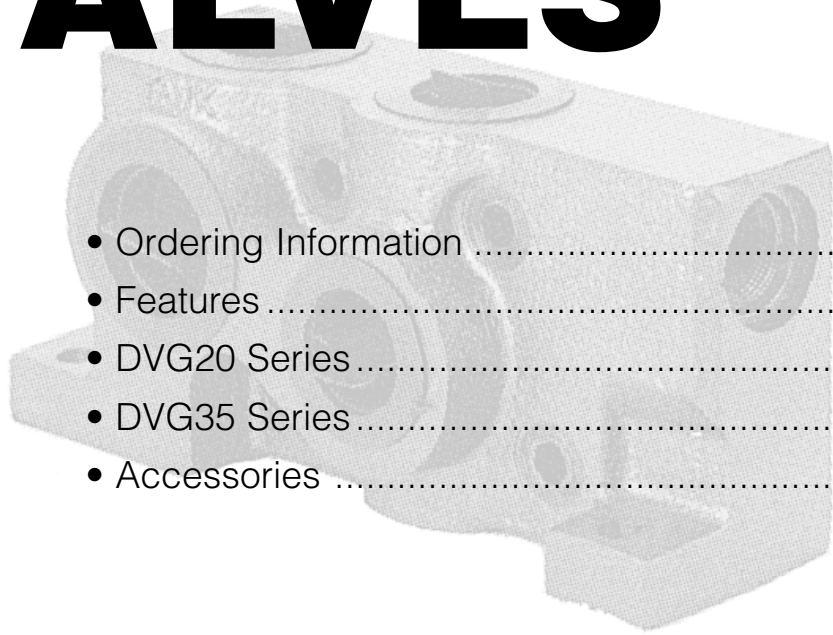


VALVES



- Ordering Information328
- Features329
- DVG20 Series330 - 332
- DVG35 Series333 - 335
- Accessories336 - 337

Inlet

Model _____

Main R/V

Yes No

Set at _____ psi
@ _____ gpm

Porting

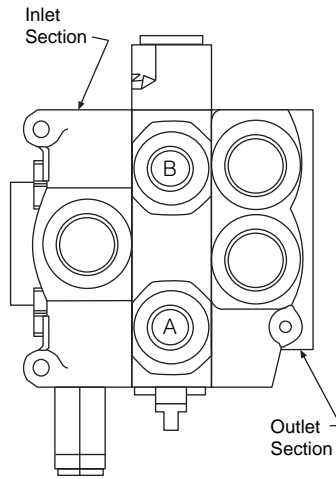
Note Thread & Size

Top

High Press _____
Low Press _____

Side

High Press _____
Low Press _____



Clevis at Port A
 Left Hand

Clevis at Port B
 Rt Hand

Handles

- None
- Bracket
- Vertical

KA18 Only

- Horizontal

Mechanical Joystick

- Left Hand
- Rt Hand

On Section #s _____

Section Information and Description

Circuit

- Parallel
- Series
- Tandem

Stacking Order

	1	2	3	4	5	6
S.A. Port B						
D.A. Cylinder						
D.A. Motor						
4way/4pos Float (DTT)						
Other _____						
A&B Port Size _____ SAE <input type="checkbox"/> NPT <input type="checkbox"/>						
Spool Actuator						
Spring Return						
3-Pos Detent						
Hyd Remote Meter						
Hyd Pilot On/Off						
Air Remote						
Solenoid 12 Vdc						
Other _____						
Port Accessory						
None A or B						
A/C						
A						
B						
R/V + A/C _____ psi @ A						
Setting _____ psi @ B						
R/V _____ psi @ A						
Setting _____ psi @ B						
Plug						
A						
B						
Restrict Out						
A						
B						
Restrict In						
A						
B						
Restrict Fix						
A						
B						
D.A. Lock						
A						
B						
S.A. Lock						
Split Flow						
Comb Flow						
Main R/V						
Main R/V Plug						
Port Size SAE <input type="checkbox"/> NPT <input type="checkbox"/>						

