

PALM

Tecnologia em Alta Pressão

☎ +55 21 2518-2555

☎ +55 21 99972-3948

✉ admin@palmtecnologia.com.br

🌐 www.palmtecnologia.com.br



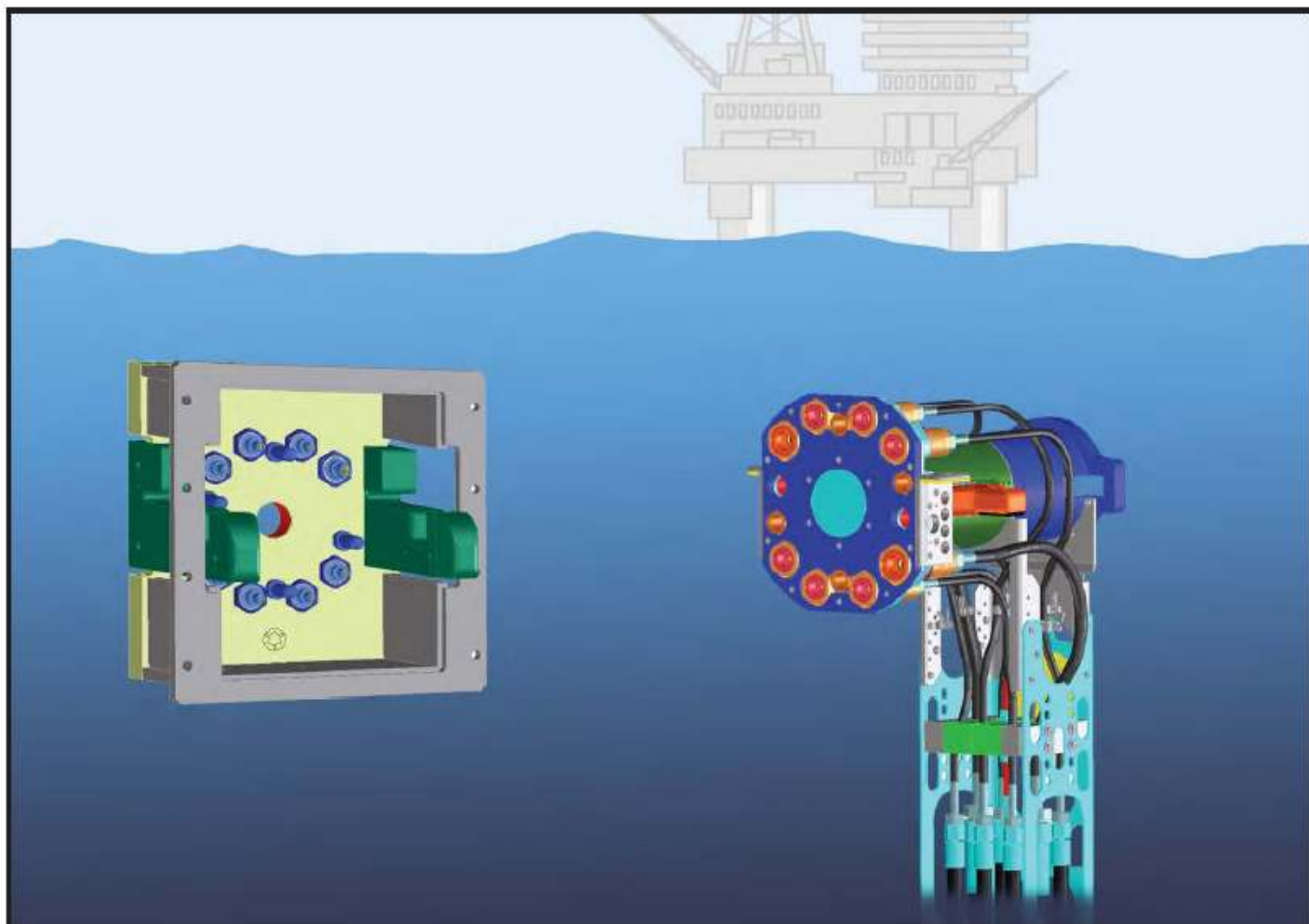
walther
präzision

WalCoDo

WALTHER CONNECTING & DOCKING

Subsea Technology HFL Systems

Type 91561



The design is based on two requirements, which are reliability and ease of use. For the implementation of these parameters, only proven technology and components were used. As a result, this system allows the customer to operate easier and quicker compared with existing systems.

