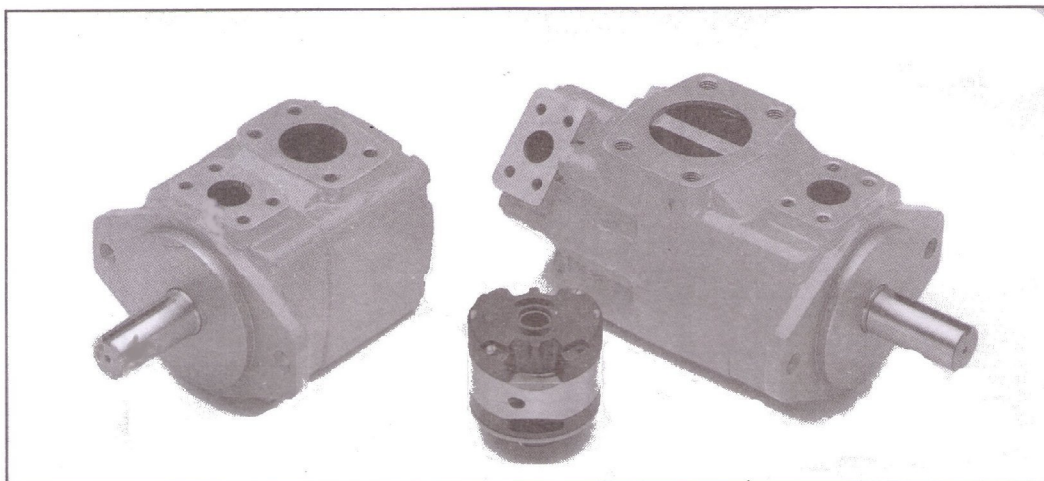


FIXED DISPLACEMENT HYDRAULIC VANE PUMPS

BV series

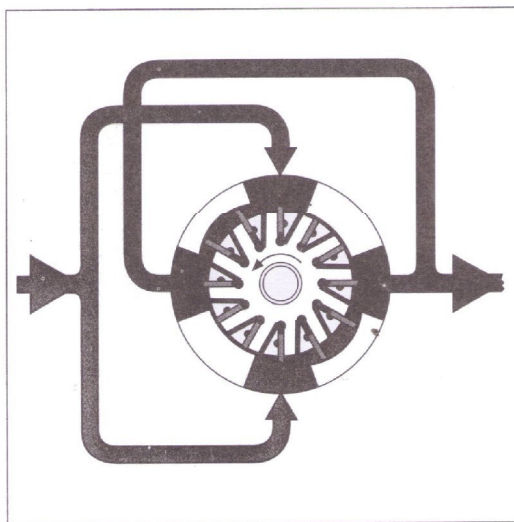


Versatility, power, compactness and low running costs are the main characteristics of B&C vane pumps.

All the components subject to wear are contained in a cartridge unit that can be easily removed for inspection and/or replacement without disconnecting the pump from the circuit, drastically reducing expensive machine down time.

The cartridge contains a rotor, vanes and inserts, a cam ring and two covers.

During operation the rotor is driven by a splined shaft coupled to the drive unit. As the rotation speed increases, centrifugal forces, in combination with the pressure generated behind the vanes, push the vanes outwards, where they follow the profile of the cam of the ring with a sufficient contact pressure to ensure adequate hydraulic sealing. The two opposed pumping chambers formed by the elliptical profile of the cam cancel out radial loads on the shaft bearings, thereby giving them extremely long lifetimes. The versatility of the BV series pumps enables them to meet the requirements of the most varied industrial applications. In fact, as well as their proven high reliability and excellent volumetric efficiency in all working conditions, they operate with particularly low noise levels. This is made possible by the special profile of the cam ring and the use of a 12 vane rotor that reduces the amplitude of the supply pressure pulses, thereby reducing induced vibrations (see drawing).



The BV series is available in four versions of single pump (from 21 to 230 L/min at 1200 rpm) and six versions of double pump (from 68 to 370 L/min at 1200 rpm), with maximum powers of over 300 HP.

