



# INDUSTRIAL **OIL & GREASES**

## BREMEN SUPER IEP HEAVY DUTY INDUSTRIAL GEAR OIL ISO 68, 100, 150, 220, 320, 460

### PERFORMANCE PROFILE :

A supreme quality oil with high degree of extreme pressure protection, designed with highly refined base stocks and additive package based on Sulfur Phosphorus gear chemistry. Exceeds the requirements of :

U.S. Steel 220 & 224----- DIN 51517 Part 3

AGMA 250.04 & 9005-D94----- David Brown S1.53.101

Cincinnati P-35, P-59, P-63, P-74, P-76, P-77 & P-78

### APPLICATION :

Recommended for efficient lubrication of all types of enclosed industrial gear systems, operating under severe service conditions, subject to heavy load, high speed and high relative sliding velocities at elevated temperatures. Also used for enclosed sprocket, flexible coupling, chain bar, rock drill, guides and low speed plain bearings.

### SUMMARY OF BENEFITS :

- Perfect lubrication powers in all operating conditions.
- Low temperature fluidity ensures efficient functioning in cold climates.
- Strong demulsibility power and air release capability.
- Reinforced thermal and oxidation stability.
- Enhanced antiwear and extreme pressure properties to protect the gear teeth.
- Outstanding resistance to foaming, rust and corrosion.
- Excellent compatibility with all seals to control the leakage.
- Outstanding load carrying ability.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE					
	68	100	150	220	320	460
Sp. Gravity @ 15 °C	0.879	0.882	0.889	0.901	0.907	0.913
Viscosity @ 40 °C, cSt	67.5	99.5	144	220	314	460
Viscosity @ 100°C, cSt	8.7	11.3	14.5	19	24	31
Viscosity Index	100	99	98	97	95	95
Flash Point, COC, °C	232	236	248	268	280	292
Pour Point, °C	-27	-21	-18	-15	-12	-12
Timken OK Load, lb	60	65	70	70	70	70
FZG, Pass Load Stage	12	12	12	12	12	12



## BREMEN SUPER GP MULTI FUNCTIONAL OIL ISO 32, 68, 100, 150, 220, 320, 460

### PERFORMANCE PROFILE :

A good quality general purpose oil, formulated with highly refined base stocks and anti foam additive package. Suitable for the lubrication of hydraulic systems, pumps, enclosed industrial gears and bearings, operating under mild conditions, and where control of oxidation and wear is not of prime significance. Also used for industrial applications where oil losses are high and heavy contaminants require frequent oil change. Also recommended for effective flushing of engines or any lube circuits.

### SUMMARY OF BENEFITS :

- Natural viscosity index.
- Good thermal stability.
- Fair resistance to rust and corrosion.
- Good demulsibility power.
- Excellent protection against foaming.
- Economical product.

### TECHNICAL DATA :

CHARACTERISTIC	TYPICAL VALUE						
	32	68	100	150	220	320	460
Sp. Gravity @ 15 oC	0.874	0.879	0.882	0.889	0.901	0.907	0.913
Viscosity @ 40 oC, cSt	33	67.5	99.5	144	220	314	460
Viscosity @ 100oC, cSt	5.5	8.7	11.3	14.5	19	24	31
Viscosity Index	102	100	99	98	97	95	95
Flash Point, COC, oC	210	232	236	248	268	280	292
Pour Point, oC	-18	-12	-9	-9	-6	-6	-6



## BREMEN SUPER EP SEVERE DUTY GREASE NLGI # 0, 1, 2, 3, 4

### PERFORMANCE PROFILE :

A top quality, smooth textured, Lithium base grease with high degree of extreme pressure protection, designed with highly refined base stocks, Lithium complex thickener and well balanced additive package. Surpassing the requirements of :

DIN 51502 KP1K, KP2K, KP3K , KP4K

DIN 51825 KP1K, KP2K, KP3K, KP4K

ISO L-XBCEB1, L-XBCEB2, L-XBCEB3, L-XBCEB4

### APPLICATION :

Recommended for the lubrication of plain and rolling element bearings, joints couplings, linkages, pivots, open gears and all other moving or vibrating machine parts used in automotive, industries, mining, marine and other services, subject to severe slidings and shock loads at high service temperature. Perfectly suitable for centralized lubrication systems and frequent stop & go service.

