



DONG-I

Hidraulički upravljački uređaji



DONG-I INDUSTRIAL CO., LTD.

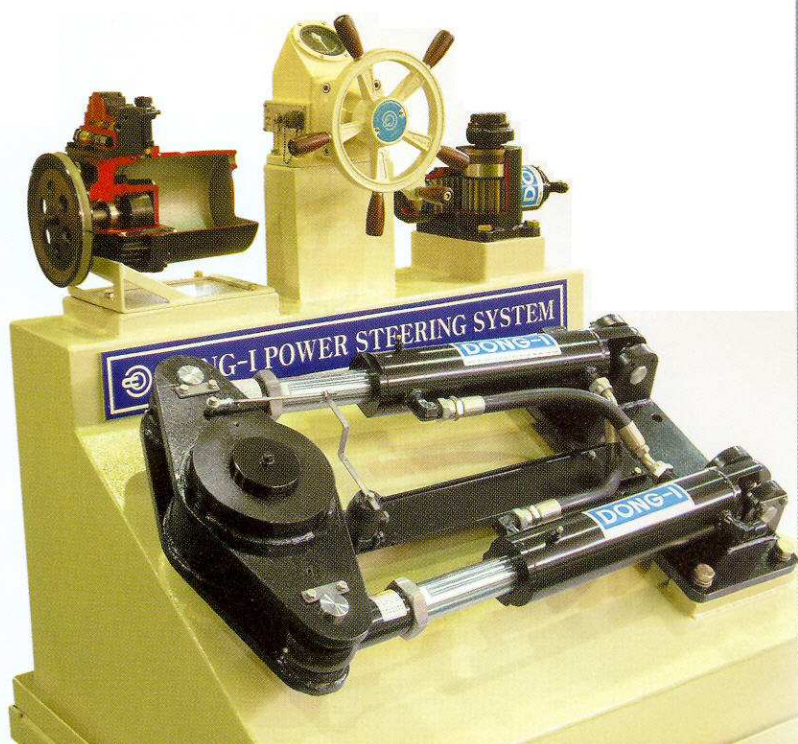
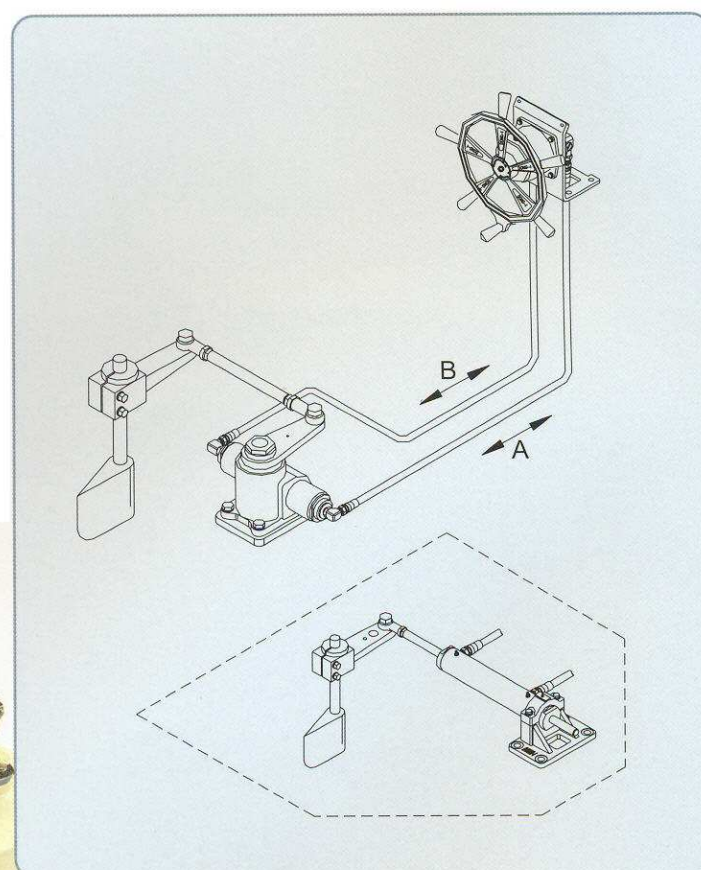
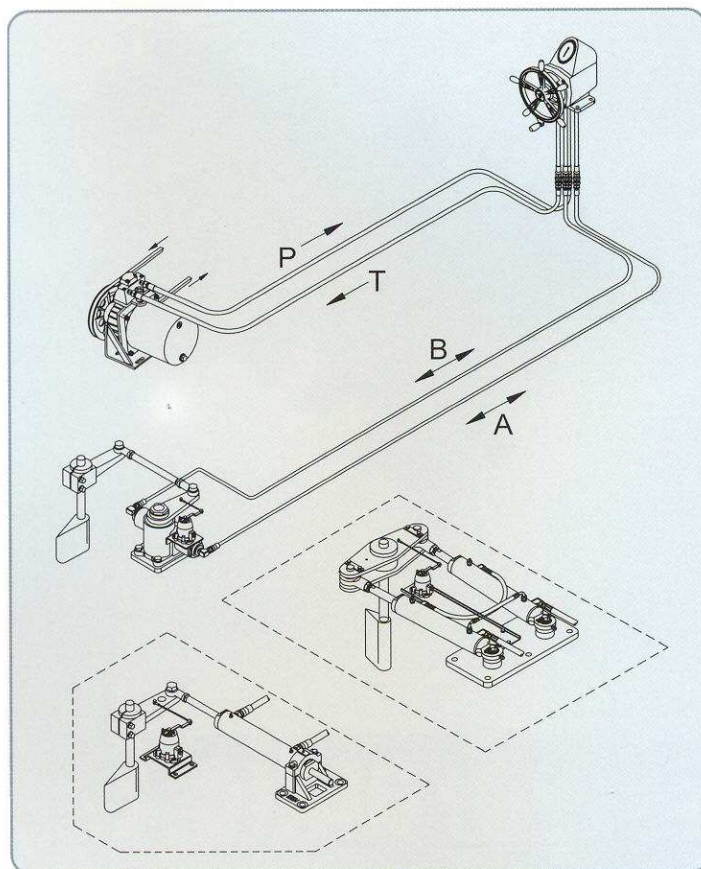
Klasifikacija i Modeli