The BV series pumps are extremely compact and are supplied with ISO norm mechanical couplings and SAE norm hydraulic fittings. This makes them very easy to install and guarantees their interchangeability with other similar pumps.



fluid power solutions

MAIN TECHNICAL CHARACTERISTICS

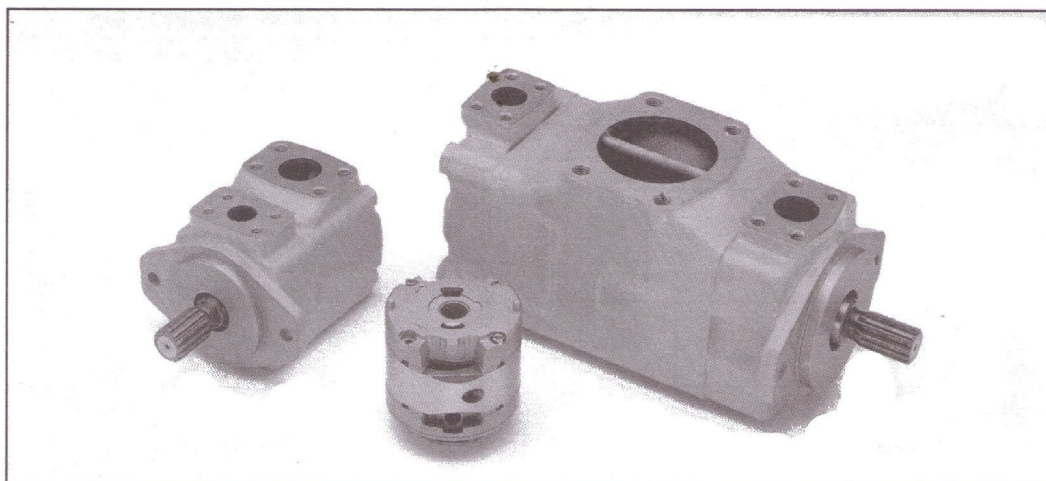
Pump type	Shaft end cartridge							Cover end cartridge						
	Geometric displacement		Rated capacity at 1200 rpm 7 bar		Maximum pressure with mineral oil		Max speed	Geometric displacement		Rated capacity at 1200 rpm 7 bar		Maximum pressure with mineral oil		Max speed
	cm ³ /g	(in ³ /r)	l/min	(gpm)	bar	(psi)	rpm	cm ³ /g	(in ³ /r)	l/min	(gpm)	bar	(psi)	rpm
BV01	18,0	(1.10)	20,8	(5)	210	(3050)	2700							
	27,4	(1.67)	31,8	(8)	210	(3050)	2700							
	36,4	(2.22)	42,4	(11)	210	(3050)	2700							
	39,5	(2.41)	46,9	(12)	160	(2300)	2000							
	45,9	(2.79)	54,9	(14)	140	(2030)	2000							
BV02	40,1	(2.45)	46,9	(12)	175	(2538)	1800							
	45,4	(2.77)	52,7	(14)	175	(2538)	1800							
	55,2	(3.37)	64,2	(17)	175	(2538)	1800							
	60,0	(3.66)	71,0	(19)	175	(2538)	1800							
	67,5	(4.12)	79,0	(21)	175	(2538)	1800							
BV04	69,0	(4.2)	79,5	(21)	175	(2538)	1800							
	81,6	(5)	94,0	(25)	175	(2538)	1800							
	97,7	(6)	113,8	(30)	175	(2538)	1800							
	112,7	(6.9)	131,6	(35)	175	(2538)	1800							
	121,6	(7.4)	139,9	(38)	175	(2538)	1800							
BV05	138,6	(8.46)	164	(42)	175	(2538)	1800							
	153,5	(9.4)	180	(47)	175	(2538)	1800							
	162,2	(9.9)	189	(50)	175	(2538)	1800							
	183,4	(11.2)	217	(57)	175	(2538)	1800							
	193,4	(11.8)	230	(60)	175	(2538)	1800							
BV21	40,1	(2.45)	46,9	(12)	175	(2538)	1800	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	45,4	(2.77)	52,7	(14)	175	(2538)	1800	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	55,2	(3.37)	64,2	(17)	175	(2538)	1800	36,4	(2.22)	42,4	(11)	210	(3050)	2700
	60,0	(3.66)	71,0	(19)	175	(2538)	1800	39,5	(2.41)	46,9	(12)	160	(2300)	2000
	67,5	(4.12)	79,0	(21)	175	(2538)	1800	45,9	(2.79)	54,9	(14)	140	(2030)	2000
