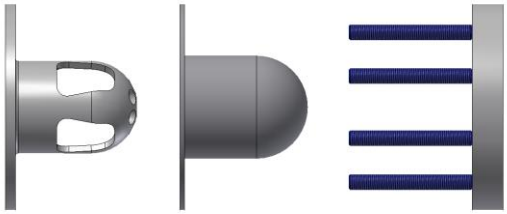
DATA SHEET

HRD NOZZLE ASSEMBLIES

DESCRIPTION



High Rate Discharge (HRD) nozzle assemblies are mounted between the explosion suppression container and vessel wall. Nozzle assemblies are available in spreader, telescopic, and no-nozzle configurations. To equip an HRD suppression container for use, it is necessary to order a nozzle assembly and its compatible nozzle cover and bolting pad. Each part is sold separately to maximize design flexibility.

Fike patented "Zero Restriction" nozzles do not add flow restrictions due to the fact that the total area of the dispersion opening is twice that of the nozzle inlet. In addition to the spreader nozzle, Fike offers a flush-mount, telescoping nozzle for abrasive applications, and a no-nozzle assembly for eliminating any protrusion into the process. Hygienic versions of the telescopic and no-nozzle assemblies are available. For high temperature environments, contact Fike about protective thermal barriers.

Fike nozzle covers provide a hermetic seal until the HRD is activated and the agent is released. Upon release, the nozzle cover bursts open, allowing unrestricted flow of the suppressant.

STANDARD FEATURES AND BENEFITS

Patented design	Zero flow restriction, full coverage, and increased agent discharge velocity.
Available flush mounted assemblies	Keeps nozzles from protruding into a process.
Available telescopic nozzle assemblies	Telescopic nozzles combine the flush mount's internal profile with the spreader nozzle's superior performance.
Available hygienic designs	Food grade/FDA approved materials; Hermetic seal prevents the accumulation of process materials around HRD port, reducing potentially unsanitary conditions.

NOZZLE COVERS

Nozzle covers are available in a variety of materials to suit the unique characteristics of the customer's process conditions.

Material	Benefits/Characteristics
Neoprene	Max Temperature: 250°F/121°C; Food grade
Silicone	Max Temperature: 450°F/232°C; Food grade
Viton®	Max Temperature: 430°F/221°C
316 Stainless Steel	Increased abrasion resistance; Food grade
Hastelloy® C276	Increased corrosion resistance

Disclaimer: All metal nozzle covers fragment

NOZZLE ASSEMBLIES

HRD nozzle assemblies come complete with all nuts, studs, gaskets, O-rings, ball plungers, dampers, sleeves, hold-downs, cap screws, and support pins necessary for installation. Applicable parts vary by assembly. Nozzle covers and bolting pads must be purchased separately. Refer to the following illustrations.

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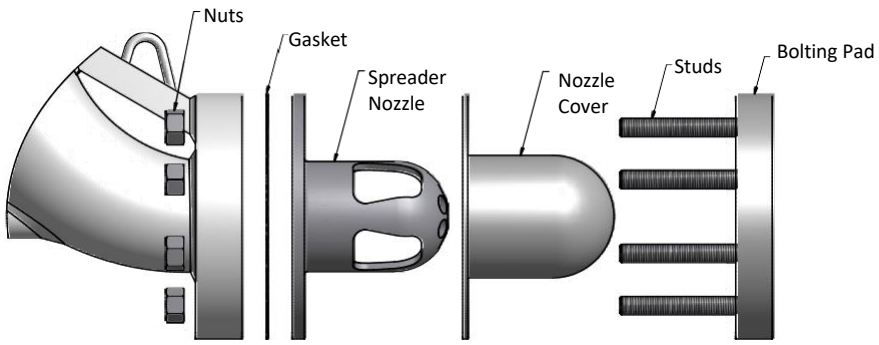
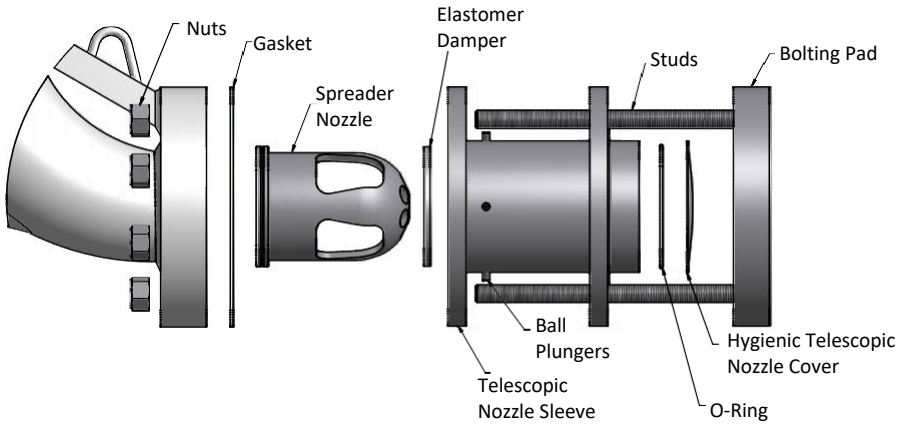


