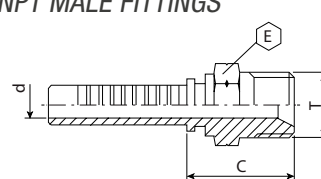
| CODE             | Hose  | T       | S  | d   | E  | C  | Multispiral |
|------------------|-------|---------|----|-----|----|----|-------------|
| RPFDIKOS16153168 | 3/16" | M16x1.5 | 8  | 3   | 19 | 25 |             |
| RPFDIKOS1615148  | 1/4"  | M16x1.5 | 8  | 4   | 19 | 25 |             |
| RPFDI161514R9    | 1/4"  | M16x1.5 | 8  | 4   | 19 | 27 | •           |
| RPFDIKOS20153812 | 3/8"  | M20x1.5 | 12 | 7   | 24 | 26 |             |
| RPFDI241538R9    | 3/8"  | M24x1.5 | 16 | 7   | 30 | 29 | •           |
| RPFDI241512R9    | 1/2"  | M24x1.5 | 16 | 9.5 | 30 | 29 | •           |
| RPFDI30258R9     | 5/8"  | M30x2   | 20 | 12  | 36 | 34 | •           |
| RPFDI36234R9     | 3/4"  | M36x2   | 25 | 15  | 41 | 41 | •           |
| RPFDI4221R9      | 1"    | M42x2   | 30 | 20  | 50 | 45 | •           |

### RACCORDI FEMMINA JIC - JIC FEMALE FITTINGS



| CODE           | Hose  | T         | d   | E  | C  | Multispiral |
|----------------|-------|-----------|-----|----|----|-------------|
| RPFDI716J316   | 3/16" | 7/16-20   | 3   | 15 | 13 |             |
| RPFDI716J14    | 1/4"  | 7/16-20   | 4   | 15 | 13 |             |
| RPFDI716J14R9  | 1/4"  | 7/16-20   | 4   | 14 | 16 | •           |
| RPFDI34J38     | 3/8"  | 3/4-16    | 7   | 24 | 16 |             |
| RPFDI916J38R9  | 3/8"  | 9/16-18   | 7   | 19 | 18 | •           |
| RPFDI34J12R9   | 1/2"  | 3/4-16    | 9.5 | 24 | 20 | •           |
| RPFDI78J58R9   | 5/8"  | 7/8-14    | 12  | 27 | 21 | •           |
| RPFDI1116J34R9 | 3/4"  | 1.1/16-12 | 15  | 32 | 23 | •           |
| RPFDI1516J1R9  | 1"    | 1.5/16-12 | 20  | 41 | 27 | •           |

### RACCORDI MASCHIO NPT - NPT MALE FITTINGS



| CODE           | Hose  | T        | d   | E  | C  | Multispiral |
|----------------|-------|----------|-----|----|----|-------------|
| RPMDI18NPT316  | 3/16" | 1/8-27   | 3   | 12 | 22 |             |
| RPMDI14NPT14   | 1/4"  | 1/4-18   | 4   | 15 | 28 |             |
| RPMDI38NPT14R9 | 1/4"  | 3/8-18   | 4   | 19 | 29 | •           |
| RPMDI12NPT38   | 3/8"  | 1/2-14   | 7   | 22 | 34 |             |
| RPMDI38NPT38R9 | 3/8"  | 3/8-18   | 7   | 19 | 29 | •           |
| RPMDI12NPT12R9 | 1/2"  | 1/2-14   | 9.5 | 22 | 35 | •           |
| RPMDI34NPT58R9 | 5/8"  | 3/4-14   | 12  | 27 | 36 | •           |
| RPMDI34NPT34R9 | 3/4"  | 3/4-14   | 15  | 30 | 39 | •           |
| RPMDI1NPT1R9   | 1"    | 1-11.1/2 | 20  | 36 | 46 | •           |

I valori menzionati in questo documento sono forniti a titolo puramente indicativo al fine di consentire una prima valutazione sulle possibilità di impiego dei prodotti. La nostra produzione potrà essere variata senza impegno di alcun preavviso alla nostra clientela.

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THERMOPLASTIC TUBING AND HOSES

