



HYDRAULIC
CONTROLS
INC.

Preferred Catalog For



Presented By Hydraulic Controls, Inc.

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NOTES



SUN

Assembly

Check Valve 10GPM

T-162A

Part Number	Set/Type	PSI	Port Size	Description
CXBA-XCN-AAI	Aluminum	3000PSI	#6 SAE	90° Body 10gpm Check

Check Valve 15GPM

T-13A

Part Number	Set/Type	PSI	Port Size	Description
CXCD-XCN-GAI	Aluminum	3000PSI	#6SAE	90° Body 2 to 1 Free Flow
CXCD-XCN-GAJ	Aluminum	3000PSI	#8 SAE	90° Body 2 to 1 Free Flow
CXCD-XCN-GBA	Aluminum	3000PSI	Sandwich	D03 A Meter-In or Out (p.12.10) 2 to 1 Free Flow
CXCD-XCN-GBP	Aluminum	3000PSI	Sandwich	D03 P Meter-In (p. 12.10) 2 to 1 Free Flow
CXCD-XCN-GBY	Aluminum	3000PSI	Sandwich	D03 A & B Meter-In or Out (p. 12.11) 2 to 1 Free Flow
CXCD-XCN-GCJ	Aluminum	3000PSI	#8 SAE	Inline Body 2 to 1 Free Flow

Check Valve 15GPM Pilot to Open

T-11A

Part Number	Set/Type	PSI	Port Size	Description
CKCB-XCN-EBA	Aluminum	3000PSI	Sandwich	D03 Sandwich Catalog 12.07 Pilot to Open 30PSI Check
CKCB-XCN-ECB	Aluminum	3000PSI	3/8" NPT	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-ECC	Aluminum	3000PSI	1/2" NPT	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-ECH	Aluminum	3000PSI	#4 SAE	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-ECI	Aluminum	3000PSI	#6 SAE	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-ECI/S	Steel	5000PSI	#6 SAE	90° Body STD Pilot to Open 30 PSI Check Valve 5000PSI
CKCB-XCN-ECJ	Aluminum	3000PSI	#8 SAE	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-ECK	Aluminum	3000PSI	#10 SAE	90° Body STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-YEB	Aluminum	3000PSI	3/8" NPT	Dual Load Control STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-YEI	Aluminum	3000PSI	#6 SAE	Dual Load Control STD Pilot to Open 30 PSI Check Valve
CKCB-XCN-YEJ	Aluminum	3000PSI	#8 SAE	Dual Load Control STD Pilot to Open 30 PSI Check Valve

**SUN****Assembly****Check Valve 20GPM Pilot to Close****T-11A**

Part Number	Set/Type	PSI	Port Size	Description
CODA-XCN-ECB	Aluminum	3000PSI	3/8" NPT	90° Body STD Pilot to Close 30PSI Check Valve
CODA-XCN-ECC	Aluminum	3000PSI	1/2" NPT	90° Body STD Pilot to Close 30PSI Check Valve
CODA-XCN-ECH	Aluminum	3000PSI	#4 SAE	90° Body STD Pilot to Close 30PSI Check Valve
CODA-XCN-ECI	Aluminum	3000PSI	#6 SAE	90° Body STD Pilot to Close 30PSI Check Valve
CODA-XCN-ECJ	Aluminum	3000PSI	#8 SAE	90° Body STD Pilot to Close 30PSI Check Valve
CODA-XCN-YEJ	Aluminum	3000PSI	#8 SAE	Dual Load Control Pilot to Close 30PSI Check Valve

Counter Balance 15GPM 10:1 Ratio**T-11A**

Part Number	Set/Type	PSI	Port Size	Description
CBCH-LJN-ECC	Aluminum	3000PSI	1/2" NPT	CounterBalance 15GPM 10:1 Ratio 25PSI Check 2000-5000PSI
CBCH-LJN-ECI	Aluminum	3000PSI	#6 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 2000-5000PSI
CBCH-LJN-ECJ	Aluminum	3000PSI	#8 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 2000-5000PSI
CBCH-LJN-ECK	Aluminum	3000PSI	#10 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 2000-5000PSI
CBCH-LKN-ECC	Aluminum	3000PSI	1/2" NPT	CounterBalance 15GPM 10:1 Ratio 25PSI Check 1000-2500PSI
CBCH-LKN-ECI	Aluminum	3000PSI	#6 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 1000-2500PSI
CBCH-LKN-ECJ	Aluminum	3000PSI	#8 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 1000-2500PSI
CBCH-LKN-ECK	Aluminum	3000PSI	#10 SAE	CounterBalance 15GPM 10:1 Ratio 25PSI Check 1000-2500PSI

Counter Balance 15GPM 3:1 Ratio**T-11A**

Part Number	Set/Type	PSI	Port Size	Description
CBCA-LHN-ECC	Aluminum	3000PSI	1/2" NPT	CounterBalance 15GPM 3:1 Ratio 25PSI Check 1000-4000PSI
CBCA-LHN-ECI	Aluminum	3000PSI	#6 SAE	CounterBalance 15GPM 3:1 Ratio 25PSI Check 1000-4000PSI
CBCA-LHN-ECJ	Aluminum	3000PSI	#8 SAE	CounterBalance 15GPM 3:1 Ratio 25PSI Check 1000-4000PSI
CBCA-LHN-ECK	Aluminum	3000PSI	#10 SAE	CounterBalance 15GPM 3:1 Ratio 25PSI Check 1000-4000PSI

**SUN****Assembly****Flow Control Valve/.1-6GPM/Rev Flow****T-13A**

Part Number	Set/Type	PSI	Port Size	Description
FDBA-LAN-GAI	Aluminum	3000PSI	#6 SAE	Flow Control Valve .1-6GPM Free Rev Flow/Press Comp
FDBA-LAN-GAJ	Aluminum	3000PSI	#8 SAE	Flow Control Valve .1-6GPM Free Rev Flow/Press Comp

Flow Control Valve/.2-25GPM/Rev Flow**T-16A**

Part Number	Set/Type	PSI	Port Size	Description
FDEA-LAN-IAL	Aluminum	3000PSI	#12 SAE	Flow Control Valve .2-25GPM Free Rev Flow/Press Comp
FDEA-LAN-IAN	Aluminum	3000PSI	#20 SAE	Flow Control Valve .2-25GPM Free Rev Flow/Press Comp
FDEA-LAN-IEN	Aluminum	3000PSI	#20 SAE	Flow Control Valve .2-25GPM Free Rev Flow/Press Comp TBody
FDEA-LAN-IEN/S	Steel	5000PSI	#20 SAE	Flow Control Valve .2-25GPM Free Rev Flow/Press Comp TBody