4" HRD SPREADER NOZZLE ASSEMBLY (E80-025-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-025-1	4" Spreader Nozzle for use with Baffle Plate
E80-025-2	4" Spreader Nozzle for use with Mechanical Lockout
E80-025-3	4" Spreader Nozzle for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E02-0172-4	Viton®
E02-0172-5	Neoprene

Bolting Pad P/N	Bolting Pad Material
E70-0064-1	Carbon Steel
E70-0064-3	316 Stainless Steel



4" HRD TELESCOPIC NOZZLE ASSEMBLY HYGIENIC COVER (E80-0067-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-0067-1	4" Telescopic Nozzle Hygienic for use with Baffle Plate
E80-0067-2	4" Telescopic Nozzle Hygienic for use with Mechanical Lockout
E80-0067-3	4" Telescopic Nozzle Hygienic for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E80-0060-2	316 Stainless Steel (X-Score)
E80-0060-3	Hastelloy C276 (X-Score)
E80-0148	316 Stainless Steel (360° Score)

Bolting Pad P/N	Bolting Pad Material
E80-0065-1	316 Stainless Steel
E80-0065-4	Hastelloy C276

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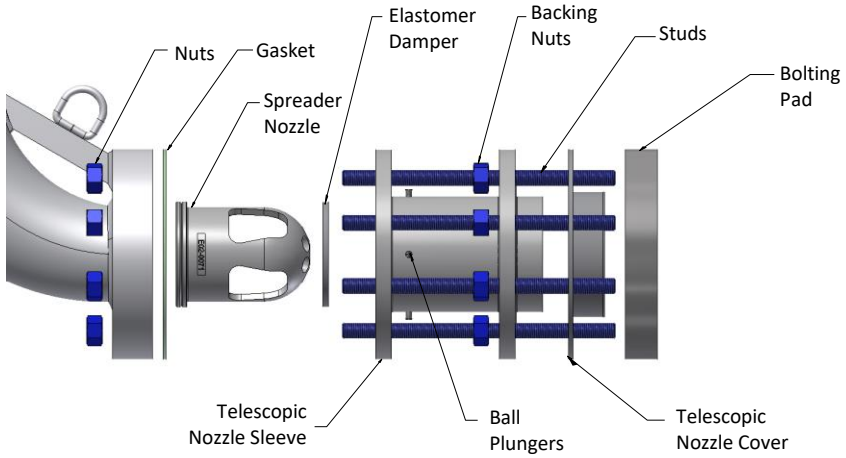
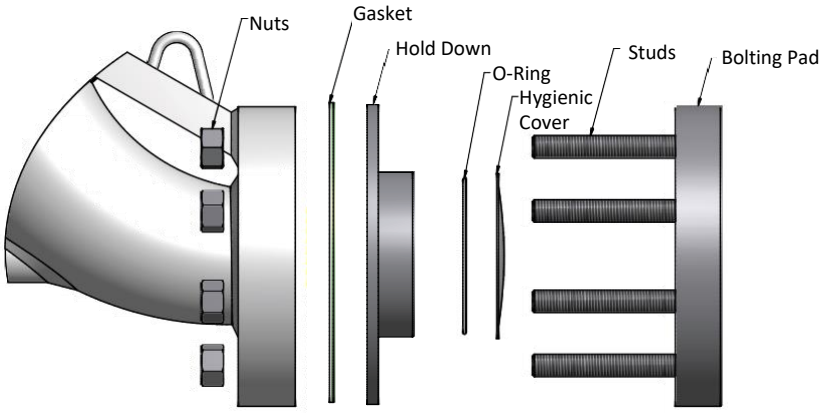