● Servo sustav - Power Steering

MODEL	TIP CILINDRA	MAX. MOMENT pri 35° (Nm)
DPS-120S4.6	Jedan linijski	1176
DPS-150S3.7		1470
DPS-150S5.8		
DPS-160R3.5	Rotacijski	1569
DPS-160R5.5		
DPS-350T5.7	Dvostruki linijski	3432
DPS-650T10.7		6374
DPS-1500T11.1		14709
DPS-350TW5.7	Aplikacija sa dva kormila	3432
DPS-650TW10.7		6374
DPS-1500TW11.1		14709

● Manualni sustav

MODEL	TIP CILINDRA	MAX. MOMENT pri 35° (Nm)
DMS-066S6.7	Jedan linijski	66
DMS-093S9.1		93
DMS-116S11.3		116
DMS-071R7.9	Rotacijski	71





Odabir upravljačkog uređaja

Izračun okretnog momenta kormila

Odabir hidrauličkog upravljačkog sustava se vrši preko okretnog momenta kormila.
Formula za izračun okretnog momenta:

$$\text{Okretni moment (kgf}\cdot\text{m)} = P_n \times r$$

$$P_n = 31.2 \times A \times V^2 \times \sin \theta$$

“ P_n ” predstavlja vrijednost tlaka na kormilu

“ $\sin \theta$ ” predstavlja vrijednost maksimalnog kuta kormila od desne strane do centra i lijeve strane do centra