BV41	69,0	(4.2)	79,5	(21)	175	(2538)	1800	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	81,6	(5)	94,0	(25)	175	(2538)	1800	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	97,7	(6)	113,8	(30)	175	(2538)	1800	36,4	(2.22)	42,4	(11)	210	(3050)	2700
	112,7	(6.9)	131,6	(35)	175	(2538)	1800	39,5	(2.41)	46,9	(12)	160	(2300)	2000
	121,6	(7.4)	139,9	(38)	175	(2538)	1800	45,9	(2.79)	54,9	(14)	140	(2030)	2000
BV42	69,0	(4.2)	79,5	(21)	175	(2538)	1800	40,1	(2.45)	46,9	(12)	175	(2538)	1800
	81,6	(5)	94,0	(25)	175	(2538)	1800	45,4	(2.77)	52,7	(14)	175	(2538)	1800
	97,7	(6)	113,8	(30)	175	(2538)	1800	55,2	(3.37)	64,2	(17)	175	(2538)	1800
	112,7	(6.9)	131,6	(35)	175	(2538)	1800	60,0	(3.66)	71,0	(19)	175	(2538)	1800
	121,6	(7.4)	139,9	(38)	175	(2538)	1800	67,5	(4.12)	79,0	(21)	175	(2538)	1800
BV51	138,6	(8.46)	164	(42)	175	(2538)	1800	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	153,5	(9.4)	180	(47)	175	(2538)	1800	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	162,2	(9.9)	189	(50)	175	(2538)	1800	36,4	(2.22)	42,4	(11)	210	(3050)	2700
	183,4	(11.2)	217	(57)	175	(2538)	1800	39,5	(2.41)	46,9	(12)	160	(2300)	2000
	193,4	(11.8)	230	(60)	175	(2538)	1800	45,9	(2.79)	54,9	(14)	140	(2030)	2000
BV52	138,6	(8.46)	164	(42)	175	(2538)	1800	40,1	(2.45)	46,9	(12)	175	(2538)	1800
	153,5	(9.4)	180	(47)	175	(2538)	1800	45,4	(2.77)	52,7	(14)	175	(2538)	1800
	162,2	(9.9)	189	(50)	175	(2538)	1800	55,2	(3.37)	64,2	(17)	175	(2538)	1800
	183,4	(11.2)	217	(57)	175	(2538)	1800	60,0	(3.66)	71,0	(19)	175	(2538)	1800
	193,4	(11.8)	230	(60)	175	(2538)	1800	67,5	(4.12)	79,0	(21)	175	(2538)	1800
BV54	138,6	(8.46)	164	(42)	175	(2538)	1800	69,0	(4.2)	79,5	(21)	175	(2538)	1800
	153,5	(9.4)	180	(47)	175	(2538)	1800	81,6	(5)	94,0	(25)	175	(2538)	1800
	162,2	(9.9)	189	(50)	175	(2538)	1800	97,7	(6)	113,8	(30)	175	(2538)	1800
	183,4	(11.2)	217	(57)	175	(2538)	1800	112,7	(6.9)	131,6	(35)	175	(2538)	1800
	193,4	(11.8)	230	(60)	175	(2538)	1800	121,6	(7.4)	139,9	(38)	175	(2538)	1800

