# 4WE 6 D6X/EG24N9K4

| | | | |
|---|---|---|---|
| **General** | | | |
| Installation | | | Optional |
| Ambient temperature | | °C (°F) | –30 to +50 (–22 to +122) – NBR seals<br>–20 to +50 (–4 to +122) – FKM seals |
| Weight | Valve with 1 solenoid | kg (lbs.) | 1.45 (3.2) |
| | Valve with 2 solenoids | kg (lbs.) | 1.95 (4.3) |
| **Hydraulic** | | | |
| Max. operating pressure | Ports A, B, P | bar (PSI) | 350 (5100) |
| | Ports T | bar (PSI) | 210 (3050) – DC; 160 (2320) – AC<br>With symbols A and B, port T must be used as a drain port if the operating pressure is above the permitted tank pressure. |
| Max. flow | | L/min (GPM) | 80 (21) – DC; 60 (15.8) – AC |
| Flow cross-section (switched position 0) | For symbol Q | $mm^2$ ($in^2$) | Approx. 6% of the nominal cross-section |
| | For symbol W | $mm^2$ ($in^2$) | Approx. 3% of the nominal cross-section |
| Pressure fluid | | | Mineral oil (HL, HLP) to DIN 51524 [1];<br>Fast bio-degradable pressure fluids to VDMA 24568 (also see RE 90221); HETG (rape seed oil) [1];<br>HEPG (polyglycols) [2]; HEES (synthetic ester) [2];<br>Other pressure fluids on request |
| Pressure fluid temperature range | | °C °F) | –30 to +80 (–22 to +176) – NBR seals<br>–20 to +80 (–4 to +176) – FKM seals |
| iscosity range | | $mm^2/s$ (SUS) | 2.8 to 500 (35 to 2320) |
| ISO code cleanliness class | | | Maximum permissible degree of contamination of fluid to ISO 4406 (c) class 20/18/15 [3] |

# 4WEH16E-71/6EG24N9ETK4/10B10

**Technical data** (for applications outside these parameters, please consult us!)

## General

| Sizes | | NG | 10 | 16 | 25<br>4W.H 22 | 25<br>4W.H 25 | 32 |
|---|---|---|---|---|---|---|---|
| Weight, ca. | – Valve with one solenoid | kg *[lbs]* | 6.4<br>*[14.1]* | 8.5<br>*[18.7]* | 11.5<br>*[25.3]* | 17.6<br>*[38.8]* | 17.6<br>*[38.8]* |
| | – Valve with two solenoids, spring-centered | kg *[lbs]* | 6.8<br>*[15.0]* | 8.9<br>*[19.6]* | 11.9<br>*[26.2]* | 19.0<br>*[41.9]* | 41.0<br>*[90.4]* |
| | – Valve with two solenoids, pressure-centered | kg *[lbs]* | 6.8<br>*[15.0]* | 8.9<br>*[19.6]* | 11.9<br>*[26.2]* | 19.0<br>*[41.9]* | 41.0<br>*[90.4]* |
| | – Valve with hydraulic actuation (type 4WH...) | kg *[lbs]* | 5.5<br>*[12.1]* | 7.3<br>*[16.1]* | 10.5<br>*[23.1]* | 16.5<br>*[36.4]* | 39.5<br>*[87.1]* |
| | – Switching time adjustment | kg *[lbs]* | 0.8 *[1.8]* | 0.8 *[1.8]* | 0.8 *[1.8]* | 0.8 *[1.8]* | 0.8 *[1.8]* |
| | – Pressure reducing valve | kg *[lbs]* | 0.4 *[0.9]* | 0.4 *[0.9]* | 0.4 *[0.9]* | 0.4 *[0.9]* | 0.4 *[0.9]* |
| Installation position | | | Optional; horizontal in the case of valves with hydraulic spool return "H" and spool symbols A, B, C, D, K, Z, Y | | | | |
| Ambient temperature range | | °C *[°F]* | –30 to +50 *[–22 to +122]* | | | | |
| Storage temperature range | | °C *[°F]* | –20 to +70 *[–4 to +158]* | | | | |
| Surface protection (valve body) | | | Paint-coating, layer thickness max. 100 µm | | | | |