($\sin 35^\circ = 0.5736$, $\sin 40^\circ = 0.6458$)

$$A = a \times b \text{ (m}^2\text{)}$$

“ A ” predstavlja ukupnu površinu kormila u m^2

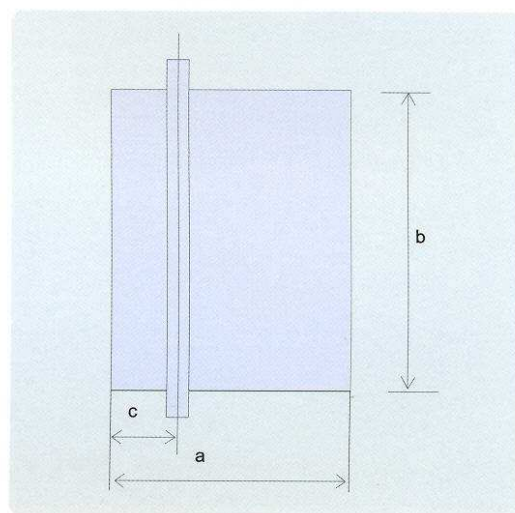
V = maksimalna brzina plovila u čvorovima

$$r = (0.195 + 0.305 \times \sin \theta - e) \times a$$

“ r ” predstavlja udaljenost od struka kormila do centralne točke djelovanja tlaka na kormilo

$$e = c \times b / a \times b$$

“ e ” predstavlja vrijednost površine balastnog dijela podijeljenu sa površinom kormila (v. sliku)



※Gornji izračun je pravljen za kut kormila od 35°

Molimo da odaberete uređaj koji ima vrijednost momenta cilindra veću od izračunatog momenta kormila.

Odabir preko karakteristika motora

MODEL	PREPORUČENA SNAGA MOTORA (KS)	DIMENZIJE INSTALACIJE CILINDRA (mm)	MODEL	PREPORUČENA SNAGA MOTORA (KS)	DIMENZIJE INSTALACIJE CILINDRA (mm)
DPS-120S4.6	180	664×200×125	DMS-066S6.7	110	664×200×125
DPS-150S3.7	250	724×200×125	DMS-093S9.1	110	664×200×125
DPS-150S5.8			DMS-116S11.3	180	724×200×125
DPS-160R3.5	250	427×246×248	DMS-071R7.9	110	427×246×248
DPS-160R5.5					
DPS-350T5.7	350	800×420×98			
DPS-650T10.7	550	950×550×108			
DPS-1500T11.1	1200	1240×600×165			
DPS-350TW5.7	250×2				
DPS-650TW10.7	350×2				
DPS-1500TW11.1	600×2				

Za točan odabir sustava, molimo Vas da nam se obratite prije odabira upravljačkog sustava.

Servo upravljački sustav

Sustav sa jednim linijskim cilindrom



UPRAVLJAČKO KOLO



CILINDAR

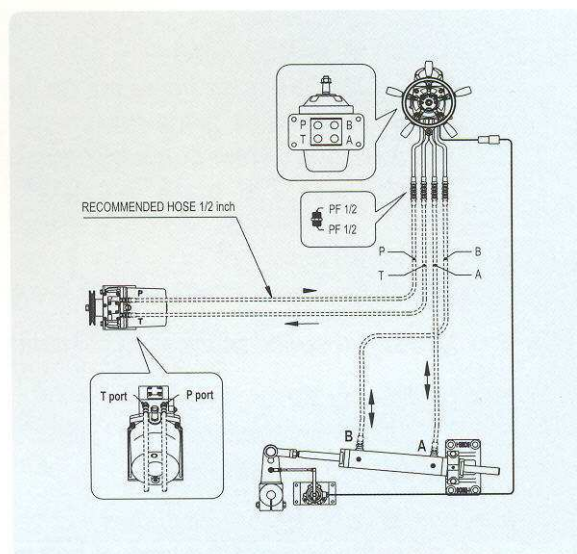


PUMPA



SENZOR KUTA KORMILA

MODEL	DPS-120S4.6	DPS-150S3.7	DPS-150S5.8
UPRAVLJAČKO KOLO	DHO-051	DHO-080	DHO-051
BROJ OKRETA KOLA / 80°	4.6	3.7	5.8
CILINDAR	DOC-120	DOC-150	
MOMENT CILINDRA	120kgf.m (1,176 N.m)	150kgf.m (1,470 N.m)	
PUMPA	DPU-09		
PROTOK ULJA KROZ PUMPU	9 ℓ /min		
SENZOR KUTA KORMILA	99016040		
MAX. PRITISAK	80 kgf/cm²		



