

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 September 2019 (06.09.2019)



(10) International Publication Number
WO 2019/168691 A2

- (51) **International Patent Classification:**
F16K 99/00 (2006.01)
- (21) **International Application Number:**
PCT/US2019/018351
- (22) **International Filing Date:**
15 February 2019 (15.02.2019)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
15/898,064 15 February 2018 (15.02.2018) US
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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,

(54) **Title: ROTARY VALVE**

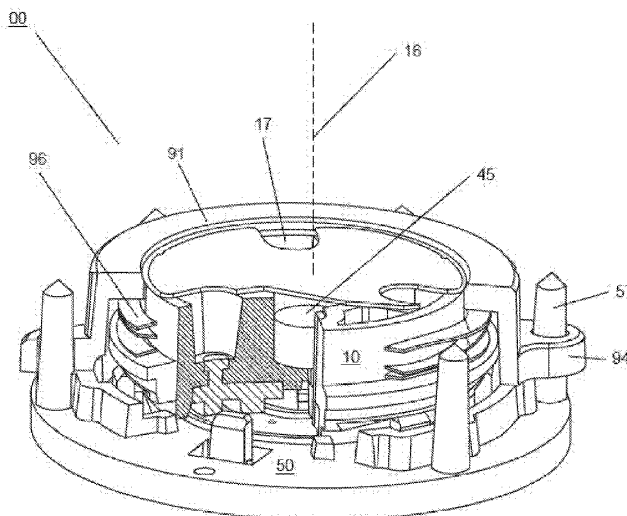


FIG. 1A

(57) **Abstract:** Rotary valves and methods of using, manufacturing, and storing the same are provided herein. The rotary valve includes a rotor and a stator, biased toward one another to form a fluid tight seal. In some implementations, the rotor comprises an integrated flow channel containing a porous solid support. Frequently, the interface between rotor and stator is made fluid-tight using a gasket. Some implementations of the rotary valve include a displaceable spacer to prevent the gasket from sealing against at least one of the rotor and stator prior to operation, wherein when the spacer is displaced, the gasket seals the rotor and stator together in a fluid-tight manner.

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UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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