Oil viscosity: 25 c.St.(10W), Temperature: 45°C, Inlet pressure: 0 BAR



FIXED DISPLACEMENT HYDRAULIC VANE PUMPS

BQ series



Versatility, power, compactness and low running costs are the main characteristics of B&C vane pumps.

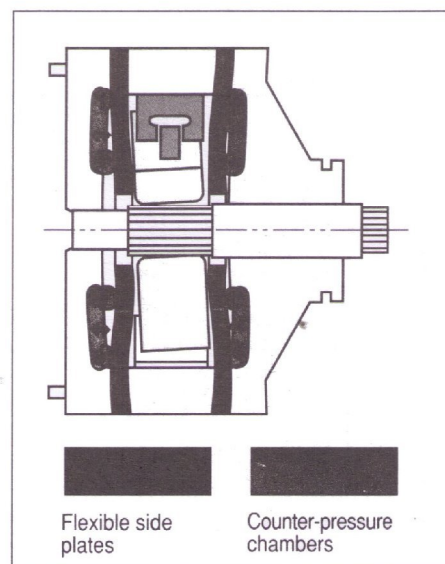
All the components subject to wear are contained in a cartridge unit that can be easily removed for inspection and/or replacement without disconnecting the pump from the circuit, drastically reducing expensive machine down time.

The cartridge contains a rotor, vanes and inserts, a cam ring, two flexible plates and two covers. During operation the rotor is driven by a splined shaft coupled to the drive unit. As the rotation speed increases, centrifugal forces, in combination with the pressure generated behind the vanes, push the vanes outwards, where they follow the profile of the cam with a sufficient contact pressure to ensure adequate hydraulic sealing. The two opposed pumping chambers formed by the elliptical profile of the cam cancel out radial loads on the shaft bearings, thereby giving them extremely long lifetimes.

The design characteristics of the BQ series pumps make them particularly suited to applications in the mobile field. The special design of the flexible plates enables any thermal expansion in the rotor to be compensated for and to adequately cope with any sudden change in pressure. Furthermore, the counter-pressure chambers positioned between the flexible plates and the cartridge covers balance the internal pressure; this ensures that the correct clearance between the rotor and the flexible plates is always maintained so guaranteeing maximum volumetric efficiency (see drawing).

The BQ series is available in four versions of single pump (from 21 to 230 L/min at 1200 rpm) and six versions of double pump (from 68 to 370 L/min at 1200 rpm), with maximum powers of over 300 HP.

The BQ series pumps are extremely compact and are supplied with ISO norm mechanical couplings and SAE norm hydraulic fittings. This makes them very easy to install and guarantees their interchangeability with other similar pumps.