KA18 ONLY

Mid-Section Inlets

Outlet

Type

- Tank Ret'n
- Press Beyond

Porting

Note Thread & Size

Top

High Press _____
Low Press _____

Side

High Press _____
Low Press _____

Customer _____ Model No. _____
 Customer No. _____
 City _____ State _____ Zip _____ Phone () _____
 Application _____
 Comments _____
 Assembly Code _____

You get more efficient control of fluid power distribution with Commercial valves because of these important features:

- ◆ Built-in, full-flow relief valves
- ◆ Parallel and series circuits in one bank
- ◆ Manual, hydraulic, electric or pneumatic operation
- ◆ Sectional construction for maximum flexibility
- ◆ Spool changeover capability for right or left-hand valve assemblies
- ◆ Low spool effort - improved metering

Several features are offered as standard on VG20/35 valves that contribute to their outstanding performance. Symmetrical timing makes changeover from left-to-right-hand operation simply a matter of removing the spool and re-inserting it in the opposite direction. Spool and re-inserting it in the opposite direction. Spool seals are fitted in counter bores for easier maintenance and in counter bores for easier maintenance and smoother spool operation. These features, combined with the extensive range of available spool functions and options, make these valves among the most versatile obtainable.

These features, and there are many more, offer advantages to the equipment manufacturer which result in superior control and equipment performance. These valves show a greatly reduced internal pressure drop under all conditions of operation.

Low Internal Pressure Drop

All valves present resistance to flow which results in pressure drop. Commercial valves VG20/35 are designed with large internal passages with uniform cross sections and smooth wall surfaces which provide flow paths free of abrupt angles. More useful fluid power is available because there is minimal internal pressure drop and less energy wasted in heat generation.

Sectional Construction

These valves are of sectional, stack type, construction assembled with one or more work sections capped by inlet and outlet sections. Working sections are offered in many functional types. Special mid-inlet sections may be added in the valve bank to introduce the flow from additional pumps. Working sections with series or parallel type circuits can be assembled in thousands of combinations to tailor these valves to your needs.

Pressure Compensation

VG35 parallel circuit sections can have the benefits of outlet pressure compensation. A special pressure compensation outlet automatically maintains a selected flow through any one of the valve's parallel section. The outlet's metering spool responds to changing pressure providing precise control of machine functions regardless of the level of the operator's skill.

Pressure compensated outlets may be used in mixed bank (series and parallel) assemblies if the series work sections are upstream of the pressure compensated parallel sections.

Full-flow Relief Valve Protection

full-flow system relief valves may be installed in the end inlet section.

Work sections can be provided with full-flow relief valves in either or both work ports. Port relief valves can be pilot operated with anti-cavitation checks or differential area, full-flow relief valves without anti-cavitation checks. Cross-over relief valves are available.

Inlets (3500 psi)

Code	End Port	Top Port
DVG20-A770	SAE-12	SAE-12
DVG20-A770-SM	SAE-12 Machined for solenoid sections pilot supply SAE-6 pilot Port	SAE-12
DVG20-A000	NON-PORTED	

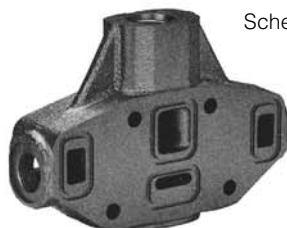
Note: Inlets are machined for a main R/V or R/V plug and are furnished with plastic closures.



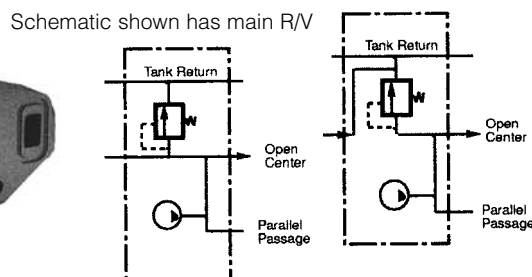
Mid-section Inlets

Split Flow

Code	Top Port
DVG20-SFA70	SAE-12
DVG20-SFA00	NON-PORTED



Separates primary and secondary pump flows which allows one valve bank to operate like two.