### SUMMARY OF BENEFITS :

- Provide long lubrication intervals.
- Outstanding structural stability to provide lubrication without softening or hardening.
- Highly effective control over rust, corrosion and oxidation.
- Good ability to resist water washout.
- Non corrosive to all metals.
- Enhanced antiwear and extreme pressure qualities to resist wiping action.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE				
NLGI consistency	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Range of use, OC	-20to130	-20 to130	-20 to130	-20 to130	-20 to130
Dropping point , OC	175	185	185	185	190
Timken OK Load, lbs	40	40	40	40	40
Worked penetration @ 25 OC, dmm	370	325	280	235	190



## BREMEN SUPER MP HEAVY DUTY GREASE NLGI # 0, 1, 2, 3, 4

### PERFORMANCE PROFILE :

A high quality, smooth textured, Lithium base multipurpose grease, designed with highly refined base stocks, Lithium complex thickener and balance additive package. Exceeds the requirements of:

DIN 51502 KL1K, KL2K, KL3K, and KL4K

DIN 51825 KL1K, KL2K, KL3K, and KL4K

ISO L-XBCDA1, L-XBCDA2, L-XBCDA3, L-BCDA4

### APPLICATION :

Recommended for the efficient lubrication of plain and rolling element bearings, joints, couplings, linkages, pivots and all other mechanical parts used in automotive, industries, mining, marine and other services, subject to intense mechanical loads and thermal stresses. Also suitable for centralized lubrication systems.

### SUMMARY OF BENEFITS :

- Outstanding protection against wear, rust and corrosion.
- Excellent structural stability to resist excessive softening or hardening as a result of shearing.
- Controlled oil bleeding to supply small amount of oil needed to form EHL film.
- Non corrosive to all metals.
- Reinforced ability to resist water washout.
- Effective resistance to centrifuging and oxidation at high service temperature.
- Excellent choice to simplify stock control.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE				
NLGI consistency	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Range of use, °C	-20to130	-20 to130	-20 to130	-20 to130	-20 to130
Dropping point , °C	175	185	190	190	195
Worked penetration @ 25 °C, dmm	370	325	280	235	190



## BREMEN SUPER GP GENERAL PURPOSE GREASE NLGI # 0, 1, 2, 3, 4

### PERFORMANCE PROFILE :

A good quality, smooth textured, Calcium base general purpose grease, formulated with highly refined base stocks Calcium soap thickener and balance additive package. Exceeds the requirements of :

DIN 51502 K1C, K2C, K3C, K4C

DIN 51825 K1B, K2B, K3B, K4B

ISO L-XBADA1, L-XBADA2, L-XBADA3, L-XBADA4

### APPLICATION :

Suitable for the lubrication of vehicle chassis, water pump, farm, workshop and construction site machineries and other services, when water resistant is an important consideration.

### SUMMARY OF BENEFITS :

- Fair structural stability.
- Better protection against rust, corrosion and wear.
- Good resistance to oxidation.
- Non corrosive to all metals.
- Outstanding ability to resist water washout.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE				
NLGI consistency	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Range of use, OC	-20 to 52	-20 to 52	-20 to 52	-20 to 52	-20 to 52
Dropping point, oC	80	90	90	90	95
Worked penetration @ 25 OC, dmm	370	325	280	235	190



## BREMEN SUPER HT HI-TEMP PERFORMANCE HEAT TRANSFER OIL ISO 32, 46, 68, 100

### PERFORMANCE PROFILE :

A top quality versatile oil designed with highly refined base stocks and specially selected additive system. Recommended for heat transfer used in all closed circuit heat exchangers and other circulation equipments, operating upto 288 OC. Can also be used in hot or cold quenching system.

### SUMMARY OF BENEFITS :

- Extended oil life.
- Excellent fluidity at low temperature ensures easy circulation.
- Outstanding thermal and oxidation stability at high temperature.
- Long term rust and corrosion protection.
- Excellent resistance to sludging and fouling of heat transfer zones.
- High specific heat and thermal conductivity for effective heat transfer.
- Strong demulsibility power and air release capability.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE			
	<b>32</b>	<b>46</b>	<b>68</b>	<b>100</b>
Sp. Gravity @ 15 oC	0.874	0.877	0.879	0.882
Viscosity @ 40 OC, cSt	33	45	67.5	99.5
Viscosity @ 100oC, cSt	5.5	6.70	8.7	11.3
Viscosity Index	102	101	100	99
Flash Point, COC, OC	205	218	232	240
Pour Point, oC	-30	-27	-27	-21

### IMPORTANT TO NOTE :

Before starting new unit or restarting after maintenance or in the presence of residual moisture in the oil at normal operating temperature, the temperature of the unit should be reduced to around 100oC to blow off all the steam before returning to the normal operating temperature.





## BREMEN PNEUMATIC ARDUOUS DUTY PNEUMATIC OIL ISO 32, 46, 68, 100, 150

### PERFORMANCE PROFILE :

A superb quality robust performance oil with high degree of extreme pressure protection, designed with highly refined base stocks and additive package based on Sulfur Phosphorus chemistry. Exceeds the requirements of :

GARDNER DENVER----- INGERSOLL RAND

### APPLICATION :

Specifically recommended for the lubrication of heavy duty pneumatic tools and rock drills, used in mining construction and other services, subject to heavy, sustained and shock loads at high temperatures.