4" HRD TELESCOPIC NOZZLE ASSEMBLY (E80-011-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-011-1	4" Telescopic Nozzle for use with Baffle Plate
E80-011-2	4" Telescopic Nozzle for use with Mechanical Lockout
E80-011-3	4" Telescopic Nozzle for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E02-0344-1	Silicone
E02-0344-2	Neoprene
E02-0344-3	Viton

Bolting Pad P/N	Bolting Pad Material
E70-0175-1	Carbon Steel
E70-0175-3	316 Stainless Steel



4" HDR NO-NOZZLE ASSEMBLY HYGIENIC COVER (E80-029-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-029-1	4" No-Nozzle Hygienic Cover for use with Baffle Plate
E80-029-2	4" No-Nozzle Hygienic Cover for use with Mechanical Lockout
E80-029-3	4" No-Nozzle Hygienic Cover for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E80-0060-2	316 Stainless Steel (X-Score)
E80-0060-3	Hastelloy C276 (X-Score)
E80-0148	316 Stainless Steel (360° Score)

Bolting Pad P/N	Bolting Pad Material
E80-0065-1	316 Stainless Steel
E80-0065-4	Hastelloy C276

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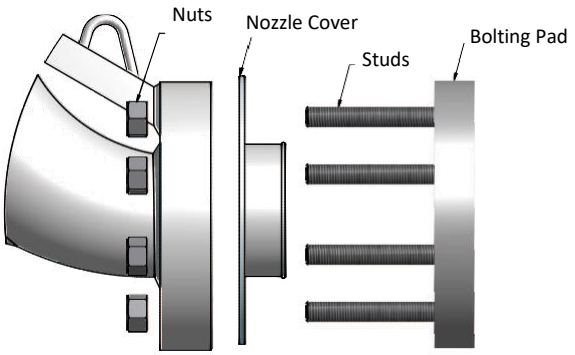
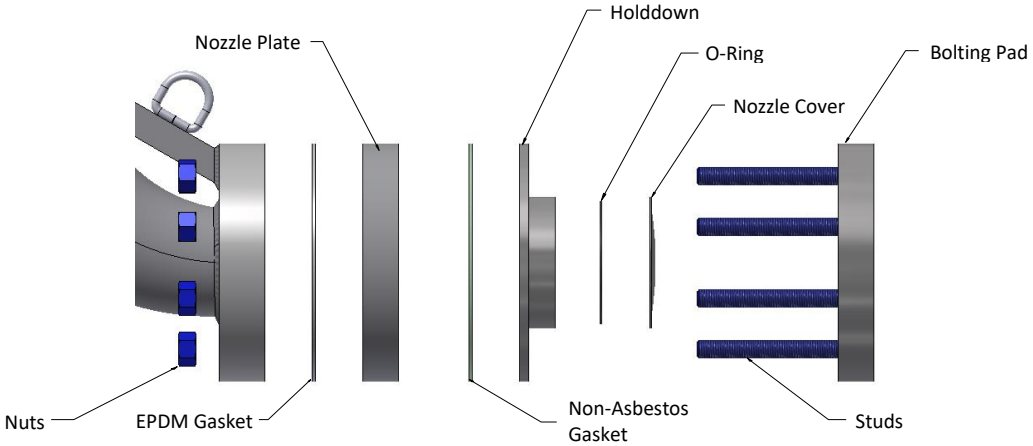


4” HRD NO-NOZZLE ASSEMBLY (E80-052-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-052-1	4” No-Nozzle for use with Baffle Plate
E80-052-2	4” No-Nozzle for use with Mechanical
E80-052-3	4” No-Nozzle for use with Ball Valve

Nozzle Cover P/N	Nozzle Cover Material
02-8939-1	Neoprene
02-8939-2	Silicone

Bolting Pad P/N	Bolting Pad Material
E70-0064-1	Carbon Steel
E70-0064-3	316 Stainless Steel



4” HRD EXTENDED DURATION NOZZLE ASSEMBLY (E80-065-XX-X)

Nozzle Assembly - Duration	
Duration	*Nozzle Size*
E80-065-05-X	500
E80-065-10-X	1000
E80-065-15-X	1500
E80-065-20-X	2000

