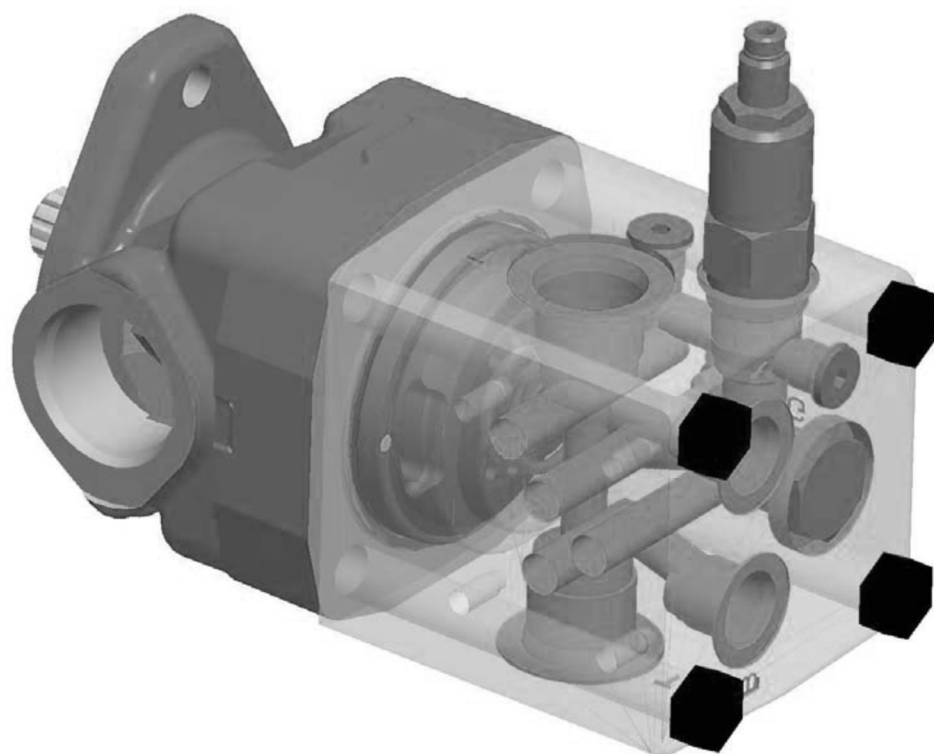


Vickers by Danfoss

V20D User Guide

DG Ready Vane Pump



Danfoss

BC458275218765en-000102

Introduction

V20D Vane Pumps

Compact

Simple

Flexible

Reliable

Durable

Cost Savings

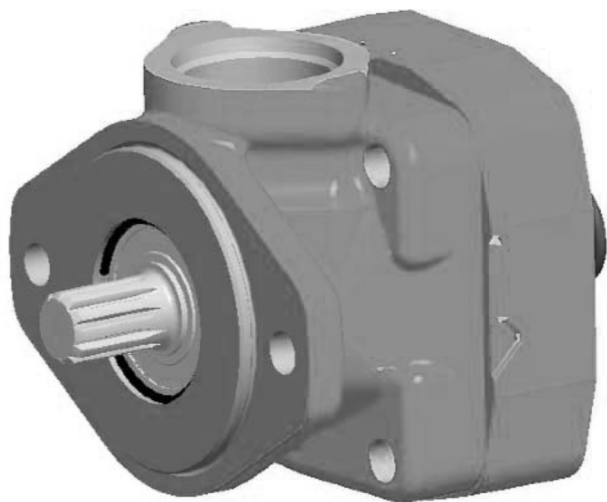
DG Ready

Features

- Four cover orientations, two choices of tank ports
- Less leakage points
- Durable cast-iron structure
- Space saving – only 2.8 inch longer than standard pump
- Popular standard cartridge valves
- Modular pump design

Benefits

- Quiet, reliable, long life and consistent high performance over life
- Cost savings
- Installation labor savings
- No need for sub-plate for valve mount
- Eliminate hose/pipe connection between pump and valves
- Easy maintenance/repair
- Flexible installation



