



### Product Description

1. Bi-directional design available
2. Cartridge unit
3. Category 2 and 3, Type A, Arrangement 2 or 3
4. Design acc. to API 682 / ISO 21049
5. Dual seal
6. Integrated pumping device available
7. Rotating multiple springs
8. Suitable for pressure reversals

### Technical Features

1. Extended field of operation in terms of temperature and pressure
2. Fits to any seal chamber
3. Metal parts also in special materials available
4. Optimized torque transmission
5. Safe operation due to metal torque transmission at the rotating seat

API/d1	API/d2	API/d3	d6	l4	l5	l6	l7
Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch
0.750	2.756	4.134	5.079	5.669	3.819	1.850	3.189
1.125	3.150	4.528	5.472	5.728	3.780	1.949	3.051
1.500	3.543	4.921	5.866	5.768	3.799	1.969	3.071
2.000	3.937	5.512	6.614	6.220	4.193	2.028	3.465
2.250	4.724	6.299	7.402	6.496	4.232	2.264	3.551
2.750	5.118	6.693	7.795	6.693	4.232	2.461	3.346
3.125	5.512	7.087	8.189	6.890	4.232	2.657	3.346
3.500	6.299	8.071	9.370	7.039	4.602	2.437	3.717
3.750	6.693	8.465	9.764	7.283	4.626	2.657	3.622
4.250	7.087	8.858	10.157	7.402	4.587	2.815	3.583

API/d1	API/d2	API/d3	d6	l4	l5	l6	l7
mm	mm	mm	mm	mm	mm	mm	mm
20	70	105	129	144.0	97.0	47.0	81.0
30	80	115	139	145.5	96.0	49.5	77.5
40	90	125	149	146.5	96.5	50.0	78.0
50	100	140	168	158.0	106.5	51.5	88.0
60	120	160	188	165.0	107.5	57.5	90.2
70	130	170	198	170.0	107.5	62.5	85.0
80	140	180	208	175.0	107.5	67.5	85.0
90	160	205	238	178.8	116.9	61.9	94.4
100	170	215	248	185.0	117.5	67.5	92.0
110	180	225	258	188.0	116.5	71.5	91.0

### Typical Industrial Applications

Light volatile and highly viscous hydrocarbons  
 Oil and gas industry  
 Petrochemical industry  
 Refining technology  
 API 610 / ISO 13709 pumps  
 Process pumps

### Performance Capabilities

Sizes: d = Upto 110 mm (Upto 4.250")  
 Pressure: p1 = 40 bar (580 PSI)  
 Temperature: t = -40°C ... +220°C (-40°F ... 428°F)  
 Speed = 23 m/s (75 ft/s)  
 Permissible axial movement: ± 2.0 ... 4.0 mm  
 depending on diameter and installation situation

### Materials

Seal face: Carbon graphite antimony impregnated (A)  
 Silicon carbide (Q1, Q2)  
 Seat: Silicon carbide (Q1, Q2)  
 Secondary seal: EPDM (E), NBR (P), FKM (V), FFKM (K)  
 Springs: Hastelloy® C-4 (M)  
 Metal parts: CrNiMo steel (G), Duplex (G1),  
 Hastelloy® C-4 (M)

### Standards

API 682 / ISO 21049

### Design Variations

**B750VK-D** Dual seal in back-to-back arrangement.  
 Suitable for API 610 table 6 seal chambers.