Needle Valve Fully Adjustable 15GPM**T-5A**

Part Number	Set/Type	PSI	Port Size	Description
NFDC-LAN-DAK	Aluminum	3000PSI	#10 SAE	Adj Needle Valve Std Screw Adj. .25"Dia. Orifice 90° Body
NFDC-LAN-DCC	Aluminum	3000PSI	1/2" NPT	Adj Needle Valve Std Screw Adj. .25"Dia. Orifice Inline

Needle Valve Fully Adjustable 30GPM**T-16A**

Part Number	Set/Type	PSI	Port Size	Description
NFEC-LAN-IAL	Aluminum	3000PSI	#12 SAE	Adj Needle Valve Std Screw Adj. .38"Dia. Orifice 90° Body
NFEC-LAN-IAN	Aluminum	3000PSI	#20 SAE	Adj Needle Valve Std Screw Adj. .38"Dia. Orifice 90° Body
NFEC-LAN-IEN	Aluminum	3000PSI	#20 SAE	Adj Needle Valve Std Screw Adj. .38"Dia. Orifice T Body
NFEC-LAN-IEN/S	Steel	5000PSI	#20 SAE	Adj Needle Valve Std Screw Adj. .38"Dia. Orifice T Body

Pressure Reducing Valve 10GPM Pilot Operated**T-11A**

Part Number	Set/Type	PSI	Port Size	Description
PBDB-LAN-ECH	Aluminum	3000PSI	#4 SAE	Pilot Operated Pressure Red. Vlv. 10GPM Std. Screw Adjust
PBDB-LAN-ECI	Aluminum	3000PSI	#6 SAE	Pilot Operated Pressure Red. Vlv. 10GPM Std. Screw Adjust
PBDB-LAN-ECJ	Aluminum	3000PSI	#8 SAE	Pilot Operated Pressure Red. Vlv. 10GPM Std. Screw Adjust
PBDB-LAN-ECK	Aluminum	3000PSI	#10 SAE	Pilot Operated Pressure Red. Vlv. 10GPM Std. Screw Adjust

**SUN****Assembly****Pressure Reducing Valve 20GPM Pilot Operated****T-2A**

Part Number	Set/Type	PSI	Port Size	Description
PBFB-LAN-BCL	Aluminum	3000PSI	#12 SAE	Pilot Operated Pressure Red. Vlv. 20GPM Std. Screw Adjust

Relief Valve Direct Acting 12GPM**T-10A**

Part Number	Set/Type	PSI	Port Size	Description
RDDA-LAN-FAI	Aluminum	3000PSI	#6 SAE	Direct Acting Relief 90° Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FAI/S	Steel	5000PSI	#6 SAE	Direct Acting Relief 90° Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FAJ	Aluminum	3000PSI	#8 SAE	Direct Acting Relief 90° Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FEC	Aluminum	3000PSI	1/2" NPT	Direct Acting Relief T Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FEJ	Aluminum	3000PSI	#8 SAE	Direct Acting Relief T Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FEJ/S	Steel	5000PSI	#8 SAE	Direct Acting Relief T Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FEL	Aluminum	3000PSI	#12 SAE	Direct Acting Relief T Body 1000PSI Preset 500-3000PSI
RDDA-LAN-FEL	Aluminum	3000PSI	#12 SAE	Direct Acting Relief T Body 1000PSI Preset 500-3000PSI

Relief Valve Dual Cross Port 12GPM**T-10A**

Part Number	Set/Type	PSI	Port Size	Description
RDDA-LAN-YFC	Aluminum	3000PSI	1/2" NPT	Direct Acting Relief Dual Cross Port 500-3000PSI Adjustable
RDDA-LAN-YFI	Aluminum	3000PSI	#6 SAE	Direct Acting Relief Dual Cross Port 500-3000PSI Adjustable
RDDA-LAN-YFJ	Aluminum	3000PSI	#8 SAE	Direct Acting Relief Dual Cross Port 500-3000PSI Adjustable

Relief Valve Pilot Operated 25GPM Adjustable**T-10A**

Part Number	Set/Type	PSI	Port Size	Description
RPEC-LAN-FAI	Aluminum	3000PSI	#6 SAE	Pilot Operated Relief 90° Body 25GPM 100-3000 Adjustable
RPEC-LAN-FAI/S	Steel	5000PSI	#6 SAE	Pilot Operated Relief 90° Body 25GPM 100-3000 Adjustable
RPEC-LAN-FAJ	Aluminum	3000PSI	#8 SAE	Pilot Operated Relief 90° Body 25GPM 100-3000 Adjustable
RPEC-LAN-FEJ	Aluminum	3000PSI	#8 SAE	Pilot Operated Relief T Body 25GPM 100-3000 Adjustable
RPEC-LAN-FEL	Aluminum	3000PSI	#12 SAE	Pilot Operated Relief T Body 25GPM 100-3000 Adjustable

**SUN****Assembly****Relief Valve Pilot Operated 50GPM Adjustable****T-3A**

Part Number	Set/Type	PSI	Port Size	Description
RPGC-LAN-CAL	Aluminum	3000PSI	#12 SAE	Pilot Operated Relief 90° Body 50GPM 100-3000 Adj
RPGC-LAN-CAM	Aluminum	3000PSI	#16 SAE	Pilot Operated Relief 90° Body 50GPM 100-3000 Adj
RPGC-LAN-CEL	Aluminum	3000PSI	#12 SAE	Pilot Operated Relief T Body 50GPM 100-3000 Adj
RPGC-LAN-CEL/S	Steel	5000PSI	#12 SAE	Pilot Operated Relief T Body 50GPM 100-3000 Adj
RPGC-LAN-CEM	Aluminum	3000PSI	#16 SAE	Pilot Operated Relief T Body 50GPM 100-3000 Adj

Relief Valve Pilot Operated Dual Cross Port 25GPM**T-10A**

Part Number	Set/Type	PSI	Port Size	Description
RPEC-LAN-YFC	Aluminum	3000PSI	1/2" NPT	Pilot Operated Relief Dual Cross Port 25GPM 100-3000 Adj
RPEC-LAN-YFI	Aluminum	3000PSI	#6 SAE	Pilot Operated Relief Dual Cross Port 25GPM 100-3000 Adj
RPEC-LAN-YFJ	Aluminum	3000PSI	#8 SAE	Pilot Operated Relief Dual Cross Port 25GPM 100-3000 Adj

Relief Valve Pilot Operated Dual Cross Port 50GPM**T-3A**

Part Number	Set/Type	PSI	Port Size	Description
RPGC-LAN-YCL	Aluminum	3000PSI	#12 SAE	Pilot Operated Relief Dual Cross Port 50GPM 100-3000 Adj
RPGC-LAN-YCM	Aluminum	3000PSI	#16 SAE	Pilot Operated Relief Dual Cross Port 50GPM 100-3000 Adj