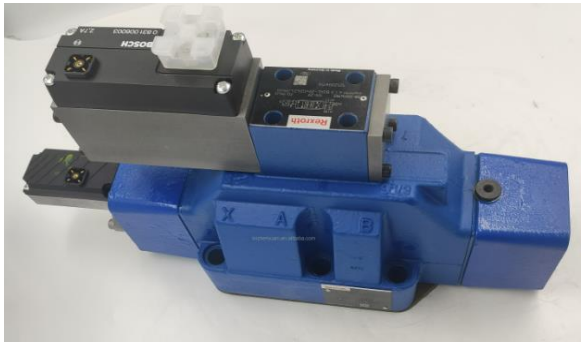
# 4WRZ 16 EA150-X/6AG24N9ETK4/M

RE 29 113/09.95

**Technical data** (For applications outside these parameters, please consult us!)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **General** | | | | | | | |
| Installation position | | | optional, preferably horizontal (for comissioning guidelines see RE 07 800) | | | | |
| Ambient temperature | | °C | – 20 to + 50 | | | | |
| Weight | Spool symbol | | E, E1-, E2-, E3-, W, W1-, W2-, W3- | | | EA, WA, EB, WB | |
| | Size 10 | kg | 7,8 | | | 7,4 | |
| | Size 16 | kg | 13,4 | | | 12,7 | |
| | Size 25 | kg | 18,2 | | | 17,5 | |
| | Size 32 | kg | 42,2 | | | 41,8 | |
| | Size 52 | kg | 79,5 | | | 78,5 | |
| for flange connection | Size 52 | kg | 77,5 | | | 76,5 | |
| **Hydraulic** (measured at $\nu = 41$ mm²/s and $t = 50$ °C) | | | | | | | |
| | | | **Size 10** | **Size 16** | **Size 25** | **Size 32** | **Size 52** |
| Operating pressure | | | | | | | |
| – Pilot valve, | Pilot oil feed external | bar | 30 to 100 | | | | 20 to 100 |
| | Pilot oil feed internal | bar | | | | | – |
| | | bar | 100 to 315 only with "D3" | | | | |
| – Main valve | | bar | up to 315 | up to 350 | up to 350 | up to 350 | up to 350 |
| Return line pressure | – Port T (port R) (Pilot oil drain external) | bar | up to 315 | up to 250 | up to 250 | up to 150 | up to 250 |
| | – Port T (Pilot oil drain internal) | bar | up to 30 | up to 30 | up to 30 | up to 30 | – |
| | – Port Y | bar | up to 30 | up to 30 | up to 30 | up to 30 | up to 30 |
| Pilot oil volume for spool movement 0 → 100 % | | cm³ | 1,7 | 4,6 | 10 | 26,5 | 54,3 |
| Pilot oil flow at ports X and Y at stepped input signals 0 → 100 % | | L/min | 3,5 | 5,5 | 7 | 15,9 | 7 |
| Flow through main valve | | L/min | up to 170 | up to 460 | up to 870 | up to 1600 | up to 2800 |
| Degree of fluid contamination | | | Maxiumum permissible degree of contamination of the fluid is to NAS 1638, class 7 (pilot stage) and class 9 (main stage) We, therefore, recommend a filter with a minimum retention rate of $\beta_5 \geq 75$ for the pilot stage; *and* $\beta_{15} \geq 75$ for the main stage | | | | |
| Hydraulic fluid | | | Mineral oil (HL, HLP) to DIN 51 524<br>Phosphate ester (HFD-R) | | | | |

| | | | | |
|---|---|---|---|---|
| Hydraulic fluid temperature range | | °C | – 20 to +70 | |
| Viscosity range | | mm²/s | 20 to 380 | |
| Hysteresis | | % | ≤ 6 | |
| Repetitive accuracy | | % | ≤ 3 | |
| **Electrical** | | | | |
| Type of voltage | | | DC | |
| Nominal current, | – at 12 V | mA | 1300 | |
| per proportional solenoid | – at 24 V | mA | 700 | |
| Pilot current | | mA | ≤ 20 | |
| Coil resistance | – value when cold at 20 °C | Ω | 19,5 (24 V) | 5,4 (12 V) |
| | – max. value when hot | Ω | 28,8 (24 V) | 7,9 (12 V) |
| Coil temperature | | °C | to + 150 | |
| Duty | | | Continuous | |
| Electrical connection | | | Plug connection to DIN 43 650/2-pin. + PE/Pg11 | |
| Type of insulation to DIN 40 050 | | | IP 65 | |
| **Electronic control** (to separate order) | – Amplifier in Eurocard format | | VT 3000 (see page 20 and data sheet RE 29 935)<br>VT 3006 (see data sheet RE 29 926)<br>VT 3024 (see data sheet RE 29 934) | |
| | – Amplifier in modular design | | VT 11 013 (see data sheet RE 29 738) | |