The modularity of the approach ensures different versions without compromising the proven technology.

Key Features:

- Seawater depth up to 3.000 m.
- Operational interface for torque tool to ISO 13628-8 class 4.
- Normal operation torque 1.350 Nm (= max. setting of class 3).
- Emergency break away torque 2.700 Nm (= max. setting of class 4).
- Connection and disconnection at full working pressure possible (also emergency disconnection).
- Hose bundle built by coiled single hoses, wrapped and protected against mechanical damage by 5 mm thick high density polyethylene spiral.
- HFL bend radius min. 600 mm + 25% for dynamic movement. Central stainless steel wire for pull loads up to 5000 N.
- Hose bundle terminated in strain relief flange and single line clamping flange, coupling elements equipped with welded tubing, bent into position to meet single hoses torsion and torque free.

Project-related Features:

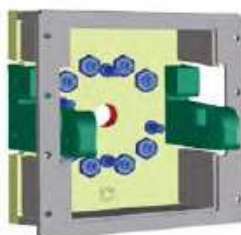
- Population of elements (up to 14 elements, see population table).
- Strain relief (according to customer requirements).
- Working pressure up to 69 MPa (10.000 psi), line sizes 1/4" – 1".
- Jumper length adapted to customer requirements.
- High collapse resistant hoses available (HCR).
- Umbilical with outer sheathing instead of hose bundle with spiral available.

Operation Sequence:

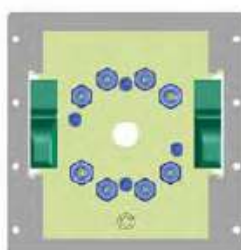
- Transport and placement of MQC free half by ROV to fixed half and dropping in position.
- Prepositioned unit is driven to connect by activation of rotary action of torque tool.
- The fine centring and mating of coupling elements is done without further action by the ROV operator.

Order nos. according to table 'Selection of Standard Populations', Example B:

91561-B-00004-AAAI-Y01	- HFL, 8 way, jumper length 5 metres, ROV stab plates on both ends (other lengths available)
91561-B-00007-AAAJ-Y01	- HFL, 8 way, jumper length 15 metres, ROV stab plate on one end (other lengths available)
91561-2-FT004-AAAE-Y01-AA	- Receptacle, tube tail termination
91561-0-LT004-AAAL-Y03-AA	- Simplified free half stab plate to test and flush receptacles
91561-2-FT004-AAAK-Y02-AA	- Simplified fixed half stab plate to test and flush HFL
91561-0-LT005-AAAN-Y04-AA	- Cross over free half (picture see on reverse)



Receptacle front view

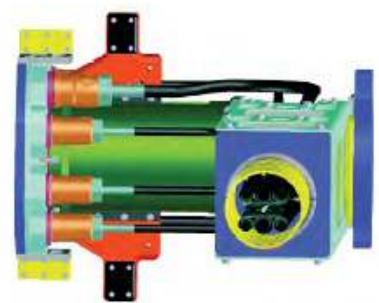


Hose Specifications:

Diameter	Working pressure WP [MPa, (PSI)]	Burst pressure WP [MPa, (PSI)]	Minimum Bend radius [mm]	Weight in Air [kg/m]	Core Material	Pressure Reinforcement	Cover
1/4"	69 (10.000)	350 (50.750)	150	0,31	Methanol washed PA 11	High strength wire	PA 12 black
3/8"	69 (10.000)	350 (50.750)	190	0,47			
1/2"	69 (10.000)	325 (47.125)	200	0,94			
3/4"	69 (10.000)	250 (3.625)	250	1,46			
1"	56 (8.120)	225 (3.262)	300	2,00			