Shuttle Valve**T-11A**

Part Number	Set/Type	PSI	Port Size	Description
CSAB-XXN-ECH	Aluminum	3000PSI	#4 SAE	Shuttle Valve 2.5GPM Signal at Port 3
CSAB-XXN-ECI	Aluminum	3000PSI	#6 SAE	Shuttle Valve 2.5GPM Signal at Port 3
CSAB-XXN-ECJ	Aluminum	3000PSI	#8 SAE	Shuttle Valve 2.5GPM Signal at Port 3
CSAB-XXN-ECK	Aluminum	3000PSI	#10 SAE	Shuttle Valve 2.5GPM Signal at Port 3

T-13A

Part Number	Set/Type	PSI	Port Size	Description
CSAA-EXN-GAI	Aluminum	3000PSI	#6 SAE	Shuttle Valve 2.5GPM #4SAE EXT.Pt
CSAA-EXN-GAJ	Aluminum	3000PSI	#8 SAE	Shuttle Valve 2.5GPM #4SAE EXT.Pt

**SUN****Cartridge Valve****Body****T10A**

Part Number	Set/Type	PSI	Port Size	Description
FAI	Aluminum	3000 PSI	#6 SAE	90° Body
FAI/S	Steel	5000 PSI	#6 SAE	90° Body
FAJ	Aluminum	3000 PSI	#8 SAE	90° Body
FBA	Aluminum	3000 PSI		D03 Sandwich A-T
FBP	Aluminum	3000 PSI		D03 Sandwich P-T
FBY	Aluminum	3000 PSI		D03 Sandwich Cross-port
FEC	Aluminum	3000 PSI	1/2" NPT	T Body
FEJ	Aluminum	3000 PSI	#8 SAE	T Body
FEJ/S	Steel	5000 PSI	#8 SAE	T Body
FEL	Aluminum	3000 PSI	#12 SAE	T Body
YFC	Aluminum	3000 PSI	1/2" NPT	Dual Cross-port
YFI	Aluminum	3000 PSI	#6 SAE	Dual Cross-port
YFJ	Aluminum	3000 PSI	#8 SAE	Dual Cross-port

T11A

Part Number	Set/Type	PSI	Port Size	Description
EBA	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07
EBP	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07
ECB	Aluminum	3000 PSI	3/8" NPT	90° Body
ECC	Aluminum	3000 PSI	1/2" NPT	90° Body
ECH	Aluminum	3000 PSI	#4 SAE	90° Body
ECI	Aluminum	3000 PSI	#6 SAE	90° Body
ECI/S	Steel	5000 PSI	#6 SAE (5000 PSI)	90° Body
ECJ	Aluminum	3000 PSI	#8 SAE	90° Body
ECK	Aluminum	3000 PSI	#10 SAE	90° Body
XEI	Aluminum	3000 PSI	#6 SAE (Inline)	Dual Load Control
YEB	Aluminum	3000 PSI	3/8" NPT	Dual Load Control
YEI	Aluminum	3000 PSI	#6 SAE	Dual Load Control
YEJ	Aluminum	3000 PSI	#8 SAE	Dual Load Control
YVY	Aluminum	3000 PSI		Gasket Mount Load Control

T-13A

Part Number	Set/Type	PSI	Port Size	Description
GAI	Aluminum	3000 PSI	#6 SAE	90° Body
GAJ	Aluminum	3000 PSI	#8 SAE	90° Body
GBA	Aluminum	3000 PSI		D03 A Meter-In or Out (p.12.10)
GBP	Aluminum	3000 PSI		D03 P Meter-In (p. 12.10)
GBY	Aluminum	3000 PSI		D03 A & B Meter-In or Out (p. 12.11)
GCJ	Aluminum	3000 PSI	#8 SAE	Inline Body

**SUN****Cartridge Valve****Body****T-162A**

Part Number	Set/Type	PSI	Port Size	Description
AAI	Aluminum	3000PSI	#6 SAE	90° Body

T-16A

Part Number	Set/Type	PSI	Port Size	Description
IAL	Aluminum	3000 PSI	#12 SAE	90° Body
IAN	Aluminum	3000 PSI	#20 SAE	90° Body
IEN	Aluminum	3000 PSI	#20 SAE	T Body
IEN/S	Steel	5000 PSI	#20 SAE	T Body

T-17A

Part Number	Set/Type	PSI	Port Size	Description
H4L	Aluminum	3000 PSI	#12 SAE	Reducing w/reverse check
HCL	Aluminum	3000 PSI	#12 SAE	90° Body
HCM	Aluminum	3000 PSI	#16 SAE	90° Body
HCN	Aluminum	3000 PSI	#20 SAE	90° Body
YJM	Aluminum	3000 PSI	#16 SAE	Dual Load Control

T-2A

Part Number	Set/Type	PSI	Port Size	Description
B8C	Aluminum	3000 PSI	1/2" NPT	Dual Sequence w/checks
BBA	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07
BBY	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07
BCL	Aluminum	3000 PSI	#12 SAE	90° Body
YAL	Aluminum	3000 PSI	#12 SAE	Dual Load Control

T-3A

Part Number	Set/Type	PSI	Port Size	Description
CAL	Aluminum	3000 PSI	#12 SAE	90° Body
CAM	Aluminum	3000 PSI	#16 SAE	90° Body
CED	Aluminum	3000 PSI	3/4" NPT	T Body
CEE	Aluminum	3000 PSI	1" NPT	T Body
CEL	Aluminum	3000 PSI	#12 SAE	T Body
CEL/S	Steel	5000 PSI	#12 SAE	T Body
CEM	Aluminum	3000 PSI	#16 SAE	T Body
YCL	Aluminum	3000 PSI	#12 SAE	Dual Cross-Port Relief
YCM	Aluminum	3000 PSI	#16 SAE	Dual Cross-Port Relief

T-5A

Part Number	Set/Type	PSI	Port Size	Description
DAK	Aluminum	3000 PSI	#10 SAE	90° Body
DCC	Aluminum	3000 PSI	1/2" NPT	Inline
GBO	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07
GBZ	Aluminum	3000 PSI		D03 Sandwich Catalog 12.07



SUN

Cartridge Valve

Check Valve 10GPM

Check, 1 to 2 Free Flow

	Part Number	Set/Type	PSI	Port Size	Description
	CXBA-XCN	Non-Adjustable	5000	T-162A	Free Flow Nose to Side 30PSI Check

Check Valve 15GPM

Check, 2 to 1 Free Flow

	Part Number	Set/Type	PSI	Port Size	Description
	CXCD-XCN	Non-Adjustable	5000	T-13A	Free Flow Side to Nose 30PSI Check