# CRG-06-04-50

## Specifications

| Type of Connection | Model Numbers | Rated Flow* L/min (U.S.GPM) | Max. Operating Pres. MPa (PSI) | Cracking Pres. MPa (PSI) | Approx. Mass kg (lbs.) |
|---|---|---|---|---|---|
| Threaded Connection | CRT-03-∗-50/5080/5090 | 40 (10.6) | 25 (3630) | 0.04 (6) | 0.9 (2.0) |
| | CRT-06-∗-50/5080/5090 | 125 (33) | | 0.35 (50) | 1.7 (3.7) |
| | CRT-10-∗-50/5080/5090 | 250 (66) | | 0.5 (70) | 5.6 (12.3) |
| Sub-plate Mounting | CRG-03-∗-50/5090 | 40 (10.6) | 25 (3630) | 0.04 (6) | 1.7 (3.7) |
| | CRG-06-∗-50/5090 | 125 (33) | | 0.35 (50) | 2.9 (6.4) |
| | CRG-10-∗-50/5090 | 250 (66) | | 0.5 (70) | 5.5 (12.1) |

★Rated flow is the approximate flow rate, when there is a free flow pressure drop of maximum 0.3 MPa (44 PSI), the fluid has a specific gravity of 0.85 and a kinematic viscosity of 20 $mm^2/s$ (98 SSU), and the cracking pressure is 0.04 MPa (6 PSI).

# CPDG-03-20-50

## Specifications

| Type of Connection | Model Numbers | Rated Flow★ L/min (U.S.GPM) | Max. Operating Pres. MPa (PSI) | Cracking Pres. MPa (PSI) | Approx. Mass kg (lbs.) |
|---|---|---|---|---|---|
| Threaded Connection | CPT/CPDT-03-∗-∗-50∗ | 40 (10.6) | 25 (3630) | 0.04 (6) | 3.0 (6.6) |
| | CPT/CPDT-06-∗-∗-50∗ | 125 (33) | | 0.2 (29) 0.35 (50) | 5.5 (12.1) |
| | CPT/CPDT-10-∗-∗-50∗ | 250 (66) | | 0.5 (70) | 9.6 (21.2) |
| Sub-plate Mounting | CPG/CPDG-03-∗-∗-50∗ | 40 (10.6) | 25 (3630) | 0.04 (6) | 3.3 (7.3) |
| | CPG/CPDG-06-∗-∗-50∗ | 125 (33) | | 0.2 (29) 0.35 (50) | 5.4 (11.9) |
| | CPG/CPDG-10-∗-∗-50∗ | 250 (66) | | 0.5 (70) | 8.5 (18.7) |

★ Rated flow is the approximate flow rate, when there is a free flow pressure drop of maximum 0.3 MPa (44 PSI), the fluid has a specific gravity of 0.85 and a kinematic viscosity of 20 $mm^2/s$ (98 SSU), and the cracking pressure is 0.04 MPa (6 PSI).