Combined Flow

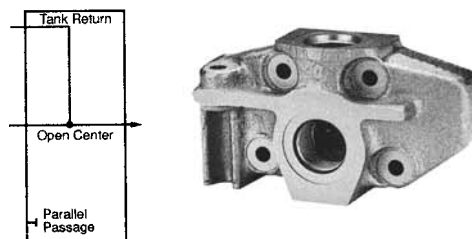
Code	Top Port
DVG20-CFA70	SAE-12
DVG20-CFA00	NON-PORTED

Combined Flow

Combines primary and secondary pump flows for faster operating speed of downstream functions.

Adjustable Relief Valves

Code	
DVG20-HMRV	Screw - adjusted main relief valve Pressure range 2800 - 3500 psi Factory set @ 3000 psi @ 30 gpm
DVG20-MRVP	Main relief valve plug



Outlets (Thru Stud Type)

Tank Return Type

Code	End Port	Top Port
DVG20-TTR88	SAE-16	SAE-16
DVG20-TTR00	NON-PORTED	



Pressure Beyond Type

Code	End Port	Top Port
DVG20-TPB80	SAE-16	SAE-16
DVG20-TPB00	NON-PORTED	

Parallel Circuit (3500 psi)

Low-boy Work Sections

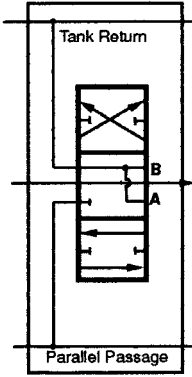
Code	4-Way 3-Position Hold in Neutral	3-Way 3-Position Hold in Neutral	4-Way 3-Position Float in Neutral	Port Size	Work Port NOT Machined	Spring Return	3-Position Detent	Metered Hydraulic Remote Control	Solenoid Operated	Air Shift
DVG20-DA0	•				•	•				
DVG20-DA7	•			SAE-12		•				
DVG20-DB7	•			SAE-12			•			
DVG20-MA7			•	SAE-12		•				
DVG20-MB7			•	SAE-12			•			
DVG20-SA7		•		SAE-12		•				
DVG20-DX7	•			SAE-12				•		
DVG20-MX7			•	SAE-12				•		
DVG20-DK7	•			SAE-12					•12vDC	
DVG20-MK7			•	SAE-12					•12vDC	
DVG20-DV7	•			SAE-12						•

Hi-boy Work Sections

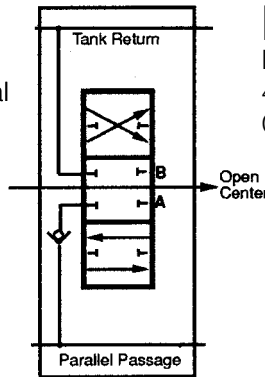
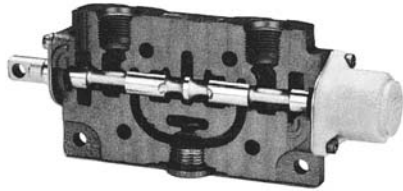
Code	4-Way 3-Position Hold in Neutral	3-Way 3-Position Hold in Neutral	4-Way 3-Position Float in Neutral	Port Size	Work Port NOT Machined	Spring Return	3-Position Detent	Metered Hydraulic Remote Control	Solenoid Operated	Air Shift	Port R/V Machined
DVG20-HA055	•				•	•					•
DVG20-HA755	•			SAE-12		•					•
DVG20-HB755	•			SAE-12			•				•
DVG20-LA755			•	SAE-12		•					•
DVG20-LB755			•	SAE-12			•				•
DVG20-JA705		•		SAE-12		•					•
DVG20-HX755	•			SAE-12				•			•
DVG20-LX755			•	SAE-12				•			•
DVG20-HK755	•			SAE-12					•12vDC		•
DVG20-LK755			•	SAE-12					•12vDC		•
DVG20-HV755	•			SAE-12						•	•

Note:

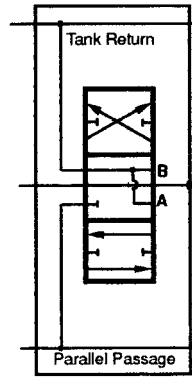
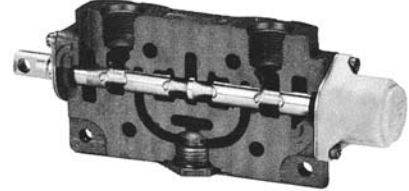
- ◆ Codes outside the shaded area may require a longer lead time.
- ◆ Most codes outside the shaded areas can be made from codes inside the area.
- ◆ Solenoids are furnished with spade connectors.
- ◆ Machining instructions for standard housings are included in solenoid kits.



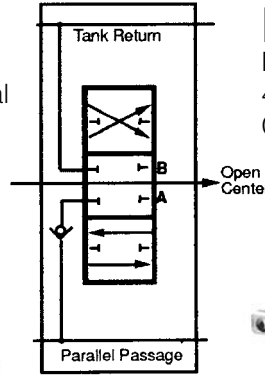
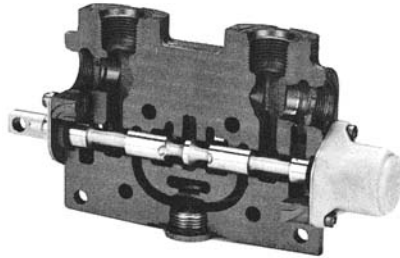
MA7
Double-Acting Section
4-Way, 3-Position, Float in Neutral
Motor Spool



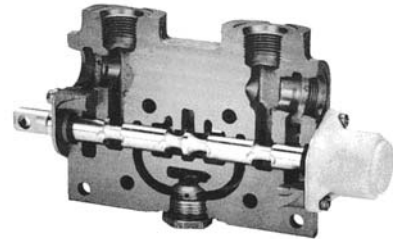
DA7
Double-Acting Section
4-Way, 3-Position, Hold in Neutral
Cylinder Spool



LA755
Double-Acting Section
4-Way, 3-Position, Float in Neutral
Motor Spool



HA755
Double-Acting Section
4-Way, 3-Position, Hold in Neutral
Cylinder Spool



Stud Kits for Thru-Stud Outlets

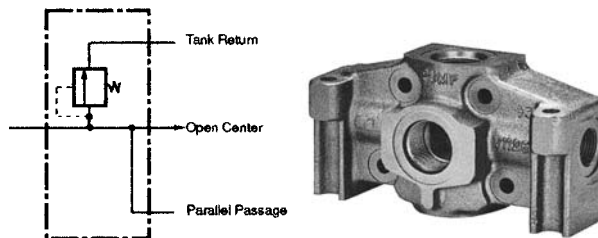
Code	1	2	3	4	5	6	7	8
DVG20-	TSK-1	TSK-2	TSK-3	TSK-4	TSK-5	TSK-6	TSK-7	TSK-8

Torque to 350 inch pounds. Stud specifications are Grade 8.

Inlets (3500 psi)

Code	End Port	Top Port
DVG35-A880	SAE-16	SAE-16
DVG35-A880-SM	SAE-16 Machined for solenoid sections pilot supply. SAE-6 pilot port.	SAE-16
DVG35-A980	SAE-20	SAE-16
DVG35-A990	SAE-20	SAE-16
DVG35-A000	NON-PORTED	SAE-20

Note: Inlets are machined for a main R/V or R/V plug and are furnished with plastic closures.



Schematic shown has main R/V

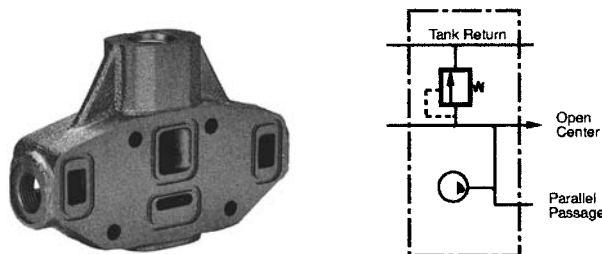
Mid-section Inlets

Split Flow

Code	Top Port
DVG35-SFA80	SAE-16
DVG35-SFA00	NON-PORTED

Separates primary and secondary pump flows which allows one valve bank to operate like two.