Sustav sa rotacijskim cilindrom



UPRAVLJAČKO KOLO



CILINDAR

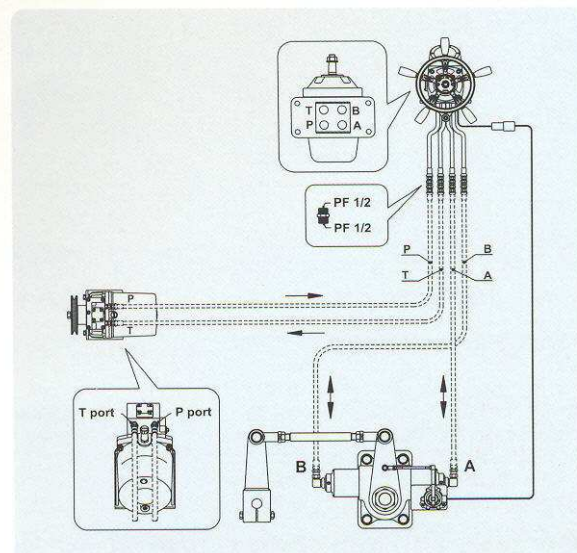


PUMPA



SENZOR KUTA KORMILA

MODEL	DPS-160R3.5	DPS-160R5.5
UPRAVLJAČKO KOLO	DHO-080	DHO-051
BROJ OKRETA KOLA / 80°	3.5	5.5
CILINDAR	DRC-075	
MOMENT CILINDRA	160kgf.m (1,568 N.m)	
PUMPA	DPU-09	
PROTOK ULJA KROZ PUMPU	9 l /min	
SENZOR KUTA KORMILA	99016040	
MAX. PRITISAK	80 kgf/cm ²	





Servo upravljački sustav

Sustav sa dvostrukim linijskim cilindrima



UPRAVLJAČKO KOLO



CILINDAR

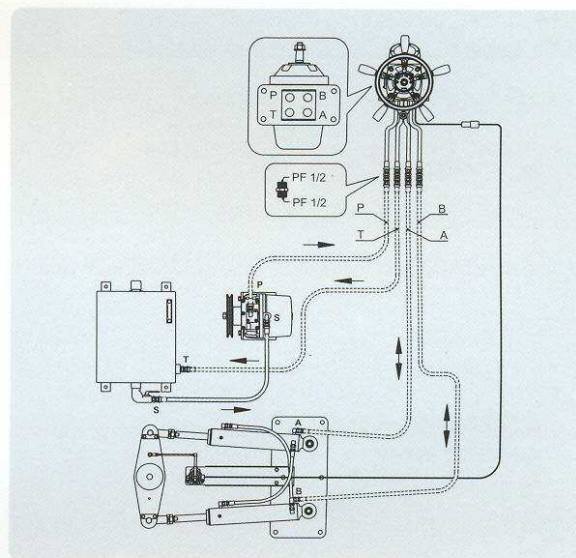


PUMPA

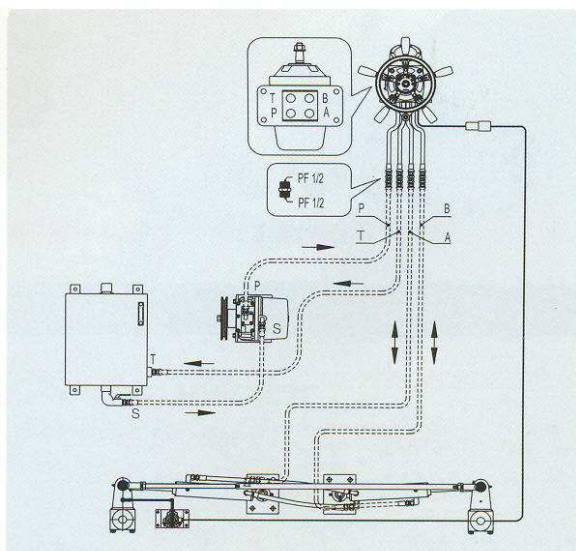
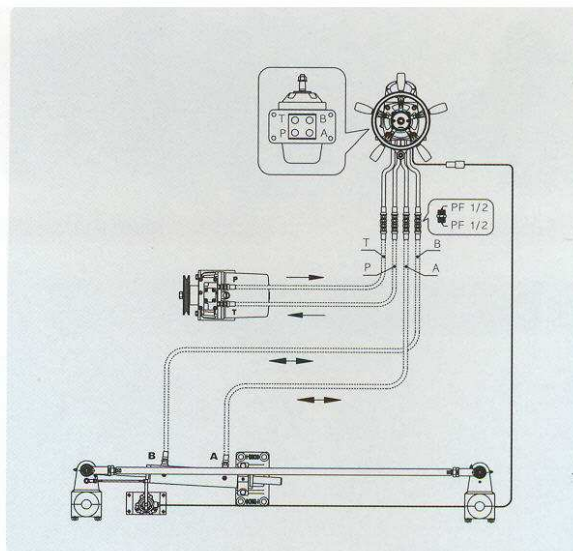


