

Vickers®

# General Product Support



## Guide to Industrial Hydraulics

Primary Metals, Machine Tools-Forming, Machine Tools-Cutting,  
Plastics Working Machinery, Paper Industries Machinery,  
Packaging Machinery, Entertainment



**VICKERS**

# Systems capabilities designed to help you...

The products featured in this catalog represent the best in hydraulic and electrohydraulic technology from a company that has been a leader in the industry for over seventy-five years. Vickers has a continuing commitment to provide its customers with quality products and system solutions.

This catalog highlights the spectrum of Vickers industrial hydraulic products. Its purpose is to provide a convenient reference tool when choosing Vickers products or designing a system using Vickers components. It is divided into different sections according to the type of product. Each entry gives a brief description and basic specifications for a specific product. Should you require more detailed information, the catalog number for each product is also provided.

Vickers has the expertise needed to provide you with complete fluid power system solutions, including the huge product selection previewed on following pages. We also offer in-depth knowledge of your market, and system design know-how to overcome design problems inherent in your market segment.

With manufacturing and design locations around the world, we “speak your language.” Our engineers understand your system needs as well as regional differences.

When you're challenged to provide more energy-efficient equipment that must work harder than ever before, let us help you meet the challenge with:

- Systems that give you total power and motion control management capability
- Systems with faster control response and enhanced reliability
- Systems featuring integral control logic, sensors, and self-diagnostics

Let one of our dedicated-market teams work closely with you in your early preliminary design stages to:

- Design an optimal power and motion control system.
- Ensure the performance compatibility of Vickers products with that of existing system.
- Share application knowledge that allows better support of products – yours and ours – in the field.

With every Vickers system, you'll receive support on a global scale... research, development and design; systems application engineering; prompt delivery and expert service. Most important, you'll get quality in everything we do for you.

So whether you design, build or maintain industrial equipment for plastic injection, machine tool cutting & forming, automotive or primary metals, Vickers has dedicated resources to serve your market and provides unmatched expertise in system reliability.

Choose Vickers – for “systems thinking” that will maximize the performance of your industrial applications.

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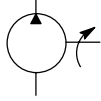
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## Vane pumps: Single fixed displacement



Vickers offers an extensive line of fixed displacement single pumps with displacements from 3,3 to 215 cm<sup>3</sup>/r (.20 to 13.12 in<sup>3</sup>/r); continuous pressures to 280 bar (4000 psi); speeds to 7000 r/min. V10 and V20 models can be provided with integral valving to limit flow to the operating system, to limit maximum system pressure, and to divide flow between two circuits. VTM42 pumps are for power steering applications. VQ, VMQ and VPF models are available with thru-drives.

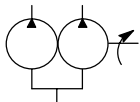


Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
V10	26,5 (7.0)	3,3 (0.2) to 16,4 (1.4)	175 (2500)	4800	698
V20	49,2 (13.0)	19,5 (1.19) to 42,4 (2.59)	175 (2500)	3400	698
20V	79,9 (21.1)	7 (0.43) to 45 (2.78)	210 (3000)	1800	560
25V(T)	118,1 (31.2)	33 (2.0) to 67 (4.13)	175 (2500)	1800	560
35V(T)	213,5 (56.4)	81 (4.94) to 121 (7.37)	175 (2500)	1800	560
35V(T)	213,5 (56.4)	81 (4.94) to 121 (7.37)	175 (2500)	1800	560
45V(T)	344,4 (91.0)	138 (8.41) to 193 (11.75)	175 (2500)	1800	560
25VPF(T)	110,0 (29.3)	10 (0.62) to 80 (4.88)	293 (4250)	1800	708
35VPF(T)	135,0 (8.2)	90 (5.49) to 135 (8.24)	260 (3800)	1800	708
45VPF(T)	118,1 (31.2)	140 (8.54) to 195 (11.89)	260 (3800)	1800	708
25VMQ	133,7 (35.3)	10 (0.62) to 80 (4.88)	260 (3800)	1800	5008.00/EN/0596/A
35VMQ	230,0 (60.8)	90 (5.49) to 135 (8.24)	260 (3800)	1800	5008.00/EN/0596/A

## Vane pumps: Double fixed displacement



Vickers extensive line of fixed displacement double pumps offers: displacements from 22,8 to 390 cm<sup>3</sup>/r (1.39 to 23.78 in<sup>3</sup>/r); continuous pressures to 280 bar (4000 psi); speeds to 3000 r/min. V2010 and V2020 models can be provided with integral valving to limit flow to the operating system, to limit maximum system pressure, and to divide flow between two circuits. VQ models are available with thru-drives.



Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
V2010	76,6 (20.2) 28,4 (7.5) cover end	19,5 (1.19) to 42,4 (2.59) 3,3 (0.2) to 16,4 (1.0)	155 (2250)	1800	698
V2020	76,6 (20.2) 76,6 (20.2) cover end	19,5 (1.19) to 42,4 (2.59) 19,5 (1.19) to 42,4 (2.59)	155 (2250)	1800	698

## Vane pumps: Double fixed displacement (continued)

Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
2520V	33,0 (2.0)	67 (4.1)	175 (2500)	1800	560
	shaft end 7,0 (0.45) cover end	shaft end 45 (2.8) cover end	210 (3000)		
2525V	79,5 (21.0)	67 (4.1)	175 (2500)	1800	560
	shaft end 53,0 (14.0) cover end	shaft end 67 (4.1) cover end	175 (2500)		
3520V	213,5 (56.4)	121 (7.4)	175 (2500)	1800	560
	shaft end 79,9 (21.1) cover end	shaft end 45 (2.8) cover end	210 (3000)		
3525V	213,5 (56.4)	121 (7.4)	175 (2500)	1800	560
	shaft end 118,1 (31.2) cover end	shaft end 67 (4.1) cover end	175 (2500)		
4520V	344,4 (91.0)	193 (11.7)	175 (2500)	1800	560
	shaft end 79,9 (21.1) cover end	shaft end 45 (2.8) cover end	210 (3000)		
4525V	344,4 (91.0)	193 (11.7)	175 (2500)	1800	560
	shaft end 118,1 (31.2) cover end	shaft end 67 (4.1) cover end	175 (2500)		
4535V	344,4 (91.0)	193 (11.7)	175 (2500)	1800	560
	shaft end 213,5 (56.4) cover end	shaft end 121 (7.4) cover end	175 (2500)		
2525VMQ	133,7 (35.3)	80 (4.88)	260 (3800)	1800	5008.00/EN/ 0596/A
		shaft end 80 (4.88) cover end	260 (3800)		
3525VMQ	230,0 (60.8)	135 (8.24)	230 (3300)	1800	5008.00/EN/ 0596/A
		shaft end 80 (4.88) cover end	260 (3800)		
2525VPF	135,0 (35.6)	80 (4.88)	175 (2500)	1800	708
		shaft end 80 (4.88) cover end	175 (2500)		
3525VPF	230,0 (60.8)	135 (8.24)	262 (3800)	1800	708
		shaft end 80 (4.88) cover end	293 (4250)		
3535VPF	230,0 (60.8)	135 (8.24)	262 (3800)	1800	708
		shaft end 135 (8.24) cover end	262 (3800)		

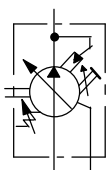
## Vane pumps: Double fixed displacement (continued)

Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
4525VPF	331,2 (87.5)	195 (11.89) shaft end 80 (4.88) cover end	262 (3800) 293 (4250)	1800	708
4535VPF	331,2 (87.5)	195 (11.89) shaft end 135 (8.24) cover end	262 (3800) 262 (3800)	1800	708
4545VPF	331,2 (87.5)	195 (11.89) shaft end 195 (11.89) cover end	262 (3800) 262 (3800)	1800	708

## Vane pumps: Variable displacement



VVA pumps are pressure compensated variable displacement vane pumps having separate adjustments for pressure compensation and maximum displacement. Pressure compensator options include single and dual adjustable pressure designs. VVB pumps are offered with a wide choice of energy-saving pressure and/or flow sensitive controls. The range covers internally and externally signalled types.

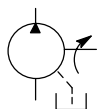


Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
VVA	100 (24,4)	83 (5.06)	100 (1500)	1800	GB-V-117
VVB	90 (23,8)	50 (3.05)	220 (3250)	1800	GB-2342

## Piston Pumps: Fixed displacement



PFB fixed displacement piston pumps are available in four geometric displacements: 10,5; 21,1; 42,8 and 94,4 cm<sup>3</sup>/rev (0.64, 2.61 and 5.76 in<sup>3</sup>/rev). Depending upon displacement and type of fluid used, maximum speeds are from 1200 to 3600 r/min, and maximum operating pressures are from 69 to 207 bar (1000 to 3000 psi). Foot mountings are available for all models.

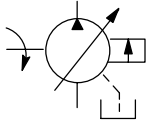


Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
PFB5	38 (10)	10,5 (0.64)	210 (3000)	3600	658 GB-2379B
PFB10	68 (18)	21 (1.29)	210 (3000)	3200	658 GB-2379B
PFB20	75 (19.9)	42,8 (2.61)	175 (2500)	2400	658 GB-2379B
PFB45	27 (54)	94,4 (5.76)	210 (3000)	2200	658 GB-2379B

## Piston Pumps: Variable displacement



Variable displacement piston pumps can closely match pressure and/or flow demand with operating pressure up to 270 bar (3900 psi). The pumps are available in geometric displacements from 10,5 to 197,3 cm<sup>3</sup>/r (0.64 to 12 in<sup>3</sup>/r) with drive speeds up to 1800 rpm. A variety of controls provides the ability to match the pumps to each application. Options include: pressure compensator with or without a remote control facility; pressure compensator with adjustable displacement control; load sensing compensator; mechanical control; and handwheel control.