Pilot Operated Check Valve

	Part Number	Set/Type	PSI	Port Size	Description
	CKCB-XCN	STD Pilot	5000	T-11A	30PSI Check

PO Check Valve, Sealed Pilot Piston

	Part Number	Set/Type	PSI	Port Size	Description
	CKCV-XCN	STD Pilot	5000	T-11A	30PSI Check

PO Check Valve, Vented

	Part Number	Set/Type	PSI	Port Size	Description
	CVCV-XCN	STD Pilot	5000	T-21A	Vented 4 Port Cav.30PSI PO Check




SUN

Cartridge Valve

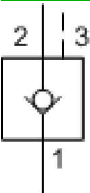
Check Valve 20GPM

Check, 1 to 2 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXDA-XCN	Non-Adjustable	5000	T-13A	Free Flow Nose to Side 30PSI Check

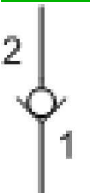
Pilot to Close Check Valve



Part Number	Set/Type	PSI	Port Size	Description
CODA-XCN	STD Pilot	5000	T-11A	30PSI Check


Check Valve 30GPM

Check, 1 to 2 Free Flow



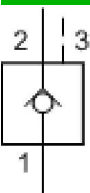
Part Number	Set/Type	PSI	Port Size	Description
CXFA-XCN	Non-Adjustable	5000	T-5A	Free Flow Nose to Side 30PSI Check

Check, 2 to 1 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXED-XCN	Non-Adjustable	5000	T-5A	Free Flow Side to Nose 30PSI Check

Pilot Operated Check Valve



Part Number	Set/Type	PSI	Port Size	Description
CKEB-XCN	STD Pilot	5000	T-2A	30PSI Check



SUN

Cartridge Valve

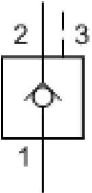
Check Valve 60GPM

Check, 2 to 1 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXGD-XCN	Non-Adjustable	5000	T-16A	Free Flow Side to Nose 30PSI Check

Pilot Operated Check Valve



Part Number	Set/Type	PSI	Port Size	Description
CKGB-XCN	STD Pilot	5000	T-17A	30PSI Check

Check Valve 7.5GPM

Check, 2 to 1 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXAD-XCN	Non-Adjustable	5000	T-162A	Free Flow Side to Nose 30PSI Check

Check Valve 80GPM

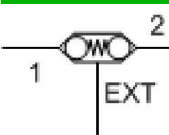
Check, 1 to 2 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXHA-XCN	Non-Adjustable	5000	T-16A	Free Flow Nose to Side 30PSI Check

Check Valve/Shuttle

Shuttle, Back to Back Checks



Part Number	Set/Type	PSI	Port Size	Description
CDAА-EBN	Shuttle Non-Adjust	5000	T-13A	2.5 GPM Shuttle/Check



SUN

Cartridge Valve

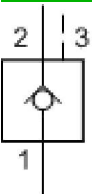
Check Valve 60GPM

Check, 2 to 1 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXGD-XCN	Non-Adjustable	5000	T-16A	Free Flow Side to Nose 30PSI Check

Pilot Operated Check Valve



Part Number	Set/Type	PSI	Port Size	Description
CKGB-XCN	STD Pilot	5000	T-17A	30PSI Check

Check Valve 7.5GPM

Check, 2 to 1 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXAD-XCN	Non-Adjustable	5000	T-162A	Free Flow Side to Nose 30PSI Check

Check Valve 80GPM

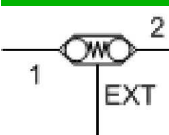
Check, 1 to 2 Free Flow



Part Number	Set/Type	PSI	Port Size	Description
CXHA-XCN	Non-Adjustable	5000	T-16A	Free Flow Nose to Side 30PSI Check

Check Valve/Shuttle

Shuttle, Back to Back Checks



Part Number	Set/Type	PSI	Port Size	Description
CDAА-EBN	Shuttle Non-Adjust	5000	T-13A	2.5 GPM Shuttle/Check

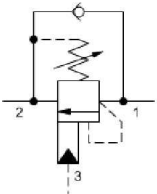


SUN

Cartridge Valve

Counterbalance 30GPM

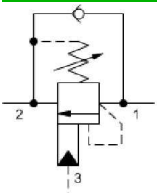
Counterbalance 4.5:1



Part Number	Set/Type	PSI	Port Size	Description
CBEG-LJN	Standard Screw	2000-5000	T-2A	25 PSI Check

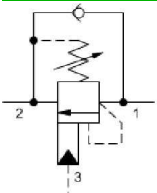
Counterbalance 60GPM

Counterbalance 3:1



Part Number	Set/Type	PSI	Port Size	Description
CBGA-LHN	Standard Screw	1000-4000	T-17A	25 PSI Check

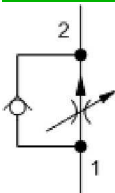
Counterbalance 4.5:1



Part Number	Set/Type	PSI	Port Size	Description
CBGG-LJN	Standard Screw	2000-5000	T-17A	25 PSI Check

Flow Control Valve .1-12GPM

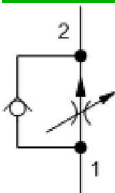
FC Pressure Comp/ Reverse Free Flow



Part Number	Set/Type	PSI	Port Size	Description
FDCB-HAN	Cal. Handknob w/Lock	5000	T-5A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control
FDCB-LAN	Standard Screw	5000	T-5A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control

Flow Control Valve .1-6GPM

FC Pressure Comp/ Reverse Free Flow



Part Number	Set/Type	PSI	Port Size	Description
FDBA-HAN	Cal. Handknob w/Lock	5000	T-13A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control
FDBA-LAN	Standard Screw	5000	T-13A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control

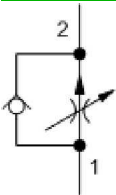


SUN

Cartridge Valve

Flow Control Valve .2-25GPM

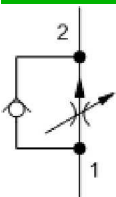
FC Pressure Comp/ Reverse Free Flow



Part Number	Set/Type	PSI	Port Size	Description
FDEA-HAN	Cal. Handknob w/Lock	5000	T-16A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control
FDEA-LAN	Standard Screw	5000	T-16A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control

Flow Control Valve .2-50GPM

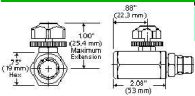
FC Pressure Comp/ Reverse Free Flow



Part Number	Set/Type	PSI	Port Size	Description
FDFA-LAN	Standard Screw	5000	T-18A	Fully Adj.Pres Comp. W/Rev Flo Check Flow Control