Selection of Standard Populations

Line size	Example A [MPa, (PSI)]	Example B [MPa, (PSI)]	Example C [MPa, (PSI)]
1/4"		_____	
3/8"	12 x 69 (10.000)	_____	6 x 69 (10.000)
1/2"	2 x 69 (10.000)	2 x 69 (10.000)	1 x 69 (10.000)
1/2"		4 x 34,5 (5.000)	2 x 34,5 (5.000)
3/4"	_____	2 x 69 (10.000)	2 x 69 (10.000)
1"	_____	_____	1 x 34,5 (5.000)
Total	14 way	8 way	12 way



Population - Determination: $F_{P(max. allowed)} = 142 \text{ kN} > F_{P(specific)}$

$$F_{P(specific)} [\text{kN}] = \sum_{\text{Elements}} S_{\text{Element}} [\text{mm}^2] \cdot WP_{\text{Element}} [\text{MPa}]$$

* Other $F_{P(max. allowed)}$ available on request

Elements	Suitable for line size	Working pressure WP _{Pmax} [MPa, (PSI)]	Surface S [mm ²]
OM-006	1/4"; 3/8"	69 (10.000)	90
OM-010	1/2"	69 (10.000)	215
OM-016	3/4"; 1"	56 (8.120)	435

Conversion: 145 psi = 1 MPa = 10 bar

Geometrical restraints might apply! Please use our service for a feasibility check.



Materials:

Stainless steel 1.4404 (AISI 316L) and similar, high corrosion and sea water resistant
Bronze 2.0966.97

Primary seals: PEEK

Back up and secondary seals: FKM for hydraulic service.

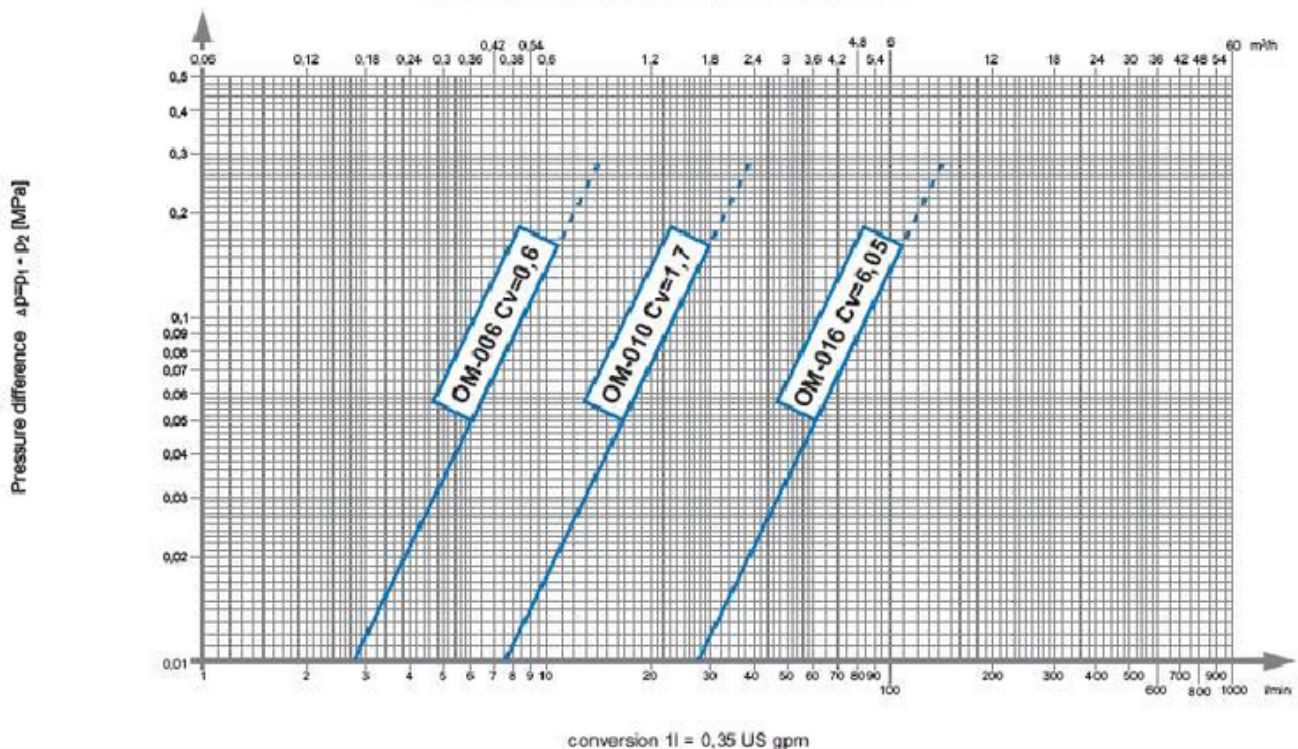
FFKM for chemical injection / methanol service.