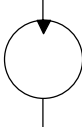


Model	Maximum Delivery L/min (USgpm)	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Catalog
PVB5	18,9 (5.0)	10,5 (0.64)	210 (3000)	1800	GB-2379B
PVB6	22,7 (6.0)	13,8 (0.84)	140 (2000)		
PVB10	37,5 (10.0)	21,1 (1.29)	210 (3000)		
PVB15	59,4 (15.7)	33,0 (2.01)	140 (2000)		
PVB20	75,7 (20.0)	42,8 (2.61)	210 (3000)		
PVB29	109,7 (29.0)	61,6 (3.76)	140 (2000)		
PVB45	170,3 (45.0)	94,5 (5.76)	210 (3000)		
PVB90	348 (91.9)	197,5 (12.04)	210 (3000)		
PVH45	81 (21)	45,1 (2.75)	350 (5000)	1800	5016/EN/ 1196/A
PVH131	215 (57)	131,1 (8.00)	350 (5000)	1800	5016/EN/ 1196/A
PVH57QI	98 (28)	57,4 (3.5)	250 (3600)	1800	GB-C-2010
PVH74QI	125 (33)	73,7 (4.5)	250 (3600)	1800	GB-C-2010
PVH98QI	170 (45)	98,3 (6)	250 (3600)	1800	GB-C-2010
PVH131QI	223 (59)	131,1 (8)	250 (3600)	1800	GB-C-2010
PVQ10	18,6 (4.9)	10,5 (0.64)	210 (3000)	1800	GB-C-2132
PVQ13	24,1 (6.4)	13,8 (0.84)	140 (2000)	1800	GB-C-2132
PVQ16	27,9 (7.4)	16 (0.9)	210 (3000)	1800	GB-C-2132
PVQ20	37,0 (9.8)	21,1 (1.29)	210 (3000)	1800	GB-C-2132
PVQ25	46,0 (12.2)	25,2 (1.54)	210 (3000)	1800	GB-C-2132
PVQ32	58 (15.3)	32,9 (2.01)	140 (2000)	1800	GB-C-2132
PVQ40	72,3 (19.1)	41 (2.5)	210 (3000)	1800	GB-C-2132
PVQ45	80,0 (21.0)	45,1 (2.75)	190 (2700)	1800	GB-C-2132
PVQ50	88 (23)	50 (3.05)	270 (3900)	1800	5014.00/ EN/0297/A
PVQ63	111,0 (29.3)	63 (3.84)	210 (3000)	1800	GB-C-2132
PVQ141	249 (66)	141,1 (8.64)	270 (3900)	1800	5014.00/ EN/0297/A

## Vane motors: Fixed displacement



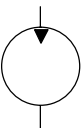
Vickers vane motors offer: displacements from from 21,6 to 317,1 cm<sup>3</sup>/r (1.32 to 19.35 in<sup>3</sup>/r); pressures to 175 bar (2500 psi); speeds to 4000 r/min; a choice of 15 torque ratings.

	Model	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Theoretical Torque Nm/Δ 7 bar (lb. in./Δ100 psi)	Catalog
	M2	24,7-35,4 (1.51-2.16)	140 (2000)	2200	2,8-4,1 (25-36)	674
	25M	43-69 (2.68-4.19)	175 (2500)	4000	4,7-7,3 (42-65)	674
	35M	84-122 (5.10-7.44)	175 (2500)	4000	9,04-13 (80-115)	674
	45M	138-193 (8.42-11.79)	175 (2500)	4000	14,68-20,9 (130-185)	674
	50M	231-317,09 (14.11-19.32)	155 (2250)	3200	24,8-33,9 (220-300)	674

## Vane motors: High torque, low speed



Vickers high torque, low speed vane motors offer: displacements from 24 to 754 cm<sup>3</sup>/r (393 to 12356 in<sup>3</sup>/r); pressures to 280 bar (4000 psi); speeds to 400 r/min; a choice of 14 single torque, single displacement models or 12 multi-torque, multi-displacement models.

	Model	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Theoretical Torque Nm/Δ 7 bar (lb. ft./Δ100 psi)	Catalog
	MHT32	393 (24)	210 (3000)	400	43 (32)	679
	MHT50	623 (38)	280 (4000)	350	68 (50)	679
	MHT70	865 (52.8)	210 (3000)	300	95 (70)	679
	MHT130	1852 (113)	280 (4000)	200	176 (130)	679
	MHT150	1852 (113)	280 (4000)	250	203 (150)	679
	MHT220	2720 (166)	190 (2750)	200	298 (220)	679
	MHT-250	3137 (188)	190 (2750)	200	339 (250)	679
	MHT-375	4638 (283)	190 (2750)	100	508 (375)	679
	MHT-380	4806 (288)	190 (2750)	200	515 (380)	679
	MHT-440	5440 (332)	190 (2750)	200	597 (440)	679
	MHT500	6274 (376)	190 (2750)	200	678 (500)	679



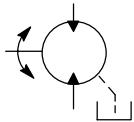
## Vane motors: High torque, low speed (continued)

Model	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Theoretical Torque Nm/Δ 7 bar (lb. ft./Δ100 psi)	Catalog
MHT-750	9258 (565)	190 (2750)	100	1017 (750)	679
MHT-1000	12356 (754)	190 (2750)	100	1356 (1000)	679
MHT70/ 35/35	868 & 426 (53 & 26)	280 (4000)	300	95 & 47 (70 & 35)	679
MHT90/ 45/45	1114 & 540 (68 & 33)	280 (4000)	300	122 & 61 (90 & 45)	679
MHT190/ 95/95	72 & 144 (1180 & 2360)	190 (2750)	200	129 & 258 (95 & 190)	679
MHT220/ 125/95	72 & 94 & 166 (1180 & 1377 & 2720)	190 (2750)	200	129 & 170 & 298 (95 & 125 & 220)	679
MHT250/ 125/125	1540 & 3081 (94 & 188)	190 (2750)	200	170 & 339 (125 & 250)	679

## Piston motors: Fixed displacement



Vickers piston motors offer: fixed displacements from 10,5 to 160 cm<sup>3</sup>/r (.64 to 9.76 in<sup>3</sup>/r) and variable displacements from 41 to 355 cm<sup>3</sup>/r (2.5 to 21.66 in<sup>3</sup>/r); continuous pressures to 480 bar (6960 psi); speeds to 3600 r/min. MFE and MVE models are ideal for use with Vickers TA19 and TA1919 hydrostatic transmission pumps.

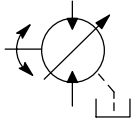


Model	Geometric Displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Theoretical Torque Nm/Δ 7 bar (lb. in./Δ100 psi)	Catalog
MFB5	10,53 (0.643)	210 (3000)	3600	1,15 (10.2)	691
MFB10	21.14 (1.29)	210 (3000)	3200	2,3 (20.5)	691
MFB20	42.77 (2.61)	175 (2500)	2400	4,7 (41.6)	691
MFB29	61.6 (3.76)	140 (2000)	2400	6,76 (59.9)	691
MFB45	94.4 (5.76)	210 (3000)	2200	10,3 (91.7)	691
MFE15	32,77 (2)	350 (5000)	3600	3,6 (31.8)	691
MFE19	40,96 (2.5)	350 (5000)	3600	4,5 (39.8)	691

## Piston motors: Variable displacement



Vickers variable displacement piston motors offer: two displacements of 19,5 and 21,1 cm<sup>3</sup>/r (0.64 and 1.29 in<sup>3</sup>/r); flows from 19,0 to 68,1 l/min (5.0 to 18.0 USgpm); speed ranges dependent on input flow and displacement control with a range of 4:1 to 12:1. MVB5 and MVB10 motors will operate at speeds as low as 50 rpm with appropriate circuit and application considerations.



Model	Geometric displacement cm <sup>3</sup> /r (in <sup>3</sup> /r)	Maximum Pressure bar (psi)	Maximum Speed rpm	Theoretical torque Nm/Δ 7 bar (lb. in./Δ100 psi)	Catalog
MVB5	10,53 (0.64)	210 (3000)	3600	1,15 (10.2)	691
MVB10	21,14 (1.29)	210 (3000)	3200	2,3 (20.5)	691
MVE19	40,96 (2.5)	350 (5000)	4000	4,5 (39.8)	691

## Pressure Controls: Remote and standard relief

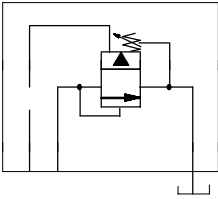
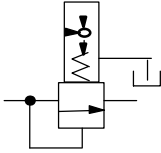
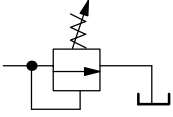
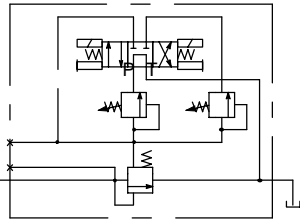
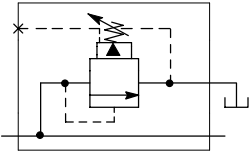


Small, easily installed remote pressure control valves make it possible to control a balanced piston pressure relief valve from a more convenient location. Available pressure ranges for the CGR-02 valve are from 4,5 to 70 bar (65 to 1000 psi), from 4,5 to 140 bar (65 to 2000 psi), and from 4,5 to 210 bar (65 to 3000 psi).

Pressure relief valves mount between the pump and valve system to protect from overloads. A sensitive adjustment mechanism allows the setting of the pressure in fine increments over a wide range - up to the maximum rating of the valve. Available pressure ranges for these valves are from 5 to 70 bar (75 to 1000 psi) to 100 to 210 bar (1500 to 3000 psi). Maximum flows are to 680 l/min (180 USgpm).

Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
C-175	Manual adjustment	1/4"	210 (3000)	12 (3)	5110.00/EN/ 1297/A GB-411A
CG-03	Balanced piston type, adjustable	03	210 (3000)	30 (8)	5110.00/EN/ 1297/A
CG-19	Solenoid controlled, pilot operated	06 10	210 (3000)	340 (90) 680 (180)	5110.00/EN/ 1297/A

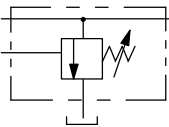
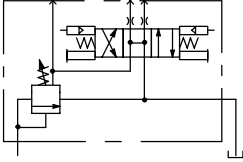
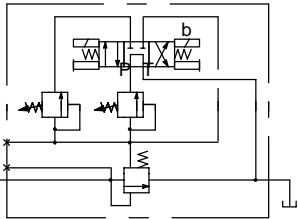
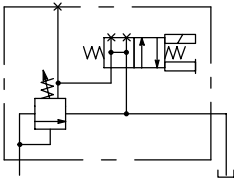
## Pressure controls: Remote and standard relief (continued)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	CG2V-6	Two-stage with integral manual adj.	06	350 (5000)	400 (106)	GB-2323A
	CG2V-8	Two-stage with integral manual adj.	08			
	CG5V-6	Two-stage with sol. operated pilot	06			
	CG5V-8	Two-stage with sol. operated pilot	08			
	CGE-02	Manifold or subplate mounted, remote electrically modulated	02	210 (3000)	380 (100)	5110.00/EN/1297/A
	CGE-06		06			
	CGE-10		10			
	CGR-02	Remote control for relief valves. Not for use as independent relief valve. Manual adjustment	02	210 (3000)	Pilot flow	5110.00/EN/1297/A GB-409A
	CS/T-03	Balanced piston type w/optional sequence feature	03	210 (3000)	170 (45)	5110.00/EN/1297/A
	CS/T*-06		06		340 (90)	
	CS/T*-10		10		681 (180)	
	ECT-06	Two-stage, pipe mounted	06	250 (3600)	200 (53)	GB-C-2330A
	ECT-10	Two-stage, pipe mounted	10		380 (100)	

## Pressure controls: Multi-pressure solenoid operated relief valves



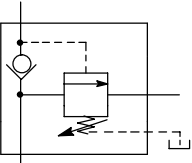
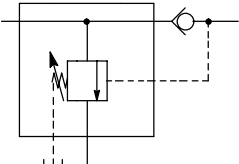
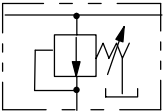
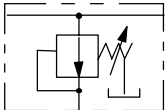
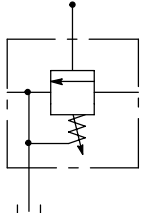
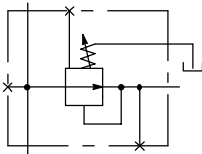
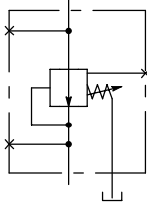
Balanced piston-type valves are used in applications needing an electrically or pneumatically controlled adjustable pressure relief or regulating valve to limit the pressure in a hydraulic circuit to the desired maximum.

