

# Knife Gate Valve Portfolio Overview - Imperial



BRAND MODEL	KEYSTONE F952 METAL SEATED	KEYSTONE F952 RESILIENT SEATED	KEYSTONE F952 POLYURETHANE SEATED	CLARKSON SU10R POLYURETHANE SEATED	KEYSTONE F955/956 SLIDE GATE	KEYSTONE PCS17 PERIMETER SEAL	KEYSTONE F215 SLIDE GATE	KEYSTONE OS1700 ASME CLASS 150	KEYSTONE F17/F20 FABRICATED	CLARKSON KLB LINE BLIND	CLARKSON M145/M202/M345/M345-HP POLY LINER	CLARKSON KGA+	CLARKSON KGD	CLARKSON KGF/KGF-HP	CLARKSON ZP 300 ASME CLASS 300	
SOLIDS % PARTICLE SIZE	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	[Bar chart]	
PRESSURE (CWP)	NPS 2 - 24: 150 psi	NPS 2 - 24: 150 psi	NPS 12: 150 psi NPS 14: 100 psi NPS 16: 90 psi NPS 18: 75 psi NPS 20: 60 psi NPS 24: 45 psi	NPS 2 - 24: 150 psi	NPS 2 - 16: 230 psi NPS 18 - 24: 150 psi NPS 28 - 30: 90 psi	NPS 2 - 24: 150 psi NPS 30 - 36: 100 psi	NPS 2 - 24: 150 psi	NPS 2 - 48: ASME CLASS 150	NPS 2 - 24: 150 psi (std) NPS 144 (custom)	NPS 2 - 16: 150 psi NPS 18 - 24: 90 psi	NPS 2 - 24: 150 psi M145: 150 psi M202: 150 psi M345: 300 psi M345-HP: 900 psi	NPS 3 - 24: 100 psi NPS 26 - 42: 75 psi NPS 48 - 54: 50 psi NPS 60: 30 psi Contact factory for higher	NPS 2 - 16: 150 psi NPS 18 - 24: 90 psi Contact factory for higher	KGF: NPS 3 - 36: 300 psi KGF-HP: NPS 3 - 36: 740psi	NPS 3 - 48: ASME CLASS 300	
TEMPERATURE	UP TO 445° F	UP TO 300° F	LIQUID: 120° F DRY: 140° F	LIQUID: 120° F DRY: 175° F	UP TO 250° F	UP TO 400° F	UP TO 500° F	UP TO 400° F	UP TO 1200° F	UP TO 300° F	UP TO 350° F	UP TO 400° F	UP TO 300° F	UP TO 300° F	UP TO 390° F	
SEAT MATERIAL	316 S/S	RTFE: 300° F FKM: 300° F	POLYURETHANE	POLYURETHANE	EPDM: 250° F NAT RUBBER: 250° F POLY U: 140° F	EPDM: 300° F NBR: 250° F FKM: 400° F	304 S/S 316 S/S 317L S/S	EPDM: 250° F NAT RUBBER: 175° F NBR: 212° F HNBR: 250° F FKM: 400° F	Hycar 304 S/S 316 S/S 317L S/S	NAT RUBBER	UHMWPE: 180° F PTFE: 350° F POLYPROPYLENE: 225° F	NAT RUBBER: 180° F EPDM-HTP: 300° F NBR: 275° F	NAT RUBBER: 180° F EPDM-HTP: 300° F NBR: 275° F	NAT RUBBER: 180° F EPDM-HTP: 300° F NBR: 275° F	URETHANE Contact factory for more	
BODY MATERIAL	316 S/S	316 S/S	316 S/S URETHANE LINED	S.G. IRON (ASTM A395-60)	S.G. IRON (RILSAN COATED)	CARBON STEEL 316 S/S	304, 316 OR 317L S/S CARBON STEEL	WCB/LCB CF8M	304 S/S 316 S/S 317L S/S	DUCTILE IRON	CARBON STEEL (FAB)	DUCTILE IRON CARBON STEEL	DUCTILE IRON	CAST WCB	CF8M, WCB/LCB Contact factory for more	
END CONNECTIONS	ASME B16.5 Class 125,150	ASME B16.5 Class 125,150	ASME B16.5 Class 125,150	ASME B16.5 Class 125,150	ASME B16.5 Class 125,150	ASME B16.5 Class 150	ASME B16.5 Class 150	ASME B16.5 Class 150	ASME B16.5 Class 150	ASME B16.5 Class 150 Contact factory for more	ASME B16.5 Class 150, 300	ASME B16.5 Class 150	ASME B16.5 Class 150 Contact factory for more	ASME B16.5 Class 150, 300	ASME B16.5 Class 300	
FLOW DIRECTION	UNI-DIRECTIONAL	UNI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	UNI-DIRECTIONAL	BI-DIRECTIONAL	UNI/BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	
SIZE AVAILABILITY NPS	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72	2 2½ 3 4 5 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 66 72