# D3DW071HNJW

## Technical data

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **General** | | | | | | | |
| Design | | Directional spool valve | | | | | |
| Actuation | | Solenoid | | | | | |
| Size | | DIN NG10 / CETOP 05 / NFPA D05 | | | | | |
| Mounting interface | | DIN 24340 A10 / ISO 4401 / CETOP RP 121-H / NFPA D05 | | | | | |
| Mounting position | | unrestricted, preferably horizontal | | | | | |
| Ambient temperature | [°C] | -25...+50 | | | | | |
| Weight | [kg] | 4.8 (1 solenoid), 6.3 (2 solenoids) | | | | | |
| **Hydraulic** | | | | | | | |
| Max. operating pressure | [bar] | P, A B: 350; T: 210 (DC), 105 (AC), 210 (AC Code "H") | | | | | |
| Fluid | | Hydraulic oil in accordance with DIN 51524 / 51525 | | | | | |
| Fluid temperature | [°C] | -25 ... +70 | | | | | |
| Viscosity permitted | [cSt] / [mm²/s] | 2.8...400 | | | | | |
| Viscosity recommended | [cSt] / [mm²/s] | 30...80 | | | | | |
| Filtration | | ISO 4406 (1999); 18/16/13 (meet NAS 1638: 7) | | | | | |
| Flow max. | [l/min] | 150 (DC); 115 (AC) | | | | | |
| Leakage at 50 bar | [ml/min] | Up to 20 per flow path, depending on spool | | | | | |
| **Static / Dynamic** | | | | | | | |
| Step response | | see table response time | | | | | |
| **Electrical characteristics** | | | | | | | |
| Duty ratio | | 100% ED; CAUTION: coil temperature up to 150 °C possible | | | | | |
| Max. switching frequency | [1/h] | 10000 | | | | | |
| Protection class | | IP 65 in accordance with EN 60529 (plugged and mounted) | | | | | |
| | Code | K | J | U | G | Y | T |
| Supply voltage / ripple | [V] | 12 V = | 24 V = | 98 V = | 205 V = | 110V at 50Hz/ 120V at 60Hz | 230V at 50Hz/ 240V at 60Hz |
| Tolerance supply voltage | [%] | ±10 | ±10 | ±10 | ±10 | ±5 | ±5 |
| Current consumption hold | [A] | 3 | 1.5 | 0.37 | 0.18 | 0.8 / 0.72 | 0.4 / 0.36 |
| Current consumption in rush | [A] | 3 | 1.5 | 0.37 | 0.18 | 3.41 / 3.31 | 1.75 / 1.7 |
| Power consumption hold | [W] | 36 | 36 | 36 | 36 | 88 / 86 | 88 / 86 |
| Power consumption in rush | [W] | 36 | 36 | 36 | 36 | 375 / 397 | 385 / 408 |
| Solenoid connection | | Connector as per EN 175301-803, solenoid identification as per ISO 9461. | | | | | |
| Wiring min. | [mm²] | 3 x 1.5 recommended | | | | | |
| Wiring length max. | [m] | 50 recommended | | | | | |

With electrical connections the protective conductor (PE ⏚) must be connected according to the relevant regulations.



# DBDS20P/200

## Technical data
(For applications outside these values, please consult us!)

| General | | | | | | |
|---|---|---|---|---|---|---|
| Size | | NG | 6, 8 | 10 | 15, 20 | 25, 30 |
| Weight | | | See pages 9, 11 and 12 | | | |
| Installation position | | | any | | | |
| Ambient temperature range | | °C | –30 ... +80 (NBR seals)<br>–15 ... +80 (FKM seals) | | | |
| Minimum stability of the housing materials | | | Housing materials are to be selected so that there is sufficient safety for all imaginable operating conditions (e. g. with reference to pressure resistance, thread stripping strengths and tightening torques). | | | |
| $MTTF_D$ values according to EN ISO 13849 | | years | 150 ... 1200 (for more information see data sheet 08012) | | | |

| Hydraulic | | | | | | |
|---|---|---|---|---|---|---|
| Maximum operating pressure | ▸ Input | | | | | |
| | – Standard | bar | 400 | 400 | 400 | 315 |
| | – Version "630" | bar | – | 630 | – | – |
| | ▸ Output | bar | 315 | 315 | 315 | 315 |
| Minimum set pressure | | | See characteristic curves page 7 | | | |
| Maximum flow (standard valves) | | | See characteristic curves page 8 | | | |
| Hydraulic fluid | | | see table page 6 | | | |
| Hydraulic fluid temperature range | | °C | –30 ... +80 (NBR seals)<br>–15 ... +80 (FKM seals) | | | |
| Viscosity range | | mm²/s | 10 ... 800 | | | |
| Maximum admissible degree of contamination of the hydraulic fluid; cleanliness class according to ISO 4406 (c) | | | Class 20/18/15 [1] | | | |

[1] The cleanliness classes specified for the components must be adhered to in hydraulic systems. Effective filtration prevents faults and simultaneously increases the life cycle of the components.
Available filters can be found at www.boschrexroth.com/filter.