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	CG(H)-06 CG(H)-10	Balanced piston type w/optional sequence feature	06 10	210 (3000)	340 (90) 681 (180)	5110.00/EN/ 1297/A
	CG/S/T-19-03 CG/S/T-19-06 CG/S/T-19-10	Air controlled, pilot operated	03 06 10	210 (3000)	227 (60) 340 (90) 680 (180)	5110.00/EN/ 1297/A
	CG/S/T-06-DG CG/S/T-10-DG	Multi-pressure, with DG4S4-01 pilot valve	06 10	210 (3000)	340 (90) 680 (180)	5110.00/EN/ 1297/A
	CG/S/T-06-DG CG/S/T-10-DG	Multi-pressure, with DG4V-3 pilot valve	06 10	210 (3000)	340 (90) 680 (180)	5110.00/EN/ 1297/A
	CG5-06 CG5-10	Multi-pressure, solenoid controlled	06 10	210 (3000)	171 (45) 380 (90)	5110.00/EN/ 1297/A

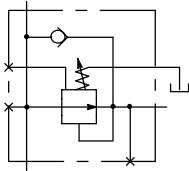
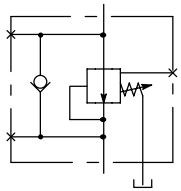
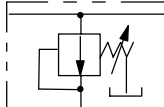
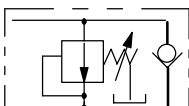
# Pressure controls: Sequence, reducing, unloading, back pressure and counterbalance valves



Vickers R-series “hydrocushion” type pressure control valves are used to control the sequencing, unloading, back pressure, and counterbalancing of oil flow. R(C)T and R(C)S have an optional pressure inlet so they may be mounted in-line. UR and EUR series unloading relief valves contain an integral check valve which prevents return flow from the accumulator through the unloading valve. X series pressure reducing valves operate under the theory of the reduced outlet pressure remaining constant regardless of variation of inlet pressure above the pressure setting.

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	EURG-1/2-06 EURG-1/2-10	Unloading relief, subplate mounted	06 10	210 (3000)	95 (25) 246 (65)	GB-404A
	EURT-1/2-06 EURT-1/2-10	Unloading relief, line mounted	06 10	210 (3000)	76 (20) 189 (50)	GB-404A
	R(C)G/S/T-03 R(C)G/S/T-06 R(C)G/S/T-10 R(C)G/S/T-12	Sequence, unloading, back pressure, and counterbalance, subplate or line mounted	03 06 10 12	210 (3000)	45 (12) 114 (30) 284 (75) 284 (75)	686
	URG-06 URG-10	Unloading relief, subplate mounted	06 10	210 (3000)	95 (25) 246 (65)	686
	URT-06 URT-10	Unloading relief, line mounted	06 10	210 (3000)	76 (20) 189 (50)	686
	XSL/XTL-03	Pressure reducing, line mounted	3/8"	140 (2000)	31 (8)	686
	XGL-03	Pressure reducing, subplate mounted	03	140 (2000)	31 (8)	686

## Pressure controls: Sequence, reducing, unloading, back pressure and counterbalance valves (continued)

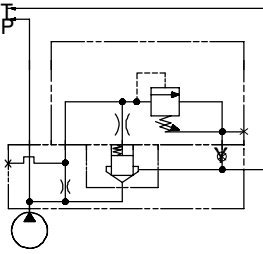
	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	X(C)*S/T-03 X(C)*S/T-06 X(C)*S/T-10	Pressure reducing, w/optional integral check, line or subplate mounted	03 06 10	210 (3000)	114 (30) 265 (70) 530 (140)	686
	X(C)G2V-6 X(C)G2V-8	Pressure reducing, w/optional integral check, line or subplate mounted	06 08	350 (5000)	200 (53) 300 (80)	GB-C-2321A
	XF-16	Reducing, line mounted, flange ports	1 1/2" or 2"	210 (3000)	473 (125)	I-135010
	XCF-16	Reducing valve w/integral check, line mounted, flange ports	2"	210 (3000)	473 (125)	I-135011

## Pressure controls: Flange mounted valves

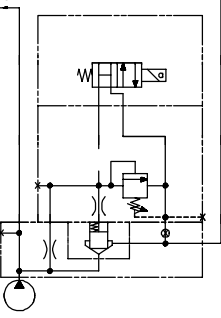
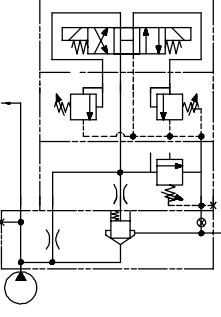
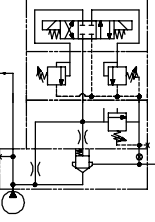
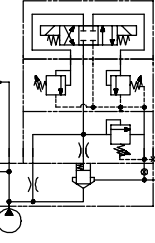


Flange mounted valves mount directly to the pump flange and reduce potential leak points for superior leak resistance. Three different valves are available: relief, unloading and check. Pilot design minimizes response time and cracking flow which allows for high pressure stability and increased system productivity.

Port size: **06** - 3/4" flange; **08** - 1" flange; **10** - 1-1/4" flange; **12** - 1-1/2" flange.  
Maximum pressure 350 bar (5000 psi); maximum flow 600 l/min (160 USgpm).

	Model	Description	Nom Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	CPF1S-06	Single pressure, without vent	06	280 (4000)	100 (26)	627
	CPF1S-08	Single pressure, without vent	08	280 (4000)	300 (80)	
	CPF1S-10	Single pressure, without vent	10	280 (4000)	600 (160)	
	CPF1S-12	Single relief without vent	12	280 (4000)	600 (160)	
	CPF1V-12	Single relief without vent	12	350 (5000)	600 (160)	

## Pressure controls: Flange mounted valves (continued)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	CPF2S-06	Single pressure, with vent	06	280 (4000)	100 (26)	627
	CPF2S-08	Single pressure with vent	08	280 (4000)	300 (80)	
	CPF2S-10	Single pressure with vent	10	280 (4000)	600 (160)	
	CPF2S-12	Single pressure with vent	12	280 (4000)	600 (160)	
	CPF2V-12	Single pressure with vent	12	350 (5000)	600 (160)	
	CPF3S-06	Bi-pressure w/max. press. override	06	280 (4000)	100 (26)	627
	CPF3S-08	Bi-pressure w/max. press. override	08	280 (4000)	300 (80)	
	CPF3S-10	Bi-pressure w/max. press. override	10	280 (4000)	600 (160)	
	CPF3S-12	Bi-pressure w/ max. press. override	12	280 (4000)	600 (160)	
	CPF3V-12	Bi-pressure w/max. press. override	12	350 (5000)	600 (160)	
	CPF4S-06	Tri-pressure w/max. press. override	06	280 (4000)	100 (26)	627
	CPF4S-08	Tri-pressure w/max. press. override	08	280 (4000)	300 (80)	627
	CPF4S-10	Tri-pressure w/max. press. override	10	280 (4000)	600 (160)	627
	CPF4S-12	Tri-pressure w/max. press. override	12	280 (4000)	600 (160)	627
	CPF4V-12	Tri-pressure w/max. press. override	12	350 (5000)	600 (160)	627
	DCPFS-08-20	Mtg. on pump flange or stacked w/CPF relief valves; poppet design		280 (4000)	114 (30)	627
	DCPFS-10-20		227 (60)			
	DCPFS-12-20		378 (100)			

## Pressure controls: Flange mounted unloading valves



The Vickers UPF unloading valve features flange mounting for increased design flexibility and reduced external piping. The valve is designed for direct mounting on the SAE flange outlet port of a pump. The UPF1 (without vent) and UPF2 (with vent) have flow ratings to 600 l/min (160 USgpm) and maximum pressure up to 210 bar (3000 psi).

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	UPF1S-06	Unloading	06	280 (4000)	100 (26)	627
	UPF1S-08	Unloading	08	280 (4000)	300 (80)	
	UPF1S-10	Unloading	10	280 (4000)	600 (160)	
	UPF1S-12	Unloading	12	280 (4000)	600 (160)	
	UPF1V-12	Unloading	12	350 (5000)	600 (160)	
	UPF2S-06	Unloading w/vent	06	280 (4000)	100 (26)	627
	UPF2S-08	Unloading w/vent	08	280 (4000)	300 (80)	
	UPF2S-10	Unloading w/vent	10	280 (4000)	600 (160)	
	UPF2S-12	Unloading w/vent	12	280 (4000)	600 (160)	
	UPF2V-12	Unloading w/vent	12	350 (5000)	600 (160)	

## Flow Controls: Adjustable



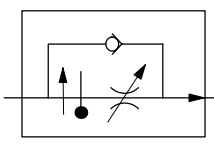
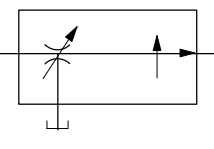
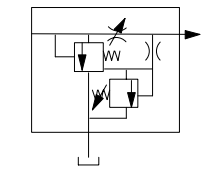
Vickers temperature and pressure compensated flow controls allow precise volumetric control. These valves are available with (bypass type) or without (restrictor type) integral relief valves and are suitable for pressures up to 250 bar (3600 psi).

FN and EFN (regulator) valves are suited for applications requiring flow regulation without pressure compensation. F(C)G (restrictor) valves are pressure compensated to provide precise adjustable flow rate, regardless of load pressure or temperature changes. FRG (bypass) valves are pressure and temperature compensated and also provide precise adjustable flow rates, regardless of load pressure or temperature changes.

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	EFN-06	Flow regulator without pressure compensation, line mounted	06	210 (3000)	76 (20)	GB-2339A
	EFN-10		10		189 (50)	
	FN-03	Flow regulator without pressure compensation, line mounted	03	210 (3000)	38 (10)	685
	FN-06		06		76 (20)	
FN-10	10		189 (50)			
	FN-4	Flow regulator, non-compensated		140 (2000)	9 (2.4)	GB-2278A
	F(C)G-02	Flow regulator, press. and temp. compensated, subplate mounted	02	250 (3600)	38 (10)	685



## Flow Controls: Adjustable (continued)

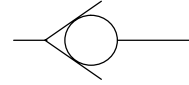
	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	F(C)G-03	Flow regulator, pressure and temperature compensated, subplate mounted	03	210 (3000)	106 (28)	685
	FG-06	Flow regulator, pressure and temperature compensated, subplate mounted	06	140 (2000)	227 (60)	I-513700
	FG-10		10		375 (99)	
	FRG-03	Meter-in type, pressure and temperature compensated, subplate mounted	03	210 (3000)	144 (28)	685

## Flow Controls: Check valves



Vickers inline, right-angle, and manifold mounted check valves are direct operated and used in hydraulic circuits to allow the free flow of fluid in one direction only.