fluid power solutions

MAIN TECHNICAL CHARACTERISTICS

Pump type	Shaft end cartridge							Cover end cartridge						
	Geometric displacement		Rated capacity at 1200 rpm 7 bar		Maximum pressure with mineral oil		Max speed	Geometric displacement		Rated capacity at 1200 rpm 7 bar		Maximum pressure with mineral oil		Max speed
	cm ³ /g	(in ³ /r)	l/min	(gpm)	bar	(psi)	rpm	cm ³ /g	(in ³ /r)	l/min	(gpm)	bar	(psi)	rpm
BQ01	18,0	(1.10)	20,8	(5)	210	(3050)	2700							
	27,4	(1.67)	31,8	(8)	210	(3050)	2700							
	36,4	(2.22)	42,4	(11)	210	(3050)	2700							
	39,5	(2.41)	46,9	(12)	160	(2300)	2700							
	45,9	(2.79)	54,9	(14)	140	(2030)	2700							
BQ02	40,1	(2.45)	46,9	(12)	210	(3050)	2700							
	45,4	(2.77)	52,7	(14)	210	(3050)	2700							
	55,2	(3.37)	64,2	(17)	210	(3050)	2500							
	60,0	(3.66)	71,0	(19)	210	(3050)	2500							
BQ04	69,0	(4.2)	79,5	(21)	210	(3050)	2500							
	81,6	(5)	94,0	(25)	210	(3050)	2500							
	97,7	(6)	113,8	(30)	210	(3050)	2500							
	112,7	(6.9)	131,6	(35)	210	(3050)	2400							
BQ05	121,6	(7.4)	139,9	(38)	210	(3050)	2400							
	138,6	(8.46)	164	(42)	175	(2538)	2200							
	153,5	(9.4)	180	(47)	175	(2538)	2200							
	162,2	(9.9)	189	(50)	175	(2538)	2200							
BQ21	183,4	(11.2)	217	(57)	175	(2538)	2200							
	193,4	(11.8)	230	(60)	175	(2538)	2200							
	40,1	(2.45)	46,9	(12)	210	(3050)	2700	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	45,4	(2.77)	52,7	(14)	210	(3050)	2700	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	55,2	(3.37)	64,2	(17)	210	(3050)	2500	36,4	(2.22)	42,4	(11)	210	(3050)	2700
BQ41	60,0	(3.66)	71,0	(19)	210	(3050)	2500	39,5	(2.41)	46,9	(12)	160	(2300)	2700
	67,5	(4.12)	79,0	(21)	210	(3050)	2500	45,9	(2.79)	54,9	(14)	140	(2030)	2700
	69,0	(4.2)	79,5	(21)	210	(3050)	2500	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	81,6	(5)	94,0	(25)	210	(3050)	2500	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	97,7	(6)	113,8	(30)	210	(3050)	2500	36,4	(2.22)	42,4	(11)	210	(3050)	2700
BQ42	112,7	(6.9)	131,6	(35)	210	(3050)	2400	39,5	(2.41)	46,9	(12)	160	(2300)	2700
	121,6	(7.4)	139,9	(38)	210	(3050)	2400	45,9	(2.79)	54,9	(14)	140	(2030)	2700
	69,0	(4.2)	79,5	(21)	210	(3050)	2500	40,1	(2.45)	46,9	(12)	210	(3050)	2700
	81,6	(5)	94,0	(25)	210	(3050)	2500	45,4	(2.77)	52,7	(14)	210	(3050)	2700
	97,7	(6)	113,8	(30)	210	(3050)	2500	55,2	(3.37)	64,2	(17)	210	(3050)	2500
BQ51	112,7	(6.9)	131,6	(35)	210	(3050)	2400	60,0	(3.66)	71,0	(19)	210	(3050)	2500
	121,6	(7.4)	139,9	(38)	210	(3050)	2400	67,5	(4.12)	79,0	(21)	210	(3050)	2500
	138,6	(8.46)	164	(42)	175	(2538)	2200	18,0	(1.10)	20,8	(5)	210	(3050)	2700
	153,5	(9.4)	180	(47)	175	(2538)	2200	27,4	(1.67)	31,8	(8)	210	(3050)	2700
	162,2	(9.9)	189	(50)	175	(2538)	2200	36,4	(2.22)	42,4	(11)	210	(3050)	2700
BQ52	183,4	(11.2)	217	(57)	175	(2538)	2200	39,5	(2.41)	46,9	(12)	160	(2300)	2700
	193,4	(11.8)	230	(60)	175	(2538)	2200	45,9	(2.79)	54,9	(14)	140	(2030)	2700
	138,6	(8.46)	164	(42)	175	(2538)	2200	40,1	(2.45)	46,9	(12)	210	(3050)	2700
	153,5	(9.4)	180	(47)	175	(2538)	2200	45,4	(2.77)	52,7	(14)	210	(3050)	2700
	162,2	(9.9)	189	(50)	175	(2538)	2200	55,2	(3.37)	64,2	(17)	210	(3050)	2500
BQ54	183,4	(11.2)	217	(57)	175	(2538)	2200	60,0	(3.66)	71,0	(19)	210	(3050)	2500
	193,4	(11.8)	230	(60)	175	(2538)	2200	67,5	(4.12)	79,0	(21)	210	(3050)	2500
	138,6	(8.46)	164	(42)	175	(2538)	2200	69,0	(4.2)	79,5	(21)	210	(3050)	2500
	153,5	(9.4)	180	(47)	175	(2538)	2200	81,6	(5)	94,0	(25)	210	(3050)	2500
	162,2	(9.9)	189	(50)	175	(2538)	2200	97,7	(6)	113,8	(30)	210	(3050)	2500
BQ54	183,4	(11.2)	217	(57)	175	(2538)	2200	112,7	(6.9)	131,6	(35)	210	(3050)	2400
	193,4	(11.8)	230	(60)	175	(2538)	2200	121,6	(7.4)	139,9	(38)	210	(3050)	2400

Oil viscosity: 25 c.St.(10W), Temperature: 45°C, Inlet pressure: 0 BAR