Deviating technical data for type-examination tested safety valves can be found on page 14.

**Notice:**
Hydraulic counter pressures in port T add 1:1 to the response pressure of the valve set at the adjustment type.

**Example:**
- Pressure adjustment of the valve due to spring preload (item 2 on page 4) $p_{spring}$ = **200 bar**
- Hydraulic counter pressure in port T: $p_{hydraulic}$ = **50 bar**
- ⇒ Response pressure = $p_{spring} + p_{hydraulic}$ = **250 bar**

## Technical data
(For applications outside these values, please consult us!)

| Hydraulic fluid | | Classification | Suitable sealing materials | Standards | Data sheet |
|---|---|---|---|---|---|
| Mineral oils | | HL, HLP, HLPD, HVLP, HVLPD | NBR, FKM | DIN 51524 | 90220 |
| Bio-degradable | ▸ Insoluble in water | HETG | FKM | ISO 15380 | 90221 |
| | | HEES | FKM | | |
| | ▸ Soluble in water | HEPG | FKM | ISO 15380 | |
| Flame-resistant | ▸ Water-free | HFDU (glycol base) | FKM | ISO 12922 | 90222 |
| | | HFDU (ester base) | FKM | | |
| | | HFDR | FKM | | |
| | ▸ Containing water | HFC (Fuchs: Hydrotherm 46M, Renosafe 500;<br>Petrofer: Ultra Safe 620;<br>Houghton: Safe 620;<br>Union: Carbide HP5046) | NBR | ISO 12922 | 90223 |

**Important notices on hydraulic fluids:**
- For further information and data on the use of other hydraulic fluids, please refer to the data sheets above or contact us.
- There may be limitations regarding the technical valve data (temperature, pressure range, life cycle, maintenance intervals, etc.).
- The ignition temperature of the hydraulic fluid used must be 50 K higher than the maximum surface temperature.
- **Bio-degradable and flame-resistant – containing water:** If components with galvanic zinc coating (e.g. version "J3" or "J5") or parts containing zinc are used, small amounts of dissolved zinc may get into the hydraulic system and cause accelerated aging of the hydraulic fluid. Zinc soap may form as a chemical reaction product, which may clog filters, nozzles and solenoid valves – particularly in connection with local heat input.
- **Flame-resistant – containing water:**
  Due to the increased cavitation tendency with HFC hydraulic fluids, the life cycle of the component may be reduced by up to 30% as compared to the use with mineral oil HLP. In order to reduce the cavitation effect, it is recommended – if possible specific to the installation – to back up the return flow pressure in ports T to approx. 20% of the pressure differential at the component.

# ZDB6VP2-4X/200V

**Technical data** (for applications outside these parameters, please consult us!)

| | | | |
|---|---|---|---|
| **General** | | | |
| Weight | Type ZDB 6 | kg | Approx. 1 |
| | Type Z2DB 6 | kg | Approx. 1,2 |
| Installation | | | Optional |
| Ambeint temperature range | | °C | –20 to +80 |
| **Hydraulic** | | | |
| Maximum operating pressure | | bar | 315 |
| Maximum settable pressure | | bar | 50; 100; 200; 315 |
| Maximum back pressure (port Y) | | bar | 315 (take the max. tank pressure of the built-on valve/ directional valve into account!) |
| Maximum flow | | L/min | 60 |
| Pressure fluid | | | Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable pressure fluids to VDMA 24568 (also see RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic ester); other pressure fluids on request |
| Pressure fluid temperature range | | °C | –20 to +80 |
| Viscosity range | | $mm^2/s$ | 10 to 800 |
| Max. permissible degree of pressure fluid contamination Cleanliness class to ISO 4406 (c) | | | Class 20/18/15 [1] |

[1] The cleanliness class stated for the components must be adhered to in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the components service life.

For the selection of filters see data sheets RE 50070, RE 50076, RE 50081, RE 50086 and RE 50088.