Inline check valves can be used as a safety bypass for flow surges. Right angle check valves are designed for higher flows with less pressure drop. Pilot operated valves permit reverse flow when a pilot pressure signal is applied to the valve's pilot port. PCG series operate as direct check valves but can be opened by pilot pressure to permit free reverse flow.

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	C2-800	High velocity service, line mounted	1/4"	210 (3000)	12 (3)	645
	C2-805		3/8"		22 (6)	
	C2-815		3/4"		61 (16)	
	C2-820		1"		106 (28)	
	C2-825		1 1/4"		170 (45)	
	C2-830		1 1/2"		246 (65)	
	C2-835		2"		380 (100)	
	C5G-805	High velocity service, subplate, or manifold mounted	3/8"	210 (3000)	38 (10)	645
	C5G-815		3/4"		76 (20)	
	C5G-825		1 1/4"		379 (100)	
	DS/T8P1-02	Non-shock service, line mounted	1/4"	210 (3000)	12 (3)	645
	DS/T8P1-03		3/8"		30 (8)	
	DS/T8P1-06		3/4"		76 (20)	
	DS/T8P1-10		1 1/4"		190 (50)	
	PCGV-6	Remote pilot operated	06	350 (5000)	150 (40)	GB-2329A
	PCGV-8		08		300 (80)	
	PCG5V-6	Solenoid pilot operated	06	350 (5000)	150 (40)	GB-2329A
	PCG5V-8		08		300 (80)	
	4CG/T/S-03	Pilot operated, line or subplate mounted	03	210 (3000)	45 (12)	645
	4CG/T/S-06		06		114 (30)	
	4CG/T/S-10		10		284 (75)	

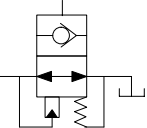
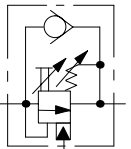
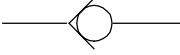
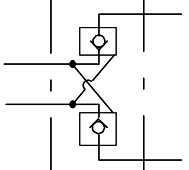
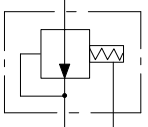
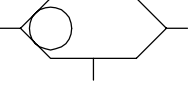
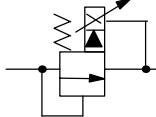
## Cartridge Valves: Screw-in



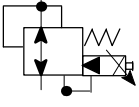
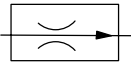
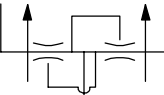
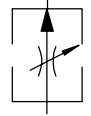
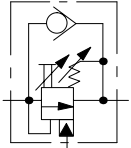
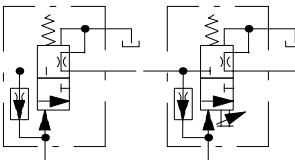
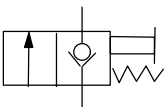
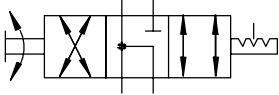
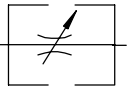
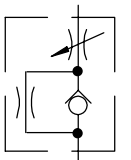
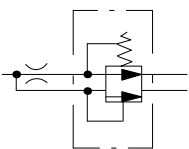
Vickers screw-in cartridge valves provide many advantages over traditional hydraulic valves. While offering the same control functions as traditional hydraulic valves, screw-in cartridge valves are compact, reliable, and economical. The concept of combining multiple cartridge valves in a common manifold offers the user substantial cost-saving advantages that cannot be achieved with traditional valving.

Our selection of screw-in cartridge valves includes:

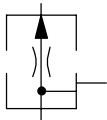
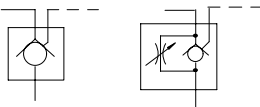
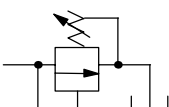
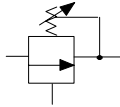
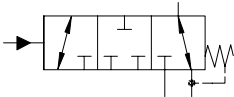
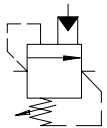
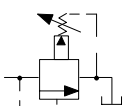
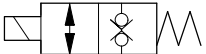
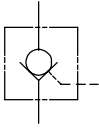
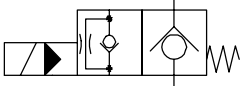

- Solenoid operated directional controls
- Directional controls
- Proportional controls
- Pressure controls
- Flow controls
- Check valves
- Logic elements
- Load controls
- Circuit makers

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	ADV1-16	Pressure controls: Accumulator discharge valve	16	210 (3000)	30 (8)	725
	CBV*-10 CBV*-12 CBV7-10 CBV*-10	Counterbalance	10 12 10 10	350 (5000) 350 (5000) 280 (4000) 350 (5000)	60 (15) 114 (30) 60 (15) 60 (15)	722
	CV3-8 CV*-10 CV11-12 CV1-16 CV2-20	Check valves: Direct operated	8 10 12 16 20	350 (5000) 350 (5000) 350 (5000) 210 (3000) 210 (3000)	30 (8) 76 (20) 114 (30) 151 (40) 227 (60)	720
	DPC1-10 DPC1-16 DPC1-20	Check valves: Pilot operated, double acting	10 16 20	210 (3000) 210 (3000) 210 (3000)	45 (12) 151 (40) 227 (60)	720
	DPS2-10 DPS2-16 DPS2-20	Logic Elements: Differential pressure sensing valve	10 16 20	Spool type: 290 (4200) Poppet type: 240 (3500)	60 (15) 190 (50) 300 (80)	724
	DSV*-6 DSV*-8 DSV*-10 DSV3-12 DSV*-16	Directional controls: Shuttle valves, non-solenoid	6 8 10 12 16	210 (3000) 240 (3500) 350 (5000) 210 (3000) 210 (3000)	11 (3) 26 (7) 26 (7) 90 (24) 170 (45)	721
	E*V-10 E*V-16	Proportional controls	10 16	210 (3000) 280 (4000)	60 (15) 160 (42)	726

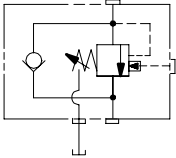
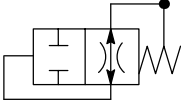
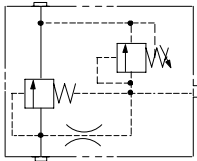
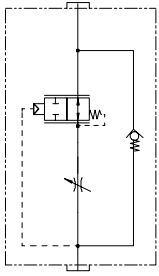
## Cartridge Valves: Screw-in (continued)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	EPRV2-8 EPRV1-10 EPRV1-16	Proportional controls	08 10 16	35 (500)	7,6 (2.0) 7,6 (2.0) 38,0 (10.0)	726
	FCV*-10 FCV*-12 FCV*-16 FCV*-20	Flow controls	10 12 16 20	210 (3000) 350 (5000) 210 (3000) 210 (3000)	45 (12) 114 (30) 208 (55) 567 (150)	723
	FDC*-10 FDC*-16 FDC*-20	Flow controls	10 16 20	210 (3000)	68 (18) 178 (47) 567 (150)	723
	FR5-8 FR*-10 FR*16 FR1-20	Flow controls	8 10 16 20	350 (5000) 350 (5000) 210 (3000) 210 (3000)	10 (2.5) 38 (10) 113 (30) 227 (60)	723
	MCV*-16 MCV*-20	Load controls: Counterbalance valves	16 20	210 (3000)	151 (40) 190 (50)	722
	MOS1-10 MOS1-16	Logic Elements: Spool type modulating orifice cartridges	10 16	210 (3000)	38 (10) 132 (35)	724
	MPV1-10	Directional controls: Manually operated	10	210 (3000)	45 (12)	721
	MRV*-10 MRV*-16	Directional controls: Manually operated	10 16	210 (3000)	23 (6) 64 (17)	721
	MRV2-10 MRV2-16	Flow controls: Restrictors, knob/lever	10 16	210 (3000)	57 (15) 170 (45)	723
	NV1-8 NV1-10 NV1-16 NV1-20	Flow controls: Restrictors, adjustable	8 10 16 20	350 (5000) 210 (3000) 210 (3000) 210 (3000)	45 (12) 45 (12) 151 (40) 265 (70)	723
	PCS*-10 PCS*-16 PCS*-20	Logic Elements: Hydrostats	10 16 20	210 (3000)	38 (10) 114 (30) 189 (50)	724

## Cartridge Valves: Screw-in (continued)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	PFR5-8	Flow controls:	8	350 (5000)	15 (4)	723
	PFR*-10	Pressure compensated	10	350 (5000)	57 (15)	
	PFR*-16		16	210 (3000)	151 (40)	
	POC1-10	Pilot operated check	10	350 (5000)	60 (15)	722
	POC1-12		12		114 (30)	
<p>F Type      S Type</p>						
	PRV*-10	Pressure controls:	10	350 (5000)	45 (12)	725
	PRV*-12	Reducing & relieving	12	350 (5000)	114 (30)	
	PRV2-16		16	415 (6000)	151 (40)	
	PSV*-8	Pressure controls:	8	350 (5000)	23 (6)	725
	PSV*-10	Sequence valves	10	380 (5500)	23 (6)	
	PSV11-12		12	350 (5000)	114 (30)	
	PSV1-16		16	415 (6000)	95 (25)	
	PTS*-10	Non-Solenoid Valves	10	210 (3000)	30 (8)	721
	PTS*-16		16		132 (35)	
	PTS*-20		20		265 (70)	
	PUV3-10	Pressure controls: Unloading valves	10	210 (3000)	4 (1)	725
	RV*-8	Pressure controls:	8	350 (5000)	30 (8)	725
	RV*-10	Relief valves	10	350 (5000)	114 (30)	
	RV11-12		12	350 (5000)	114 (30)	
	RV5-16		16	415 (6000)	303 (80)	
	SBV11-8	Bi-directional controls	8	350 (5000)	60 (15)	5082.00/ EN/0397/A
	SBV11-10		10		76 (20)	
	SBV11-12		12		114 (30)	
	SPC2-8	Check valves:	8	240 (3500)	19 (5)	720
	SPC*-10	Pilot operated, single acting	10	210 (3000)	45 (12)	
	SPC1-16		16	210 (3000)	151 (40)	
	SPC1-20		20	210 (3000)	227 (60)	
	SV*-8	Solenoid Valves	8	210 (3000)	23 (6)	727
	SV*-10		10		45 (12)	
	SV*-12		12		114 (30)	
	SV*-16		16		132 (35)	
	SV*-20		20		227 (60)	
	SV**-8	350 Bar Solenoid Valves	8	350 (5000)	38 (10)	728
	SV**-10		10		45 (12)	
	SV**-12		12		114 (30)	
	SV**-16		16		132 (35)	
	SV**-20		20		227 (60)	

