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Leader of offshore / marine equipment business



We have been producing and supplying the VRC(Valve Remote Control) system which is a vital component to all ships from general merchant ships to specialised vessels such as FPSO, etc. since Scana Korea Hydraulic Ltd. was established in 1998.

We have been fulfilling customer satisfaction by providing the best quality and service on the basis of the rich experience and technical skills of SKH(Scana Korea Hydraulic) and the expertise offered by Scana Skarpenord AS in Norway, which is well respected to the shipbuilding and offshore / marine equipment industry.

Thanks to the support of our customers, Scana Korea Hydraulic Ltd has grown significantly. This has allowed us to relocate to a new purpose build factory and office complex located in Gimhae industrial complex. Accordingly, in the years ahead Scana Korea will move forward and become a company following the VISION 2020 slogan and will proceed to develop and strengthen our R&D capabilities.

- * Leader of VRC system
- * First-class company
- * Company of co-existence

Valve Remote Control

The Valve Remote Control system manufactured by Scana is designed according to specifications given by the client, and according to Classification Society's requirements. Our engineering department has over the year's accumulated considerable amount of experience and technical know-how and will in cooperation with the client select the best alternative.

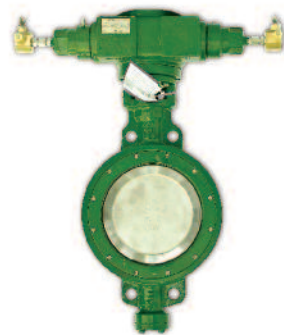
The Valve Remote Control system consists of

- Hydraulic Actuators (Single - and double acting)
- Hydraulic Power Unit
- Solenoid Valve Cabinet
- Control Console

Marine

Hydraulic Actuator (Single and double acting)

The actuator operates ball and butterfly valves. The design simplifies maintenance and installation, which gives the customer a cost effective product.



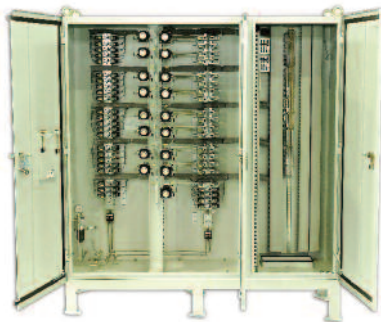
Hydraulic Power Unit (HPU)

The hydraulic power unit with oil reservoir, hydraulic pumps and accumulator unit feeds the system with high-pressure oil. All components are selected to ensure high reliability and low maintenance cost.



Solenoid Valve Cabinet

The cabinet contains solenoid operated directional valves for distribution of high-pressure oil to the actuators. Valve position can be measured indirectly and transferred to the ICS or conventional Control console via one single cable unit.



Control Console

Control Console is provided for centralized control of all valves included in the system. The Control Consoles are often designed and manufactured to include other Cargo Handling and Monitoring system. The Control Console can be replaced by a computerized package.



Offshore

The superiority and reliability of our products have been recognized as the best from our clients and we have been successfully supplying to the following offshore projects continuously.

- | | |
|--|--------------------------------|
| - Conoco Phillips LNG-FSO : built by SAMSUNG | - SHELL LNG-FPSO at SAMSUNG |
| - TOTAL DALIA FPSO : built by SAMSUNG and DSME | - INPEX ICHTHYS CPF at SAMSUNG |
| - AGBAMI FPSO : built by DSME | - INPEX ICHTHYS FPSO at DSME |
| - TOTAL AKPO and USAN FPSO : built by HYUNDAI | - PETRONAS FLNG at DSME |
| - TOTAL PAZFLO and CLOV FPSO : built by DSME | |

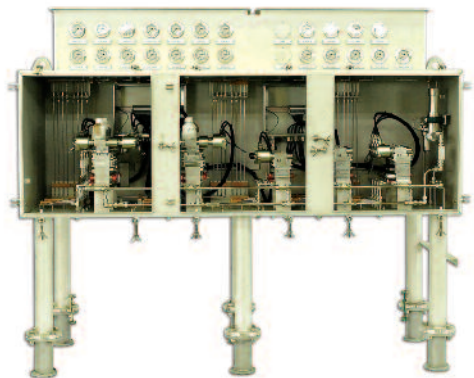
Hydraulic Actuator

The Scana hydraulic actuators can be delivered as both double acting and single acting type. Quarter turn actuators are delivered with adjustable stroke or fixed 90 degree rotation with mechanical locking.



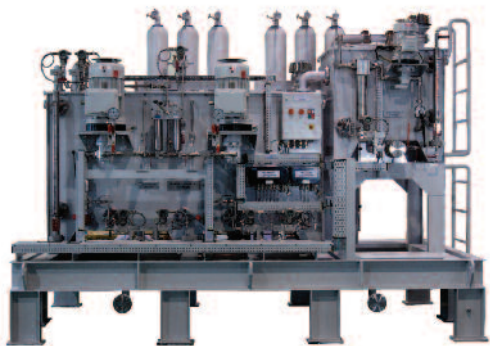
Local Control Panel

Stainless steel control circuits are delivered as panels and enclosed cabinets and with various functions. All designed and built to meet the client specification. High quality components are chosen to secure the best possible safety and performance.