Gauge Snubber

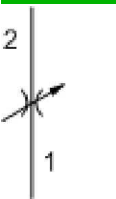
Gauge Snubber In-Line



Part Number	Set/Type	PSI	Port Size	Description
NSAB-KXV-BA	Adj. Knob	6000		Gauge Snubber Male 1/4NPTF X Female 1/4NPTF

Needle Valve

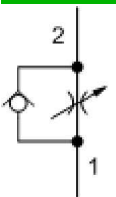
Fully Adjustable Needle Valve



Part Number	Set/Type	PSI	Port Size	Description
NFCC-LCN	Standard Screw	5000	T-13A	Fully Adj.Needle Valve .19"Dia Orifice
NFDC-HAN	Cal. Handknob w/Lock	5000	T-5A	Fully Adj.Needle Valve .25"Dia Orifice
NFDC-LAN	Standard Screw	5000	T-5A	Fully Adj.Needle Valve .25"Dia Orifice
NFEC-LEN	Standard Screw	5000	T-16A	Fully Adj.Needle Valve .38"Dia Orifice

Needle Valve High Capacity

Needle, Reverse Free Flow .19"Dia.Orif.



Part Number	Set/Type	PSI	Port Size	Description
NCCB-LCN	Standard Screw	5000	T-162A	Fully Adj. Needle Valve W/Rev Flow 30PSI Check

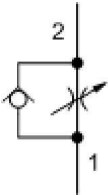


SUN

Cartridge Valve

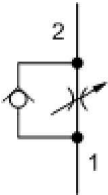
Needle Valve High Capacity

Needle, Reverse Free Flow .25"Dia.Orif.



Part Number	Set/Type	PSI	Port Size	Description
NCEB-LCN	Standard Screw	5000	T-5A	Fully Adj. Needle Valve W/Rev Flow 30PSI Check

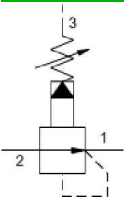
Needle, Reverse Free Flow .38"Dia.Orif.



Part Number	Set/Type	PSI	Port Size	Description
NCFB-LCN	Standard Screw	5000	T-16A	Fully Adj. Needle Valve W/Rev Flow 30PSI Check

Pressure Reducing Valve 10GPM

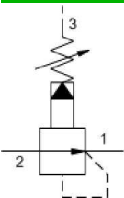
Pilot Operated Reducing



Part Number	Set/Type	PSI	Port Size	Description
PBDB-FAN	Wrench Adjust	5000	T-11A	Pilot Operated Pressure Reducing Valve 10GPM
PBDB-LAN	Standard Screw	5000	T-11A	Pilot Operated Pressure Reducing Valve 10GPM
PBDB-LBN	Standard Screw	5000	T-11A	Pilot Operated Pressure Reducing Valve 10GPM

Pressure Reducing Valve 20GPM

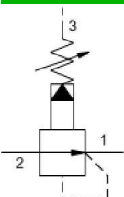
Pilot Operated Reducing



Part Number	Set/Type	PSI	Port Size	Description
PBFB-LAN	Standard Screw	5000	T-2A	Pilot Operated Pressure Reducing Valve 20GPM

Pressure Reducing Valve 40GPM

Pilot Operated Reducing



Part Number	Set/Type	PSI	Port Size	Description
PBHB-LAN	Standard Screw	5000	T-17A	Pilot Operated Pressure Reducing Valve 40GPM

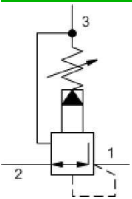


SUN

Cartridge Valve

Pressure Reducing/Relieving Valve 10GPM

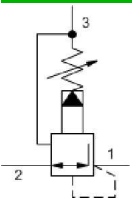
Pilot Operated Reducing/Relieving



Part Number	Set/Type	PSI	Port Size	Description
PPDB-LAN	Standard Screw	5000	T-11A	Pilot Operated Pressure Reducing/Relieving Valve 10GPM
PPDB-LBN	Standard Screw	5000	T-11A	Pilot Operated Pressure Reducing/Relieving Valve 10GPM
PPDB-LDN	Standard Screw	5000	T-11A	Pilot Operated Pressure Reducing/Relieving Valve 10GPM

Pressure Reducing/Relieving Valve 20GPM

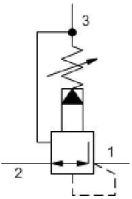
Pilot Operated Reducing/Relieving



Part Number	Set/Type	PSI	Port Size	Description
PPFB-LAN	Standard Screw	5000	T-2A	Pilot Operated Pressure Reducing/Relieving Valve 20GPM
PPFB-LBN	Standard Screw	5000	T-2A	Pilot Operated Pressure Reducing/Relieving Valve 20GPM

Pressure Reducing/Relieving Valve 40GPM

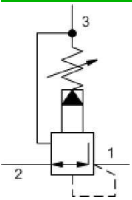
Pilot Operated Reducing/Relieving



Part Number	Set/Type	PSI	Port Size	Description
PPHB-LAN	Standard Screw	5000	T-17A	Pilot Operated Pressure Reducing/Relieving Valve 40GPM

Pressure Reducing/Relieving Valve 80GPM

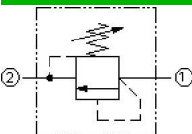
Pilot Operated Reducing/Relieving



Part Number	Set/Type	PSI	Port Size	Description
PPJB-LAN	Standard Screw	5000	T-19A	Pilot Operated Pressure Reducing/Relieving Valve 80GPM

Relief Valve Direct Acting 100GPM

Direct Acting Relief



Part Number	Set/Type	PSI	Port Size	Description
RDHA-LAN	Standard Screw	500-3000	T-16A	Direct Acting Relief Valve Preset 1000PSI
RDHA-LCN	Standard Screw	1000-6000	T-16A	Direct Acting Relief Valve Preset 1000PSI

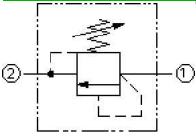


SUN

Cartridge Valve

Relief Valve Direct Acting 12GPM

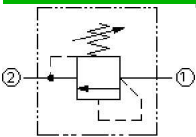
Direct Acting Relief



Part Number	Set/Type	PSI	Port Size	Description
RDDA-LAN	Standard Screw	500-3000	T-10A	Direct Acting Relief Valve Preset 1000PSI
RDDA-LCN	Standard Screw	1000-6000	T-10A	Direct Acting Relief Valve Preset 1000PSI
RDDA-LDN	Standard Screw	200-800	T-10A	Direct Acting Relief Valve Preset 400PSI
RDDA-LEN	Standard Screw	100-400	T-10A	Direct Acting Relief Valve Preset 200PSI