## Cartridge Valves: Screw-in (continued)

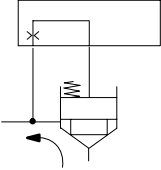
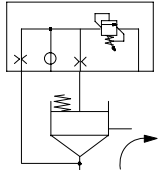
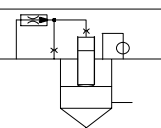
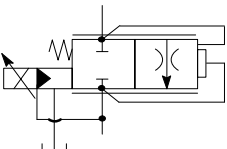
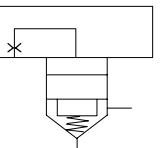
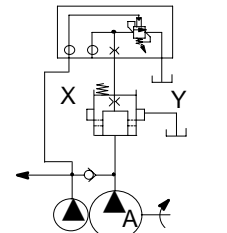
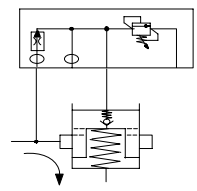
	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	VCB1-10	Load controls:	10	350 (5000)	60 (15)	722
	VCB1-12	Counterbalance valves	12		114 (30)	
	VF1-10	Velocity fuses	10	210 (3000)	23 (6)	723
	VF1-16		16		114 (30)	
	VF1-20		20		227 (60)	
	VRV11-12	Pressure controls: Relief valves	12	210 (3000)	114 (30)	725
	CRV	Circuit Makers		210 (3000)	300 (80)	737
	FC		190 (50)			
	FRC		190 (50)			
	PCC1		228 (60)			
	PCC2		228 (60)			
	PFRR		152 (40)			
	RGV		114 (30)			
	RLV		114 (30)			
	SCR		114 (30)			
SRV	300 (80)					

## Cartridge Valves: Slip-in to ISO 7368 (DIN 24342)

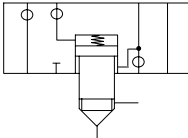
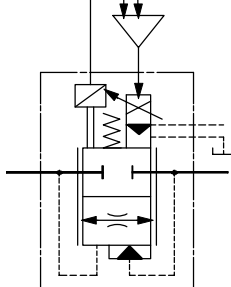
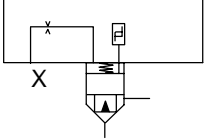


Cartridge valves are generally used in medium to high pressure hydraulic systems where flows may be greater than 150 L/min (40 USgpm), to provide power transmission and motion control in a wide variety of applications

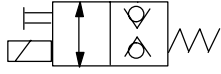
The HFV (Hydraulic Feedback Valvistor®) range of slip-in cartridge valves uses a self-regulating hydraulic design for the control of flow rate by a current-controlled PWM signal. The design achieves servo-type control of the main poppet without using an electrical feedback transducer.

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	CVCS-**-A*/B/D*/N/PC/W**	Check, directional & flow restrictor	16 25 32 40 50 63	350 (5000)	200 (50) 450 (120) 700 (200) 1100 (300) 1700 (450) 2800 (750)	5043.00/ EN/0496/A
	CVCS-**-C	Pressure relief, unloading and venting	16 25 32 40	350 (5000)	200 (50) 450 (120) 700 (200) 950 (250)	5043.00/ EN/0496/A
	CVCS-**-CO25	1:0.25 area ratio, low pressure relief/directional	16 25 32 40			5043.00/ EN/0496/A
	CVCS-**-HFV	Valvistor Proportional Throttle to ISO 7368	16 25 32 40 50 63	350 (5000)	175 (46) 405 (107) 630 (166) 810 (214) 1305 (345) 2160 (571)	5043.00/ EN/0496/A
	CVCS-**-OD	Normally open prefill	25 32 40 63			5043.00/ EN/0496/A
	CVCS-**-U*	Pressure unloading and relief	16 25 32 40	350 (5000)	165 (45) 300 (80) 420 (110) 750 (200)	5043.00/ EN/0496/A
	CVCS-**-X(*)	Pressure reducer	16 25	350 (5000)	200 (50) 400 (106)	5043.00/ EN/0496/A

## Cartridge Valves: Slip-in to ISO 7368 (DIN 24342) (continued)

	Model	Description	Nom. Size/ Type	Maximum Pressure bar (psi)	Maximum Flow L/min (USpgm)	Catalog
	CVCS-**-ZD*(N)	Dynamic functions	16 25 32 40 50 63	350 (5000)	230 (61) 550 (145) 850 (225) 1200 (317) 1800 (476) 3000 (793)	5043.00/ EN/0496/A
	CVU-**-EFP1	Electrohydraulic proportional throttle	16 25 32 40	315 (4560)	190 (50) 450 (120) 700 (185) 900 (238)	5043.00/ EN/0496/A
	CVU-**(*)SWD(*)	Directional with Electrical Indicators	16 25 32 40 50 63	310 (4500)	210 (55) 400 (105) 600 (158) 900 (236) 1600 (420) 2500 (660)	5043.00/ EN/0496/A

## Cartridge valves: Solenoid controlled, poppet-type

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USpgm)	Catalog
	CVUA-6-PD	Two- or three-way		315 (4570)	20 (5.3)	GB-642A

## Directional control valves: Solenoid operated



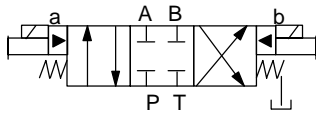
Vickers offers a complete line of mobile directional control valves designed for flexibility, easy application and performance. These valves come in various sizes and operators... solenoid, hydraulic, air, cam or lever to meet a wide range of applications. A soft shift feature is designed to provide smoother control of actuator acceleration and deceleration. The electrically actuated valves use industry- standard connectors to make installation and replacement easier and faster. Our valves use many common connectors such as...Packard Weatherpak, DIN, Amp and Deutsche (single & double spade). Surge suppression is available as standard on applicable valves.

These valves are designed to optimize equipment performance with operating pressures up to 350 bar (5000 psi) and flows to 1100 l/min (290 USgpm)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	DG3V-5	Two or four-way, wet armature	03	315 (3570)	160 (42)	GB-2047A
	DG3V-7	Two- or four-way, wet armature	07	350 (5000)	300 (80)	GB-2326B
	DG3V-8	Four-way	08	350 (5000)	700 (185)	5007.02/EN/1196/A
	DG3V-10	Four-way	10	350 (5000)	1100 (290)	5007.01/EN/0196/A
	DG4S*-01-50	Two- or four-way, air gap	05	210 (3000)	76 (20)	671
	DG4S*-01-60	Two- or four-way, wet armature	05	250 (3600)	95 (25)	GB-C-2129
	DG4S4-01-60-S491	Two- or four-way, wet armature, soft shift	05	210 (3000)	76 (20)	615
	DG4V4-01	Two- or four-way, wet armature	05	315 (4570)	115 (30)	5050.00/EN/0596/A
	DG4V-3	Two or four-way, wet armature	03	350 (5000)	80 (21)	5059.00/EN/1097/A
	DG4V-3(S)-2	Soft shift, wet armature	03	350 (5000)	40 (10)	614
	DG4V-5	Two- or four-way, wet armature	05	315 (4570)	115 (30)	5069.00/EN/0497/A



## Directional control valves: Solenoid controlled, pilot operated



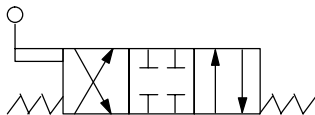
Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
DG5S4-02	Four-way	05	210 (3000)	115 (30)	GB-C-2037
DG5S-8	Four-way	08	210 (3000)	380 (100)	591
DG5S-(H)8	Four-way	08	310 (4500)	530 (140)	591
DG5S4-10	Four-way	10	210 (3000)	946 (250)	669
DG5V-5	Four-way	05	315 (4570)	160 (42)	GB-2047B
DG5V-7	Four-way	07	350 (5000)	300 (80)	GB-2326A
DG5V-8	Four-way	08	350 (5000)	700 (185)	5007.02/EN/0196/A
DG5V-10	Four-way	10	350 (5000)	1100 (290)	5007.01/EN/0197/A

## Directional control valves: Solenoid controlled, poppet-type, gasket mounted



Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
DG3/4VP-3	Three- or four-way	03	315 (4570)	20 (5.3)	GB-642A

## Directional control valves: Manual, air, or hydraulic operated



Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
DG2V-2	Roller/cam operated	02	250 (3600)	30 (8)	5018/EN/0596/A
DG4V-2	Solenoid operated				
DG17V-2	Lever operated				
DG21V-2	Plunger operated				

## Directional control valves: Manual, air, or hydraulic operated (continued)

Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
DG3V-3	Hydraulic operated	03	350 (5000)	76 (20)	682
DG17V-3	Cam operated	03	350 (5000)	76 (20)	
DG20V-3	Lever operated	03	350 (5000)	76 (20)	
DG18V-3	Air operated				
DG2/16S4-01	Deceleration, two & four way, roller/cam operated	05	210 (3000)	76 (20)	672
DG1/17S4-01	Two & four way, knob or lever operated	05	210 (3000)	76 (20)	672
DG1/17S4-01	Four way, knob or lever operated	05	210 (3000)	76 (20)	672
DG17S-8-10	Four-way, manual lever operated	08	210 (3000)	170 (45)	681
DG3*-H8	Pilot operated	08	350 (5000)	185 (700)	GB-2327A
DG17*-H8	Lever operated	08	350 (5000)	185 (700)	
DG5*-H8	Solenoid controlled, pilot operated	08	350 (5000)	185 (700)	
DG3S-8	Four-way, hydraulic piloted	08	210 (3000)	380 (100)	670
DG3S-H8	Four-way, hydraulic piloted	08	210 (3000)	530 (140)	670
DG19S-8	Four-way, air operated	08	210 (3000)	379 (100)	I-517906
DG17S4-10	Four-way, lever operated	10	210 (3000)	340 (90)	681
DG3S4-10	Four-way, hydraulic piloted	10	210 (3000)	946 (250)	670

# Stacking Valves: SystemStak™ modular valves



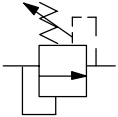
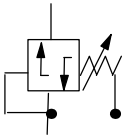
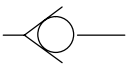

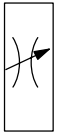


SystemStak™ valves make compact hydraulic systems in which modular valves are “sandwich” mounted between a directional control valve and a standard mounting surface. All circuit flow paths are contained within the control valve and modules. With their cartridge design they provide a compact hydraulic circuit at a reduced cost with the elimination of interconnecting piping.