Hydraulic Power Unit (HPU)

Taylor made hydraulic power units for various types of system service. Various control and monitoring solutions are available, and different back-up/accumulator arrangements can be delivered.

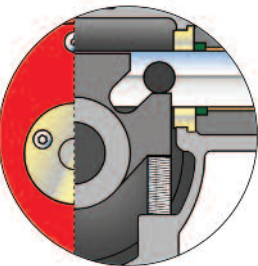
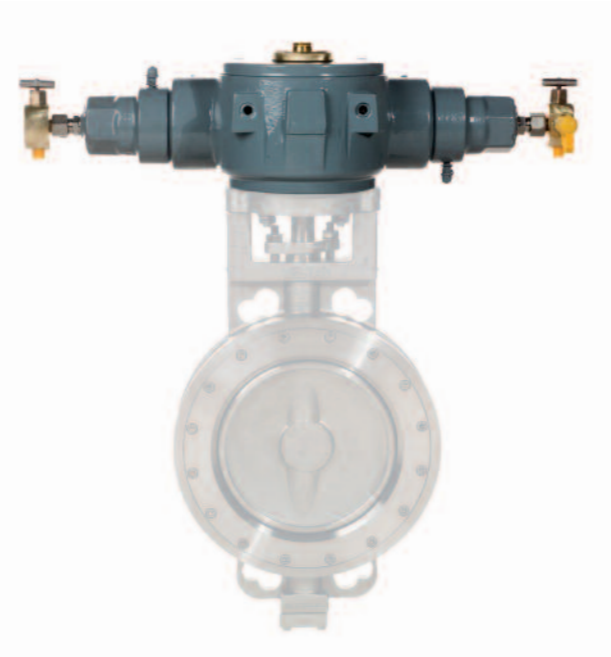


Hydraulic actuator, double acting

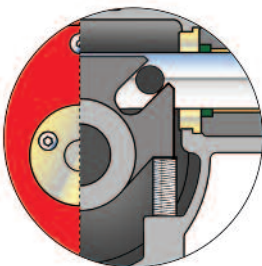
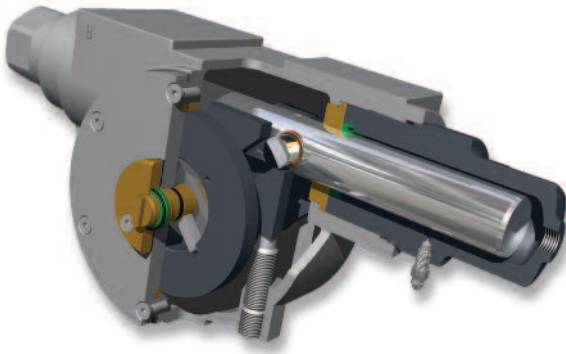
- Type : 1/4 turn hydraulic actuator
RA2 - Mechanical locking
RB2 - Adjustable stroke
- * Scotch-yoke design, piston type
 - * Local visual position indicator
 - * Manual operation by stationary hand pump or by portable hand pump via quick connectors
 - * Connection flange according to ISO 5211

Max hydraulic working pressure 220 bar
Actuator torque range 69 - 64550 Nm
Service temperature -45°C to +120°C

Use area : For dry and submerged purpose (for submerged type "SBM" a seal connection kit is added).



ACTUATOR WITH MECHANICAL LOCK



ACTUATOR WITH ADJUSTABLE STROKE

Materials

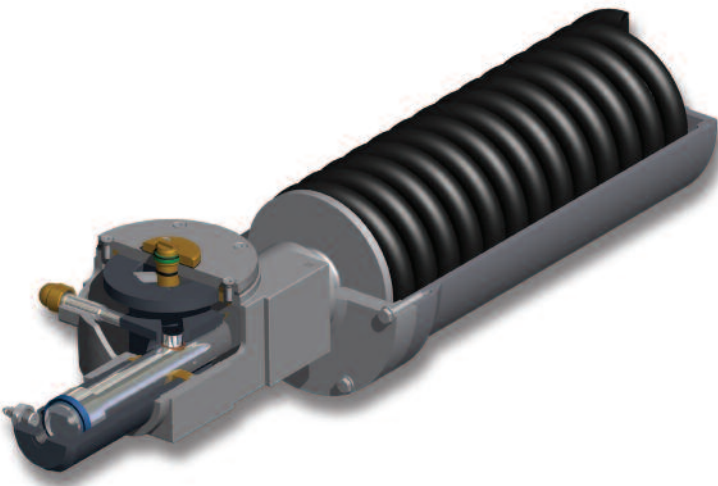
PART NAME	MATERIAL
CENTRAL BODY, DRIVE FORK	NODULAR CAST IRON
CYLINDER	NODULAR CAST IRON / CARBON STEEL
TOP COVER	CARBON STEEL
PLSTON ROD	CHROME PLATED CARBON STEEL
CROSS PIN	TEMPERED STEEL
END ADJUSTMENT SCREW, CAP NUT	STAINLESS STEEL
PISTON SEALINGS	POLYURETHANE
O-RINGS	NITRILE
SCREWS, NUTS AND WASHERS	STAINLESS STEEL

Hydraulic actuator, single acting

- Type : 1/4 turn hydraulic actuator
RE2 - Spring-to-close action
RF2 - Spring-to-open action
- * Scotch-yoke design, piston type
 - * Local visual position indicator
 - * Stationary hand pump or quick connectors for portable hand pump
 - * Connection flange according to ISO 5211

Available torque up to 17800 Nm (Larger actuators on request) Service temperature -45°C to +120°C

Use area : For dry and submerged purpose (for submerged type "SBM" a seal connection kit is added).