Note: Mid-section inlets are machined for a main R/V or R/V plug and are furnished with plastic closures.



Adjustable Relief Valves

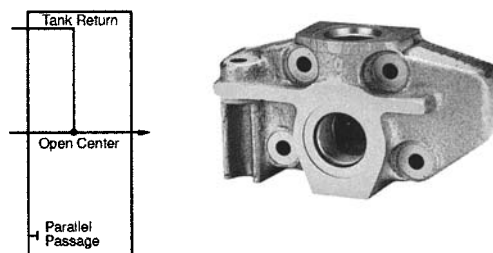
Code	
DVG35-HMRV	Screw - adjusted main relief valve Pressure range 2800 - 3500 psi Factory set @ 3000 psi @ 30 gpm
DVG35-MRVP	Main relief valve plug



Outlets (Thru Stud Type)

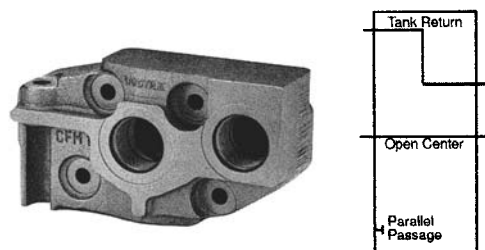
Tank Return Type

Code	End Port	Top Port
DVG35-TTR99	SAE-20	SAE-20
DVG35-TT400	NON-PORTED	



Pressure Beyond Type

Code	End Port	Top Port
DVG35-TPB99	SAE-20	SAE-20
DVG35-TPB00	NON-PORTED	



Parallel Circuit (3500 psi)

Low-boy Work Sections

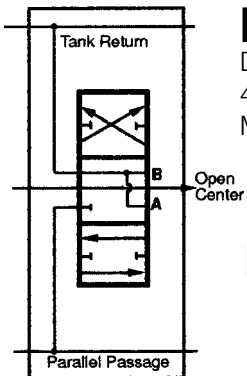
Code	4-Way 3-Position Hold in Neutral	3-Way 3-Position Hold in Neutral	4-Way 3-Position Float in Neutral	Port Size	Work Port NOT Machined	Spring Return	3-Position Detent	Metered Hydraulic Remote Control	Solenoid Operated
DVG35-DA0	•				•	•			
DVG35-DA8	•			SAE-16		•			
DVG35-MA8			•	SAE-16		•			
DVG35-DX8	•			SAE-16				•	
DVG35-DK8	•			SAE-16					•
DVG35-SA8		•		SAE-16		•			

Hi-boy Work Sections

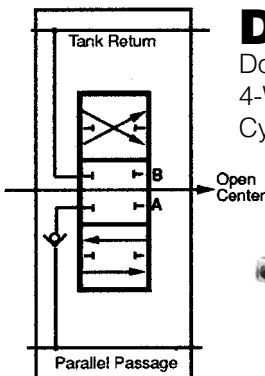
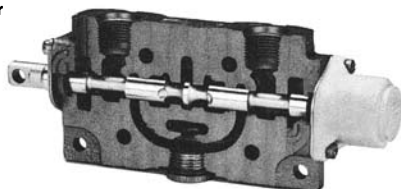
Code	4-Way 3-Position Hold in Neutral	3-Way 3-Position Hold in Neutral	4-Way 3-Position Float in Neutral	Port Size	Work Port NOT Machined	Spring Return	3-Position Detent	Metered Hydraulic Remote Control	Solenoid Operated	Air Shift	Port R/V Machined
DVG35-HA055	•				•	•					•
DVG35-LA055			•		•	•					•
DVG35-HA855	•			SAE-16		•					•
DVG35-HB855	•			SAE-16			•				•
DVG35-LA855			•	SAE-16		•					•
DVG35-LB855			•	SAE-16			•				•
DVG35-JA805		•		SAE-16		•					•
DVG35-HX855	•			SAE-16				•			•
DVG35-LX855			•	SAE-16				•			•
DVG35-HK855	•			SAE-16					•12vDC		•
DVG35-LK855			•	SAE-16					•12vDC		•
DVG35-HV855	•			SAE-16						•	•
DVG35-LV855			•	SAE-16						•	•

