



RO-SERIES COUPLING SUMMARY

The RO-Series hydraulic coupling product line was developed for diver or ROV make-up applications requiring the highest possible reliability. Couplings in this series can be provided for working pressures up to 17,500 psi and water depths to over 5500 meters (18,300 feet) with proper seal selection. Constructed of 316 stainless steel and premium Nitronic stainless steel, the RO-Series couplings feature our patented metal-to-metal seal and secondary elastomer dovetail crown seal system designed for ease of seal replacement. RO-Series coupling designs are tailored to customer mounting and end connection specifications.

Applications

The RO-Series couplings are used in hot stab applications for subsea trees, control pods, manifolds/templates, chemical injection, etc.



Subsea Technologies

RO-SERIES MALE HYDRAULIC COUPLING DATA SHEET

Body Material

Nitronic 50 HS

Component Materials	
Poppet Assembly	K500/316 SS
Spring	Elgiloy/Inconel X-750
Spring Seat	316 SS
Spring Seat Retainer	316 SS/Elgiloy
Thrust Washer	Nitronic 60/50 HS
Washer Retaining Clip	Inconel X-750
Retaining Nut	Nit 60/Nit 50 HS/316 SS
Guide Sleeve	Nit 50 HS

Seal Material		
Poppet Seal	Delrin	(-DL)

Options		
Poppet Seal	PEEK	(-PK)
Poppet	Bleeder	(-B)
	No Poppet	(-NP)

Performance				
Part Series	Pressure Rating		Flow Coefficient (Cv)	
	Delrin Poppet Seal	PEEK Poppet Seal	Poppet (200 psi)	No Poppet
RO-4-A (1/4")	10,000 psi	17,500 psi	.53	2.6
RO-8-A (1/2")	10,000 psi	15,000 psi	1.9 ²	6.7
RO-16-A (1")	10,000 psi	15,000 psi	5.5	16.4

Notes:

1. Coupling Drawings or Part-Specific Data Sheets take precedence.
2. Cv = 1.2 when equipped with 800 psi cracking-pressure poppet spring.



Subsea Technologies

RO-SERIES FEMALE HYDRAULIC COUPLING DATA SHEET¹

Body Material

Nitronic 50 HS

Component Materials		Seal Materials	
Seal Retainer	Nitronic 60 HS/ ToughMet 3 AT 110	Crown Seal	Fluorotrel 1507
Seal Retainer Nut	Nitronic 60 HS/ ToughMet 3 AT 110	O-rings	Nitrile 90D
Poppet Assembly	K500/316 SS	Metal Seal	Inconel X-750-Gold Plated
Spring	Elgiloy/Inconel X-750	Poppet Seal	Delrin
Spring Seat	316 SS		
Spring Seat Retainer	316 SS/Elgiloy		
Thrust Washer	Nitronic 60/50 HS		
Washer Retaining Clip	Inconel X-750		
Retaining Nut	Nit 60/Nit 50 HS/316 SS		
T-Handle	316 SS		

Options		
Poppet Seal	PEEK	(-PK)
Crown Seal	PEEK	(-PK)
	Dual PEEK	(-PK2)
	Glass Filled Teflon w/Nickel	(-GTFEN)
O-rings	Viton	(-V)
	Chemraz	(-C510)
	HNBR	(-2269)
Poppet	Bleeder	(-B)
	No Poppet	(-NP)

Performance						
Part Series	Pressure Rating		Max Working Depth		Flow Coefficient (Cv)	
	Delrin Poppet Seal	PEEK Poppet Seal	Crown Seal Materials		Poppet (200 psi)	No Poppet
RO-4-B (1/4")	10,000 psi	17,500 psi	Dual PEEK	22,800ft (6950 m)	0.53	2.6
RO-8-B (1/2")	10,000 psi	15,000 psi	Dual PEEK	22,800ft (6950 m)	1.9 ²	6.7
RO-16-B (1")	10,000 psi	15,000 psi	Dual PEEK	22,800ft (6950 m)	5.5	16.4

- Note
1. Coupling Drawings or Part-Specific Data Sheets take precedence.
 2. Cv = 1.2 when equipped with 800 psi cracking-pressure poppet spring.