Relief Valve Direct Acting 50GPM

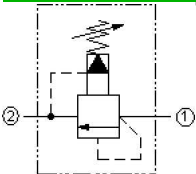
Direct Acting Relief



Part Number	Set/Type	PSI	Port Size	Description
RDFA-LCN	Standard Screw	100-6000	T-3A	Direct Acting Relief Valve Preset 1000PSI

Relief Valve Pilot Operated 100GPM

Pilot Operated Relief



Part Number	Set/Type	PSI	Port Size	Description
RPIC-LAN	Standard Screw	100-3000	T-16A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPIC-LCN	Standard Screw	150-6000	T-16A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI

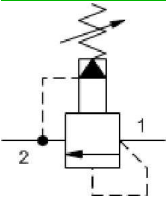


SUN

Cartridge Valve

Relief Valve Pilot Operated 25GPM

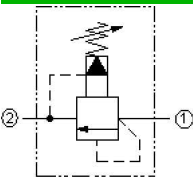
Pilot Operated Relief



Part Number	Set/Type	PSI	Port Size	Description
RPEC-FAN	Wrench Adjust	100-3000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-KAN	Handknob	100-3000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-LAN	Standard Screw	100-3000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-LBN	Standard Screw	50-1500	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-LCN	Standard Screw	150-6000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-LEN	Standard Screw	25-400	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 200PSI
RPEC-LNN	Standard Screw	60-800	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 400PSI
RPEC-LWN	Standard Screw	150-4500	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-OAN	Handknob w/Panel Mount	100-3000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPEC-OCN	Handknob w/Panel Mount	150-6000	T-10A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI

Relief Valve Pilot Operated 50GPM

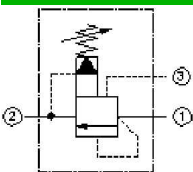
Pilot Operated Relief



Part Number	Set/Type	PSI	Port Size	Description
RPGC-FAN	Wrench Adjust	100-3000	T-3A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPGC-LAN	Standard Screw	100-3000	T-3A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPGC-LBN	Standard Screw	50-1500	T-3A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPGC-LCN	Standard Screw	150-6000	T-3A	Pilot Operated Balanced Piston Relief Valve Preset 1000PSI
RPGC-LEN	Standard Screw	25-400	T-3A	Pilot Operated Balanced Piston Relief Valve Preset 200PSI

Relief Valve Ventable 15GPM

Pilot Operated Relief with Vent



Part Number	Set/Type	PSI	Port Size	Description
RVCA-LAN	Standard Screw	100-3000	T-11A	Pilot Operated Ventable Relief Valve Preset 1000PSI

Relief Valve Ventable 30GPM

Pilot Operated Relief with Vent

Part Number	Set/Type	PSI	Port Size	Description
RVEA-LAN	Standard Screw	100-3000	T-2A	Pilot Operated Ventable Relief Valve Preset 1000PSI

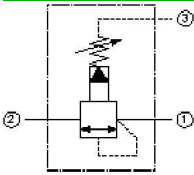


SUN

Cartridge Valve

Sequence Valve 15GPM

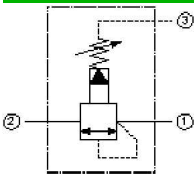
Pilot Operated Sequence



Part Number	Set/Type	PSI	Port Size	Description
RSDC-FAN	Wrench Adjust	100-3000	T-11A	Pilot Operated Balanced Piston Sequence Valve Preset 1000PSI
RSDC-LAN	Standard Screw	100-3000	T-11A	Pilot Operated Balanced Piston Sequence Valve Preset 1000PSI

Sequence Valve 30GPM

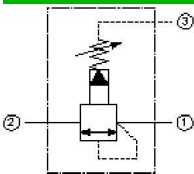
Pilot Operated Sequence



Part Number	Set/Type	PSI	Port Size	Description
RSFC-LAN	Standard Screw	100-3000	T-2A	Pilot Operated Balanced Piston Sequence Valve Preset 1000PSI

Sequence Valve 60GPM

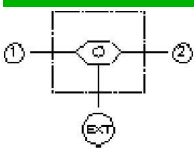
Pilot Operated Sequence



Part Number	Set/Type	PSI	Port Size	Description
RSHC-LAN	Standard Screw	100-3000	T-17A	Pilot Operated Balanced Piston Sequence Valve Preset 1000PSI

Shuttle Valve

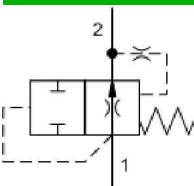
Shuttle Valve



Part Number	Set/Type	PSI	Port Size	Description
CSAA-EXN	Signal at Ext Port	5000	T-13A	2.5GPM SAE-4 Ext Pt Shuttle
CSAB-XXN	Signal at Port 3	5000	T-11A	2.5GPM Shuttle w/Signal Pt. 3