# DR20-4-4X/200YM

**Technical data** (for applications outside these parameters, please consult us!)

## General

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Installation | | | | Optional | | | | |
| Ambient temperature range | | | °C | – 30 to + 50 for NBR seals | | | | |
| | | | °C | – 20 to + 50 for FKM seals | | | | |
| Weight | | | | DR 10 | DR 16 | DR 20 | DR 25 | DR 32 |
| | Subplate mounting | DR… | kg | 3.4 | – | 5.3 | – | 8.0 |
| | | DRC… | kg | 1.2 | | | | |
| | | DRC 30… | kg | 1.5 | | | | |
| | Threaded connections | DR..G… | kg | 5.3 | 5.2 | 5.1 | 5.0 | 4.8 |

## Hydraulic

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Nominal pressure | | | bar | 350 [1] | | | | |
| Maximum operating pressure at port B | | | bar | 350 [1] | | | | |
| Operating pressure range at port A | | | bar | 10 to 350 [1] | | | | |
| Maximum back pressure at port Y | | | bar | 350 [1] | | | | |
| Settable pressure | | Minimum | bar | Flow related (see characteristic curves on page 5) | | | | |
| | | Maximum | bar | 50; 100; 200; 315; 350 [1] | | | | |
| Maximum flow | | | | DR 10 | DR 16 | DR 20 | DR 25 | DR 32 |
| | Subplate mounting | | L/min | 150 | – | 300 | – | 400 |
| | Threaded connections | | L/min | 150 | 300 | 300 | 400 | 400 |
| Pressure fluid | | | | Mineral oil (HL, HLP) to DIN 51 524 [2];<br>Fast bio-degradable pressure fluids is to<br>VDMA 24 568 (also see RE 90 221); HETG (rape seed oil) [2];<br>HEPG (polyglycols) [3]; HEES (synthetic ester) [3];<br>Other pressure fluids on request | | | | |
| Pressure fluid temperature range | | | °C | – 30 to + 80 for NBR seals | | | | |
| | | | °C | – 20 to + 80 for FKM seals | | | | |
| Viscosity range | | | $mm^2/s$ | 10 to 800 | | | | |
| Cleanliness class to ISO code | | | | Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) class 20/18/15 [4] | | | | |

[1] 350 bar only possible for version **without** check valve

[2] Suitable for NBR **and** FKM seals

[3] **Only** suitable for FKM seals

[4] The cleanliness class stated for the components must be adhered too in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life.
For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

# EDG-O1V-C-1-PNT13-51

## Specifications

| Model Numbers / Description | EDG-01 |
|---|---|
| Max. Operating Pres. | 24.5 MPa (3550 PSI) |
| Max. Flow | 2 L/min (.53 U.S.GPM) |
| Min. Flow | 0.3 L/min (.08 U.S.GPM) |
| Pressure Adj. Range MPa (PSI) | Refer to Model Number Designation |
| Rated Current | EDG-01∗-B: 800 mA<br>EDG-01∗-C: 900 mA<br>EDG-01∗-H: 950 mA |
| Coil Resistance | 10 Ω |
| Hysteresis | 3% or less |
| Repeatability | 1% or less |
| Approx. Mass | 2 kg (4.4 lbs.) |

# EFBG-06-500-H-50

## Specifications

| Description \ Model No. | | EFBG-03 -250-∗-∗-51∗ | EFBG-06 -500-∗-∗-51∗ | EFBG-10 -1000-∗-∗-51∗ |
|---|---|---|---|---|
| Max. Operating Pressure MPa (PSI) | | 24.5 (3550) | 24.5 (3550) | 24.5 (3550) |
| Max. Flow L/min (U.S.GPM) | | 250 (66) | 500 (132) | 1000 (264) |
| Metred Flow Adjustment Range L/min (U.S.GPM) | | 2.5-250 (.66-66) | 5-500 (1.32-132) | 10-1000 (2.64-264) |
| Min. Pilot Pressure MPa (PSI) | | 1.5 (220) | 1.5 (220) | 1.5 (220) |
| Pilot Flow L/min (U.S.GPM) | at Normal | 1 (.26) | 1 (.26) | 4.5 (1.19) |
| | at Transition | 4 (1.06) | 6 (1.59) | 10.0 (2.64) |
| Flow Controls | Rated Currnt | 830 mA | 780 mA | 830 mA |
| | Coil Resistance | 10 Ω | 10 Ω | 10 Ω |
| | Differential Pressure MPa (PSI) | 0.8 (115) | 0.9 (130) | 1.2 (174) |
| | Hysteresis | 3% or less | 3% or less | 3% or less |
| | Repeatability | 1% or less | 1% or less | 1% or less |
| Pressure Controls ★1 | Pres. Adj. Range MPa (PSI) ★2 | C: 1.6-15.7 (230-2275) H: 1.8-24.5 (260-3550) | C: 1.5-15.7 (220-2275) H: 1.5-24.5 (220-3550) | C: 1.1-15.7 (160-2275) H: 1.1-24.5 (160-3550) |
| | Rated Current | C: 850 mA H: 870 mA | C: 800 mA H: 900 mA | C: 900 mA H: 950 mA |
| | Coil Resistance | 10 Ω | 10 Ω | 10 Ω |
| | Hysteresis | 3% or less | 3% or less | 3% or less |
| | Repeatability | 1% or less | 1% or less | 1% or less |
| Approx. Mass kg (lbs.) | | Refer to page 735 to 737 | | |