Note:

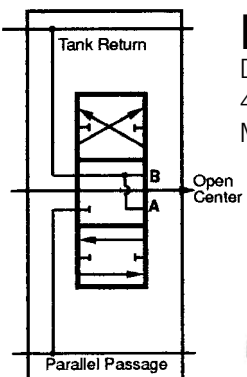
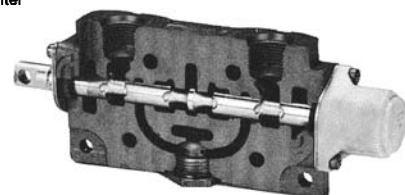
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- ◆ Most codes outside the shaded areas can be made from codes inside the area.
- ◆ Solenoids are furnished with spade connectors.
- ◆ Machining instructions for standard housings are included in solenoid kits.



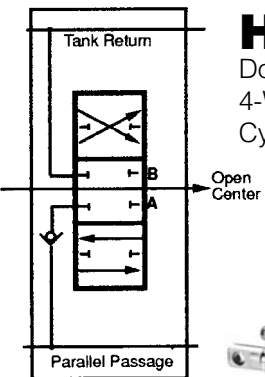
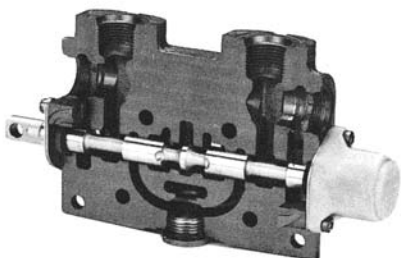
MA8
Double-Acting Section
4-Way, 3-Position, Float in Neutral
Motor Spool



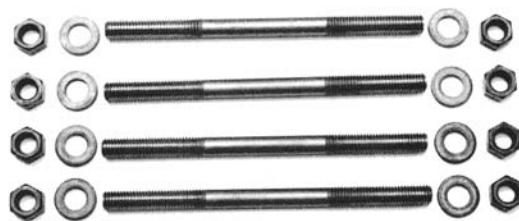
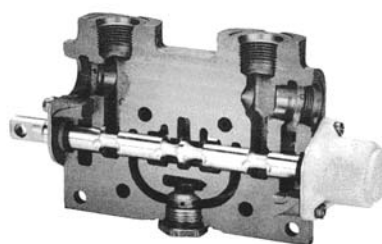
DA8
Double-Acting Section
4-Way, 3-Position, Hold in Neutral
Cylinder Spool



LA855
Double-Acting Section
4-Way, 3-Position, Float in Neutral
Motor Spool



HA855
Double-Acting Section
4-Way, 3-Position, Hold in Neutral
Cylinder Spool



Stud Kits for Thru-Stud Outlets

Code	1	2	3	4	5	6	7	8
DVG35-	TSK-1	TSK-2	TSK-3	TSK-4	TSK-5	TSK-6	TSK-7	TSK-8

Torque to 900 inch pounds. Stud specifications are Grade 8.

Relief Valves For DVA20/35 and DVG20/35

Code	Screw Adjustable Port Relief Valve With A/C 500 to 5000 psi	Slug Adjustable Port Relief Valve Without A/C		
		500 to 1000	1000 to 2500	2500 to 3500
DV-	***PRVAC	*PRV-1	** PRV-2	***PRV-3
DV-	---	PRV-SK Shim Kit for Above		



All relief valves are full-flow
 See inlet sections for main relief valve codes
 Port relief valves are factory set at 10 gpm and:
 * 1000 psi
 ** 2000 psi
 *** 2500 psi

Accessories For DVA20/35 And DVG20/35

Code	Anti-Cavitation Check	Port Relief Valve Plug
DV-	AC	PRVP

Valve Work Port Plugs For all valve series

Code	NPT Plugs					SAE Plugs					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	SAE-8	SAE-10	SAE-12	SAE-16	SAE-20	SAE-24
DV-DPL-	50	75	100	125	150	8	10	12	16	20	24