### SUMMARY OF BENEFITS :

- Perfect lubrication powers in all operating conditions.
- Outstanding emulsifying power to lubricate the working surfaces effectively.
- Exceptional oxidation and thermal stability.
- Excellent resistance to foaming.
- Long term rust and corrosion protection.
- Excellent oiliness property to maintain a strong lubricant film.
- Improved extreme pressure properties to control excessive wear and prevent severe surface damage.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE				
	32	46	68	100	150
Sp. Gravity @ 15 OC	0.874	0.877	0.879	0.882	0.889
Viscosity @ 40 OC, cSt	33	45	67.5	99.5	144
Viscosity @ 100OC, cSt	5.5	6.70	8.7	11.3	14.5
Viscosity Index	102	101	100	99	98
Flash Point, COC, OC	205	224	232	236	248
Pour Point, OC	-12	-12	-9	-9	-9
4-Ball EP, Weld Load (kg)	Pass	Pass	Pass	Pass	Pass



## BREMEN SUPER COOLCUT SUPER PERFORMANCE SOLUBLE CUTTING OIL

### APPLICATION :

A BREMEN quality versatile water soluble oil with innovative conception, designed with highly refined base stocks and well balanced additive package. Expressly recommended for use in all high speed, heavy duty metal cutting operations on ferrous and non ferrous metals, such as turning, milling, drilling, tapping, threading and cold sawing. Depending on the particular application, the rate of use is 3 to 10% of oil.

### SUMMARY OF BENEFITS :

- Forms homogenous and extremely stable milky emulsion in both hard and soft water.
- Outstanding lubricating and cooling power necessary to ensure good work piece finish and extended tool life.
- Contains biocides and fungicides to give a long service life and to prevent emulsion breakdown and spoilage.
- Long term control over wear, rust and corrosion.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE
Sp. Gravity @ 15 OC	0.933
Viscosity @ 40 OC, cSt	55
Viscosity @ 100 OC, cSt	7.8
Flash Point, COC, OC	130
Pour Point, OC	-9
Emulsion Test (3% emulsion)	Stable milky
Corrosion Test (3% emulsion)	Pass

### IMPORTANT TO NOTE :

Store the product in closed premises to prevent deterioration of the product due to marked temperature variations.



# BREMEN SUPER SLIDEWAY STICK-SLIP PERFORMANCE MACHINE TOOL OIL ISO 32, 68, 220

## PERFORMANCE PROFILE :

A premium quality, friction performance, multipurpose workshop oil, formulated with highly refined base stocks and friction modifier system based on inactive Sulfur chemistry. Exceeds the requirements of :

Cincinnati Milacron P-47, P-50, P-53----- DIN 51524 Part 2

Stactinometer----- AGMA 250.04 (EP)

Schmidt (SKC) Inclined Tribotester----- Darmstadt Friction Rig

## APPLICATION :

Recommended for the lubrication of all machine tool slideways and guides. Others uses are :

- As a hydraulic fluid in machines such as grinder.
- As a industrial gear oil.

## SUMMARY OF BENEFITS :

- Strong film strength to maintain the required boundary film under heavy loads.
- Excellent antiwear capability to control wear under boundary condition.
- Improved proper frictional characteristics to prevent stick slip and chatter thus ensuring smooth machining and dimensional precision.
- Adequate adhesiveness to maintain film even at vertical surfaces.
- Long-term rust and corrosion protection.
- Outstanding separation capability for aqueous based cutting fluids.
- Minimize rejection rates and extended cutting tool life.

## TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE		
	32	68	220
Sp. Gravity @ 15 OC	0.874	0.879	0.901
Viscosity @ 40 OC, cSt	33	67.5	220
Viscosity @ 100OC, cSt	5.5	8.7	19
Viscosity Index	102	100	97
Flash Point, COC, OC	205	220	254
Pour Point, OC	-12	-9	-6
CM Stick Slip Ratio (0.8 max)	0.76	0.76	0.73



# BREMEN SUPER SPIN HIGH-SPEED PERFORMANCE SPINDLE OIL ISO 3, 10, 15, 22

## PERFORMANCE PROFILE :

An excellent quality dispersant type oil designed with highly refined base stocks and specially selected additive system. Exceeds the requirements of :

Cincinnati Milacron P.62(10)----- NF E 60-200

DIN 51517 Part 2 CL 10, CL 22----- British Standard 6413 /2

## APPLICATION :

Expressly recommended for the lubrication of high speed spindles used in hoseiry, textile and knitwear machineries.