The seal technology of Walther coupling elements allows
> 100 connection cycles without seal exchange.

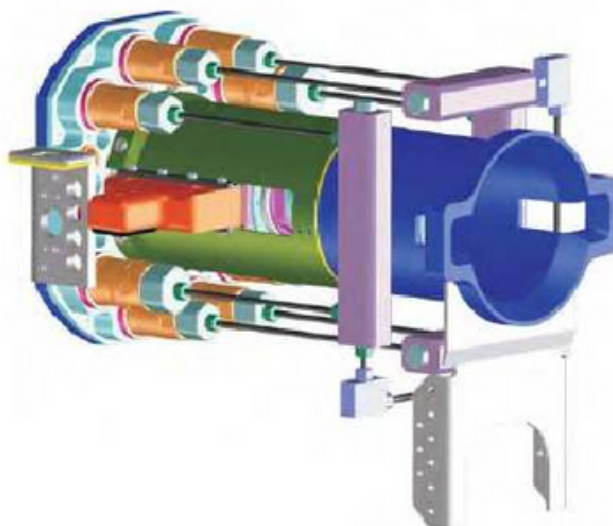
HCR versions are available, too.

Performance diagramme / sealing on both sides

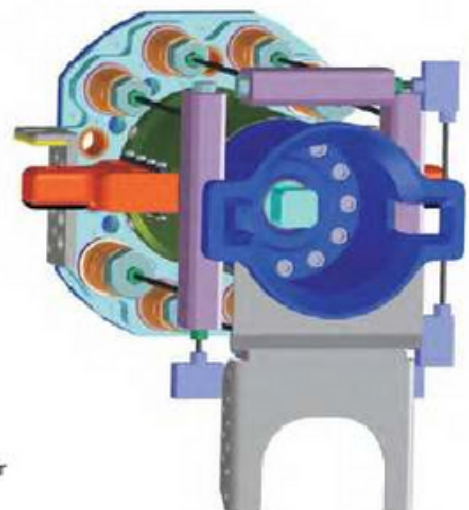
Flow rates Cv: test acc. to DIN IEC 534 with water at 20 °C



WALTHER-PRÄZISION - WKA rev. 01/2010 - subject to alterations



Cross over



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HIDRÁULICA
PNEUMÁTICA
GÁS
TESTES

WALTHER-PRÄZISION Carl Kurt Walther GmbH & Co. KG

Hausadresse / Head office:
Westfalenstraße 2
42781 Haan, Germany
Telefon: +49 (0) 21 29 567-0
Telefax: +49 (0) 21 29 567-450

Postadresse / Postal address:
Postfach 420444
42404 Haan, Germany
eMail: info@walther-praezision.de
Internet: www.walther-praezision.de



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