RENOLIN UNISYN XT

Fully-synthetic industrial gear lubricants based on polyalphaolefins of the latest generation, very high natural, shear stable viscosity index

Description

The products of the RENOLIN UNISYN XT series are demulsifying, fully-synthetic industrial gear oils with elevated aging resistance, excellent load-carrying capacity and wear protection, based on polyalphaolefins of the latest generation. RENOLIN UNISYN XT oils show good resistance to micropitting. Reliable lubrication of roller bearings is confirmed by the good results of the FE8 testing. Moreover the RENOLIN UNISYN XT oils show a good filterability. The products are preferably used when increased requirements are set for high and low operating temperatures. Especially in low temperature areas RENOLIN UNISYN XT shows significant advantages in comparison to conventional PAO based industrial gear oils. In gearboxes and circulating systems with sump temperatures up to 90 °C, longer oil-change intervals in comparison with previous mineral oils are achieved.
Miscibility with gearbox oils based on mineral oil and PAO is generally given, which means that simplified conversion to RENOLIN UNISYN XT is possible. Nevertheless a complete change-over is recommended (perhaps with flushing procedure) to receive the full performance of RENOLIN UNISYN XT and especially to exploit the advantages in comparison to conventional oils.

Advantages

- **Excellent low temperature behaviour**
- **Low foaming**
- **Good air release capacity**
- **Very good aging resistance**
- **Excellent corrosion protection**
- **Excellent viscosity-temperature behavior**
- **Very high natural VI (viscosity index)**
- **Multigrade character**
- **Excellent wear protection, high EP performance**
- **Miscible with mineral oil- and ester-based gear oils**
- **Prolongation of the service intervals possible**
- **For high and low operating temperatures**

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Application

The oils of the RENOLIN UNISYN XT series are used for all applications in industry where a synthetic oil of the CLP type according to DIN 51517-3 is recommended by the manufacturer. Highly-stressed bearings, joints, pressure screws, spur gears, worm gears and planetary gears can be reliably, safely and economically supplied even at short-term peak temperatures up to 150 °C. RENOLIN UNISYN XT can particularly be used if high low temperature demands for the gear oil are required.

Specifications

The products meet and in many cases exceed the requirements according to:

- DIN 51517-3: CLP
- ISO 6743-6 and ISO 12925-1:
  CKC / CKD / CKE / CKSMP
- AGMA 9005/E02: EP
- AIST 224
- Flender approval according to Flender BA 7300, Table A

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Typical technical data:

Product name		RENOLIN UNISYN XT				
		68	100	150	220	
Properties	**Unit**					**Test method**
ISO VG		68	100	150	220	DIN 51519
Kinematic viscosity						
at – 20 °C	mm^2/s	3,600	5,850	9,250	13,670	DIN EN ISO 3104
at – 10 °C	mm^2/s	1,360	2,080	3,100	4,400	
at 0 °C	mm^2/s	630	950	1,500	2,300	
at 40 °C	mm^2/s	68	100	150	220	
at 100 °C	mm^2/s	11.0	15.3	21.4	29.4	
Viscosity index	-	154	162	168	174	DIN ISO 2909
Density at 15 °C	kg/m^3	850	850	850	860	DIN 51757
Colour	ASTM	0.5	0.5	0.5	0.5	DIN ISO 2049
Flashpoint in open cup acc. to Cleveland	°C	238	238	238	242	DIN ISO 2592
Pourpoint	°C	-54	-48	-45	-42	DIN ISO 3016
Neutralisation number	mgKOH/g	0.86	0.86	0.86	0.86	DIN 51558
Demulsibility at 82 °C	min	< 10	10	15	20	DIN ISO 6614
Scuffing and scoring test, FZG A/8.3/90	failure load stage		>14			DIN ISO 14635-1
Micropitting load capacity						
C/8.3/90	GF Class	-	-	GFT high, >10		FVA 54/I-IV
C/8.3/60	GF Class	-	-	GFT high, >10		FVA 54/I-IV
FE8 roller bearing wear test, D-7.5/80-80						DIN 51819-3
- roller element wear	mg		1.0			
- cage wear	mg		<100			