- They are divided into two groups
- Valves acting in the pressure and/or tank lines (P and/or T)
  - Valves acting in the service lines (A and/or B)

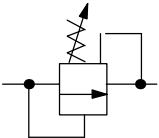
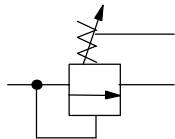
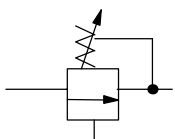
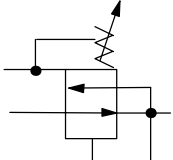
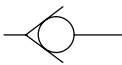
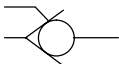
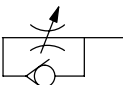
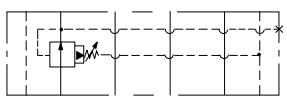
Each valve “stack” can be configured to provide the specific combination of functions required to meet system needs.

Mounting surfaces and port patterns are to the international standard:

- 02 size - ISO/DIS 4401-02-02
- 03 size - ISO 4401-03
- 05 size - ISO 4401-05
- 06 size - ISO 4401-06
- 07 size - ISO 4401-07

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	DGMC-2-1* DGMC-2-PT	Relief	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMR(1)-2-1* DGMR-2 DGMX2-2-1*	Pressure control	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMDC-2	Direct check	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMPC-2	Pilot operated check	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMFG-2	Flow control	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMFN-2	Flow restrictor	02	250 (3600)	30 (8)	5018/EN/ 0596/A
	DGMFD-2	Flow divider	02	250 (3600)	30 (8)	5018/EN/ 0596/A

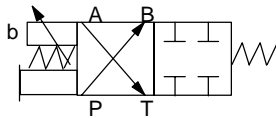
# SystemStak™ modular valves (continued)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	DGMC-03	Relief	03	310 (4500)	60 (16)	I-517380
	DGMC-05		05	310 (4500)	120 (32)	
	DGC5-H-06		06	210 (3000)	340 (90)	
	DGC-H-06		06	210 (3000)	340 (90)	
	DGMR1-03	Sequence	03	310 (4500)	60 (16)	I-517380
	DGMR1-05		05	310 (4500)	120 (32)	
	DGR-06		06	210 (3000)	227 (60)	
	DGMR-03	Counterbalance	03	310 (4500)	60 (16)	I-517380
	DGMR-05		05	310 (4500)	120 (32)	
	DGMX2-03	Reducing/ Relieving	03	310 (4500)	60 (16)	I-517380
	DGMX2-05		05	310 (4500)	120 (32)	
	DGX-*06-* B		06	210 (3000)	57 (15)	
	DGX-*06-* F		06	210 (3000)	114 (30)	
	DGX-*06-* H		06	210 (3000)	265 (70)	
	DGMDC-03	Direct check	03	310 (4500)	60 (16)	I-517380
	DGMDC-05		05	310 (4500)	120 (32)	
	DGMPC-03	Pilot operated check	03	310 (4500)	60 (16)	I-517380
	DGMPC-05		05	310 (4500)	120 (32)	
	DGPC-06		06	210 (3000)	227 (60)	
	DGMFN-03	Flow restrictor	03	310 (4500)	60 (16)	I-517380
	DGMFN-05		05	310 (4500)	120 (32)	
	DGFN-06		06	210 (3000)	227 (60)	
	DGM**-7	Pressure control	07	315 (4500)	200 (53)	GB-2480

# Proportional controls: Directional and throttle controls, pilot operated, with integral electronics



These four-way solenoid operated proportional valves have a high dynamic performance which enables them to be used in closed-loop applications, previously possible only with servo valves. Various spool options are available for rated flows up to 720 L/min (190 USgpm). Working pressures are to 315 bar (4500 psi). In some models, the spool position is monitored by an LVDT which feeds back information to the amplifier, enabling spool position to be accurately maintained.

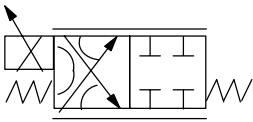


Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Typical Hyst. %	Catalog
KADG4V-3	Directional control without feedback	03	20 (5.3)	350 (5000)	<8	GB-2452
KADG4V-5		05	50 (13.2)	310 (4500)		
KADG5V-5	Two-stage, directional control without feedback	05	340 (90)	310 (4500)	± 4	GB-2457
KADG5V-7		07	450 (118)	350 (5000)	± 4	
KADG5V-8		08	720 (190)	350 (5000)	± 4	
K(A)DG5V-5	Directional control without feedback, with integral amplifier	05	350 (5000)	720 (190)	±4	5052/EN/0696/A
K(A)DG5V-7		07				
K(A)DG5V-8		08				
K(A)FDG4V-3	Directional control with feedback	03	350 (5000)	28 (7.4)	<1	GB-2457
K(A)FDG4V-5		05	310 (4500)	70 (18.5)	<1	
K(A)FTG4V-3	Throttle with feedback	03	350 (5000)	20 (5.3)	<1	GB-2457
K(A)FTG4V-5		05	310 (4500)	70 (18.5)	<1	
K(A)FDG5V-5	Directional control with feedback transducer	05	310 (4500)	100 (26)	<2	GB-2457
K(A)FDG5V-7		07	350 (5000)	200 (52)		
K(A)FDG5V-8		08	350 (5000)	300 (79)		
K(A)HDG5V-5	Directional control with pilot and mainstage feedback	05	100 (26)	310 (4500)	<1	GB-2457
K(A)HDG5V-7		07	200 (52)	350 (5000)		
K(A)HDG5V-8		08	300 (79)	350 (5000)		
KATG4V-3	Throttle control without feedback	03	20 (5.3)	350 (5000)	<8	GB-2452
KATG4V-5		05	50 (13.2)	310 (4500)	<8	
K(A)X(C)G-6/8	Two-stage, directional control without feedback	06	300 (80)	350 (5000)	<6	GB-2322D
		08			<7	

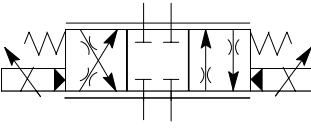
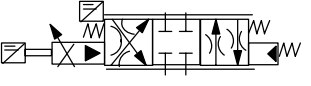
## Proportional controls: Directional and throttle controls, pilot operated, with integral electronics (continued)

Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Typical Hyst. %	Catalog
K(B)F*G4V-3 KF*G4V-3	Directional control with feedback, with/ without integral amplifier	03	350 (5000)	28 (7.4)	<1	5071.00/EN/0497/A
K(B)F*G4V-5 KF*G4V-5	Directional control with feedback, with/ without integral amplifier	05	310 (4500)	70 (18.5)	<1	5071.01/EN/0497/A
K(B)SDG4V-3	Directional control with feedback, with/ without integral amplifier	05	350 (5000)	21 (80)	<0.5	5071.02/EN/0797/A
K(B)SDG4V-5	Directional control with feedback	05	310 (4500)	21 (80)	<0.5	5071.03/EN/0997/A

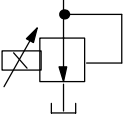
## Proportional controls: Directional and throttle controls, with separate drive amplifiers/controllers

Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Typical Hyst. %	Catalog
	KD/TG4V-3	03	350 (5000)	28 (7.4)	<8	539
	KD/TG4V-3S		350 (5000)	28 (7.4)		
			350 (5000)	65 (17)		
	Directional control, single stage without feedback					


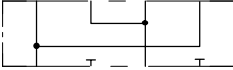
## Proportional controls: Directional controls, without/with electrical feedback

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Typical Hyst. %	Catalog		
	KDG3V-3	Proportional directional, single-stage	03	350 (5000)	34 (9)	± 4	660		
	KDG3V-5		05	315 (4500)	95 (25)				
	KDG3V-5	Proportional directional, single-stage	05	315 (4500)	85 (22)			GB-2405	
	KDG3V-7		07	350 (5000)	180 (48)				
KDG3V-8	08		350 (5000)	280 (74)					
	K(A)DG5V-5	Proportional directional,	05	350 (5000)	90 (24)	< 2	5052/EN/0696/A GB-C-2325B		
	K(A)DG5V-7	two-stage	07		180 (48)				
	K(A)DG5V-8		08		280 (74)				
	K(A)DG5V-10				550 (145)				
	KFDG5V-5	Proportional directional, with mainstage feedback transducers	05	350 (5000)	3 (0.8)			< 1	GB-2457
	KFDG5V-7		07						
	KFDG5V-8		08						
	KHDG5V-5	Proportional directional, with pilot & mainstage feedback transducers	05	350 (5000)	1,5 (0.4)			< 1	GB-2457
	KHDG5V-7		07						
	KHDG5V-8		08						

## Proportional controls: Electrohydraulic proportional pressure relief valves

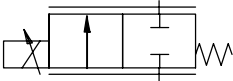
	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	K(A)X(C)G-6	Single stage, without integral amplifier	ISO 5781 AG-06-2-A	350 (5000)	300 (80)	GB-2322D
	K(A)X(C)G-8		ISO 5781 AH-08-2-A			
	KCG-3, 1*	Single stage, without integral amplifier	ISO 4401-03	350 (5000)	5 (1.3)	GB-C-2162E
	KCG-3, 1*	Single stage, with integral amplifier	ISO 4401-03	350 (5000)	5 (1.3)	GB-C-2162E
	K(A)CG-6	Single stage, with integral amplifier	ISO 6264 AR-06-2-A	350 (5000)	200 (52.8)	GB-C-2324D
	K(A)CG-8		ISO 6264 AR-08-2-A			GB-C-2324D
	K(A)CG-6	Single stage, with integral amplifier	ISO 6264 AR-06-2-A	350 (5000)	400 (105.7)	GB-C-2324D
	K(A)CG-8		ISO 6264 AR-08-2-A			GB-C-2324D
	EHST-3-30	Proportional pressure control with integrated electronics	ISO 4401 ANSI/ B93.7M	90 or 210 (1305 or 3000)	2,5 (0.65)	689

## Proportional controls: Auxiliary function modules for proportional valves

	Model	Description	Mounting Face	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	KDGMH-3	Single stage, hydrostat module	03	315 (4567)	25 (6.6)	GB-2459
	KDGMH-5	Single stage, hydrostat module	05	315 (4567)	70 (18.5)	GB-2459
	KDGMH-7	Single stage, hydrostat module	07	250 (3600)	180 (47.5)	GB-2459
	KDGMH-8	Single stage, hydrostat module	08	250 (3600)	360 (95.0)	GB-2459
	KDGMA-3	Single stage, parallel flow path module	03	No functional limitations: dependent on valves used		GB-2459
	KDGMA-5	Single stage, parallel flow path module	05			GB-2459
	DGMA-7	Single stage, pilot shuttle module	07	Must be placed between K*DG5V-7 directional valves and KDGMH-7-616268 hydrostat modules●		GB-2459
	DGMA-8	Single stage, pilot shuttle module	08	Must be placed between K*DG5V-8 directional valves and KDGMH-8-616269 hydrostat modules●		GB-2459

● If both of these are to be used together.