SPREMNIK ULJA

MODEL	DPS-350T5.7	DPS-650T10.7	DPS-1500T11.1
UPRAVLJAČKO KOLO	DHO-120		DHO-277
BROJ OKRETA KOLA / 80°	5.7	10.7	11.1
CILINDAR	DSC-050	DSC-060	DSC-090
MOMENT CILINDRA	350 kgf.m (3,430 N.m)	650 kgf.m (6,370 N.m)	1,540 kgf.m (15,092 N.m)
PUMPA	DPU-18		DPU-30
PROTOK ULJA KROZ PUMPU	18 l/min		30 l/min
SENZOR KUTA KORMILA	DOT20		DOT60
MAX. PRITISAK	80 kgf/cm ²		



Aplikacija sa dvostrukim kormilom



MODEL	DPS-120TW4.6	DPS-150TW3.5	DPS-150TW5.8	DPS-350TW5.7	DPS-650TW10.7	DPS-1500TW11.1
BAZNI MODEL	DPS-120S4.6	DPS-150S3.5	DPS-150S5.8	DPS-350T5.7	DPS-650T10.7	DPS-1500T11.1
CILINDAR	DOC-120TW	DOC-150TW		DSC-050TW	DSC-060TW	DSC-090TW
MOMENT CILINDRA	120kgf.m (1,176 N.m)	150kgf.m (1,470 N.m)		350 kgf.m (3,430 N.m)	650 kgf.m (6,370 N.m)	1,540 kgf.m (15,092 N.m)

Manualni upravljački sustav

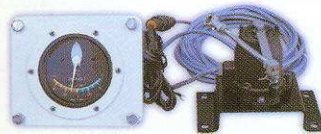
Sustav sa jednim linijskim cilindrom



UPRAVLJAČKO KOLO



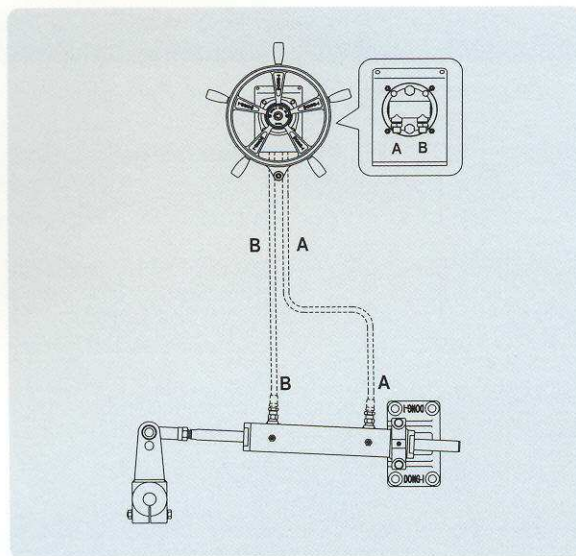
CILINDAR



(Option)