Standard V20 Vane Pump

Displacement: 16 – 42cc

SAE A & B mount

NPT, Straight Tread, and
2 Bolt Ports

Key, Spline, Key Thread and
Woodruff Shafts



Special Pump Cover Block

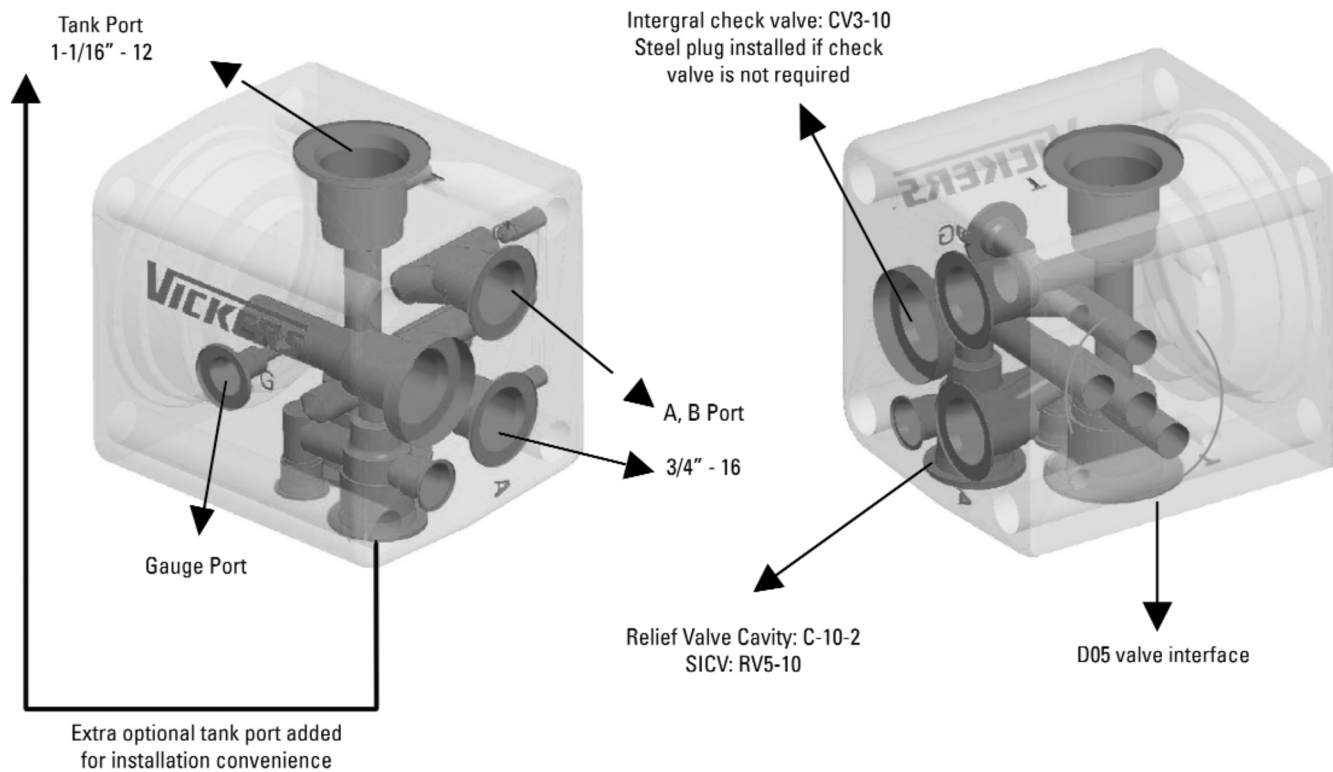
D03 and D05 DG Valve
Interface

Screw-in Cartridge Relief Valve

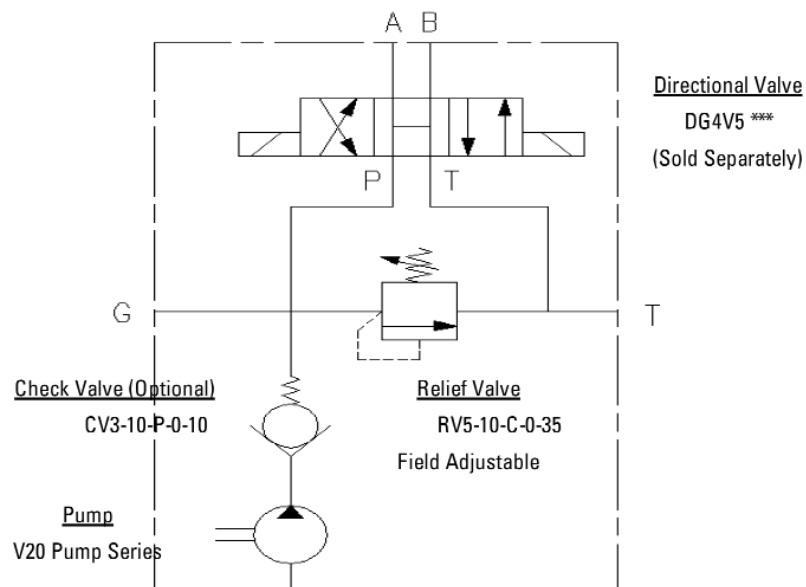
Optional Check Valve

Gauge Ports

V20D Cover Block

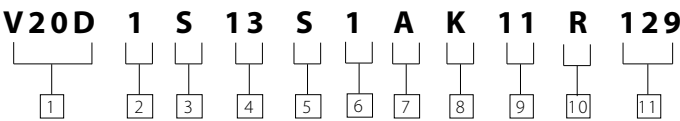


Cover Block - Circuitry



Model Codes

V20D Pump



1 Pump Name

2 Pump Mount
1 – SAE A mount
6 – SAE B mount

3 Inlet Port
S – 1-5/8"–12
P – 1-1/4" NPT thread
E – 1-1/2" 2 bolt flange
B – G (BSP) 1-1/4"

4 Flow