## Proportional controls: Electrohydraulic proportional flow control valve (Valvistor®)

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	EPV10	Screw-in cartridge design provides pressure compensated flow control without the need for a separate hydrostat.	10	210 (3000)	30 (8)	715
	EPV16		16	280 (4000)	160 (42)	558



# Servovalves



Vickers servovalves are two-stage, four-way, flapper nozzle valves that provide system closed loop control with exact positional accuracy, repeatable velocity profiles and predictable force or torque regulations.

These servovalves offer a wide range of rated flows from 38 to 151 l/min (10 to 40 USgpm) at  $\Delta p$  of 70 bar (1000psi).

	Model	Description	Nom. Size	Maximum Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	SM4-10	Two-stage, four-way, flapper nozzle	10	210 (3000)	38 (10)	651
	SM4-12	Two-stage, four-way, flapper nozzle	12	210 (3000)	45 (12)	651
	SM4-15	Two-stage, four-way, flapper nozzle	15	210 (3000)	57 (15)	651
	SM4-20	Two-stage, four-way, flapper nozzle	20	210 (3000)	76 (20)	652
	SM4-20-50	Two-stage, four-way, flapper nozzle	20	350 (5000)	76 (20)	662
	SM4-30-20	Two-stage, four-way, flapper nozzle	30	140 (2000)	113 (30)	653
	SM4-40-20	Two-stage, four-way, flapper nozzle	40	350 (5000)	151 (40)	654
	SX4-10	Two-stage, four-way, flapper nozzle	10	350 (5000)	38 (10)	650
	SX4-12	Two-stage, four-way, flapper nozzle	12	350 (5000)	45 (12)	650
	SX4-15	Two-stage, four-way, flapper nozzle	15	350 (5000)	57 (15)	650
SX4-20	Two-stage, four-way, flapper nozzle	20	350 (5000)	76 (20)	650	

## Electronics: Amplifiers & electrical accessories for proportional valves



The Vickers power amplifiers are equipped with a 4-input (demand signal) module and 4-ramp function generator with quadrant detection. The ramp generator allows acceleration and deceleration to be set separately for both directions of movement. A strip guidance controller serves to control the position of an electro- hydraulic actuator, using optical sensors. The controller can be used for strip-edge or strip-center guidance or stack height control. It consists of a power amplifier for proportional valves, and an integrated module for strip guidance control.

The “soft switch” power plugs, conforming to ISO 4400/ DIN 43650 interface, offer low cost solutions for solenoid-operated, non-feedback hydraulic proportional valves through the use of an integral amplifier.

Model	Description	For use with	Catalog
EEA-PAM-513-A EEA-PAM-523/525-A EEA-PAM-533/535-A EEA-PAM-553-A EEA-PAM-561-A EEA-PAM-568-A EEA-PAM-58-A	“A” Series Basic power amp.	KCG-3-10 K*G4V-3/5 KF*G4V-3/5 KSDG4V-3 KFDG5V-5/7 KFDG5V-8 KHDG5V-5/7/8	GB-2137C GB-2464 GB-2101A
EEA-PAM-520-A EEA-PAM-525-A	“A” Series Basic power amp. also for use with the Valvistor proportional valve	KD/TG4V-3...H7-2* KD/TG4V-5...H*-3*	GB-2270A
EEA-PAM-523-B EEA-PAM-525-B EEA-PAM-533-B EEA-PAM-535-B EEA-PAM-561-B EEA-PAM-568-B EEA-PAM-581-B	“B” Series with command logic module and 2 ramps	K*G4V-3...H7-2* KF*G4V-5...H*-3* KF*G4V-3 KF*G4V-5 KFDG5V-5/7 KFDG5V- KHDG5V-5/7/8	GB-2472
EEA-PAM-523-C EEA-PAM-525-C EEA-PAM-533-C EEA-PAM-535-C EEA-PAM-561-C EEA-PAM-568-C EEA-PAM-581-C	“C” Series with command logic module and 4 ramps	K*G4V-3...H7-2* KF*G4V-5...H*-3* KF*G4V-3 KF*G4V-5 KFDG5V-5/7 KFDG5V- KHDG5V-5/7/8	GB-2473
EEA-PAM-523-D EEA-PAM-525-D EEA-PAM-533-D EEA-PAM-535-D EEA-PAM-561-D EEA-PAM-568-D EEA-PAM-581-D	“D” Series with PID modules	K*G4V-3...H7-2* KF*G4V-5...H*-3* KF*G4V-3 KF*G4V-5 KFDG5V-5/7 KFDG5V- KHDG5V-5/7/8	GB-2474A
EEA-PAM-523-E EEA-PAM-525-E EEA-PAM-533-E EEA-PAM-535-E EEA-PAM-561-E EEA-PAM-568-E EEA-PAM-581-E	“E” Series with strip-guidance- controller module	K*G4V-3...H7-2* KF*G4V-5...H*-3* KF*G4V-3 KF*G4V-5 KFDG5V-5/7 KFDG5V- KHDG5V-5/7/8	GB-2475
EEA-PAM-523-F EEA-PAM-525-F EEA-PAM-533-F EEA-PAM-535-F EEA-PAM-561-F EEA-PAM-568-F EEA-PAM-581-F	“F” Series with strip-guidance- controller module	K*G4V-3...H7-2* KF*G4V-5...H*-3* KF*G4V-3 KF*G4V-5 KFDG5V-5/7 KFDG5V- KHDG5V-5/7/8	GB-2476A
EHH-AMP-702-C/F-10 EHH-AMP-702-D/E-10	“Soft switch” power plugs	KD/TG4V-3/5-H KD/TG4V-3/5-H	GB-2114C GB-2115E

## Electronics: Amplifiers & electrical accessories for proportional valves (continued)

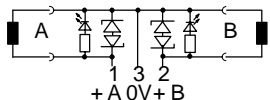
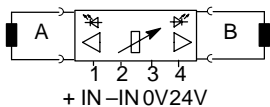
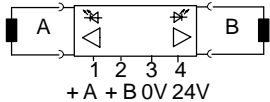
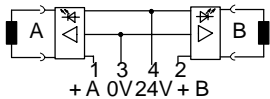
Model	Description	For use with	Catalog
EHH-AMP-712-D/G-2*	"Soft switch" power plugs	KDG4V-3S-GP7-6* KTG4V-3S-GP7-6* KCG-3/6/8-GP1-1* KX(C)G-6/8-GP1-1* KDG5V-5/7/8-GP-1 CMX-***-E-G EPV**-12D-1* ERV1/2**-12D-1* EPFR1**-12D-1*	GB-2282C
EHA-TEQ-700-2*	Portable test equipment for KD, KT, KF, and KH series proportional valves and associated amplifiers	K*G4V KF Series KH Series	GB-2462

## Electronics: Single-cable connector (UNIPLUG)



Vickers UNIPLUG system consists of a solenoid-operated valve fitted with a single-cable electrical connector ideally suited for economical wiring of single- and double-solenoid models. It is suitable for use on Vickers ISO 03-size directional and proportional valves which are fitted with the appropriate plug-in coils.

Model	Description	For use with	Catalog
EHH-AMP-724-A**-1*	Plug with integral switching amplifiers for two solenoids.	DG4V-3(S) KD/T4V-3(S)	GB-2367C
EHH-AMP-724-C**-1*	Plug with proportional amplifiers plus an adjustable ramp to give "soft switching" of two solenoids from a switching input signal.		
EHH-AMP-724-D**-1*	Plug with proportional amplifiers with independent gain and deadband for each of two solenoid outputs, plus a common adjustable ramp.		
EHH-AMP-724-Z**-1*	Plug for direct connection to solenoids of switching valves (no integral amplifier)		



## Electronics: Amplifiers and electrical accessories for servo valves



Vickers amplifiers, power supplies, and function modules provide a convenient and economical package of electronics for closed loop servo control. These electronic components have been specially designed and assembled for high reliability and improved ease of use. They can be applied in systems utilizing Vickers servovalves and proportional valves and may also be used to control competitors' valves.

EM series power supplies and the SMC 20H controller are panel mounted. EM series amplifiers and function modules plug into fully compatible slots in the EMRS-A-11 and EMP-A-20 power supply units. The EEA series amplifiers are designed for use in a standard rack mount.

Model	Description	Catalog
EEA-PAM-591	Universal servovalve amplifier card designed to drive Vickers SM4, SX4, and SP4 servovalves as well as other industry standard servovalves, in open and closed loop systems.	656
EM-D-30	With PID. For driving single-polarity and bipolar servo valves, and other current controlled valves.	656
EM-J-10	Programmer module. When used with EM-D-30 servo amplifier, provides a means of presetting and selecting a variety of positions, speeds, or forces in closed loop systems.	656
EM-K-10	Ramp module. For converting step changes in input signals to ramped signals, for smooth transition from one operating level to another. When used with EM-D-30 amplifier, provides a means of controlling speed in positioning systems, acceleration and deceleration in speed control systems, and the rate of pressure change in pressure control systems.	656
EMP-A-20	Power supply unit designed for use with Vickers electronic control modules in single and multiple axis electrohydraulic control systems. Provides the means for mounting up to four modules (two EM-D-30 amplifiers, one EM-K-10 ramp module, and one EM-J-10 programmer module. Supplies each with the proper excitation voltages, and connects it to external circuit components through a terminal strip.	656
EMRS-A-11	Power supply unit designed for use with Vickers electronic control modules in single axis electro-hydraulic control systems. Provides the means for mounting one module, supplying it with the proper excitation voltages, and connecting it to external circuit components through a terminal strip.	656

## Electronics: Amplifiers for pressure and flow controls



A range of three "Snap-on" control modules for mounting into control cabinets, using rails to DIN EN 50022 or DIN EN 50035. The range is ideally suited for use with Vickers "KA" series of proportional valves with integrated drive electronics, where external ramp generation, conversion from current to voltage command signals, etc. may be required.

Model	For use with/description	Catalog
EBA-TEQ-706-A-10	EEA-PAM-5** amplifier	GB-2315
EEA-AMP-451-A-1*	In OP AMP circuitry	GB-2095
EEA-DSG-450-A-10	To generate input signals for open and closed loop systems; driving external command potentiometers	GB-2094
EEA-LIM-454-A-10	Comparator card	GB-2098
EEA-REL-452-A-10	Relay card	GB-2096A
EHA-CON-201-A-20	Electronic control modules for DIN-Rail-Mounting	GB-2410A
EHA-PAM-291-A-20	For controlling SM4 sectional valves or other servo valves up to 200 mA. max. current	GB-2093A
EHA-PID-201-A-20	Electronic control modules for DIN-Rail-Mounting	GB-2427
EHA-PSU-201-A-20	Electronic control modules for DIN-Rail-Mounting	GB-2410A
EHA-PSU-704-A/B-1*	Power supply units 24V DC x 3,5A max. output	GB-2461
EHA-PSU-704-A**-2*	Power supply units 24V DC x 10A max. output	GB-2419
EHA-RMP-201-A-20	Electronic control modules for DIN-Rail-Mounting	GB-2410A
EHD-AMP-73*-***-1*	Driving non-feedback proportional valves	GB-2448A
EHD-BUS	PROFIBUS, Sinec L2-DP, Interbus-S	GB-2366
EHD-DSG-201-A-10	Cabinet mounting on rails for use with KA, KV and UNIPLUG series	GB-2470
EHH-AMP-702-A-2*	Switching power plug for use with solenoid operated valves rated up to 24V DC	GB-2122D
EMCS*-30	Remote electrically modulated (CGE) and (FGE) controls	I-521557

# Cylinders



Vickers line of hydraulic cylinders offers a wide variety of cylinder bore and rod diameters for use in agricultural applications and construction equipment, as well as industrial machines and vehicles.

