WMP™
WELDED MUFFLED PLUG

Continental Disc® Corporation

The WMP™ Rupture Disc Assembly is a single use unit that is threaded into a pressure system. The rupture disc assembly is designed to relieve the pressure of the process media in an over pressure condition to protect equipment, personnel and the environment from catastrophic failure of the pressure equipment or system. It is designed for applications which discharge to atmosphere at the rupture disc location.

The WMP Rupture Disc assembly is a solid metal tension acting rupture disc that is welded to a threaded outlet body and inlet ring. The outlet body has a hexagon shape head with six holes in the side of the hexagon to reduce reaction forces after the rupture disc has burst. The rupture disc is welded to the outlet body and inlet ring for a bubble-tight seal. These rupture disc assemblies are designed to be installed into a threaded port.

ASME Compliance &
CE Marking Available
Compact
Easy to Install
High Pressures

APPLICATIONS

The highly versatile WMP Rupture Disc is available with a large range of burst pressures and temperatures, and can be used in a wide range of applications in many different industries, some of which include:

Hydraulic Systems
- Actuators
- Accumulators
- Pumps
- A/C Systems
- Braking Systems
- High Pressure Water Cleaning Systems

Pneumatic Systems
- Actuators
- Sample Bottle - Gas Cylinders
- Test Stands
- A/C Systems
- Gauge Panel Protection
- Overinflation Protection

FEATURES

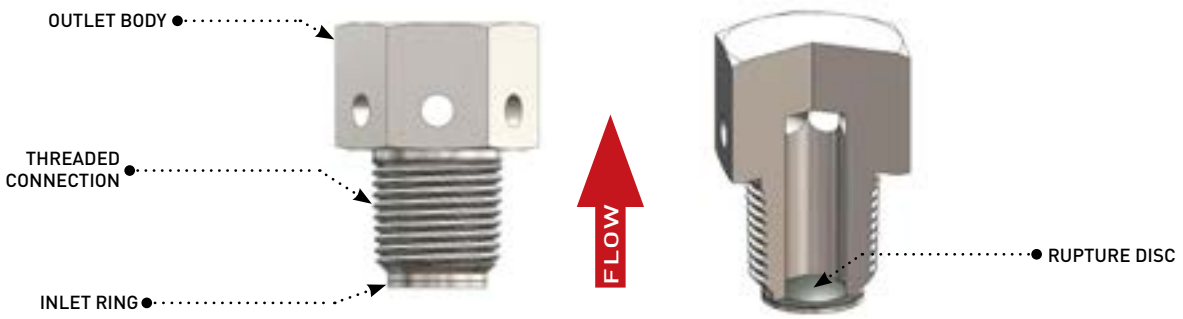
- Code compliance, when requested:
  - •MPT, BSPT and BSPP connections available with ASME compliance
  - •All thread connection options available with CE marking
- Rupture disc sizes available: 1/8”-1”
- Offered with industry standard male threaded connections:
  MPT (Male NPT ASME B1.20.1), SAE (J1926/3), BSPT (BS 21) and BSPP (ISO 228-1)
- Standard Outlet Materials*:
  316 SS/316L SS
- Standard Rupture Disc Materials:
  316 SS/316L SS, Nickel, Alloy 600 and Alloy C276
- Standard Inlet Ring Materials:
  316 SS/316L SS, Nickel, Alloy 600 and Alloy C276

BENEFITS

- Simple to install
- Not torque sensitive
- Single use device which is discarded after the rupture disc bursts
- Welded to ensure a bubble-tight seal

* Other materials may be available, contact the factory or your Representative for more details

ILLUSTRATIONS



CERTIFIED COEFFICIENTS

The table to the right lists the certified coefficient of discharge of the WMP Rupture Disc Assembly for gas and liquid applications, certified by the National Board of Boiler and Pressure Vessel Inspectors. These values, along with the appropriate MNFA value from the tables on page 3, can be used for evaluating pressure relief device sizing and flow capacity. These coefficients are the ratio of the certified flow of the WMP Rupture Disc Assembly to the theoretical flow.