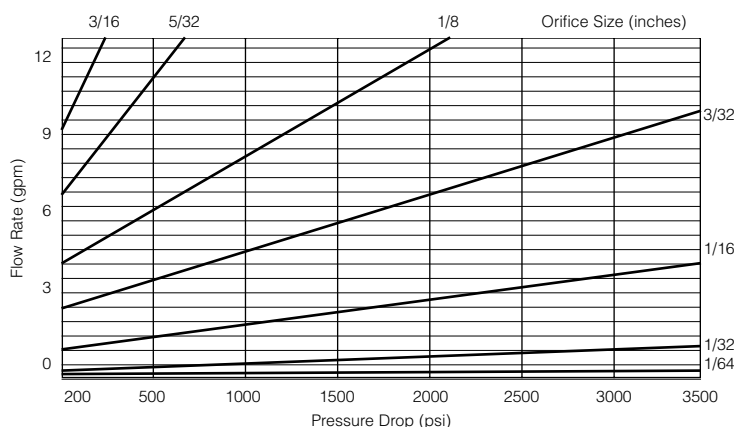


SAE plugs include o-ring.

Work Port Restrictors

Code	Description
DV-PRT-8	For SAE-8 Work Port
DV-PRT-10	For SAE-10 Work Port
DV-PRT-12	For SAE-12 Work Port
DV-PRT-16	For SAE-16 Work Port

Restrictors are furnished without orifices.
 See chart for orifice drill size.



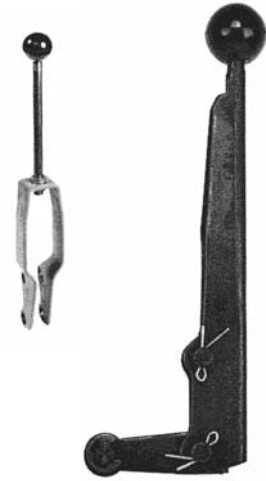
Handle Assembly

For DVA20/35 and DVG20/35

A= Old Style Handle W/VA Linkage

VA= New Style Handle W/VA Linkage

Lever Length	6"		8"		10"		Linkage Kits Handle to Valve			
	A	VA	A	VA	A	VA	A to VA	VA to A	VA to VA	A to A
Code										
DV20-	H-3	H-6	H-4	H-8	H-5	H-10	HK-1	HK-2	HK-5	HK-7
DV35-	H-3	H-6	H-4	H-8	H-5	H-10	HK-3	HK-4	HK-6	HK-8



Work Section -- Spool Actuation Kits

For DVA20/35 and DVG20/35

Code	Spring Return	3-Position Detent	Rotary Control	Air Shift	Metering Hydraulic Remote Control	On/Off Pilot Operated	Single-Ended D.A. Solenoid 12 VDC	Double-Ended D.A. Solenoid 12VDC	Detent In Spring Ret'n Out	Dentent Out Spring Ret'n	Single Ended DA Solenoid 24v
DV20-	K-100	K-101	K-102	K-113	K-109	K-110	K-106	K-111	K-107	K-108	K-112
DV35-	K-200	K-201	K-202	K-213	K-209	K-210	K-206	K-211	N/A	N/A	K-212

 These kits are for LH assemblies ONLY. RH kits are NOT AVAILABLE.

Seal Kits

For DVA20/35 and DVG20/35

Code	Work Section Assembly Kit	Work Section Repair Kit	Port R/V Without A/C Seal Kit	Port R/V With A/C Seal Kit	Main R/V Repair Kit	Main R/V Seal Kit
DV20-	K-1	K-2	K-3	K-3-1	K-4	K-5
DV35-	K-11	K-12	K-3	K-3-1	K-14	K-15
Kit Contains	Section Seals	Section, Spool and Check Seals	All Replaceable Seals	All Replaceable Seals	All Replaceable Seals & Cartridge Body	All Replaceable Seals