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Fully-synthetic industrial gear lubricants based on polyalphaolefins of the latest generation, very high natural, shear stable viscosity index

Typical technical data:

Product name		RENOLIN UNISYN XT				
		320	460	680	1000	
Properties	**Unit**					**Test method**
ISO VG		320	460	680	1000	DIN 51519
Kinematic viscosity						
at – 20 °C	mm^2/s	19,400	41,000	130,000	187,000	DIN EN ISO 3104
at – 10 °C	mm^2/s	6,000	11,500	35,300	48,000	
at 0 °C	mm^2/s	3,500	5,600	8,500	15,000	
at 40 °C	mm^2/s	320	460	680	1,000	
at 100 °C	mm^2/s	40.2	54.5	75.5	101.0	
Viscosity index	-	179	188	192	195	DIN ISO 2909
Density at 15 °C	kg/m^3	860	860	860	860	DIN 51757
Colour	ASTM	0.5	0.5	1.0	1.0	DIN ISO 2049
Flashpoint in open cup acc. to Cleveland	°C	242	242	244	244	DIN ISO 2592
Pourpoint	°C	-42	-39	-39	-33	DIN ISO 3016
Neutralisation number	mgKOH/g	0.86	0.86	0.86	0.86	DIN 51558
Demulsibility at 82 °C	min	20	25	25	40	DIN ISO 6614
Scuffing and scoring test FZG A/8.3/90	failure load stage		>14			DIN ISO 14635-1
FZG A/16.6/90	failure load stage		>14			DIN ISO 14635-1
Micropitting load capacity						
C/8.3/90	GF Class		GFT high, >10			FVA 54/I-IV
C/8.3/60	GF Class		GFT high, >10			FVA 54/I-IV
FE8 roller bearing wear test, D-7.5/80-80						DIN 51819-3
- roller element wear	mg		1.0			
- cage wear	mg		<200			

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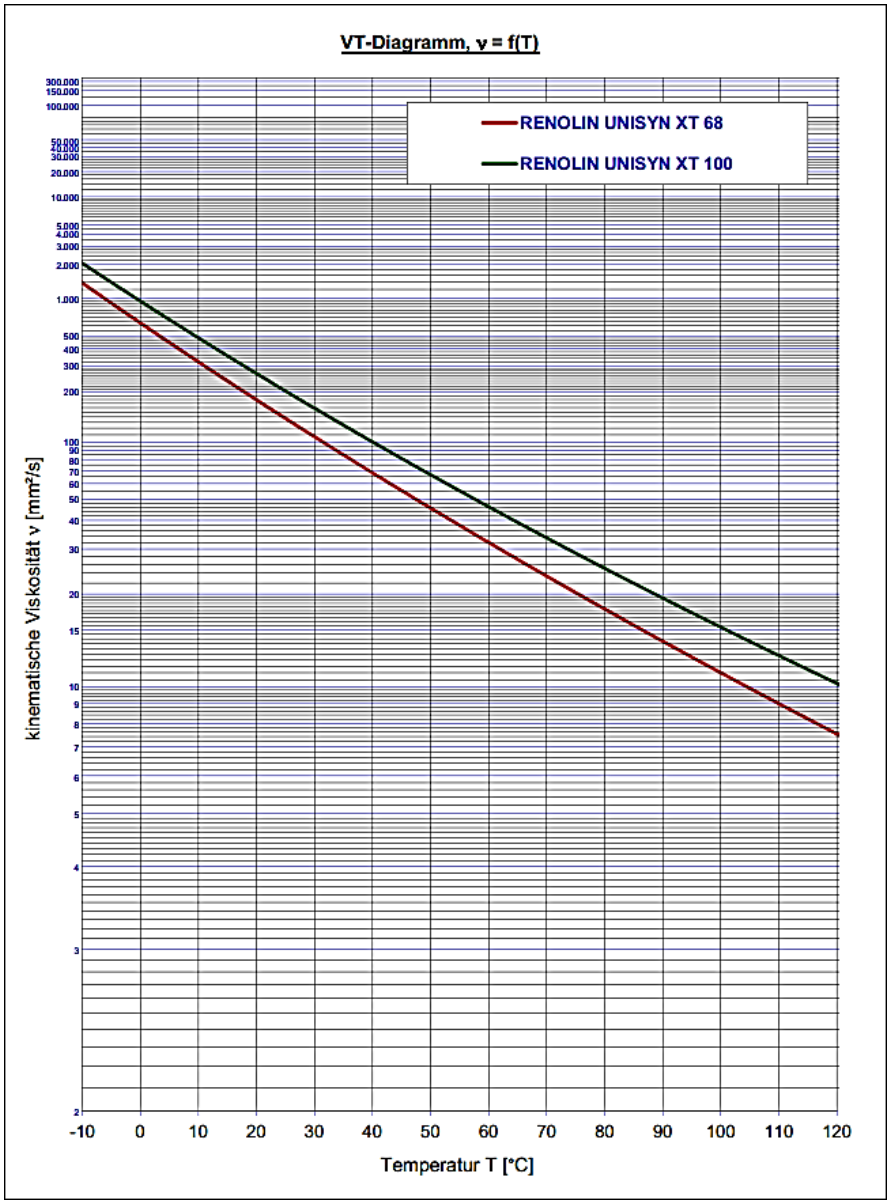