★1. The specifications for pressure controls are applied to models with proportional pilot relief valve. (Ex. EFBG-03-250-C-∗-51)

★2. The maximum pressure adjustment range of the valves without proportional pilot relief valves is 24.5 MPa (3550 PSI).

# TDA040EW09AZNXW

| General | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Size** | **NG16** | **NG25** | **NG32** | **NG40** | **NG50** | **NG63** | **NG80** | **NG100** |
| **Interface** | Slip-in cartridge according to ISO 7368 | | | | | | | |
| **Mounting Position** | Unrestricted | | | | | | | |
| **Ambient Temperature** | -20°C to +80°C (-4°F to +176°F) | | | | | | | |
| **Hydraulic** | | | | | | | | |
| **Maximum Operating Pressure** | Ports A, B and X: 350 Bar (5075 PSI), Port Y 10: Bar (145 PSI) maximum | | | | | | | |
| **Nominal Flow LPM**<br>**Δp = 10 Bar (145 PSI) GPM** | 220<br>(58) | 500<br>(132) | 950<br>(251) | 1400<br>(370) | 2300<br>(609) | 4000<br>(1058) | 6000<br>(1587) | 9500<br>(2513) |
| **Flow Direction** | See Ordering Information | | | | | | | |
| **Fluid** | Hydraulic oil according to DIN 51524 ... 525 | | | | | | | |
| **Viscosity Recommended** | 30 to 80 cSt ($mm^2/s$) | | | | | | | |
| **Viscosity Permitted** | 20 to 380 cSt ($mm^2/s$) | | | | | | | |
| **Fluid Temperature** | 0°C to +60°C (+32°F to +140°F) | | | | | | | |
| **Filtration** | ISO 4406 (1999); 18/16/13 (meet NAS 1638:7) | | | | | | | |
| **Minimum Pilot Pressure** | > 25% of system pressure | | | | | | | |
| **Minimum Operating Pressure** | Port A to B at 10 Bar (145 PSI), B to A at 15 Bar (208 PSI) | | | | | | | |
| **Pilot Oil Supply** | Depending on flow direction A or B using X or external X | | | | | | | |
| **Pilot Oil Drain** | External using Y, 10 Bar (145 PSI) maximum | | | | | | | |
| **Pilot Oil at p = 100 Bar (1450 PSI)** | Port X to Y < 1.5 LPM (0.4 GPM) | | | | | | | |
| **Opening Point** | At 30% of nominal current | | | | | | | |
| **Manufacturing Tolerance** | ±5% of Qnom | | | | | | | |
| **Static / Dynamic** | | | | | | | | |
| **Hysteresis** | < 3% | | | | | | | |
| **Repeatability** | < 1% | | | | | | | |
| **Response Time**<br>**px = 50 Bar (725 PSI)** | 20 ms | 25 ms | 30 ms | 35 ms | 45 ms | 55 ms | 65 ms | 80 ms |
| **Electrical (Proportional Solenoid)** | | | | | | | | |
| **Duty Ratio** | 100% ED | | | | | | | |
| **Protection Class** | IP65 in accordance with EN 60529 (plugged and mounted) | | | | | | | |
| **Solenoid Code** | **L** | | | | **X** | | | |
| **Size** | **NG16-50** | | **NG63-100** | | **NG16-50** | | **NG63-100** | |
| **Solenoid Voltage**<br>**Nominal Current (100% ED)** | 6 VDC<br>2.6 amps | | | | 16 VDC<br>1.05 amps | | | |
| **Nominal Resistance** | 2.2 Ohm | | 2.5 Ohm | | 11.3 Ohm | | 14 Ohm | |
| **Power Amplifier Recommended** | PCD00A-400 | | | | | | | |
| **Solenoid Connection** | Connector as per EN 175301-803 | | | | | | | |