For example, the Vickers LESA Series TT servo actuator, designed primarily for wood products processing applications, combines a high performance hydraulic cylinder and a control valve mounting manifold in one convenient package.

	<b>Series &amp; Type</b>	<b>Nominal Pressure bar (psi)</b>	<b>Cylinder Bore mm (inch)</b>	<b>Piston Rod Diameter mm (inch)</b>	<b>Catalog</b>
	TA Air	17,25 (250)	19-200 (0.75-8)	9,5-57,2 (0.375-2.25)	4111A
	TE Air	17,25 (250)	38,1-356 (1.5-14)	15,9-140 (0.625-5.5)	4110B
	TL Non-Lube, Air	17,25 (250)	38,1-356 (1.5-14)	15,9-140 (0.625-5.5)	4110B
	TP Non-Lube, Air	17,25 (250)	38,1-203 (1.5-8)	15,9-34,9 (0.625-1.375)	4093C
	TJ Air	7 (100)	38,1-203 (1.5-8)	12,7-34,9 (0.5-1 3/8)	4112A
	TZ Hydraulic ANSI/NFPA	210 (3000)	38-200 (1.5-8)	15,9-140 (0.625-5.5)	5039.00/ EN/1197/A
	TG/TM/TW Hydraulic	210 (3000)	38,1-508 (1.5-20)	15,9-254 (0.625-10)	4109B
	TV Hydraulic (ISO Metric)	160 (2320)	25-200 (0.98-7.9)	12-140 (0.47-5.5)	4147
	TF Hydraulic	70 (1000)	38,1-356 (1.5-14)	15,9-140 (0.625-5.5)	4110B
	TB Hydraulic	70 (1000)	19-200 (0.75-8)	9,5-57,2 (0.375-2.25)	4111A
	LESA 1 Electrohydraulic	210 (3000)	50,8-127 (2.0-5.0)	34,9-63,5 (1.375-2.5)	4108B
	LESA 2 Electrohydraulic	210 (3000)	50,8-127 (2.0-5.0)	34,9-63,5 (1.375-2.5)	4144
	LESA Series TT	210 (3000)	50,8-127 (2.0-5.0)	34,9-88,9 (1.375-3.5)	5094.00/ EN/0797/A

# Filters



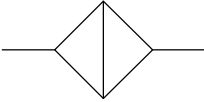
Vickers filters handle flows to 568 L/min (150 USgpm) and pressures to 415 bar (6000 psi). A wide range of port sizes, bypass valves, pressure drop indicators and media grades facilitates filter installation and achievement of desired system cleanliness levels. Inch (H) or metric (M) ports are available.

Reservoir vent filters BR110 and BR210 feature a visual indicator and corrosion-resistant housing. In addition to particle control, the BR110 also features water/moisture control.

	Series	Description	Operating Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	H041 M041	Return line filter or lube oil with C-, E-, or L-Pak element	28 (400)	1135 (300)	■ ▲
	H042 M042	Duplex filter with C-, E-, or L-Pak element	28 (400)	1135 (300)	■ ▲
	H061 M061	Return line filter (HF3), with C-, E-, or H-Pak element	41 (600)	189 (50)	■ ▲
	HL15 ML15	In tank filter (HF4), with C-Pak element	14 (200)	379 (100)	■ ▲
	HL16 ML16	In tank filter (HF4), with C- and E-Pak element	14 (200)	568 (150)	■ ▲
	HT15 MT15	In tank filter (HF4), with C-Pak element	7 (100)	76 (20)	■ ▲
	OFR-15/30	Return line filter (HF3)	41 (600)	114 (30)	5057/EN/ 0597/A
	OFR-60/120	Return line filter (HF4)	27 (400)	454 (120)	5057/EN/ 0597/A
	OFRS-15	Return line spin-on filter	7 (100)	57 (15)	5057/EN/ 0597/A
	OFRS-25	Return line spin-on filter	7 (100)	95 (25)	5057/EN/ 0597/A
	OFRS-60	Return line spin-on filter	7 (100)	227 (60)	5057/EN/ 0597/A

■ Refer to Catalog 5057.00/EN/0597/A (inches) for more information on filters.  
▲ Refer to catalog 5057.01/EN/0497/A (metric) for more information on filters.

## Filters (continued)

	Series	Description	Operating Pressure bar (psi)	Maximum Flow L/min (USgpm)	Catalog
	H021 & H023 M021 & M023	Return line spin-on cartridge with R- and W- Pak element	14 (200)	227 (60)	■ ▲
	H022 M022	Return line spin-on cartridge with R- and W- Pak element	14 (200)	454 (60)	■ ▲
	OF3–10	Inlet strainer spin-on cartridge	7 (100)	379 (100)	5057/EN/ 0597/A
	10F	Indicating inlet strainers	20 (300)	61 (16)	5057/EN/ 0597/A
	50F	Indicating inlet strainers	20 (300)	329 (87)	5057/EN/ 0597/A
	100F	Indicating inlet strainers	20 (300)	700 (185)	5057/EN/ 0597/A
	H330 M330	Pressure filter with C- or H-Pak element	210 (3000)	23 (6)	■ ▲
	H340 M340	Pressure filter with C- or H-Pak element	210 (3000)	91 (24)	■ ▲
	H350 M350	Pressure filter (HF3) with C-, E-, or H-Pak element	210 (3000)	189 (50)	■ ▲
	H360 M360	Servo-Pro filter with C- or H-Pak element	210 (3000)	114 (30)	■ ▲
	H440 M440	Pressure filter (HF2) with C- or H-Pak element	280 (4000)	24 (91)	■ ▲
	H451 M451	Pressure filter (HF4) with C-, E-, or H-Pak element	310 (4500)	568 (150)	■ ▲
	S610 H610 M610	Pressure filter with C- or H-Pak construction	414 (6000)	208 (55)	■▲ ■ ▲
	S620 H620 M620	Pressure filter (HF3) with C-, E- or H-Pak element	414 (6000)	568 (150)	■▲ ■ ▲

■ Refer to Catalog 5057.00/EN/0597/A (inches) for more information on filters.  
 ▲ Refer to catalog 5057.01/EN/0497/A (metric) for more information on filters.



## Power Packages: Off-Line Filtration System



Vickers Off-Line Filtration units (OLF) provide 24 hour filtration, flushing and transfer of oil for existing in-plant machinery. Each unit can be matched to individual systems to provide on-site filtration for any application.

There are six “families” of OLF’s, based on the pump size in each unit. Pump flows range from 74 L/min (19.5 USgpm) to 568 L/min (150 USgpm). A number of different pump/motor and filter combinations comprise each “family.”

Type	Description (Catalog)
	<p>Off-Line Filtration</p> <p>Pumps . . . . . 74-568 L/min (19.5-150 USgpm)            Electric motors . . . . . 1800 rpm            (5063.00/EN/0497/A)</p>

## Power Packages: Global SystemPak™ and SystemCenter™



Vickers Global SystemPak™ vertical motor pump power units and SystemCenter™ power units offer capacities, control options and configurations to fit virtually any application requirements. The global design offers a wide variety of manifold options and a choice of pumps to match application requirements while ensuring cost-effective operation and optimum productivity.

Type	Description (Catalog)
	<p>Global SystemPak</p> <p>Tanks . . . . . 8-95 liters (2-25 US gallons)            Pumps . . . . . 1,9-36 L/min (0.5-9.5 USgpm)            Electric motors . . . . . 0.25-5hp; 1800 &amp; 3600 rpm            Max. pressure . . . . . 210 bar (3000 psi)            (5042/EN/1196/A)</p>
	<p>SystemCenter</p> <p>Tanks . . . . . 38-303 liters (10-80 US gallons)            Pumps . . . . . 3,8-155 L/min (1-41 USgpm)            Electric motors . . . . . 1-50 hp            Max. pressure . . . . . 210 bar (3000 psi)            (464)</p>

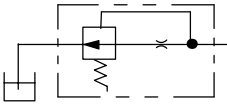
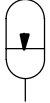
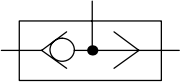
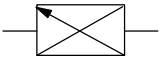

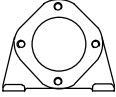
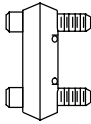



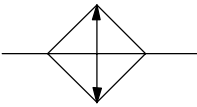
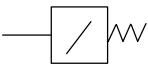
## Power Packages: Integrated Motor Pump



The Vickers Integrated Motor Pump is a unique combination of a conventional AC induction motor cooled with system hydraulic oil and Vickers hydraulic pump, either fixed vane pump or variable piston type, housed in a special sound reduction enclosure. This combination provides an exceptionally quiet and small pumping package for any industrial application requiring up to 125 horsepower (92 kilowatts) of continuous hydraulic power.

Description (Catalog)	Output Motor Power kW (hp)
	<p>Combination AC induction motor, cooled with system hydraulic oil, and Vickers hydraulic pumps, either single or double fixed vane or variable piston pumps. Series MP15-MP92. (5035.00/EN/1196/A)</p>
	<p>15 (20) 22 (30) 45 (60) 75 (100) 92 (125)</p>

# Accessories

	Model	Description	Catalog
	ABT-03/ABS-12	Air bleed valve w/NPT threads or SAE straight threads	690
	A1-**-11 & 30	Accumulators, bladder type, 10 cu. in. to 10 gallons	690
	DSB-1-03-10	Ball shuttle valves, with SAE straight threads	690
	DSB-1-03-10	Angle and globe valves, plug or needle type with NPT threads	690
	DTNAS DTNS3	Needle valves, angle or tee, shutoff w/ 1/4" NPT threads	690
	FB-A/B/C-10	Foot bracket kits for mounting hydraulic motors or pumps	690
	FL1-**-***-10	Flanges, SAE 4-bolt solid	690
	GM/GP-**-**-30	Pressure gauges bourden tube type, 0 - 5000 psi	690
	GM/GP-120-2-10	Pressure gauges diaphragm type, 0-120 to psi	690
	GS-1000/2000/3000	Pressure gauges spring loaded, 0-3000 psi	690
	OCA-**-30    OCW-**-30	Oil coolers, air and water type	690
	SPDT type	Vacuum and pressure switches, 5 in. Hg to 75 psi	690

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# Notes

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