## SUMMARY OF BENEFITS :

- Strong film strength to maintain the required boundary film at very high speed.
- Outstanding demulsibility power.
- Improved antiwear capability to provide smooth machine needles operations.
- Exceptional resistance to foaming and oxidation.
- Long term rust and corrosion protection.

## TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE			
	3	10	15	22
Sp. Gravity @ 15 OC	0.835	0.853	0.859	0.867
Viscosity @ 40 OC, cSt	3.5	9.8	15	21.3
Viscosity @ 100OC, cSt	-	2.5	3.4	4.2
Viscosity Index	90	95	98	98
Flash Point, COC, OC	110	160	180	190
Pour Point, OC	-30	-12	-12	-9



## BREMEN SUPER ENGINE OIL VT-SHPD SAE 15W/40

### PERFORMANCE PROFILE :

A superior quality multigrade oil with new conception, formulated with semi synthetic base stocks and state of art additive technology. Exceeds the latest performance requirements of:

API CI-4

VW 500.00 / 501.00 / 505.00----- Caterpillar ECF-3, ECF-2

Cummins CES 20081----- Mack EO-O Premium Plus

Volvo VDS-4----- Detroit Diesel Power Guard 93K218

ACEA E7/A3/B4----- BMW Special Oil

MB 229.1, 228.1----- Porsche

### APPLICATION :

Recommended for the lubrication of most modern, high powered, supercharged or turbocharged gasoline and diesel engines operating under the most severe driving conditions. Specially suitable for repeated short trips, low speed driving for a long distance and high speed driving.

### SUMMARY OF BENEFITS :

- Lengthens oil changes period.
- Perfect lubrication powers in all seasons.
- Reduced maintenance costs through extended engine life.
- Reduced running costs through improved oil and fuel efficiency.
- Superior antifriction and engine cleaning properties.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE
	<b>15W/40</b>
Sp. Gravity @ 15 °C	0.886
Viscosity @ 40 °C, cSt	110
Viscosity @ 100 °C, cSt	15
Viscosity Index	140
Flash Point, COC, °C	220
Pour Point, C	-27
TBN, mgm KOH / gm	11



## BREMEN DIESEL OIL SAE 40

### PERFORMANCE PROFILE :

An excellent quality oil formulated with highly refined base stocks and advanced additive package. Exceeds the requirements of :

### APPLICATION :

Expressly recommended for turbocharged or atmospheric two stroke DETROIT DIESEL engines series 53, 71, 92 et 149 used in heavy and medium duty trucks, off highway equipments, handling machineries and generating sets, operating under severe conditions.

### SUMMARY OF BENEFITS :

- Monograde.
- No VI improver added which results in no loss of viscosity and excellent control of wear.
- Low sulfated ash content.
- Exceptional protection against oxidation, high temperature deposits and bore polishing.
- Highly effective control over soot, wear, rust and corrosion to ensure long life of moving parts.
- Properly balanced detergency and dispersancy ensures a clean engine.
- High stability in operation.

### TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE
	<b>40</b>
Sp. Gravity @ 15 °C	0.889
Viscosity @ 40 °C, cSt	151.00
Viscosity @ 100°C, cSt	15.10
Viscosity Index	99
Flash Point, COC, °C	240
Pour Point, °C	-6



# BREMEN HEAVY DUTY DIESEL OIL SAE 50

## PERFORMANCE PROFILE :

A premium quality robust performance oil, designed with highly refined base stocks and state of art additive technology. Exceeds the stringent requirements of :

API CD/SF----- CAT TO-2

Mil-L-2104C

## APPLICATION :

Expressly recommended for turbocharged or atmospheric diesel and gasoline engines used in passenger cars, vans, trucks, off highway equipments, handling machineries and generating sets, burning fuels with a wide quality range (including high sulfur fuels) and operating under severe conditions. Also used in transmissions where Allison C-3 and CAT TO 2 fluids are recommended and in hydraulic systems, gear boxes and compressors where engine oil is recommended.

## SUMMARY OF BENEFITS :

Longer maintenance intervals.

Excellent choice for mixed fleet services.

Better fuel economy.

Exceptional protection against oxidation, foaming, high temperature deposits and bore polishing.

Highly effective control over soot, wear, rust and corrosion to ensure long life of moving parts.

Outstanding thermal behavior at high temperature.

Properly balanced detergency and dispersancy ensures a clean engine.

## TECHNICAL DATA :

CHARACTERISTICS	TYPICAL VALUE
	<b>50</b>
Sp. Gravity @ 15 oC	0.901
Viscosity @ 40 oC, cSt	220
Viscosity @ 100oC, cSt	19
Viscosity Index	97
Flash Point, COC, oC	240
Pour Point, oC	-9
TBN, mgm KOH / gm	8