Start-Up Valve

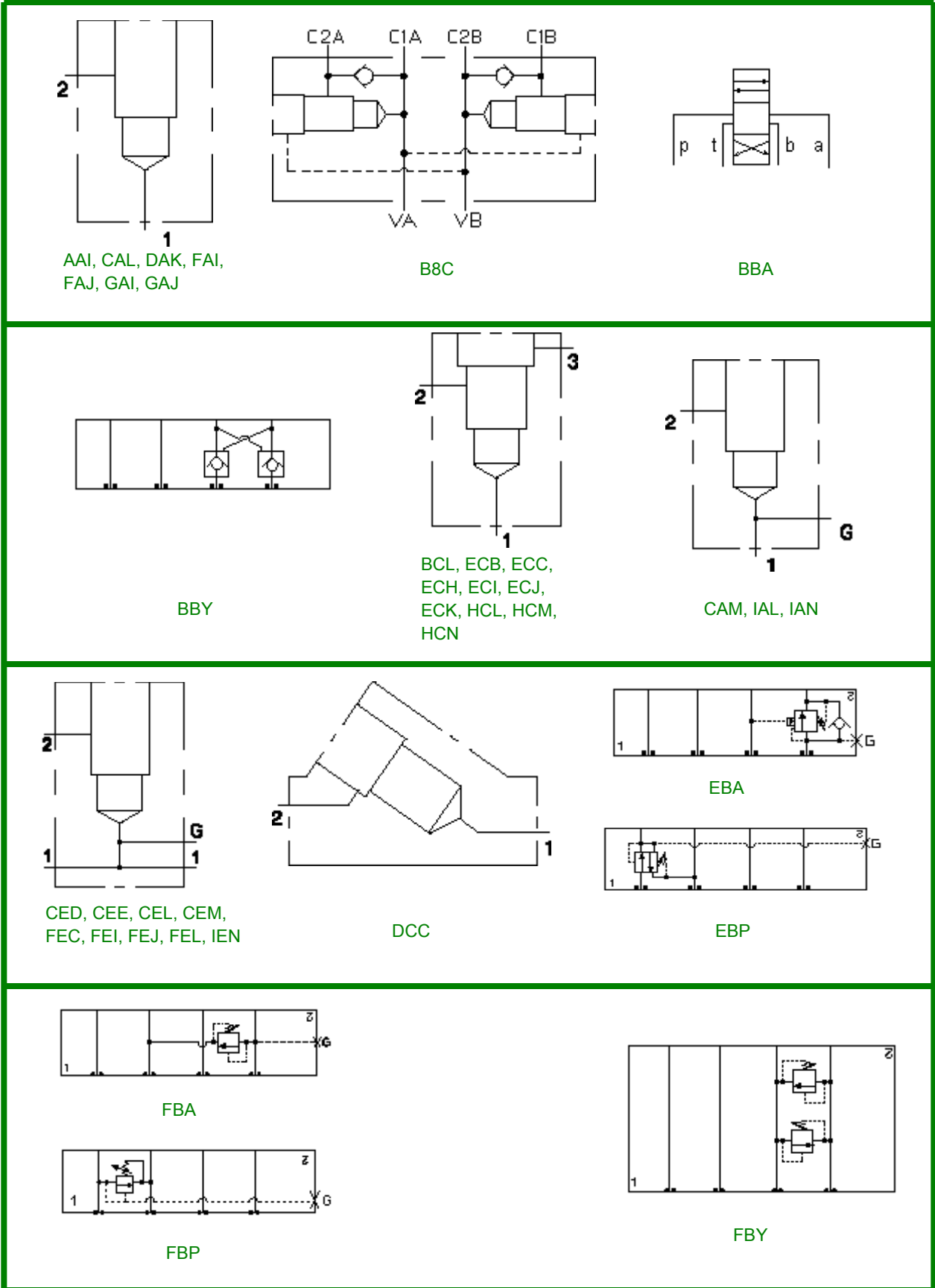
Air Bleed and Start-up



Part Number	Set/Type	PSI	Port Size	Description
NQEB-XAN	Non-Adjustable	5000	T-3A	Air Bleed & Start Up Valve 4-50GPM

NOTES

SUN HYDRAULICS PREFERRED CATALOG BODY SCHEMATICS



SUN HYDRAULICS PREFERRED CATALOG BODY SCHEMATICS

The image displays various hydraulic schematic diagrams for SUN valve models, organized into four rows:

- Row 1:**
 - GBA:** 4-way valve with 2 ports (1, 2) and a center position.
 - GBY:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils.
 - GBO:** 4-way valve with 2 ports (1, 2) and a center position.
 - GBP:** 4-way valve with 4 ports (1, 2, 3, 4) and a center position.
 - GBZ:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils.
- Row 2:**
 - GCJ:** 3-way valve with 2 ports (1, 2) and a center position.
 - XEI:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils (V1, V2) and two center positions (C1, C2).
 - YAL, YEB, YEI, YEJ, YJM:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils (V1, V2) and two center positions (C1, C2).
- Row 3:**
 - H4L:** 3-way valve with 3 ports (1, 2, 3) and a center position (G).
 - YCL, YCM:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils (G1, G2).
 - YFC, YFI, YFJ:** 4-way valve with 2 ports (1, 2) and a center position.
- Row 4:**
 - YVY:** 4-way valve with 2 ports (1, 2) and a center position, featuring two solenoid coils (V1, V2) and two center positions (C1, C2).

SUN Date Code and Model Part Number Identification

The diagram shows a physical valve cartridge with the following labels:

- Date Code:** 0LB1
- Cartridge Model Code:** RPEC LAN
- Manifold Model Code:** FAV 9FN0 -A1
- Date Code:** -A1



HYDRAULIC CONTROLS INC.

For application information and specifications, please refer to manufacturers' catalogs.

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1. **Terms of Offer.** The Buyer shall be deemed to accept Seller's offer when Buyer accepts delivery of the items shipped pursuant to this order. After acceptance by Buyer, no cancellation, change in quantity or extension of delivery schedule may be made without the written consent of Seller. Items are not subject to return or rejection, except with the written consent of Seller.
2. **Price.** Prices do not include sales, gross receipts, excise or similar taxes or custom duties. Consequently, the amount of any present or future sales, use, gross receipts, excise or other similar tax or custom duties applicable to the sale of the items hereunder shall be paid or reimbursed to Seller by the Buyer, or in lieu thereof, Buyer, when applicable, shall provide Seller with a tax-exemption certificate acceptable to the taxing authorities. Terms are net F.O.B. manufacturer's factory or as modified by written agreement and/or exceptions noted on the face hereof. Charges for special shipping, handling, and special expediting shall be for the account of the Buyer. The price shall be Seller's standard price in effect at the time of delivery of performance. Invoice date is the date of shipment or offer to ship.
3. **Delivery.** Risk of loss passes to the Buyer upon delivery of the items to the carrier for shipment. Every effort will be made to deliver as promised. Seller shall not, however, be liable for non-performance, delay, loss of or damage to items, in whole or in part, by Act of God or the public enemy or by labor troubles, lockouts, strikes, riots, fires, storms, explosions, breakdowns of machinery, railroad embargoes or congestions, government embargoes, interventions or controls, non-receipt or delay in receipt of machinery, equipment, materials or supplies, or other causes affecting Seller, Seller's facilities or Seller's sources of supply, whether such other causes be of the classes mentioned herein or not. In the event of any such delay, the time fixed for delivery or performance shall be extended for a period of time equal to any such delay. If shipment or performance is delayed by the Buyer, it shall be invoiced when items are ready for shipment or supply and the invoice shall be payable in accordance with the terms set forth herein.
4. **DISCLAIMER OF WARRANTIES.** THE FOLLOWING IS IN LIEU ALL WARRANTIES EXPRESS, IMPLIED OR STATUTORY AND IN NO EVENT SHALL SELLER OR ITS AGENTS, SUCCESSORS, NOMINEES OR ASSIGNEES, OR EITHER, BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF A BREACH OF WARRANTY. THIS WARRANTY DOES NOT APPLY TO ANY DAMAGE OR DEFECT RESULTING FROM NEGLIGENT OR IMPROPER ASSEMBLY OR USE OF ANY ITEM BY THE BUYER OR ITS AGENT OR FROM ALTERATION OR ATTEMPTED REPAIR BY ANY PERSON OTHER THAN AN AUTHORIZED AGENT OR SELLER. ALL USED, REPAIRED, MODIFIED OR ALTERED ITEMS ARE PURCHASED "AS IS" AND WITH ALL FAULTS. THE SOLE AND EXCLUSIVE REMEDY OF BUYER FOR BREACH OF WARRANTY BY SELLER SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS OR, AT SELLER'S OPTION, REFUND OF THE PURCHASE PRICE, AS SET FORTH BELOW:

(A.) SELLER MAKES NO WARRANTY WITH RESPECT TO ITEMS SOLD OTHER THAN IN ACCORDANCE HEREUNDER. (B.) ON ITEMS SELLER ASSEMBLES, SELLER WARRANTS THAT ALL ITEMS ARE TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF 60 DAYS FROM DATE OF SHIPMENT TO BUYER, BUT NO WARRANTY IS MADE THAT THE ITEMS ARE FIT FOR A PARTICULAR PURPOSE OR THAT THE ITEMS COMPLY WITH FEDERAL OR STATE OSHA OR OSHA RELATED REGULATIONS (WHICH HOLD EMPLOYERS RESPONSIBLE FOR THE HEALTH AND SAFETY OF THEIR EMPLOYEES, AND WHICH DEPEND UPON THE CONDITIONS OF USE WHICH DICTATE THE APPLICATION OF OSHA REGULATIONS). (C.) ON ITEMS WHICH SELLER BUYS AND RESELLS PURSUANT TO THIS ORDER, SELLER WARRANTS THAT THE ITEMS SHALL CARRY THE THEN STANDARD WARRANTIES OF THE MANUFACTURERS THEREOF, A COPY OF WHICH SHALL BE MADE AVAILABLE TO CUSTOMER UPON REQUEST. (D.) THE USE OF ANY SAMPLE OR MODEL IN CONNECTION WITH THIS ORDER IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS A WARRANTY THAT THE ITEM WILL CONFORM TO THE SAMPLE OR MODEL. (E.) SELLER MAKES NO WARRANTY THAT THE ITEMS ARE DELIVERED FREE OF THE RIGHTFUL CLAIM OF ANY THIRD PARTY BY WAY OF PATENT INFRINGEMENT OR THE LIKE. (F.) THIS WARRANTY IS CONDITIONED UPON SELLER'S RECEIPT WITHIN TEN (10) DAYS AFTER A BUYER'S DISCOVERY OF A DEFECT OF A WRITTEN NOTICE STATING IN WHAT SPECIFIC MATERIAL RESPECTS THE ITEM FAILED TO MEET THIS WARRANTY. IF SUCH NOTICE IS TIMELY GIVEN, SELLER WILL, AT ITS OPTION, EITHER MODIFY THE PRODUCT OR

PART TO CORRECT THE DEFECT, REPLACE THE ITEM OR PART WITH COMPLYING ITEMS OR PARTS, OR REFUND THE AMOUNT PAID FOR THE DEFECTIVE ITEM, ANY ONE OF WHICH WILL CONSTITUTE THE SOLE LIABILITY OF SELLER AND A FULL SETTLEMENT OF ALL CLAIMS. NO ALLOWANCE WILL BE MADE FOR ALTERATIONS OR REPAIRS MADE BY OTHERS THAN THOSE AUTHORIZED BY SELLER WITHOUT THE PRIOR WRITTEN CONSENT OF SELLER. BUYER SHALL AFFORD SELLER PROMPT AND REASONABLE OPPORTUNITY TO INSPECT THE ITEM FOR WHICH ANY CLAIM IS MADE AS ABOVE STATED. ALL FREIGHT CHARGES REQUIRED FOR REPAIR OR REPLACEMENT OF DEFECTIVE ITEMS SHALL BE THE RESPONSIBILITY OF BUYER.

EXCEPT AS EXPRESSLY SET FORTH ABOVE, ALL WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

5. **Specifications.** No specifications or changes in specifications pertaining to this order which are made after the date of this order will be considered binding on Seller unless so agreed in writing. Buyer furnished designs, drawings and/or specifications are adhered to where deemed material by Seller and Seller shall have no responsibility for the suitability of same for the application intended. The Buyer shall pay all additional costs, as determined by Seller arising from erroneous specifications and/or information supplied to Seller. Preparation, submission and applicability of design and component specifications is solely Buyer's responsibility.
6. **Security Interest and Retaking.** To secure the payment of the purchase price, Buyer hereby grants to Seller a security interest in the terms and all accessories, substitutions, additions or replacements. Buyer agrees to execute UCC Form 1 and/or any and all papers that may be desirable to carry out the terms, intention or purpose of this agreement after the offer is accepted. In the event Buyer fails to pay the purchase price, Seller shall be at liberty and is hereby authorized to enter upon any premises where the items may then be and take same either with or without legal process but without breach of the peace. Upon any such retaking, Seller shall have the right to resell for the account of Buyer at a private sale or otherwise, without prior notice to Buyer and may, upon such resale, re-purchase the said items. The purchase price obtained upon such resale shall be applied first to the payment of expenses of retaking and resale and then to the payment of the purchase price remaining due from Buyer. In the event that after such application of proceeds of resale, a deficiency arises, Buyer shall pay such deficiency. In the event that after applying the proceeds of sale to the expenses of retaking the resale and the balance due a surplus exists, such surplus shall be paid to Buyer.
7. **BUYER HEREBY REPRESENTS THAT IT IS SOLVENT WITHIN THE MEANING AND FOR THE PURPOSES OF UCC SECTION 2702 AND SHALL NEITHER ORDER NOR ACCEPT GOODS SHOULD THE BUYER BECOME INSOLVENT. ANY ORDER OR ACCEPTANCE OF GOODS IS DEEMED AS WRITTEN AFFIRMATION OF THIS REPRESENTATION.**
8. **Nonconforming Goods.** If nonconforming goods are shipped, they shall be sent merely for the accommodation of the Buyer.
9. **Waiver of Defenses.** Buyer hereby waives the right to assert against Seller's assignee or any subsequent assignee, any defense, counterclaim, set-off or claim, known or unknown, which Buyer could assert against Seller in an action brought by Seller upon the debt of Buyer.
10. **Attorney's Fees.** In the event that any proceeding shall be brought to enforce or interpret this agreement, the Buyer agrees to pay all of Seller's court costs and expenses, including such additional sums of attorney's fees as may be adjudged reasonable by all courts, including appellate courts. Buyer further agrees to pay Seller's costs and expenses, including its attorney's fees, if Seller refers this agreement to any attorney for collection.
11. **Jurisdiction and Venue.** Buyer and Seller agree to submit to the jurisdiction of the courts of the State of California, in and for the County of San Francisco, that any action that may be instituted relating to this Agreement shall be prosecuted in said county, and that each party waives the right to change venue to any other state or county.
12. **Amendment.** No verbal agreement nor any change or amendment hereof will be considered binding on Seller unless so agreed in writing.
13. **A service charge of 1½% per month (18% per annum) will be charged on all past due balances.**

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