13 – US gpm (1200 rpm and 100 psi) 5, 6, 7, 8, 9, 11, 12, 13

5 Outlet Port
S – SAE O ring port (J514)
A, B port: 3/4" – 16
Tank port: 1-1/16" – 12
Gauge port: 7/16 – 20

6 Shaft
1 – Key
62 – Spline 9T
38 – Spline 11T
39 – Spline 13T
3 – Key Tread
22 – Woodruff

7 Cover position (View from cover end)
A – DG interface opposite of inlet
B – DG interface 90° CCW from inlet
C – DG interface in line with inlet
D – DG interface 90° CW from inlet

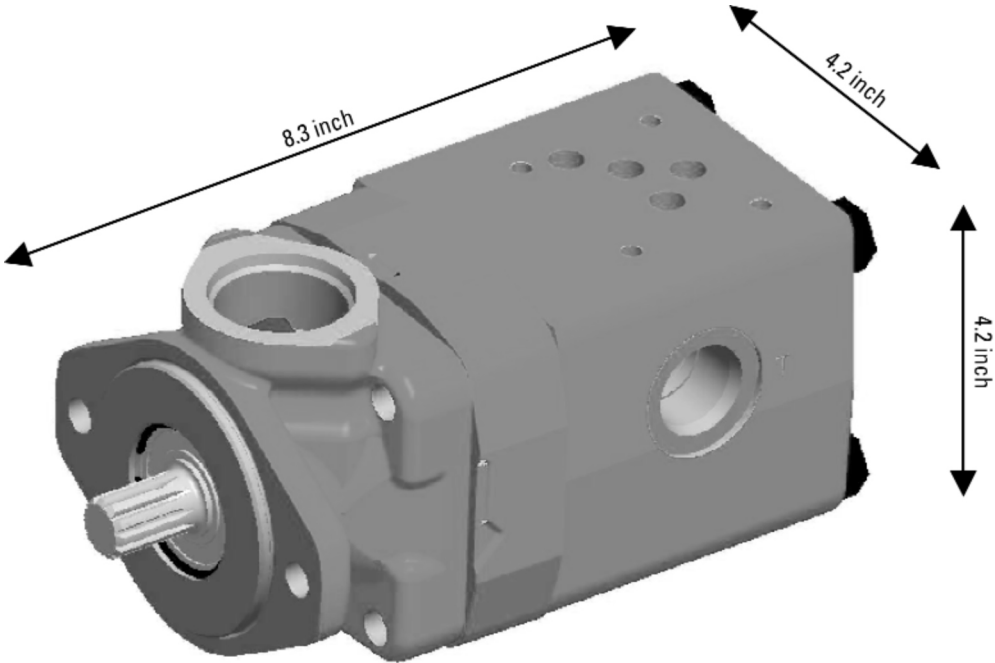
8 Relief Valve Setting
A – 250 psi G – 1750 psi
B – 500 psi H – 2000 psi
C – 750 psi J – 2250 psi
D – 1000 psi K – 2500 psi
E – 1250 psi L – 2750 psi
F – 1500 psi M – 3000 psi