Nozzle Assembly – Lockout (Lockout Ordered Separately)	
Lockout	*Nozzle Assembly Description*
E80-065-XX-1	4” HRD Extended Duration Nozzle for use with Baffle Plate
E80-065-XX-2	4” HRD Extended Duration Nozzle for use with HRD Lockout
E80-065-XX-3	4” HRD Extended Duration Nozzle for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E80-0060-2	316 Stainless Steel
E80-0060-3	Hastelloy C276

Bolting Pad P/N	Bolting Pad Material
E80-0065-1	316 Stainless Steel
E80-0065-4	Hastelloy C276
E80-0065-10	Carbon Steel

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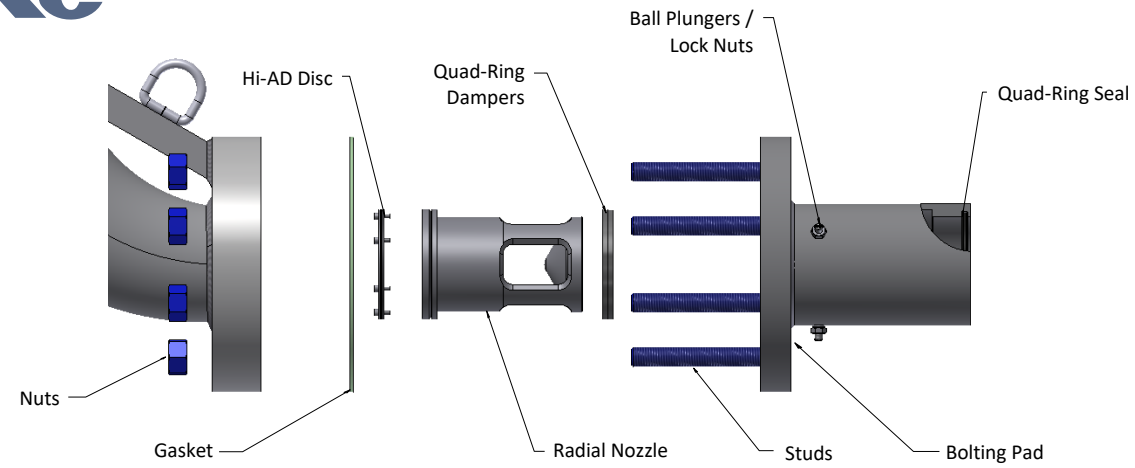
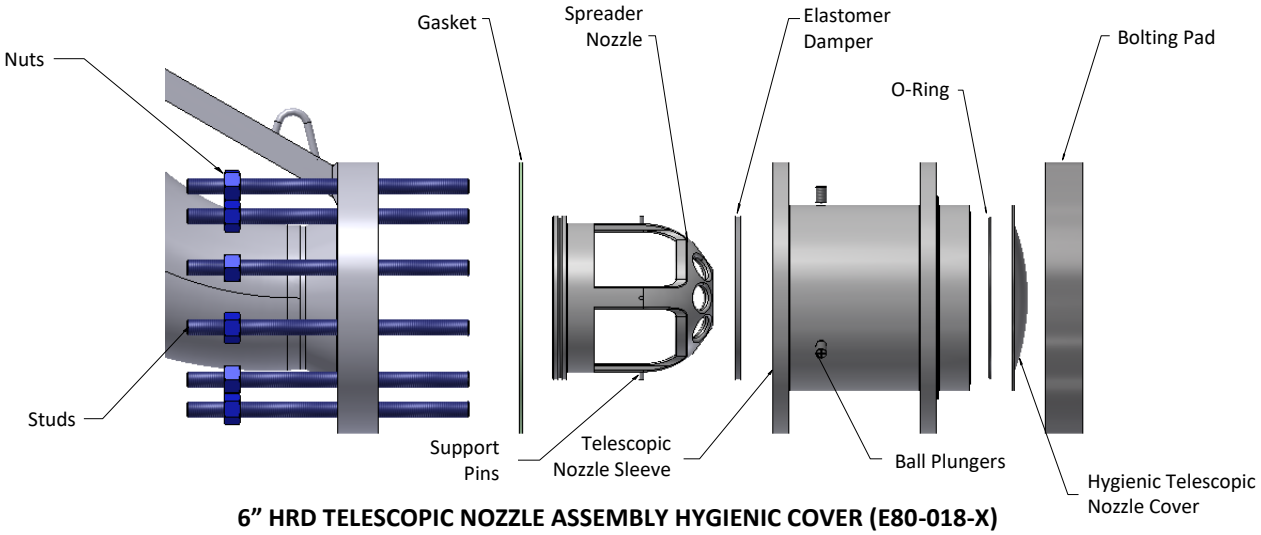