ASSEMBLY	RENO, BRISBANE	RENO, BRISBANE	BRISBANE	BRISBANE	BRISBANE	RENO, BRISBANE	RENO	RENO, BRISBANE	RENO	RENO	RENO	RENO, BRISBANE	RENO, BRISBANE	RENO	RENO	
DESIGN AUTHORITY	BRISBANE	BRISBANE	BRISBANE	BRISBANE	BRISBANE	RENO	RENO	RENO	RENO	RENO	RENO	RENO	RENO	RENO	RENO	
SUITABLE FOR	F952 metal seated can be sold into higher solids like fly ash where there is no water presence but the valve must include a deflector cone to prevent wear and buildup on the seat or mounted in reverse flow with backing ring. Other wise it can be applied in clean or dirty water where drip tight isolation is acceptable.	Designed for clean/dirty water, light slurries with limited abrasion. Unidirectional and provides improved sealing over a metal seated valve.	Urethane can be sold into higher solids like fly ash or sand where there is no water presence but they must undergo a deeper application review to ensure proper application.	Made for slurries applications if particulate size is fine. As particles get larger sleeves are not able to pass larger media. Requires flushing and packing wears in high cycle applications.	Made for slurries applications if particulate size is fine. As particles get larger sleeves are not able to pass larger media. Requires flushing and packing wears in high cycle applications.	Designed for clean/dirty water, light slurries. Provides bi directional zero leakage shutoff.	Designed to move static columns out of the pipeline and isolate them when it opens, it will carry the product back into the pipeline.	Designed for finer slurries under medium pressures. The zero pocket prevents build-up of media. Minimal disruption to flow in the downstream pipe.	Standard and custom fabricated knife gates available in any weldable alloy and in many configurations. F17 Resilient seated F20 Metal seated	Wafer style linear line blind offers value, high performance and safety in a compact package. Visual confirmation of the blank from all sides. Standard with closed position dual-function lock-out assembly. Detachable pin removes potential energy from actuator. Lock-out pin prevents unwanted blind movement.	Fabricated valves with three-piece replaceable polymer liner offer reliability and long life in a wide variety of tough applications.	Designed with a wide face to face allowing larger % solids to be passed through sleeves and able to handle larger particulate size.	40% is the recommended cut off for a KGD, however if particulate size is fine, then the valve can be installed in higher % solid applications.	Designed with a wide face to face allowing larger % solids to be passed through sleeves and able to handle larger particulate size at higher pressures (300 - 740 psi), limited cycle life compared to KGA/KGD valves because of the higher pressure rating.	Designed for highly abrasive, high pressure applications. The Zero Pocket prevents build-up of media. No disruption to flow in the downstream pipe. Limits apply to closing against pressure when pipe ID matched in valve port. Minimal disruption to flow in downstream pipe. Gate supports used in flow rings to achieve closing under full rated pressure.	