SENZOR KUTA KORMILA SA INDIKATOROM

MODEL	DMS-066S6.7	DMS-093S9.1	DMS-116S11.3
UPRAVLJAČKO KOLO	DHM-035	DHM-026	
BROJ OKRETA KOLA / 80°	6.7	9.1	11.3
CILINDAR	DOC-120		DOC-150
MOMENT CILINDRA	66 kgf.m (647 N.m)	93 kgf.m (912 N.m)	116 kgf.m (1,137 N.m)
KAPACITET PUMPE OTKLONA	35 ℓ /min	26 ℓ /min	
MAX. PRITISAK	80 kgf/cm ²		



Sustav sa rotacijskim cilindrom



UPRAVLJAČKO KOLO



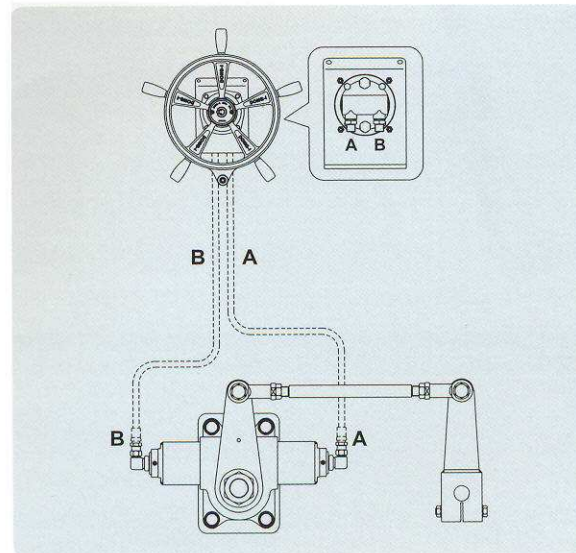
CILINDAR



(Option)

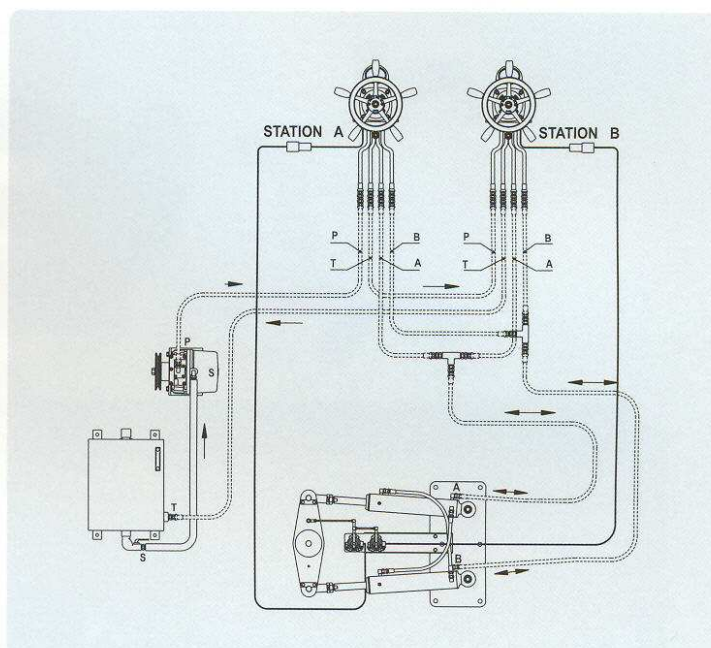
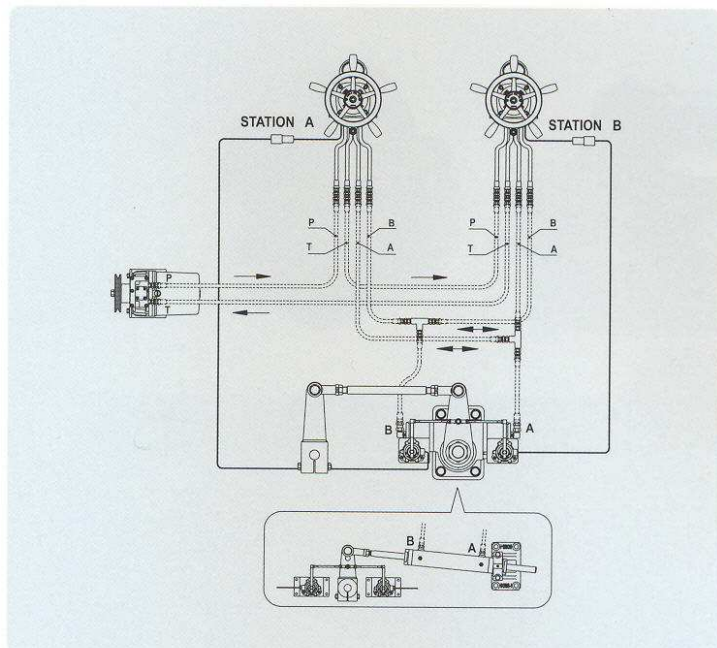
SENZOR KUTA KORMILA SA INDIKATOROM