4" HRD RADIAL NOZZLE ASSEMBLY (E80-068-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-068-1	4" Radial Nozzle for use with Baffle Plate
E80-068-2	4" Radial Nozzle for use with Mechanical Lockout

Nozzle Cover P/N	Nozzle Cover Material
45049922	303 Stainless Steel

Bolting Pad P/N	Bolting Pad Material
45048700	Carbon Steel



6" HRD TELESCOPIC NOZZLE ASSEMBLY HYGIENIC COVER (E80-018-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-018-1	6" Telescopic Nozzle Hygienic for use with Baffle Plate
E80-018-2	6" Telescopic Nozzle Hygienic for use with Mechanical Lockout
E80-018-3	6" Telescopic Nozzle Hygienic for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
E80-0171	316 Stainless Steel (X-Score)

Bolting Pad P/N	Bolting Pad Material
E80-0043	316 Stainless Steel

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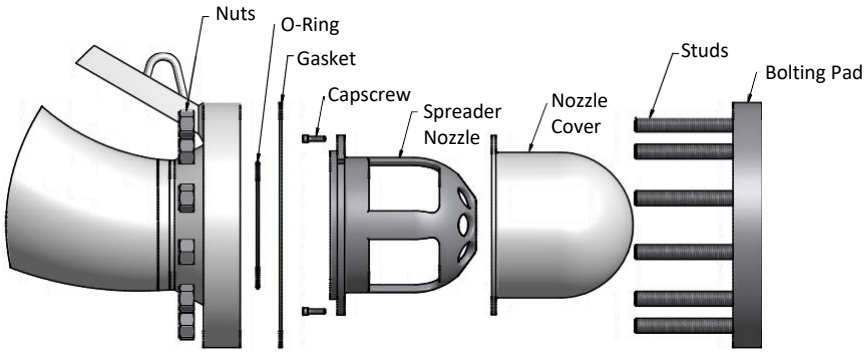

6” HRD SPREADER NOZZLE ASSEMBLY (E80-026-X)

Nozzle Assembly P/N	Nozzle Assembly Description
E80-026-1	6” Spreader Nozzle for use with Baffle Plate
E80-026-2	6” Spreader Nozzle for use with Mechanical Lockout
E80-026-3	6” Spreader Nozzle for use with Ball Valve Lockout

Nozzle Cover P/N	Nozzle Cover Material
02-8574-1	Silicone
02-8574-2	Neoprene

Bolting Pad P/N	Bolting Pad Material
E70-0084-1	Carbon Steel
E70-0084-3	316 Stainless Steel

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REFURBISH KITS

In the event of a discharge the HRD and nozzle assembly will need to be refurbished to be ready to use. Nozzle Refurbish Kits contain all the necessary replacement parts for the HRD and the nozzle assembly. Suppressant, nozzle covers, & GCA's must be ordered separately.

Refurbish Kit P/N	Description	Nozzle Assembly P/N Reference
E85-033-04	Reload Kit – Spreader or No-Nozzle – 4"	E80-052-X & E80-025-X
E85-033-04F	Reload Kit – Hygienic No-Nozzle – 4"	E80-029-X
E85-033-04TS	Reload Kit – Elastomer Telescopic Nozzle – 4"	E80-011-X
E85-033-04TH	Reload Kit – Hygienic Telescopic Nozzle – 4"	E80-0067-X
E85-033-06	Reload Kit – Spreader Nozzle - 6" - 50L Ver. 1	E80-026-X (Ver. 1)
E85-047	Reload Kit – Spreader Nozzle - 6" - 50L Ver. 2	E80-026-X (Ver. 2)
E85-033-06TH	Reload Kit – Hygienic Telescopic Nozzle - 6" – 50L Ver. 1	E80-018-X (Ver. 1)
E85-049	Reload Kit – Hygienic Telescopic Nozzle - 6" - 50L Ver. 2	E80-018-X (Ver. 2)
E85-054	Reload Kit – Extended Duration Nozzle – 4"	E80-065-XX-X
E85-055*	Reload Kit – HRD Radial Nozzle – 4"	E80-068-X

*Requires installation tool T01715-S

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