9 Design code

10 Rotation (View from shaft end)
L – Left hand
R – Right hand

11 Suffix
129 – D05 w/o check
130 – D05 w/ check
136 – D03 w/o check
137 – D03 w/ check

Basic Dimensions



Why Use Vane Pumps?

Design Benefits

Flexible Displacement Change

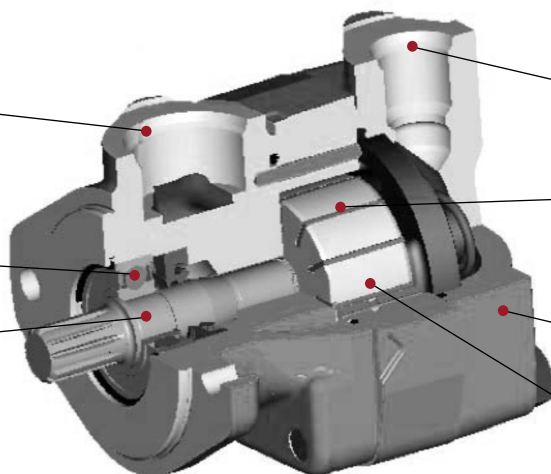
- Easy repair or reconfiguration

Ball Bearing

- Long life

Hydraulic Balanced Design

- No shaft fatigue caused by side load



Flexible Porting

- Easy installation

Vane Self-wear Compensation

- No performance degradation over life

Cast Iron Structure

- Durable

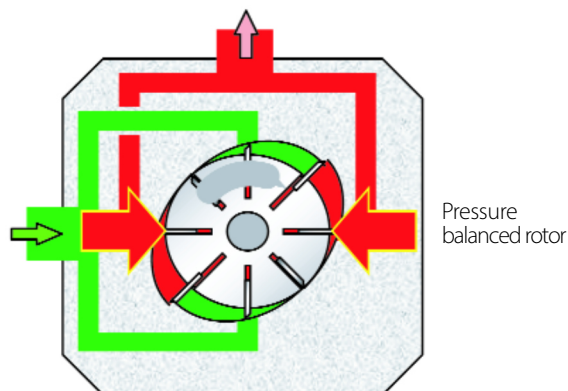
Floating Rotor

- Less chance of side plate smearing

Low pressure ripple

- Quiet operation

Ring profile generates smooth pressure transition for the oil trapped between the adjacent two vanes



Vickers by Danfoss Vane Pump Family

Reliable, Quiet, Compact, Long Life

Economical

V10/V20 Square

- 3000psi [210 Bar]
- 0.2in³ [3.3cc] - 2.59in³ [42cc]
- Single, Double Pumps
- Optional integral valves

Comprehensive

V/VQ(H)

- Up to 3500 psi [240 Bar]
- 1.1in³ [18cc] - 20.9in³ [343cc]
- Cartridge-kit Design
- Industrial V and Mobile VQ(H)
- Single, Double and Thru-Drive Pumps

Tough

VMQ

- Up to 4250psi [280 Bar]
- 0.6in³ [10cc] - 13.1in³ [215cc]
- Cartridge-kit Design
- Bi-metal wafer plate
- Single, Double and Thru-Drive Pumps



Products we offer:

- Cartridge valves
- DCV directional control valves
- Electric converters
- Electric machines
- Electric motors
- Gear motors
- Gear pumps
- Hydraulic integrated circuits (HICs)
- Hydrostatic motors
- Hydrostatic pumps
- Orbital motors
- PLUS+1® controllers
- PLUS+1® displays
- PLUS+1® joysticks and pedals
- PLUS+1® operator interfaces
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- PLUS+1® software
- PLUS+1® software services, support and training
- Position controls and sensors
- PVG proportional valves
- Steering components and systems
- Telematics

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