MODEL	DMS-071R7.9
UPRAVLJAČKO KOLO	DHM-035
BROJ OKRETA KOLA / 80°	7.9
CILINDAR	DRC-075
MOMENT CILINDRA	71 kgf.m (696 N.m)
KAPACITET PUMPE OTKLONA	35 l /min
MAX. PRITISAK	80 kgf/cm ²





Primjena dvostrukog upravljačkog uređaja

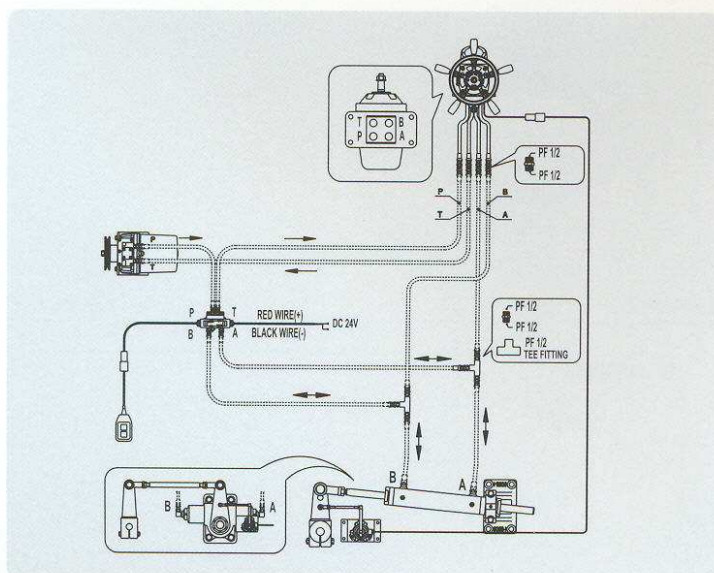
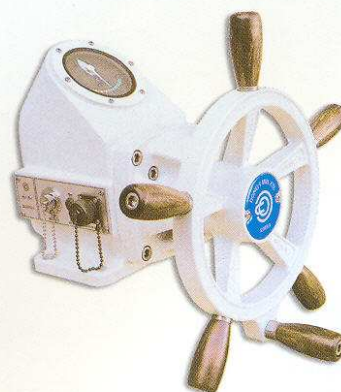


Dodatna oprema

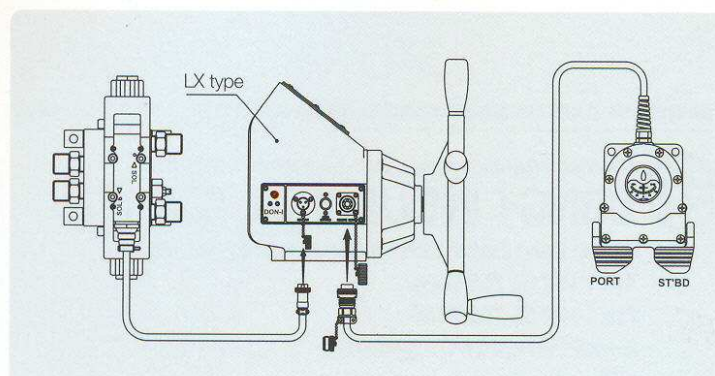
● Sustav ručnog daljinskog upravljanja



● Sustav nožnog daljinskog upravljanja



LX tip upravljačkog kola je potreban za korištenje upravljačkih pedala



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