Design exists and available to quote (core range)  
 Design does not exist but may be considered if market requirement is justified  
 Design exists and available to quote. However some pressures are only available in special material and/or limited locations (contact factory)  
 Design exists but is not currently offered  
 No design or tooling exists

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# Knife Gate Valve Portfolio Overview - Metric



BRAND MODEL	KEYSTONE F952 METAL SEATED	KEYSTONE F952 RESILIENT SEATED	KEYSTONE F952 POLYURETHANE SEATED	CLARKSON SU10R POLYURETHANE SEATED	KEYSTONE F955/956 SLIDE GATE	KEYSTONE F969 HOPPER VALVE	KEYSTONE KGNR WASTEWATER VALVE	KEYSTONE PCS17 PERIMETER SEAL	KEYSTONE F215 SLIDE GATE	KEYSTONE OS1700 ASME CLASS 150	CLARKSON KGA+	CLARKSON KGD	CLARKSON KGF/KGF-HP	CLARKSON ZP 300 ASME CLASS 300
SOLIDS % PARTICLE SIZE														
PRESSURE (CWP)	DN 50 - 600: 10 bar	DN 50 - 600: 10 bar	DN 300: 10 bar DN 350: 7 bar DN 400: 6 bar DN 450: 5 bar DN 500: 4 bar DN 600: 3 bar	DN 50 - 600: 10 bar	DN 50 - 400: 16 bar DN 450 - 600: 10 bar DN 700 - 750: 6 bar	DN 100 - 500: 10 bar	DN 80 - 300: 10 bar DN 350 - 600: 7.5 bar DN 750 - 900: 5 bar	DN 50 - 600: 10.3 bar DN 750 - 900: 6.90 bar	DN 50 - 600: 10 bar	DN 50 - 1200: ASME CLASS 150	DN 80 - 600: 7 bar DN 650 - 1050: 5 bar DN 1200 - 1350: 3.5 bar DN 1500: 2 bar Contact factory for higher	DN 50 - 400: 10 bar DN 450 - 600: 6 bar Contact factory for higher	KGF: DN 80 - 900: 20 bar KGF-HP: DN 80 - 900: 51 bar	DN 50 - 1200: ASME Class 300
TEMPERATURE	UP TO 230 °C	UP TO 150 °C	LIQUID: 50 °C DRY: 60 °C	LIQUID: 50 °C DRY: 80 °C	UP TO 120 °C	UP TO 230 °C	DN 80 - 300: 110 °C DN 500 - 900: 90 °C	UP TO 200 °C	UP TO 260 °C	UP TO 200 °C	UP TO 200 °C	UP TO 150 °C	UP TO 150 °C	UP TO 200 °C
SEAT MATERIAL	316 S/S	RTFE: 150 °C FKM: 150 °C	POLYURETHANE	POLYURETHANE	EPDM: 120 °C NAT RUBBER: 120 °C POLY U: 60 °C	S.G IRON: 230 °C 316 S/S: 230 °C	RTFE UHMWPE	EPDM: 150 °C NBR: 120 °C FKM: 205 °C	304 S/S 316 S/S 317L S/S	EPDM: 120 °C NAT RUBBER: 80 °C NBR: 100 °C HNBR: 120 °C FKM: 200 °C	NAT RUBBER: 82 °C EPDM-HTP: 150 °C NBR: 135 °C	NAT RUBBER: 82 °C EPDM-HTP: 150 °C NBR: 135 °C	NAT RUBBER: 82 °C EPDM-HTP: 150 °C NBR: 135 °C	URETHANE Contact factory for more
BODY MATERIAL	316 S/S	316 S/S	316 S/S URETHANE LINED	S.G. IRON (ASTM A395-60)	S.G. IRON (RILSAN COATED)	S.G. IRON 316 S/S	S.G. IRON (AS1831 500-7)	CARBON STEEL 316 S/S	304, 316 OR 317L S/S CARBON STEEL	WCB/LCB CF8M	DUCTILE IRON CARBON STEEL	DUCTILE IRON	CAST WCB	CF8M, WCB/LCB Contact factory for more
END CONNECTIONS	AS 2129 - Table C,D,E BS 4504 PN 10,16 JIS B2210 Table 5,10 DIN 2501 Table10,16	AS 2129 - Table C,D,E BS 4504 PN 10,16 JIS B2210 Table 5,10 DIN 2501 Table10,16	AS 2129 - Table C,D,E BS 4504 PN 10,16 JIS B2210 Table 5,10 DIN 2501 Table10,16	AS 2129 - Table C,D,E BS 4504 PN 10,16 JIS B2210 Table 5,10 DIN 2501 Table10,16	AS 2129 - Table C,D,E JIS B2210 Table 5,10 DIN 2501 Table10,16	AS 2129 - Table C,D,E	AS 2129 - Table D	AS 2129 - Table E	AS 2129 - Table C,D,E DIN 2501 Table10		AS 2129 - Table D,E BS 4504 PN 10,16 DIN 2501 Table10,16	Contact factory for more		
