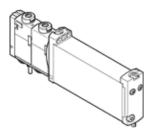
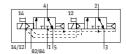
solenoid valve VUVG-B14-T32C-AZT-F-1T1L-EX2C Part number: 8041958







Data sheet

Type of ploting Plot air supply Positive overlap Plot air supply Positive overlap Plot air supply Positive overlap Plot or pressure Plot or pressur	Feature	Value
Valve size 14 mm Standard nominal flow rate 490 l/min Operating pressure MPa 0.151 MPa Operating pressure 1.510 bar Operating pressure 1.610 bar Operating pressure 1.710 bar Operating pressure 1.810 bar Operating pressure 1.910 bar Op	Valve function	2x3/2 closed, monostable
Standard nominal flow rate 490 /min	Type of actuation	electrical
Operating pressure MPa Operating pressure Operating operating on the operating oper	Valve size	14 mm
Departing pressure 1.5 10 bar Design structure Piston silide Piston silide Authorisation c UL us - Recognized (OL) Protection class	Standard nominal flow rate	490 l/min
Design structure Piston slide Nype of reset Air spring Authorisation c U. u. s. Recognized (OL) Protection class IP65 PROTECTION through the spring Protection class IP65 PROTECTION through the spring Protection class IP66 Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override detenting Pushing Nype of piloting Piloted Plot air supply external Overlap Plot air supply external Overlap Positive overlap Signal status display IED Overlap Positive overlap Signal status display IED Signal status display IED Signal status display IED Sultiting frequency 3 Hz Switching frequency 3 Hz Switching frequency 3 Hz Switching time off 29 ms Switching time off 29 ms Aux. switching time off 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 µs Max. negative test pulse with logic 0 1,600 µs Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation 4,7 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 -Moderate corrosion stress Shock resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Compressed air in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature 5 60 °C Corrosion resistance classification CRC 2 -Moderate corrosion stress Wall Alassification CRC 3 -Moderate corrosion stress Wall Alassification CRC 4 -Moderate corrosion stress	Operating pressure MPa	0.15 1 MPa
Design structure Piston slide Nype of reset Air spring Authorisation c U. u. s. Recognized (OL) Protection class IP65 PROTECTION through the spring Protection class IP65 PROTECTION through the spring Protection class IP66 Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override detenting Pushing Nype of piloting Piloted Plot air supply external Overlap Plot air supply external Overlap Positive overlap Signal status display IED Overlap Positive overlap Signal status display IED Signal status display IED Signal status display IED Sultiting frequency 3 Hz Switching frequency 3 Hz Switching frequency 3 Hz Switching time off 29 ms Switching time off 29 ms Aux. switching time off 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 µs Max. negative test pulse with logic 0 1,600 µs Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation 4,7 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 -Moderate corrosion stress Shock resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Compressed air in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance Lassification CRC 2 -Moderate corrosion stress Shock resistance Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature 5 60 °C Corrosion resistance classification CRC 2 -Moderate corrosion stress Wall Alassification CRC 3 -Moderate corrosion stress Wall Alassification CRC 4 -Moderate corrosion stress	Operating pressure	1.5 10 bar
Authorisation C. UL us - Recognized (OL) Protection class P65 Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override detenting Pushing Pushing Plioted Plioted Plioted Plioted Pliot air supply external Overlap Positive overlap Signal status display LED Pliot pressure MPa 0.15 0.8 MPa Pliot pressure MPa 0.15 0.8 MPa Pliot pressure MPa 1.5 8 bar 3 Hz Switching time off 29 ms Switching time off 29 ms Switching time off 20 ms Duty cycle 1.600 µs Max. positive test pulse with logic 0 1.600 µs Max. positive test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC 1 W Permissible voltage fluctuation 4/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Vibration resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-0 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-0 Filot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Medium temperature 5 60 °C Product weight 102 g Electrical connection via manifold block Material seals NBR Material se	Design structure	Piston slide
Protection class IP65 Exhaust-air function throttleable Sealing principle soft Any Manual override detenting Pushing Type of piloting Piloted Pilot air supply external Overlap Positive overlap Signal status display IED Pilot pressure MPa O.15 0.8 MPa Pilot medium O.0 MPa O.15 0.8 MPa Pilot not pressure MPa O.15 0.8 MPa Pilot medium O.0 MPa O.15 0.8 MPa Pilot pressure MPa	Type of reset	Air spring
P67 Exhaust-air function	Authorisation	c UL us - Recognized (OL)
Exhaust-air function throttleable soft Sealing principle soft soft Seasembly position Any Manual override detenting Pushing Ploted Pushing Plioted Pushing Plioted Plot air supply external Overlap Electrical Signal status display EED Plot pressure MPa D.15 0.8 MPa Pliot pressure MPa D.15 0.0 MPa D.15	Protection class	IP65
Sealing principle Assembly position Any Manual override detenting Pushing Type of piloting Pilot air supply external Overlap O		IP67
Assembly position Manual override detenting Pushing Pushing Plioted Pilot air supply external Overlap Positive overlap Signal status display Plot pressure MPa Pilot pressure MPa Ass. witching frequency 3 Hz Switching time off 29 ms Switching time of 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Assaurative test pulse with logic 0 Assaurative test pulse with logic	Exhaust-air function	throttleable
Assembly position Manual override detenting Pushing Pushing Plioted Pilot air supply external Overlap Positive overlap Signal status display Plot pressure MPa Pilot pressure MPa Ass. witching frequency 3 Hz Switching time off 29 ms Switching time of 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Assaurative test pulse with logic 0 Assaurative test pulse with logic	Sealing principle	soft
Manual override detenting Pushing Type of piloting Piloted Pilot air supply external Overlap Positive overlap Signal status display LED Pilot pressure MPa 0.15 0.8 MPa Pilot pressure 1.5 8 bar Max. switching frequency 3 Hz Switching time off 29 ms Switching time on 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 μs Max. negative test pulse with logic 1 3,000 μs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation +/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 · Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold block Material seals HNBR		Any