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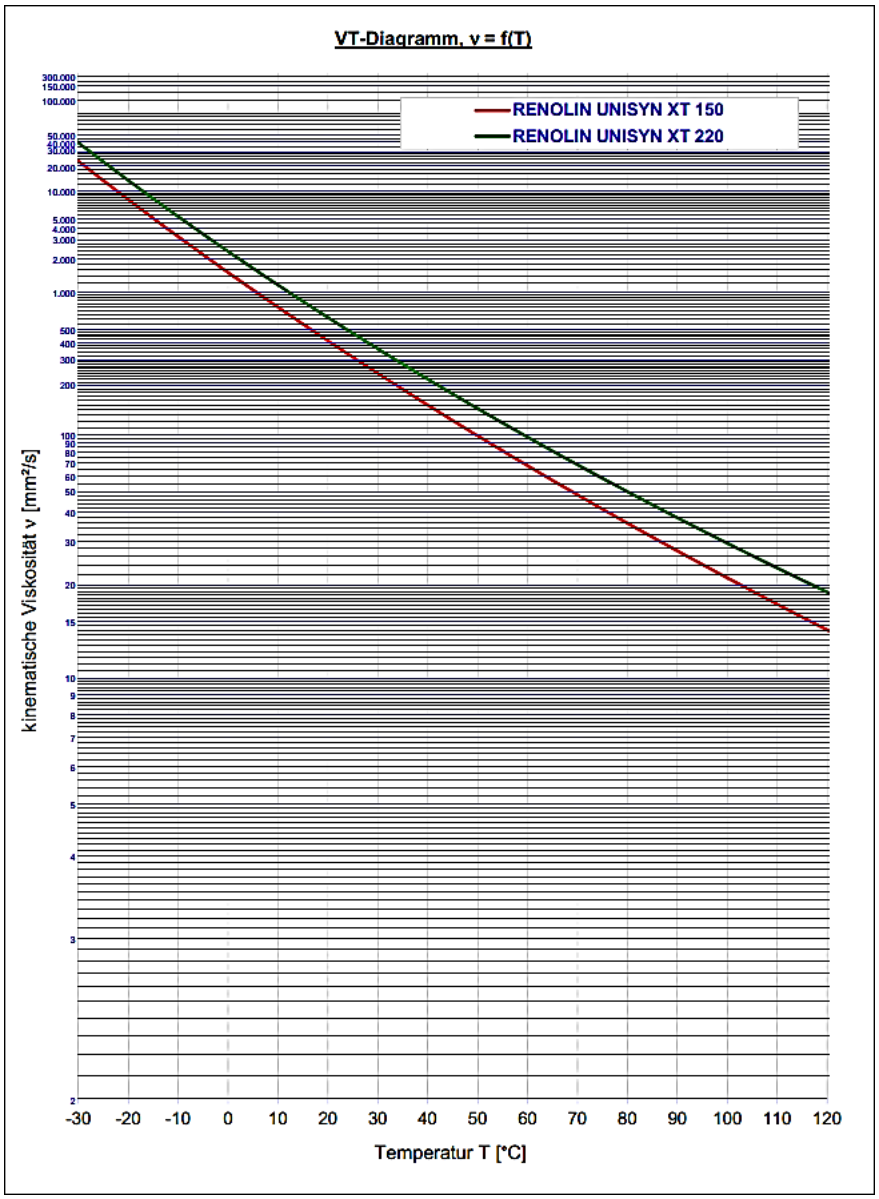