The pilot pressure in X-line must be at least 25% (NG16-40) or 45% (NG50-100) of the pressure in the draining-off line of the cartridge to make sure that the main poppet closes safely without malfunction.

# TEA040EW09B2NXWJ20

## Technical Specifications

| | | | |
|---|---|---|---|
| **Port Connection:** | NG40 | **Function:** | Flow direction from B to A |
| **Seal Material:** | NBR | **Input Voltage:** | 16 VDC |
| **Solenoid Option:** | 24 V / 1.25 A | **Product Series:** | Throttle valve |
| **Operation Type:** | Pilot | **Actuation Type:** | Proportional |
| **Function:** | 2-way | **Mounting Type:** | Slip-in cartridge |
| **Mounting Position:** | Unrestricted | **Configuration:** | N/A |
| **Maximum Operating Pressure:** | 350 bar | **Minimum Pilot Pressure:** | > 25 % of system pressure |
| **Maximum Flow Rate:** | 1400 L/min | **Flow Rate:** | N/A |
| **Flow Direction:** | B to A | **Maximum Operating Temperature:** | 60 °C |
| **Minimum Operating Temperature:** | -20 °C | **Seal Material:** | NBR |
| **For Fluid Type:** | Hydraulic oil according to DIN 51524 | **Weight:** | 13 kg |

# TEA050EW09B2NXWJ

## Technical Specifications

| | | | |
|---|---|---|---|
| **Port Connection:** | NG50 | **Function:** | Flow direction from B to A |
| **Seal Material:** | NBR | **Input Voltage:** | 16 VDC |
| **Solenoid Option:** | 24 V / 1.25 A | **Product Series:** | Throttle valve |
| **Operation Type:** | Pilot | **Actuation Type:** | Proportional |
| **Function:** | 2-way | **Mounting Type:** | Slip-in cartridge |
| **Mounting Position:** | Unrestricted | **Configuration:** | N/A |
| **Maximum Operating Pressure:** | 350 bar | **Minimum Pilot Pressure:** | > 25 % of system pressure |
| **Maximum Flow Rate:** | 2300 L/min | **Flow Rate:** | N/A |
| **Flow Direction:** | B to A | **Maximum Operating Temperature:** | 60 °C |
| **Minimum Operating Temperature:** | -20 °C | **Seal Material:** | NBR |
| **For Fluid Type:** | Hydraulic oil according to DIN 51524 | **Weight:** | 22 kg |

# TEA100EW09B2NXWJ

## Technical Specifications

| | | | |
|---|---|---|---|
| **Port Connection:** | NG100 | **Function:** | Flow direction from B to A |
| **Seal Material:** | NBR | **Input Voltage:** | 16 VDC |
| **Solenoid Option:** | 24 V / 1.25 A | **Product Series:** | Throttle valve |
| **Operation Type:** | Pilot | **Actuation Type:** | Proportional |
| **Function:** | 2-way | **Mounting Type:** | Slip-in cartridge |
| **Mounting Position:** | Unrestricted | **Configuration:** | N/A |
| **Maximum Operating Pressure:** | 350 bar | **Minimum Pilot Pressure:** | > 25 % of system pressure |
| **Maximum Flow Rate:** | 9500 L/min | **Flow Rate:** | N/A |
| **Flow Direction:** | B to A | **Maximum Operating Temperature:** | 60 °C |
| **Minimum Operating Temperature:** | -20 °C | **Seal Material:** | NBR |
| **For Fluid Type:** | Hydraulic oil according to DIN 51524 | **Weight:** | 85 kg |
| **Body Material:** | Steel | | |