Pushing Piloted Pilot air supply external Overlap Positive overlap Signal status display Pilot pressure MPa Pilot pressure Max. switching frequency Switching time off Switching time of Duty cycle Max. negative test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Note on operating and pilot medium Vibration resistance Shock resistance Shock resistance Shock resistance Shock sestive the service of Compositive service service of Compositive of Compositive service service of Compositive service service of Compositive service serv	Manual override	
Type of piloting Pilot air supply external Overlap Positive overlap Signal status display LED Positive overlap Signal status display LED Pilot pressure MPa O.15 0.8 MPa Pilot pressure MPa Max. switching frequency 3 Hz Switching time off 29 ms Switching time on 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 μs Max. positive test pulse with logic 1 3,000 μs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation +/- 10 % Operating medium Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-2 f Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-2 f Wedium temperature 5 60 °C PWIS conformity VDMA24364-B2-L Medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature - 5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Material seals HNBR NBR NBR		
Pilot air supply Positive overlap Positive overlap Positive overlap Pilot pressure MPa O.15 0.8 MPa Pilot pressure MPa O.15 0.8 MPa Pilot pressure 1.5 8 bar Max. switching frequency Switching time off 29 ms Switching time on 10 ms Dutty cycle 100 % Max. negative test pulse with logic 0 Max. negative test pulse with logic 1 3,000 μs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation Poperating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-7 Corrosion resistance classification CRC 2 - Moderate corrosion stress VDMA24364-82-1 Redium temperature 9 - 5 60 °C PIlot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature 9 - 5 60 °C Product weight 10 2 g Electrical connection Waterial seals HNBR Material seals NBR	Type of piloting	-
Overlap Signal status display LED Pliot pressure MPa 1.58 bar Max. switching frequency 3 Hz Switching time off 29 ms Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 3,000 µs Characteristic coil data 22 V Dc. 1 W Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Shock r		external
LED	Overlap	Positive overlap
Pilot pressure MPa 1.5 8 bar Max. switching frequency 3 Hz Switching time of 29 ms Switching time on 10 ms Duty cycle 100 % Max. negative test pulse with logic 0 1,600 µs Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 · Moderate corrosion stress WDMA24364-B2-L Medium temperature 5 · 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Material seals HNBR NBR	Signal status display	
Pilot pressure 1.5 8 bar		0.15 0.8 MPa
Max. switching frequency Switching time off 29 ms Switching time on 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 μs Max. negative test pulse with logic 1 Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation 4/- 10 % Operating medium Compressed air in accordance with IS08573-1:2010 [7:4:4] Note on operating and pilot medium Ubricated operation possible (subsequently required for further operation) Vibration resistance Shock resistance Shock test with severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature 5 60 °C Product weight 102 g Electrical connection Waterial seals Materials note Materials note Materials note Marerial seals NBR	•	
Switching time off Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 1,600 µs 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation Vibration resistance Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Uibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Product weight Electrical connection Mounting type Material seals Materials note Moterial seals Material seals Marerial seals		
Switching time on 10 ms Duty cycle 100 % Max. positive test pulse with logic 0 1,600 µs Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation +/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-2 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note 10 10 ms 10 0 % 10 ms 10 m		29 ms
Duty cycle Max. positive test pulse with logic 0 1,600 µs Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-5 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-7 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity Wedium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection Wounting type on manifold rail Materials note Materials seals HNBR NBR		10 ms
Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 3,000 µs Characteristic coil data 22 V D C: 1 W Permissible voltage fluctuation 4/- 10 % Operating medium Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight Electrical connection Waterials note Material seals HNBR NBR	Duty cycle	100 %
Max. negative test pulse with logic 1 3,000 μs Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation +/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR		1,600 μs
Characteristic coil data 22 V DC: 1 W Permissible voltage fluctuation 4/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Product medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS HNBR NBR		·
Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Characteristic coil data	
Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Permissible voltage fluctuation	+/- 10 %
Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-77 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Product weight 102 g Electrical connection Mounting type on manifold block Mounting type Materials soals HNBR NBR		Compressed air in accordance with ISO8573-1:2010 [7:4:4]
942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 Corrosion resistance classification CRC 2 - Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with IS08573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Material seals HNBR NBR	Note on operating and pilot medium	Lubricated operation possible (subsequently required for further
60068-2-27 Corrosion resistance classification CRC 2 · Moderate corrosion stress PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Material seals HNBR NBR	Vibration resistance	
PWIS conformity VDMA24364-B2-L Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Shock resistance	
Medium temperature -5 60 °C Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS HNBR NBR	Corrosion resistance classification CRC	2 - Moderate corrosion stress
Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS HNBR NBR	PWIS conformity	VDMA24364-B2-L
Ambient temperature -5 60 °C Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Medium temperature	-5 60 °C
Product weight 102 g Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to ROHS Material seals HNBR NBR	Pilot medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Ambient temperature	-5 60 °C
Electrical connection via manifold block Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Product weight	102 g
Mounting type on manifold rail Materials note Conforms to RoHS Material seals HNBR NBR	Electrical connection	
Materials note Conforms to RoHS Material seals HNBR NBR	Mounting type	on manifold rail
NBR	Materials note	
	Material seals	
	Material housing	Wrought Aluminium alloy