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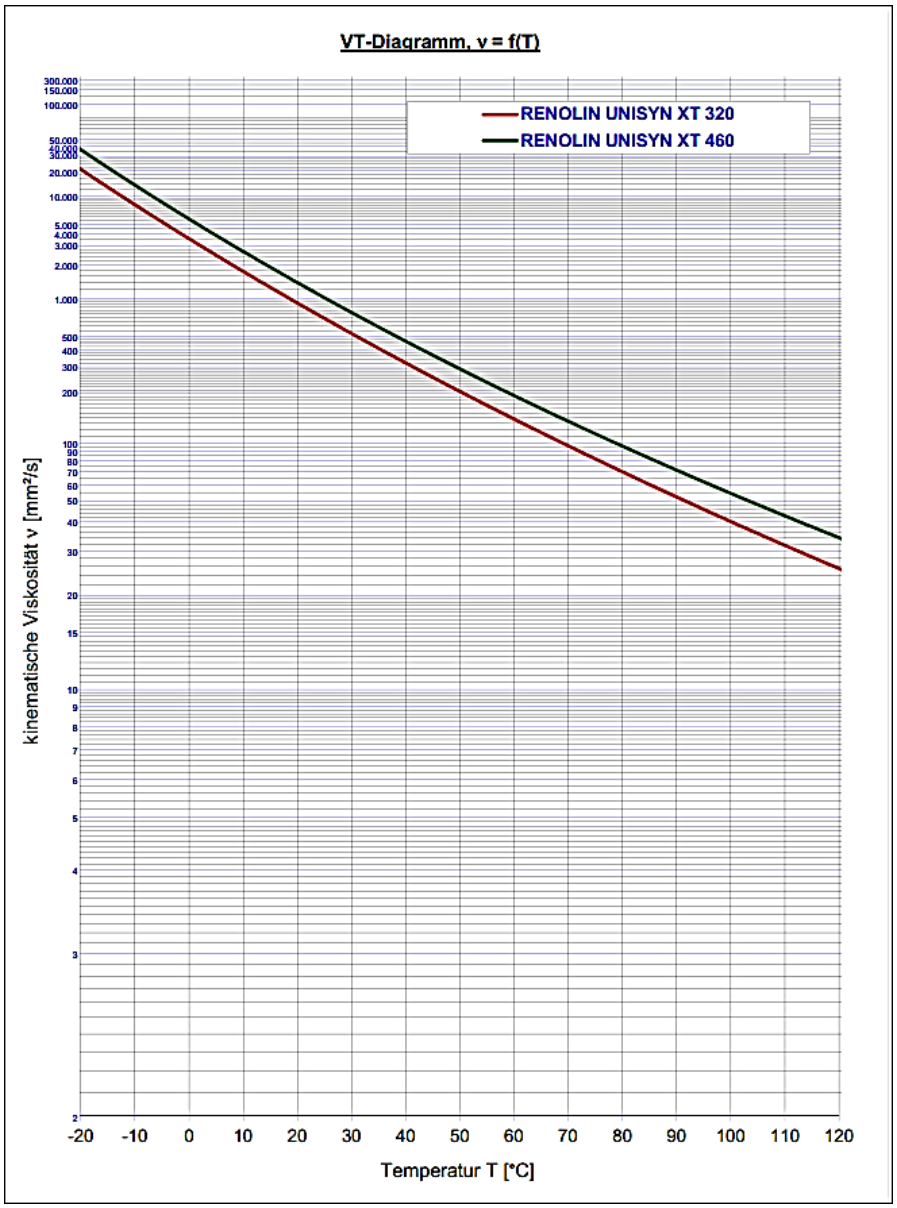