CONNECTION TYPE	K (Gas)	K (Liquid)
MPT	.80	.59
BSPT	.80	.59
SAE[1]	N/A	N/A
BSPP	.80	.59

RATINGS, RANGES & TOLERANCES

RATED RUPTURE DISC RATING TYPE

MANUFACTURING RANGE	BURST TOLERANCE AROUND RATED (MARKED) BURST PRESSURE	MAXIMUM RECOMMENDED OPERATING PRESSURE
-10%	-5% / +5%	70% of Rated (Marked) Burst Pressure

SPECIFIED RUPTURE DISC RATING TYPE

PERFORMANCE TOLERANCE	EQUIVALENT MANUFACTURING RANGE	MAXIMUM RECOMMENDED OPERATING PRESSURE
-14.5% / +5%	-10%	Burst Pressure 75% of Min of Performance Tolerance

MIN/MAX RUPTURE DISC RATING TYPE

MIN=	EQUIVALENT MANUFACTURING RANGE	MAXIMUM RECOMMENDED OPERATING PRESSURE
MAX / 1.05 x 0.9 x 0.95	-10%	75% of MIN Burst Pressure

MAXIMUM RECOMMENDED TEMPERATURE LIMITS

DISC MATERIALS	°F	°C
Nickel	800	427
316/316L SS	900	482

DISC MATERIALS	°F	°C
Alloy C276	900	482
Alloy 600	1,000	538

NOTE:
Product parameters are based on United States customary units. Values in metric units are provided for reference only.

RUPTURE DISC PRESSURE LIMITS // MPT & BSPT THREAD CONNECTIONS

CONNECTION SIZE	RUPTURE DISC SIZE	NICKEL		316 SS/316L SS, ALLOY 600		ALLOY C276		MNFA
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	
		psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	in^2/ mm^2
1/8" MPT 1/8" BSPT	1/8"	1,200	10,000	2,000	15,000	2,800	15,000	.006
		82,7	689	138	1034	193	1034	3,87
1/4" MPT 1/4" BSPT	1/4"	800	10,000	1,200	15,000	1,700	15,000	.026
		55,2	689	82,7	1034	117	1034	16,8
3/8" MPT 3/8" BSPT	3/8"	500	8,000	800	15,000	1,200	15,000	.059
		34,5	552	55,2	1034	82,7	1034	38,1
1/2" MPT 1/2" BSPT	1/2"	450	6,000	700	15,000	1,000	15,000	.082
		31,0	414	48,3	1034	68,9	1034	52,9
3/4" MPT 3/4" BSPT	3/4"	350	4,000	500	5,000	750	5,000	.168
		24,1	276	34,5	345	51,7	345	108
1" MPT 1" BSPT	1"	300	3,000	400	5,000	600	5,000	.332
		20,7	207	27,6	345	41,4	345	214

RUPTURE DISC PRESSURE LIMITS // SAE THREAD CONNECTIONS

[1]Not certified for compliance with ASME Section XIII (UD mark)

CONNECTION SIZE	RUPTURE DISC SIZE	NICKEL		316 SS/316L SS, ALLOY 600		ALLOY C276		MNFA
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	
		psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	in^2/ mm^2
3/8-24 UNF-2A 7/16-20 UNF-2A	1/8"	1,200	4,350	2,000	4,350	2,800	4,350	.006
		82,7	300	138	300	193	300	3,87
1/2-20 UNF-2A 9/16-18 UNF-2A	1/4"	800	4,350	1,200	4,350	1,700	4,350	.026
		55,2	300	82,7	300	117	300	16,8
3/4-16 UNF-2A	3/8"	500	4,350	800	4,350	1,200	4,350	.059
		34,5	300	55,2	300	82,7	300	38,1

RUPTURE DISC PRESSURE LIMITS // BSPP THREAD CONNECTIONS

CONNECTION SIZE	RUPTURE DISC SIZE	NICKEL		316 SS/316L SS, ALLOY 600		ALLOY C276		MNFA
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	
		psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	psig/ barg	in^2/ mm^2
G 1/4 A	1/4"	800	10,000	1,200	15,000	1,700	15,000	.026
		55,2	689	82,7	1034	117	1034	16,8
G 3/8 A	3/8"	500	8,000	800	15,000	1,200	15,000	.059
		34,5	552	55,2	1034	82,7	1034	38,1
G 1/2 A	1/2"	450	6,000	700	15,000	1,000	15,000	.082
		31,0	414	48,3	1034	68,9	1034	52,9
G 3/4 A	3/4"	350	4,000	500	5,000	780	5,000	.168
		24,1	276	34,5	345	51,7	345	108
G 1 A	1"	300	3,000	400	5,000	600	5,000	.322
		20,7	207	27,6	345	41,4	345	214

CERTIFICATIONS
Available When Specified

ASME Product Certification Mark

Pressure Equipment Directive

Continental Disc® Corporation

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