FLOW DIRECTION	UNI-DIRECTIONAL	UNI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	UNI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	UNI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL	BI-DIRECTIONAL
SIZE AVAILABILITY DN	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800	50 65 80 100 125 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1650 1800
ASSEMBLY	RENO, BRISBANE	RENO, BRISBANE	BRISBANE	BRISBANE	BRISBANE	BRISBANE	BRISBANE	RENO, BRISBANE	RENO	RENO, BRISBANE	RENO, BRISBANE	RENO, BRISBANE	RENO	RENO
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	F952 metal seated can be sold into higher solids like fly ash where there is no water presence but the valve must include a deflector cone to prevent wear and buildup on the seat or mounted in reverse flow with backing ring. Other wise it can be applied in clean or dirty water where drip tight isolation is acceptable.	Designed for clean/ dirty water, light slurries with limited abrasion. Unidirectional and provides improved sealing over a metal seated valve.	Urethane can be sold into higher solids like fly ash or sand where there is no water presence but they must undergo a deeper application review to ensure proper application.	Made for slurries applications if particulate size is fine. As particles get larger sleeves are not able to pass larger media. Requires flushing and packing wears in high cycle applications.	Made for slurries applications if particulate size is fine. As particles get larger sleeves are not able to pass larger media. Requires flushing and packing wears in high cycle applications.	Designed for hopper usage where traditional KGVs jam. Unique seat design, keeps valve clean and free from jamming. Not as suited for closing on a static column as a F215.	This bonneted knife gate designed for the requirements of the water market. Offers boneted design and o-ring design suited for clean and dirty water.	Designed for clean/dirty water, light slurries. Provides bi directional zero leakage shutoff.	Designed to move static columns out of the pipeline and isolate them when it opens, it will carry the product back into the pipeline.	Designed for finer slurries under medium pressures. The zero pocket prevents build-up of media. Minimal disruption to flow in the downstream pipe.	Designed with a wide face to face allowing larger % solids to be passed through sleeves and able to handle larger particulate size.	40% is the recommended cut off for a KGD, however if particulate size is fine, then the valve can be installed in higher % solid applications.	Designed with a wide face to face allowing larger % solids to be passed through sleeves and able to handle larger particulate size at higher pressures (300 - 740 psi), limited cycle life compared to KGA/KGD valves because of the higher pressure rating.	Designed for highly abrasive, high pressure applications. The Zero Pocket prevents build-up of media. No disruption to flow in the downstream pipe. Limits apply to closing against pressure when pipe ID matched in valve port. Minimal disruption to flow in downstream pipe. Gate supports used in flow rings to achieve closing under full rated pressure.

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