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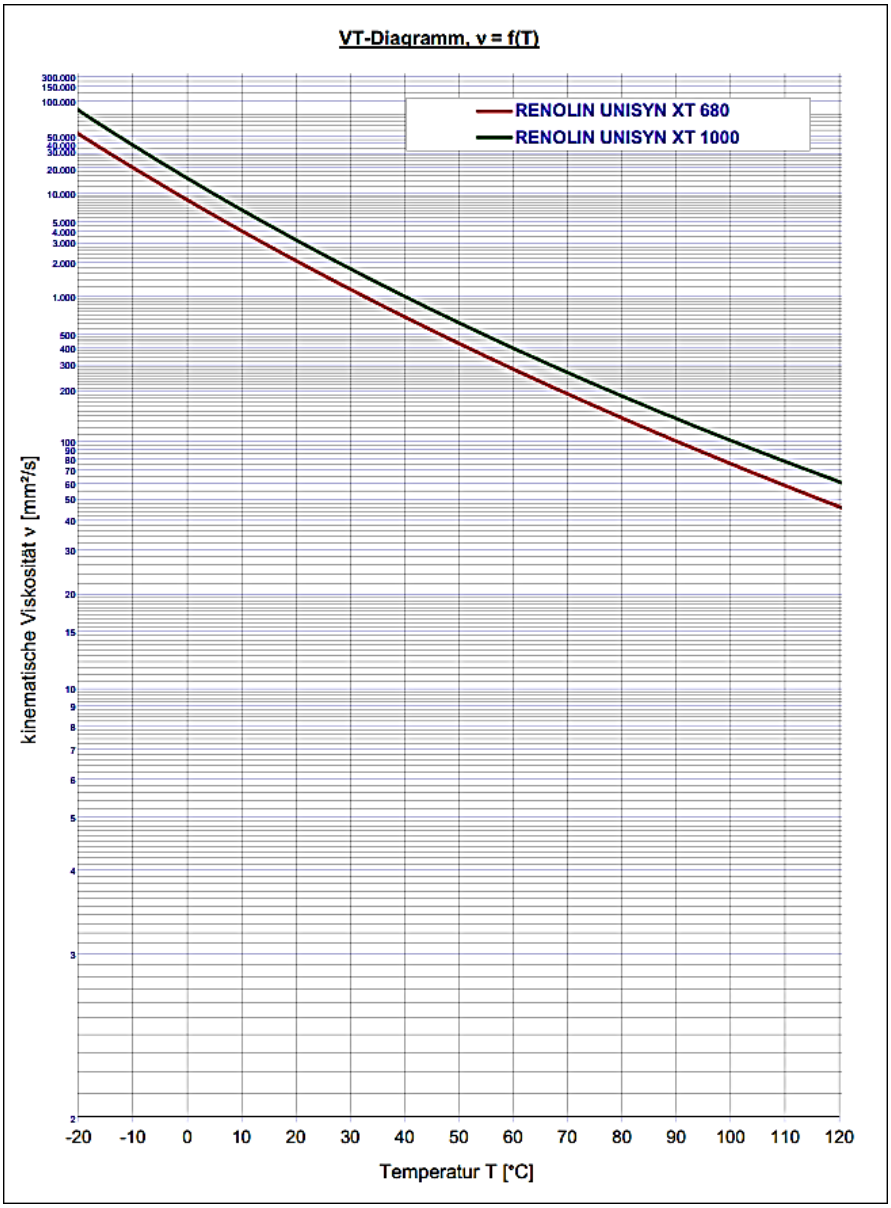

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