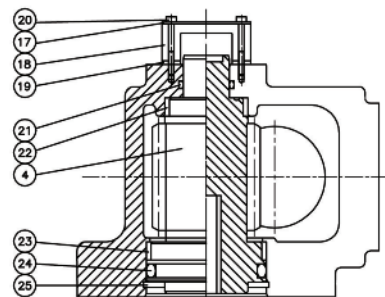
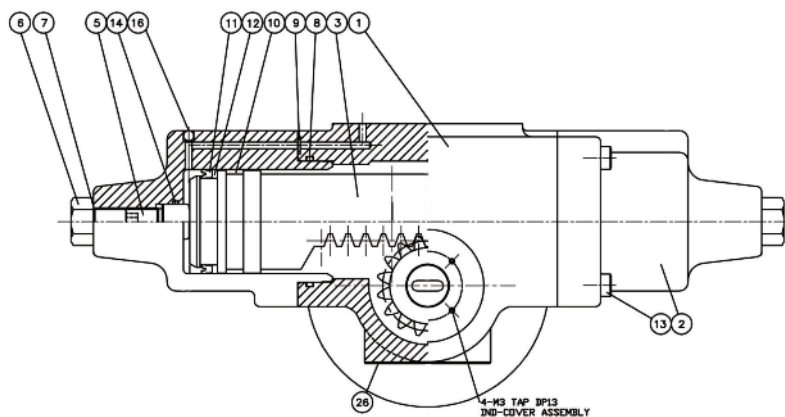
Materials

PART NAME	MATERIAL
CENTRAL BODY, DRIVE FORK	NODULAR CAST IRON
CYLINDER	NODULAR CAST IRON / CARBON STEEL
SPRING HOUSE	NODULAR CAST IRON / CARBON STEEL
HELICOIL SPRING	SPRING WIRE
TOP COVER	CARBON STEEL
PISTON ROD	CHROME PLATED CARBON STEEL
CROSS PIN	TEMPERED STEEL
END ADJUSTMENT SCREW, CAP NUT	STAINLESS STEEL
PISTON SEALINGS	POLYURETHANE
O-RINGS	NITRILE
SCREWS, NUTS AND WASHERS	STAINLESS STEEL

Rack & Pinion Actuator

Type : 1/4 turn hydraulic actuator

- * Rack & Pinion design, piston type
- * Local visual position indicator
- * Manual operation by stationary hand pump or by portable hand pump via quick connectors
- * Connection flange according to ISO 5211



NO	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	HOUSING	FCD45	1	-
2	CYLINDER	FCD45	2	-
3	RACK	SCM440	1	ø65x234
4	PINION	SCM440	1	ø65x129
5	STROKE LIMITER	SCM440	2	M16x36
6	PLUG CAP	CABON SEEL	2	M16x1.5P
7	O-RING	NBR	2	P14
8	O-RING	NBR	2	G70
9	O-RING	NBR	2	P8
10	WEARING	PHENOLIC	2	ø60xø50x10H
11	U-PACKING	POLYURETHANE	2	ø60xø50x6H(OSI)
12	BACKUPRING	TEFLON	2	ø60xø50x3
13	WRENCH BOLT	SCM440	8	M12x45

NO	DESCRIPTION	MATERIAL	Q'TY	REMARK
14	O-RING	NBR	2	BP20
16	EXPANDER	SUS316	2	ø6
17	IND-PLATE	SUS316	1	ø48xø28x1T
18	IND-COVER	ACRYLIC	1	ø48x20
19	IND-GASKET	NBR	1	ø48xø28x1T
20	WRENCHBOLT	SCM440	4	M3x30
21	O-RING	NBR	1	G25
22	WEARING	PHENOLIC	1	ø45xø40x10H
23	WEARING	PHENOLIC	1	ø60xø60x10H
24	O-RING	NBR	1	P55
25	SNAPRING	SWP-A	1	65(HOLE)
26	NAME PLATE	SUS316	1	72x44x1T



Scana Korea Hydraulic Ltd is a sales representative for ;

Scana Offshore Vestby AS
Offloading Systems/Winches and Mooring System/Turret/Swivel

Scana Steel Stavanger AS
High-alloy castings, Forgings and Wear-resistant steel

Scana Propulsion AS
Gears/Propellers and Propulsion System/ Tunnel Thrusters

KROHNE Skarpenord AS
Cargo and tank monitoring system, EcoMATE system/Coriolis Mass Flowmeters